

4th Submission

Transportation Master Plan Update
Agerton Secondary Plan Area

June 2026 – Project No. 100242

Agerton New Urban Ltd.

1st Submission	November 2025
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TYLin

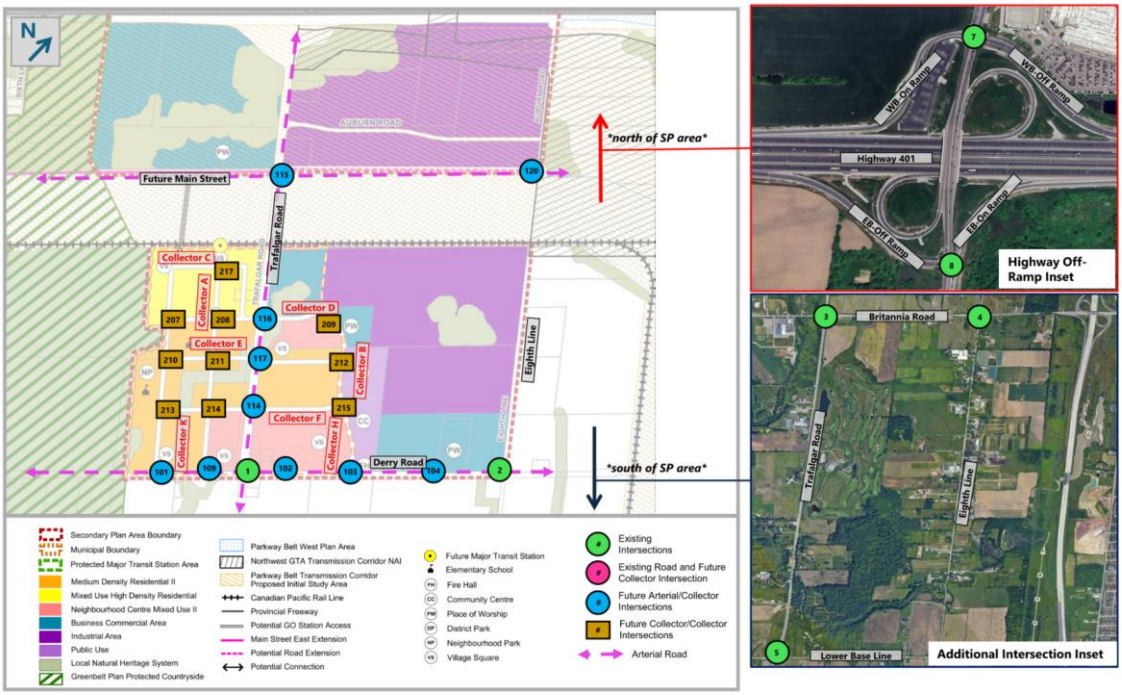
EXECUTIVE SUMMARY

T.Y. Lin International Canada Inc. (TYLin) was retained by the Agerton New Urban Ltd. Landowner's Group (MP4 Agerton) to provide advisory transportation planning and engineering services in support of the development of the Agerton lands within the broader Milton Phase 4 (MP4) area. The purpose of this Transportation Master Plan (TMP) Update is to update the previous 2022 TMP Addendum report completed by WSP – referred to as the TMP for the Trafalgar and Agerton Secondary Plan Areas. This report accounts for changes to the proposed land use density and road network modifications put forth by MP4 Agerton. The update will provide analysis for the 2031, 2041, and 2051 planning horizons, and the assessment of an ultimate 2051 horizon will align with the Region's TMP and activity-based model.

In consultation with Halton Region and Town of Milton staff, the following key intersections were identified for inclusion in the analysis:

- Trafalgar Road & Highway 401 Westbound On- and Off-Ramp (Existing, Signalized)
- Trafalgar Road & Highway 401 Eastbound Off-Ramp (Existing, Signalized)
- Trafalgar Road & Derry Road (Existing, Signalized)
- Trafalgar Road & Britannia Road (Existing, Signalized)
- Trafalgar Road & Lower Base Line (Existing, Signalized)
- Eighth Line & Britannia Road (Existing, Signalized)
- Eighth Line & Derry Road (Existing, Unsignalized)
- Trafalgar Road & Future Main Street (Future, Signalized)

Figure ES - 1 Existing and Proposed Road Network Within Study Area



The Agerton Secondary Plan establishes a target of 14,100 residents and 17,500 jobs within the Secondary Plan area, with the Milton Trafalgar Major Transit Station Area (MTSA) identified as the highest-density, transit-oriented node centered on the future Milton Trafalgar GO Station. The Secondary Plan is estimated to accommodate the following general site statistics to the 2051 planning horizon:

- 6,600 Residential Units
- 66,900 m^2 Office Space
- 38,600 m^2 Retail Commercial Space
- 160 ha Industrial land
- 1 Community Centre and Library
- 1 District Park
- 2 Elementary Schools

Building on the above, SGL Planning and Design Inc. prepared a sensitivity analysis to assess the number of residential units required to achieve the Secondary Plan population target of 14,100 residents under varying unit mix scenarios. The analysis found that, depending on the unit mix, achieving the population target could require up to approximately 7,130 residential units. As this represents a more conservative assumption than the forecasted 6,600 residential units, the higher unit count has been adopted for the purpose of trip generation estimates in this study.

For the commercial, mixed-use, and employment land uses, additional assumptions were required to translate the planning land use framework into a format compatible with ITE trip generation methodologies. SGL provided land area and employment forecasts for the various non-residential land use designations. To facilitate trip generation, these forecasts were converted into estimated gross floor area (GFA) values using assumptions regarding employment density and building floor space characteristics. The resulting GFA was then allocated among the applicable ITE land use categories, including retail, office, business park, and industrial uses, based on the planned land use composition. As a result of these conversions and assumptions, the GFA figures used for transportation modelling may not exactly correspond to the floor area statistics presented elsewhere in the Secondary Plan or related planning documents. However, the methodology provides a reasonable and consistent basis for estimating transportation demand associated with the proposed development.

Based on the above, the general site statistics adopted, per the 2051 scenario, are as follows:

- 7,132 Residential Units
- Commercial and Mixed Use G.F.A. of 2,233,000 ft^2
- Employment G.F.A. of 20,624,000 ft^2
- 1 Community Centre and Library with a combined G.F.A. of 142,000 ft^2

- 1 District Park
- 2 Elementary Schools

The Agerton Secondary Plan Area was divided into 18 Traffic Analysis Zones (TAZs) for the purposes of trip generation and assignment. The TAZ boundaries are generally defined by the collector road network and NHS features, conforming to the shape of future development blocks when possible.

Per the preparation of a scenario with the Trafalgar GO Station constructed, and a separate scenario without the Trafalgar GO Station, the following Agerton site trip totals were estimated under full build-out conditions for the 2051 horizon:

- With Trafalgar GO Station: A total of 6,021 net auto trips, consisting of 3,520 inbound and 2,501 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2051 conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 2,885 inbound and 3,945 outbound net auto site trips are predicted, totaling 6,830 trips.
- Without Trafalgar GO Station: A total of 6,591 net auto trips, consisting of 3,944 inbound and 2,647 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2051 conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 3,128 inbound and 4,195 outbound net auto site trips are predicted, totaling 7,323 trips.

It should be noted that the future Milton-Trafalgar GO Station is a key aspect of the analysis undertaken as part of this study. Metrolinx however, has acknowledged that while there is an initial Business Case for the station, the project is currently unfunded.

Existing Scenario

Turning movement count traffic data was surveyed at the existing study area intersections during the a.m. and p.m. peak periods on Wednesday, May 28, 2025.

Majority of study area intersections operate with overall reserve capacity and acceptable delays during both the weekday a.m. and p.m. peak hours, except Trafalgar Road and Derry Road. Although select movements experience LOS F, the corresponding v/c ratio is less than 1.0 during both peak hours, indicating reserve capacity remains.

Future Conditions With/Without GO Scenarios

For all future total conditions (exception of 2031) two scenarios were modelled, one without the Trafalgar GO Station, and one with the Trafalgar GO Station. Generally, the future total traffic conditions without the operation of the future GO Station are shown to operate at higher capacity, with longer delays and have larger queues when compared to analysis with the GO Station. This is attributed to residents and visitors being auto dependent within the localized network.

Due to the uncertainty around the timing for implementation of the GO station impacts to longer term network operations may align with, without GO analysis completed in this study. Road networks within the vicinity of the study area will likely become busier, until new linkages/alternative routes are created. Study area development transportation studies when received will provide updated assessment of current network traffic volumes and operating conditions at the time of submission, whilst incorporating current planning and forecasting for the area.

Future Lane Configuration Improvements

The lane configuration improvements identified in this study are categorized as follows:

- **Planned Improvements** – lane configuration improvements identified through municipal planning documents, environmental assessments, and previous transportation studies, which are assumed to be implemented independently of the Agerton Secondary Plan development.
- **Recommended Improvements** – Additional improvements identified through this study to accommodate future background traffic growth and improve network operations. These measures are not attributable to, nor triggered by, Agerton-generated traffic.
- **Proposed Improvements** – Site-triggered improvements identified to mitigate operational impacts associated with traffic generated by the Agerton Secondary Plan development under future total traffic conditions.

Future 2031 Scenario

2031 Future Background Conditions

- Intersection / Road Improvement

No intersection improvements are recommended in this study for 2031 future background scenario, beyond the planned improvements identified in other background studies.

- Analysis Summary

Under 2031 future background conditions, intersections of Trafalgar Road & Derry Road during p.m. peak hour, Trafalgar Road & Britannia Road during p.m. peak hour and Trafalgar Road & Lower Base Line during a.m. peak hour are expected to exceed capacity. Further, select movements at the study intersections are also expected to exceed capacity during one or both peak hours.

Select movements are expected to queue beyond the proposed storage length. The southbound right movement at the intersection of Trafalgar Road and Derry Road and the westbound right movement at the intersection of Trafalgar Road and Highway 401 westbound on- and off-ramp were also previously identified under existing conditions to exceed the existing storage, demonstrating that it is an existing issue.

It is noted that this study did not provide any recommendations for improvements to MTO ramps. As per MTO policy signal timing, adjustments were not applied to the intersections so as not to remove

approved green time from ramp terminal operations. It is recommended that MTO review the existing signal timing as a temporary mitigation measure while the MTO undertakes a MCEA of the ramp terminal to reduced v/c of the westbound right-turn movement during all horizon years.

2031 Future Total Conditions

- Intersection / Road Improvement

For external intersections, no intersection improvements are proposed for 2031 future total scenario, beyond the planned and recommended improvements from the Trafalgar RNA study. For all arterial-to-collector and collector-to-collector intersections, detailed recommendations are summarized in **Table ES-1** and **Table ES-2**.

- Analysis Summary

Under 2031 future total conditions, most turning movements at external intersections are predicted to generally operate well with overall reserve capacity and acceptable delays during both weekday a.m. and p.m. peak hours. Capacity constraints do occur in some areas, with critical intersections including:

- Trafalgar Road and Derry Road during a.m. and p.m. peak hour
- Trafalgar Road and Britannia Road during p.m. peak hour
- Trafalgar Road and Lower Base Line during a.m. peak hour
- Trafalgar Road and Hwy 401 WB Off-ramp during p.m. peak hour

All the arterial-to-collector intersections within the Secondary Plan operate well with overall reserve capacity and no individual movements over capacity. Although some movements experience LOS F, the v/c ratio is less than 1.0 during both peak hours, indicating reserve capacity remains.

The above noted regional arterial intersections additionally are expected to have specific movements that will queue past the available storage length, either being accommodated within the Taper lengths or spilling back into the through movements.

Future 2041 Scenario

2041 Future Background Conditions

- Intersection / Road Improvement

The Future Main Street Extension from Fifth Line to Trafalgar Road has been included under the 2041 horizon year. At the time of this report, the EA is currently underway with construction anticipated to begin as early as 2027 between Fifth Line and Sixth Line. As for the construction of Future Main Street from Sixth Line to Trafalgar Road, no construction timeline has been announced as it is currently in the post period. For the purposes of this analysis, it is assumed that the Future Main Street Extension from Sixth Line to Trafalgar Road will be constructed and operational under the 2041 horizon year.

In addition to the planned improvements identified in other background studies, further mitigation are

recommended under 2041 future background scenario to accommodate forecast background traffic growth, including dual southbound left-turn lanes at Trafalgar Road and Lower Base Line and dedicated left-turn lanes on all approaches, along with a dedicated southbound right-turn lane, at Trafalgar Road and Future Main Street.

HOV/Bus lanes are to be implemented on Trafalgar Road, Britannia Road, and Derry Road under future background and future total conditions upon Regional widening of Trafalgar Road and Derry Road to three lanes in each direction, consistent with the Transit Priority Corridor network phasing identified in Region's Integrated Master Plan (IMP).

- Analysis Summary

Under 2041 future background conditions, overall, the network operates at satisfactory levels, with the majority of intersections and movements operating with reserve capacity and acceptable delays during assessed weekday a.m. and p.m. peak hours. The exception, however, remains the critical movements that were identified under 2031 future background conditions. Analysis included both the with and without GO scenarios, which showed improved operation and overall reduced capacity constraint on the network with the implementation of the GO Station.

Select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under existing and 2031 future background conditions. Such as the westbound right turn at the intersection of Trafalgar Road at Derry Road, the eastbound and southbound right turn at the intersection of Trafalgar Road at Britannia Road, the westbound left turn at Trafalgar Road at Lower Baseline, and at the Hwy 401 WB on ramp. Where queues extend past the available storage length, but are anticipated to be contained within the available taper, the queue lengths are deemed acceptable.

2041 Future Total Conditions

- Intersection / Road Improvement

For external intersections, the proposed improvements beyond the planned and recommended improvements include dual eastbound right-turn lanes, dual northbound left-turn lanes, and a dedicated northbound right-turn lane at the intersections of Trafalgar Road and Future Main Street. For all other arterial-to-collector and collector-to-collector intersections, refer to the detailed recommendations summarized in **Table ES-1** and **Table ES-2**.

- Analysis Summary

Under 2041 future total conditions, a number of movements at external intersections are predicted to operate with capacity constraints however most movements operate with some reserve capacity and acceptable delays. Intersections with select movements or the intersection itself operating above capacity include:

- Trafalgar Road and Derry Road during a.m. and p.m. peak hour
- Trafalgar Road and Britannia Road during p.m. peak hour
- Trafalgar Road and Lower Base Line during a.m. peak hour
- Trafalgar Road and Hwy 401 WB Off-ramp during p.m. peak hour
- Trafalgar Road and Main Street during p.m. peak hours

All the arterial-to-collector intersections operate well with overall reserve capacity and no individual movements over capacity with the exception of select movements at the intersections of Derry Road at Collector K, Trafalgar Road at Collector F, Trafalgar Road at Collector D, and, Trafalgar Road at Collector E are projected to operate over capacity.

Under the 2041 future total without GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 future total conditions. Critical movements not identified within the 2031 scenario or are not able to be accommodated within the existing tapers are as follows:

- At the intersection of Trafalgar Road and Derry Road, queues remain similar however the southbound right exceeds the available storage length.
- At the intersection of Eighth Line and Derry Road, the 95th percentile queue for the northbound left movement is anticipated to exceed the available storage for the a.m. peak hour.
- At the intersection of Trafalgar Road and Britannia Road the eastbound left and right turns as well as the southbound right turn are anticipated to extend past the available storage lengths.
- The westbound left turn at the intersection of Trafalgar Road and Lower Baseline is anticipated to extend past the available storage for the 50th percentile in the a.m. and the 95th percentile in the a.m. and p.m. peak hour, with only the 95th percentile queue during the a.m. peak hour not being able to be accommodated within the Taper.
- At the intersection of Trafalgar Road and the Highway 401 eastbound off ramp the 95th percentile queue during the p.m. peak hour will not be able to be accommodated within the available storage or taper length.

When the GO Station is implemented it should be noted that general operations improve throughout the network. This includes the intersection of Trafalgar Road and Main Street operating under capacity and overall reduced operational concerns at the MTO ramp terminals. General queueing improves, reducing the number of movements where queues cannot be accommodated within the existing infrastructure.

The 2041 horizon indicates that growth beyond the projected 2041 populations will be constrained in

the absence of the Trafalgar GO Station. The transition from the 2031 to 2041 horizon demonstrates increasing frequency of capacity constraints, with a number of external arterial intersections operating near or above capacity, highlighting the importance of the GO station in supporting future growth. These constraints reflect the cumulative impacts of both regional background growth and traffic associated with the Agerton Secondary Plan. Should the assumed background growth not materialize as forecast, additional transportation capacity may be available within the network, allowing for development beyond the 2041 forecast in the absence of the Trafalgar GO Station.

It is recommended that the Trafalgar GO Station be implemented by the 2041 horizon year.

Future 2051 Scenario

2051 Future Background Conditions

- Intersection / Road Improvement

Localized widening of Lower Base Line to four lanes (two lanes in each direction) is expected to be implemented within the 2051 horizon, as proposed by the Town of Milton in Figure 4 – Proposed Road Network (Town-wide) of the Milton TMP Update (February 2025).

No intersection improvements are recommended for the 2051 future background scenario, beyond the planned improvements identified in other background studies.

- Analysis Summary

Under 2051 future background conditions, the study area intersections are mainly predicted to operate with overall reserve capacity and acceptable delays during both weekday a.m. and p.m. peak hours. There are exceptions however, with the critical movements identified under the 2041 future background conditions at the intersections of Trafalgar Road at Derry Road, Britannia Road, and Lower Baseline all being areas of note.

Select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 and 2041 future background conditions. Trafalgar Road at Derry Road, Trafalgar Road at Britannia Road, Trafalgar Road at Lower Baseline, and Hwy 401 WB on ramp are all intersections noted where queues will spill past the available storage and taper lengths for specific turning movements.

2051 Future Total Conditions

- Intersection / Road Improvement

For external intersections, no intersection improvements are proposed for 2051 future total scenario, beyond the planned and recommended improvements. For all arterial-to-collector and collector-to-collector intersections, refer to the detailed recommendations summarized in **Table ES-1** and **Table ES-2**.

► Analysis Summary

Under 2051 future total conditions most external intersections along Trafalgar Road are expected to operate near or above capacity in one or both the assessed peak hour periods. Eighth Line intersections are forecasted to operate with good LOS and reserve capacity with all movements having v/c ratios less than 1.0.

Trafalgar Road intersection where individual movements in addition to overall intersections operate above capacity include:

- Trafalgar Road & Derry Road during both a.m. and p.m. peak hours
- Trafalgar Road & Britannia Road during both a.m. and p.m. peak hours
- Trafalgar Road & Lower Base Line during both a.m. and p.m. peak hours
- Trafalgar Road & Hwy 401 WB Off-ramp during the p.m. peak hour
- Trafalgar Road & Hwy 401 EB Off-ramp during both a.m. and p.m. peak hours
- Trafalgar Road & Future Main Street during both a.m. and p.m. peak hours

Under 2051 future total conditions, many arterial-to-collector intersections are expected to operate with increased delays with v/c ratios over capacity. Intersections with movements or overall operating over capacity include:

- Collector J (Trafalgar Secondary Plan collector) / Z-15 Local Access & Derry Road during both a.m. peak hour
- Trafalgar Road & Collector F during both a.m. and p.m. peak hours
- Trafalgar Road & Collector D during both a.m. and p.m. peak hours
- Trafalgar Road & Collector E during both a.m. and p.m. peak hours

Under the 2051 future total without GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2041 future total conditions. Critical movements not identified within the 2041 scenario or not able to accommodate queues within the existing tapers are as follows:

- The westbound right turn at the intersection of Trafalgar Road and Lower Baseline is anticipated to extend past the available storage for the 50th percentile and the 95th percentile in the p.m. peak hour with queues not being able to be accommodated within the available storage or taper.
- At the intersection of Trafalgar Road and Future Main Street the eastbound right, westbound left, northbound left will all have queues longer than the available storage and will not be able to be accommodated within the available taper during the p.m. peak hour.

Implementation of the GO Station generally results in improved operations throughout the network,

which is very noticeable for arterial-to-collector intersections however capacity constraints remain common and widespread across the network, especially along Trafalgar Road. With the implementation of the GO Station, general queueing improves, reducing the number of movements where queues cannot be accommodated within the existing infrastructure.

MTSA Collector-to-Collector Intersections

All internal collector-to-collector intersections are expected to operate with ample capacity and minimal levels of delay, with no critical movements identified under future total (2031, 2041 and 2051) conditions with or without the Trafalgar GO Station.

Transportation Capacity Limit Assessment

The Agerton Secondary Plan establishes a target of 14,100 residents and 17,500 jobs within the Secondary Plan area, with the Milton Trafalgar Major Transit Station Area (MTSA) identified as the highest-density, transit-oriented node centered on the future Milton Trafalgar GO Station.

Based on the analysis included in this study, growth beyond projected 2041 populations will be constrained in the absence of the Trafalgar GO Station. The transition from the 2031 to 2041 horizon demonstrates increasing frequency of capacity constraints, with a number of external arterial intersections operating near or above capacity, highlighting the importance of the GO station in supporting future growth. The 2041 without GO scenario reflects development conditions corresponding to approximately 90% of the Secondary Plan's projected population and 55% of its projected employment. These constraints reflect the cumulative impacts of both regional background growth and traffic associated with the Agerton Secondary Plan. As the analysis is dependent on the background growth assumptions applied in the transportation model, changes in the timing, location, or magnitude of the forecast background growth could influence the amount of development that might be accommodated within the transportation network in the absence of the Trafalgar GO Station.

Future traffic demands and future capacity constraints along Trafalgar Road and other key major arterial intersection locations are the cumulative result of growth occurring across the broader transportation network. As such, transportation capacity thresholds should be evaluated in the context of all planned development and infrastructure delivery, recognizing that network conditions will evolve over time as growth is realized and transportation improvements are implemented.

The Agerton Secondary Plan is intended to support a complete community that balances population and employment growth in a manner consistent with broader municipal planning objectives. The transportation analysis completed for this study demonstrates that the 2041 without-GO scenario, corresponding to approximately 90% of the Secondary Plan population target and 55% of the employment target, represents where network reaches a constrained condition for the level of development. Beyond this level of development, increasing transportation constraints are anticipated in the absence of the Milton Trafalgar GO Station. However, as transportation network performance is

influenced by the timing and magnitude of background growth, future development potential should continue to be evaluated through ongoing transportation monitoring and updated analyses as development progresses.

Table ES-1 Queueing Mitigation Summary

Intersection	Movement	Original Storage (m)	Required Storage (m)	Proposed Storage (m)
Trafalgar Road & Derry Road	EBL	130	200	- [1]
	WBR	70	200	130
	SBR	85	175	175
Eighth Line & Derry Road	NBL	50	120	120
Trafalgar Road & Britannia Road	EBL	125	220	220
	EBR	85	165	165
	SBR	140	325	325
Trafalgar Road & Lower Baseline	WBL	120	250	250
	WBR	70	150	150
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	240	- [2]
	WBR	80	680	- [2]
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	220	- [2]
Trafalgar Road & Collector D	EBL	70	160	- [1]

Note 1 Storage limited by intersection spacing to upstream intersection; Existing storage to be maintained.
2 MTO intersection; no recommendation on geometric improvement or signal timing plan mitigation; to be reviewed, monitored and recommended by MTO

Table ES -2 Geometric Improvements Summary

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
External Intersections														
1	Derry Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches										
		Planned	Dedicated right turn lane	NBR WBR										
		Planned	Dual left turn lanes	NBL SBL EBL										
		Planned	Dual left turn lanes	WBL										
2	Derry Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT										
		Planned	Dedicated right turn lane	EBR WBR										
3	Britannia Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches										
		Planned	Dedicated right turn lane	All Approaches										
		Planned	Dual left turn lanes	EBL WBL										
		Planned	Dual left turn lanes	NBL SBL										
4	Britannia Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT										
		Planned	Dedicated right turn lane	WBR										
5	Lower Baseline and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
		Planned	Dedicated right turn lane	NBR SBR										
		Planned	Dedicated left turn lane	NBL SBL EBL										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
		Planned	Dedicated right turn lane	EBR WBR										
		Recommended	Dual left turn lanes	SBL										
		Planned	Widening to 2 lanes per direction	EBT WBT										
7	Commuter Lot/Highway 401 WB Off-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
8	Highway 401 EB Off-Ramp/On-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
115	Trafalgar Road and Future Main Street	**Planned**	Extension of Future Main Street with 2 lanes per direction	EBT WBT										
		Planned	Shared right movement on through lane	EBR WBR NBR										
		Recommended	Dedicated left turn lane with storage of NBL: 125m SBL: 50m EBL: 75m WBL: 160m	All Approaches										
		Recommended	Dedicated right turn lane with storage of 75m	SBR										
		Proposed	Dual right turn lanes with storage of 100m	EBR										
		Proposed	Dual left turn lanes	NBL										
		Proposed	Dedicated right turn lane with storage of 50m	NBR										
Arterial-to-Collector Intersections														
101	Derry Road and Collector K	**Planned**	Dedicated right turn lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
		Proposed	3 lanes for left / through / right movements	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										
		Proposed	Dedicated right turn lane	WBR										
102	Derry Road and Collector G (Trafalgar Secondary Plan collector) / Z-10 Local	**Planned**	Dedicated right turn lane	EBR										
		Planned	Right turn lane	NB										
		Proposed	Right turn lane	SBR										
		Proposed	Shared right movement on through lane	WBR										
103	Derry Road and Collector H	**Planned**	Shared right movement on through lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										
		Proposed	Shared left / through / right lane	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										
104	Derry Road and Collector J (Trafalgar Secondary Plan collector) / Z-15 Local Access	**Planned**	Shared right movement on through lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										
		Proposed	Shared left / through / right lane	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
109	Derry Road and Collector A	**Proposed**	New Road intersecting Derry Road Right turn lane	SBR										
		Proposed	Dedicated right turn lane	WBR										
114	Collector F and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
		Proposed	Dedicated right turn lane	NBR										
116	Collector D and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
		Proposed	Dedicated right turn lane	NBR SBR										
		Proposed	Dual left turn lanes	SBL										
		Proposed	Dual left turn lanes	NBL										
117	Collector E and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
Collector-to-Collector Intersections														
207	Collector D and Collector K	**Proposed**	Proposed 1 lane configuration with shared movements	All Approaches										
208	Collector D and Collector A	**Proposed**												
209	Collector D and Collector B / Z-13 Z-14 Access	**Proposed**												

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
210	Collector E and Collector K	**Proposed**												
211	Collector E and Collector A	**Proposed**												
212	Collector E and Collector B	**Proposed**												
213	Collector F / Z-5 Local and Collector K	**Proposed**												
214	Collector F and Collector A	**Proposed**												
215	Collector F and Collector B	**Proposed**												
217	Collector C and Collector A	**Proposed**												

LEGEND: - Not Required **- Planned / Recommended / Proposed**

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **II**

1 INTRODUCTION **1**

1.1 Guiding Principles **1**

1.2 Study Methodology **2**

1.3 Study Area **3**

2 EXISTING CONDITIONS **5**

2.1 Road Network **5**

2.2 Agerton Roadway Element Review **7**

2.2.1 Roadway Functional Classification 7

2.2.2 Right-of-Way Component Review 11

2.2.3 Road Safety Criteria Review 13

2.2.4 Emerging Transportation Technologies and Market Conditions Review 14

2.2.5 Review of Multi-Modal Network and Facility Types 16

2.3 Planning Context **27**

2.3.1 Halton Region Transportation Master Plan (2011) 27

2.3.2 Halton Region Active Transportation Master Plan (2015) 27

2.3.3 Town of Milton Transportation Master Plan Update (2025) 28

2.3.4 Town of Milton Transportation Master Plan for the Trafalgar and Agerton Secondary Plan (2019-2022) 29

2.3.5 Trafalgar Secondary Plan (2019, 2024) 31

2.3.6 Agerton Secondary Plan 32

2.3.7 Halton Integrated Master Plan 33

2.3.8 Town of Milton Transit 5-year (2025-2029) Service Plan and Master Plan Update 33

2.4 Relevant Background Studies **34**

2.4.1 Britannia Road Transportation Corridor Environmental Assessment (2014) 34

2.4.2 Trafalgar GO Station 34

2.4.3 Main Street Extension Environmental Assessment (2023 – Ongoing) 35

2.4.4 Trafalgar Road Corridor Study – Highway 407 (ETR) to Steeles Avenue (Regional Road 8) (2024 – Ongoing) 36

2.4.5 Trafalgar Tertiary Plan Road Network Assessment (Nov. 2025) 37

2.4.6 Halton Region's Access By-Law No. 32-17 38

2.4.7 Halton Region's Access Management Guidelines (2015) 38
2.5 Existing Traffic Data 39
2.6 Existing Intersection Capacity and Queuing Analysis 41
2.6.1 Intersection Capacity and Queuing Parameters 41
2.6.2 Existing Conditions Results 42
3 FUTURE BACKGROUND CONDITIONS 45
3.1 Study Horizon Years 45
3.2 Background Traffic Growth Methodology 45
3.3 Background Developments 47
3.4 Future Background Volumes and Lane Configurations 48
3.4.1 Future Background Traffic Volumes 48
3.4.2 Future Background Lane Configurations 48
3.5 Future Background Intersection Capacity Analysis 60
3.5.1 2031 Future Background – Without GO 60
3.5.2 2041 Future Background – Without GO 63
3.5.3 2041 Future Background – With GO 67
3.5.4 2051 Future Background – Without GO 69
3.5.5 2051 Future Background – With GO 72
3.6 Future Background Queuing Analysis 74
3.6.1 2031 Future Background Queues – Without GO 75
3.6.2 2041 Future Background Queues – Without GO 75
3.6.3 2041 Future Background Queues – With GO 76
3.6.4 2051 Future Background Queues – Without GO 77
3.6.5 2051 Future Background Queues – With GO 78
3.6.6 Queue Analysis Mitigation Summary 79
4 AGERTON SECONDARY PLAN SITE TRAFFIC 80
4.1 Traffic Analysis Zones 80
4.2 Site Statistics 81
4.3 Dense Multi-Use Urban Setting 84
4.4 With / Without Trafalgar GO Station Scenarios 84
4.5 Non-Automobile Mode Split Reductions 85
4.6 Trip Generation 86
4.6.1 2031 Horizon Year 86
4.6.2 2041 Horizon Year 88

4.6.3 2051 Horizon Year 93
4.7 Trip Distribution 99
4.8 Trip Assignment 103
4.8.1 External Assignment 103
4.8.2 Internal Assignment 103
5 FUTURE TOTAL CONDITIONS 108
5.1 Future Total Volumes and Lane Configurations 108
5.1.1 Future Total Traffic Volumes 108
5.1.2 Future Total Lane Configurations 108
5.2 Future Total Intersection Capacity Analysis 138
5.2.1 2031 Future Total – Without GO 138
5.2.2 2041 Future Total – Without GO 143
5.2.3 2041 Future Total – With GO 149
5.2.4 2051 Future Total – Without GO 154
5.2.5 2051 Future Total – With GO 159
5.3 Future Total Queueing Analysis 165
5.3.1 2031 Future Total Queues – Without GO 165
5.3.2 2041 Future Total Queues – Without GO 165
5.3.3 2041 Future Total Queues – With GO 167
5.3.4 2051 Future Total Queues – Without GO 168
5.3.5 2051 Future Total Queues – With GO 169
5.3.6 Queue Analysis Mitigation Summary 170
6 TRANSPORTATION CAPACITY LIMIT ASSESSMENT 171
7 CONCLUSIONS AND RECOMMENDATIONS 173
7.1 Study Analysis 173
7.2 Threshold Capacity Limit 175
7.3 Study Recommendations 176

APPENDICES

Appendix A Existing Traffic Data
Appendix B Existing SYNCHRO Capacity and Queuing Analysis Reports
Appendix C Background Traffic Forecast Methodology

Appendix D Future Background SYNCHRO Capacity and Queuing Analysis Reports
Appendix E ITE Trip Generation Manual
Appendix F TAZs Land Use and Trip Generation
Appendix G Excerpt of 2022 TMP and Trip Distribution Calculations
Appendix H Site Traffic Volume
Appendix I Future Total SYNCHRO Capacity and Queuing Analysis Reports

FIGURES

Figure 1-1 Study Area Context and SPA Boundaries 4
Figure 2-1 Existing Lane Configurations 6
Figure 2-2 Existing Functional Classification Table 7
Figure 2-3 Proposed Functional Classification Table 7
Figure 2-4 Minor Local Cross-Section - Milton TMP Update 8
Figure 2-5 Major Local Cross-Section - Milton TMP Update 9
Figure 2-6 Minor Collector Cross-Section - Milton TMP Update 9
Figure 2-7 Major Collector Cross-Section - Milton TMP Update 10
Figure 2-8 Arterial (No Median) Cross-Section - Milton TMP Update 10
Figure 2-9 2051 Preferred Strategy Network - Lane Configuration 12
Figure 2-10 Minimum Width for Cross-Section Elements - 2025 TMP Update 13
Figure 2-11 Transit Priority Benefits - 2025 TMP Update 15
Figure 2-12 Transit Priority Options - 2025 TMP Update 15
Figure 2-13 2051 Preferred Transit Priority Corridor Infrastructure Network 19
Figure 2-14 Proposed Transit Routes for ASPA and Trafalgar Routing 20
Figure 2-15 Transit Stop Servicing 21
Figure 2-16 Alternative Routing for Route 14 22
Figure 2-17 Preliminary Active Transportation Network in 2051 24
Figure 2-18 Natural Heritage System and Trails 26
Figure 2-19 Future Total Lane Configurations Figure 2022 TMP Addendum 31
Figure 2-20 Town of Milton Official Plan Land Uses and Future Main Street MCEA Area 36
Figure 2-21 Existing Traffic Volumes: External Intersections 40
Figure 3-1 2031 Future Background Volumes – Without GO: External Intersections 52
Figure 3-2 2041 Future Background Volumes – Without GO: External Intersections 53
Figure 3-3 2041 Future Background Volumes – With GO: External Intersections 54
Figure 3-4 2051 Future Background Volumes – Without GO: External Intersections 55
Figure 3-5 2051 Future Background Volumes – With GO: External Intersections 56
Figure 3-6 2031 Future Background Lane Configurations 57

Figure 3-7 2041 Future Background Lane Configurations 58
Figure 3-8 2051 Future Background Lane Configurations 59
Figure 4-1 Traffic Analysis Zones 80
Figure 4-2 Study Intersections Key Map: Future Conditions 104
Figure 4-3 2051 Full Build-Out Site Traffic Volumes (With GO): External Intersections 105
Figure 4-4 2051 Full Build-Out Site Traffic Volumes (With GO): Arterial-Collector Intersections 106
Figure 4-5 2051 Full Build-Out Site Traffic Volumes (With GO): Collector-Collector Intersections 107
Figure 5-1 2031 Future Total Volumes (without GO): External Intersections 114
Figure 5-2 2031 Future Total Volumes (without GO): Arterial-Collector Intersections 115
Figure 5-3 2031 Future Total Volumes (without GO): Collector-Collector Intersections 116
Figure 5-4 2041 Future Total Volumes (without GO): External Intersections 117
Figure 5-5 2041 Future Total Volumes (without GO): Arterial-Collector Intersections 118
Figure 5-6 2041 Future Total Volumes (without GO): Collector-Collector Intersections 119
Figure 5-7 2041 Future Total Volumes (with GO): External Intersections 120
Figure 5-8 2041 Future Total Volumes (with GO): Arterial-Collector Intersections 121
Figure 5-9 2041 Future Total Volumes (with GO): Collector-Collector Intersections 122
Figure 5-10 2051 Future Total Volumes (without GO): External Intersections 123
Figure 5-11 2051 Future Total Volumes (without GO): Arterial-Collector Intersections 124
Figure 5-12 2051 Future Total Volumes (without GO): Collector-Collector Intersections 125
Figure 5-13 2051 Future Total Volumes (with GO): External Intersections 126
Figure 5-14 2051 Future Total Volumes (with GO): Arterial-Collector Intersections 127
Figure 5-15 2051 Future Total Volumes (with GO): Collector-Collector Intersections 128
Figure 5-16 2031 Future Total Lane Configurations 129
Figure 5-17 2041 Future Total Lane Configurations 132
Figure 5-18 2051 Future Total Lane Configurations 135

TABLES

Table 2-1 ROW Elements Based on Width 23
Table 2-2 Non-Lane-Configuration Improvements: 2022 TMP Addendum 30
Table 2-3 Intersection and Corridor Improvements (Trafalgar Tertiary Plan Road Network Assessment) 37
Table 2-4 Intersection Turning Movement Count Summary 39
Table 2-5 Existing Capacity Analysis Summary 42
Table 2-6 Existing Queueing Analysis: Critical Movements 44

Table 3-1 Background Growth Rates 47
Table 3-2 Future Background Mitigations Measures 49
Table 3-3 Future Background Signal Timing Assumptions and Modifications 60
Table 3-4 2031 Future Background – Without GO Capacity Analysis Summary 61
Table 3-5 2041 Future Background - Without GO Capacity Analysis Summary 64
Table 3-6 2041 Future Background - With GO Capacity Analysis Summary 67
Table 3-7 2051 Future Background - Without GO Capacity Analysis Summary 69
Table 3-8 2051 Future Background - With GO Capacity Analysis Summary 72
Table 3-9 2031 Future Background Queueing Analysis – Without GO 75
Table 3-10 2041 Future Background Queueing Analysis – Without GO: Critical Movements 75
Table 3-11 2041 Future Background Queueing Analysis – With GO: Critical Movements 76
Table 3-12 2051 Future Background Queueing Analysis – Without GO: Critical Movements 77
Table 3-13 2051 Future Background Queueing Analysis – With GO: Critical Movements 78
Table 3-14 Future Background Queueing Mitigation Summary Table 79
Table 4-1 Agerton Development Phasing 83
Table 4-2 Agerton Site Statistics for Trip Generation 83
Table 4-3 Agerton 2031 (without GO Station) Trip Generation Summary 86
Table 4-4 Agerton 2041 (with GO Station) Trip Generation Summary 89
Table 4-5 Agerton 2041 (without GO Station) Trip Generation Summary 91
Table 4-6 Agerton 2051 (with GO Station) Trip Generation Summary 94
Table 4-7 Agerton 2051 (without GO Station) Trip Generation Summary 96
Table 4-8 External Gateway Trip Distribution: 2031 Without GO 100
Table 4-9 External Gateway Trip Distribution: 2041 Without GO 100
Table 4-10 External Gateway Trip Distribution: 2041 With GO 101
Table 4-11 External Gateway Trip Distribution: 2051 Without GO 102
Table 4-12 External Gateway Trip Distribution: 2051 With GO 102
Table 5-1 Summary of Future Total Traffic Volume Figures 108
Table 5-2 Future Total Proposed Mitigation Measures 109
Table 5-3 2031 Future Total Capacity Analysis Summary: External Intersections 138
Table 5-4 2031 Future Total Capacity Analysis Summary: Arterial-Collector Intersections 141
Table 5-5 2041 Future Total Capacity Analysis Summary – Without GO: External Intersections 144
Table 5-6 2041 Future Total Capacity Analysis Summary – Without GO: Arterial-Collector Intersections 147
Table 5-7 2041 Future Total Capacity Analysis Summary – With GO: External Intersections 149
Table 5-8 2041 Future Total Capacity Analysis Summary – With GO: Arterial-Collector Intersections 152
Table 5-9 2051 Future Total Capacity Analysis Summary – Without GO: External Intersections

.....154
Table 5-10 2051 Future Total Capacity Analysis Summary – Without GO: Arterial-Collector Intersections 157
Table 5-11 2051 Future Total Capacity Analysis Summary – With GO: External Intersections160
Table 5-12 2051 Future Total Capacity Analysis Summary – With GO: Arterial-Collector Intersections 162
Table 5-13 2031 Future Total – Without GO Queueing Analysis: Critical Movements.....165
Table 5-14 2041 Future Total – Without GO Queueing Analysis: Critical Movements.....166
Table 5-15 2041 Future Total – With GO Queueing Analysis: Critical Movements.....167
Table 5-16 2051 Future Total – Without GO Queueing Analysis: Critical Movements.....168
Table 5-17 2051 Future Total – With GO Queueing Analysis: Critical Movements.....169
Table 5-18 Future Total Queueing Mitigation Summary Table.....170
Table 7-1 Future Total Queueing Mitigation Summary Table.....177
Table 7-2 Geometric Improvements Summary 178

1 INTRODUCTION

TYLin International Canada Inc. (TYLin) was retained by Agerton New Urban Ltd. Landowners Group (MP4 Agerton) to provide advisory transportation planning and engineering services in support of the development of the Agerton lands within the broader Milton Phase 4 (MP4) area.

The Town of Milton commenced planning for the neighbouring Trafalgar and Agerton Secondary Plans within the MP4 area simultaneously, to plan the two Secondary Plan (SP) areas concurrently. Accordingly, the transportation report prepared for the Trafalgar and Agerton Secondary Plan Areas (TSPA or ASPA) analyzed the future traffic generated by both areas together (i.e. impacts specific to Trafalgar and Agerton traffic were not separated). The latest Addendum to the "Transportation Master Plan for the Trafalgar and Agerton Secondary Plan Areas" (TMP) was prepared by WSP in March 2022.

The purpose of this TMP Update is to update the previous 2022 TMP Addendum report completed by WSP, accounting for proposed land use density and road network modifications resulting from the latest Agerton Secondary Plan. The update will provide analysis for the 2031, 2041, and 2051 planning horizons, and the assessment of an 2051 horizon year will align with the Region's Joint Best Practice Estimates (JBPE) and activity-based model.

It is noted that the planned populations for the Agerton Secondary Plan have evolved through various existing and ongoing studies. The Region Integrated Master Plan is understood to be based on the 2024 Joint Best Planning Estimates (JBPE). Since then, the Town has increased the Agerton Secondary Plan targets to 14,100 residents and 17,500 jobs by 2051. The traffic analysis completed by TYLin adopts these 2051 planning targets based on the Agerton Secondary Plan land use assumptions and site statistics provided by SGL Planning & Design Inc. (SGL), including residential units, and mixed-use/commercial/employment GFA. While the Secondary Plan notes there may be potential for additional growth beyond 2051, no separate ultimate buildout scenario was assessed as part of this TMP.

Intersection improvements will be recommended, as required, based on traffic analysis results for each horizon year and scenario. The subsequent section identifies the principles and key methodologies guiding TYLin's work for the TMP Update.

1.1 Guiding Principles

To ensure appropriate delivery of the Update to the ASPA Transportation Master Plan (TMP), it is critical to reiterate key principles guiding TYLin's work. These principles were identified in the March 2022 TMP and reinforce the broader goals outlined within the ASPA. In addition to identifying principles in this section of the Update, subsequent portions of the report will clarify the methodology applied for analysis, in addition to any assumptions underscoring TYLin's work.

Consider the following summary of the transportation-related principles informing the work within the Update:

- Ensure the community is characterized by higher-order transit service, appropriate infrastructure, and multi-modal connections.
- Provide for a seamless and well-functioning active transportation and goods movement network that is accessible for all.
- Encourage a logical road network which maintains connectivity to other parts of Milton, Halton Region and surrounding municipalities, that is underscored by sufficient levels of service and performance.
- Make use of regional zones, population, employment and residential unit forecasts alongside landowner development densities to prepare 2031, 2041, and 2051 study horizon trip generation results.

This TMP has followed the Municipal Class Environmental Assessment (EA) Master Plan process thereby fulfilling the requirements of Phases 1 and 2 of EA requirements for the proposed ASPA road network. The Master Plan and in turn the Municipal Class EA process account for a system-wide approach to infrastructure planning and, at the same time, integrate environmental assessment principles. This is considered beneficial to the planning process as it considers groups of related projects / developments prior to engaging with and addressing project specific issues and concerns.

The networks presented and assessed as part of this TMP for the ASPA are representative of future development planning through to the 2051 horizon which are intended to accommodate the needs of future population and employment in this area. The TMP has been prepared to align with the Region and the Town's long-term growth and development planning for the purpose of producing a sustainable strategy that keeps pace with realized network demands following implementation.

1.2 Study Methodology

The TMP Update has been prepared in accordance with the Halton Region's Transportation Impact Study Guidelines (2015). TYLin submitted a Terms of Reference (TOR) specifying the approach for the TMP Update to all relevant agencies, including Halton Region and Town staff. Following the incorporation of comments and feedback, the summary below outlines the approach pursued in this report:

- ***Section 1.3 – Study Area:*** Provide an adequate description of the project study area and development proposal. Describe changes to land use density and road network modifications.
- ***Section 2 – Existing Conditions:*** Review relevant background documents and applicable policies to complete a comprehensive description of multi-modal networks, transit

infrastructure and other network elements.

- ***Section 2.5 – Existing Traffic Data:*** Identify base-year traffic conditions which will be used to project volumes to the 2031, 2041, and 2051 study horizons. New turning-movement-count collection was undertaken in May 2025. Weekday a.m. and p.m. peak hours were analyzed. The new TMC data helps account for road improvements in the study area along Britannia Road, alongside changes to commuting patterns resulting from COVID-19.

Section 3 – Future Background Conditions: Future background traffic were developed using a tailored multi-step forecasting methodology that accounts for regional growth, site-specific development traffic from the Agerton and Trafalgar Secondary Plan areas, and the potential influence of the proposed Milton-Trafalgar GO Station. The approach varies by horizon year and transit scenario, applying adjusted regional growth rates while isolating background traffic through the removal of Agerton-related volumes and strategically incorporating Trafalgar Secondary Plan traffic based on the Trafalgar Road Network Assessment.

- ***Sections 2.5, 2.6, 3 and 5 – Traffic Analysis Related Work:*** Intersection capacity and queuing analyses were undertaken using Synchro version 12.0, with results generated using the Highway Capacity Manual 2000 (HCM 2000) methodology, therefore adhering to the Region's TIS Guidelines. The Study Area intersections were analyzed under existing, future background (without the proposed Agerton Corridor development) and future total (with Agerton Corridor development) conditions for the weekday a.m. and p.m. peak hours. Planned and recommended infrastructure and signal timing improvements were noted under future scenarios as required, with considerations also based on timing of regional and municipal infrastructure improvement planning.
- ***Section 4.6 – Trip Generation:*** For all trip generation estimates, site-related traffic was calculated using rates within the Institute of Transportation Engineers (ITE) Trip Generation Manual (12th Edition). All trip generation and mode split assumptions are clearly documented.

1.3 Study Area

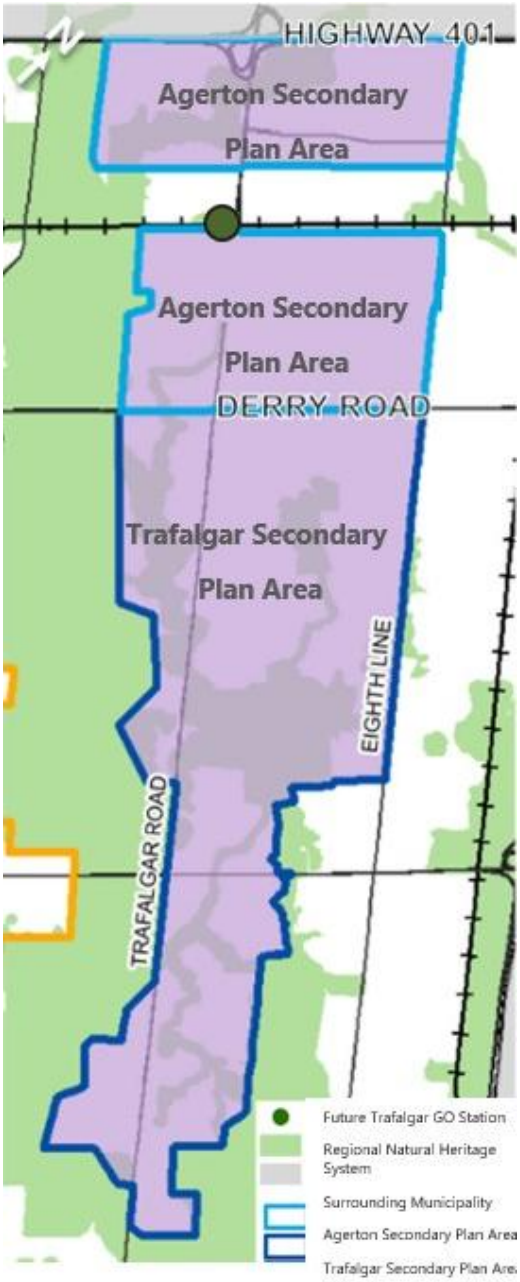
The Agerton Secondary Plan Area (ASPA) is adjacent to the eastern limit of the Town of Milton. North of the study area, as per **Figure 1-1**, is Highway 401. The eastern boundary of the ASPA area runs along the Eighth Line, and the Greenbelt is adjacent to the western boundary. Trafalgar Road traverses north-south through the ASPA area, and the southern boundary runs along Derry Road.

The ASPA features the following intersections:

- Trafalgar Road & Highway 401 Westbound On- and Off-Ramp (Existing, Signalized)
- Trafalgar Road & Highway 401 Eastbound Off-Ramp (Existing, Signalized)

- Trafalgar Road & Derry Road (Existing, Signalized)
- Trafalgar Road & Britannia Road (Existing, Signalized)
- Trafalgar Road & Lower Base Line (Existing, Signalized)
- Eighth Line & Britannia Road (Existing, Signalized)
- Eighth Line & Derry Road (Existing, Unsignalized)
- Trafalgar Road & Future Main Street (Future, Signalized)

Figure 1-1 Study Area Context and SPA Boundaries



2 EXISTING CONDITIONS

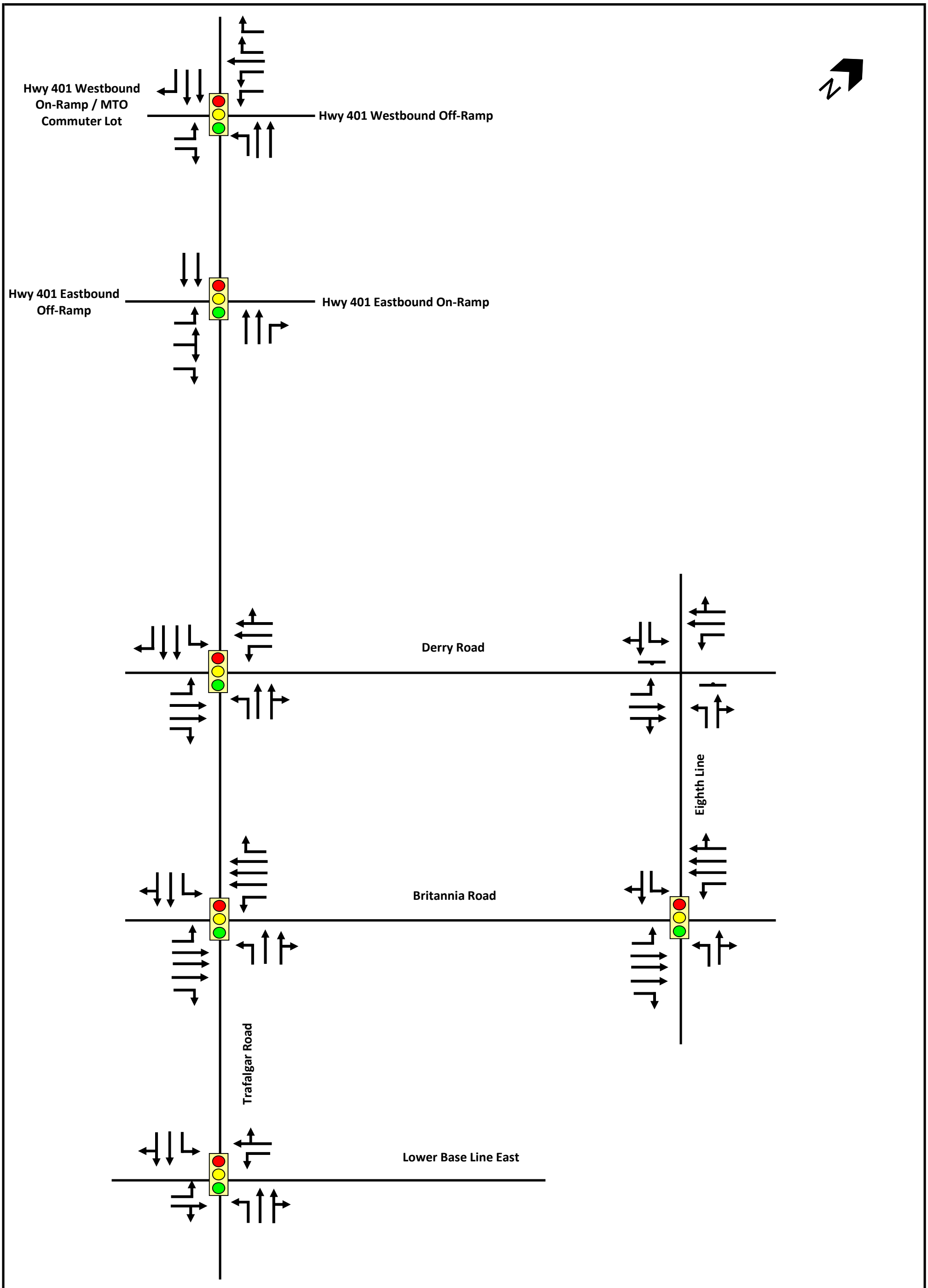
2.1 Road Network

The Study Area Road network includes Regional and Town roads that provide connections to Provincial Highways 401 and 407, as well as the neighbouring municipalities of Halton Hills, Mississauga, and Oakville.

The existing road network includes the following roads:

- **Highway 401** is an east-west provincial highway featuring a six-lane cross-section, with a posted speed limit of 100 km/h within the Study Area. The interchange on Trafalgar Road is located in the ASPA.
- **Trafalgar Road** is a north-south major arterial roadway under the jurisdiction of the Region of Halton, as per the Local Plan. Currently, the roadway has a five-lane rural cross-section consisting of two lanes in each direction and a centre median. It should be noted that north of Derry Road, there is no existing centre unused lane nor two-way-left-turn lane along Trafalgar Road. Trafalgar Road has a posted speed limit of 60 km/h in the vicinity of Derry Road, with paved shoulders and no sidewalks.
- **Derry Road** is an east-west major arterial roadway under the jurisdiction of the Region of Halton, as per the Local Plan. Currently, the roadway has a four-lane rural cross-section consisting of two lanes in each direction. Derry Road has a posted speed limit of 80 km/h within the study area, with paved shoulders and no sidewalks.
- **Britannia Road** is an existing east-west major arterial roadway under the jurisdiction of Halton Region. At the time of this report, the construction of Britannia Road has been completed and has been widened to a 6-lane cross-section with an urban cross-section with active transportation facilities and a posted speed limit of 60 km/h.
- **Eighth Line** is a north-south collector road under the jurisdiction of the Town of Milton. Currently, the roadway has a two-lane rural cross-section consisting of one lane in each direction. Eighth Line has a posted speed limit of 70 km/h in the vicinity of Derry Road, with no sidewalks and discontinuous gravel shoulders.
- **E Lower Base Line (Lower Base Line)** is an existing east-west collector roadway under the jurisdiction of the Town of Milton. Currently, this road has a rural two-lane cross-section and has a posted speed limit of 60 km/h within the vicinity of the subject site.

A lane configuration diagram of the study area road network is provided in **Figure 2-1.**



Legend

Signalized Intersection

Unsignalized Intersection

Existing Lane

TYLin

Figure 2-1

Existing Lane Configuration

2.2 Agerton Roadway Element Review

2.2.1 Roadway Functional Classification

Per the Town of Milton's TMP Update (2025), roadway classification in the Town of Milton is based on Canada-wide and Region Right-of-Way (ROW) practices. **Figure 2-2** presents Milton's existing roadway functional classification of roadway types as per the Town's 2024 Engineering and Parks Standard Manual.

Figure 2-2 Existing Functional Classification Table

Table 21. Existing Functional Classification and ROW

Category	ROW (m)	Standard Drawing Number	Parking Allowed
Laneway	11	01-11.01	Not Allowed
Local	20	01-20.01, 01-20.02, 01-20.03	1 Side
Minor Collector	24	01-24.01	1 Side
Major Collector	26	01-26.01	Site Specific
Arterial	30	01-30.01	Not Allowed
Arterial with Median	35	01-35.02	Not Allowed
Industrial Arterial	35	01-35.01	Not Allowed

Figure 2-3 illustrates the proposed changes for future roadways as recommended in the Town of Milton's TMP Update (2025). The recommended functional classification and ROW provided below was considered for all new roadways within the Agerton SPA and MTSA.

Figure 2-3 Proposed Functional Classification Table

Table 22. Recommended Functional Classification and ROW

Category	ROW (m)*	Parking Allowed
Minor Local	16	1 Side
Major Local	18	1 Side
Minor Collector	22	1 Side
Major Collector	26	1 Side
Arterial without Median	35	Not Allowed
Arterial with Median	35	Not Allowed
Category	**ROW (m)***	**Parking Allowed**
Arterial without Median	35	Not Allowed
Arterial with Median	35	Not Allowed

* Alternate right of way widths may be considered through specific development plans, if supported by the context of the plan and by plan-specific traffic and transportation studies, to the satisfaction of the Town. In addition, individual Municipal Class Environmental Assessments for transportation projects may result in a recommended right of way width that differs from those identified above.

Each roadway type fulfills a specific purpose. The Town TMP Update (2025) states that roads are to be classified based on their function. A general characterization of these functional categories entails the following:

- **Local:** Primarily providing access to properties and connecting to higher-order roads. Lowest volumes across categories. It consists of one or two lanes.
- **Collector:** Providing both property access and traffic movement. Higher volume than local roads. It consists of one or two lanes.
- **Minor Arterial (Town):** Traffic movement is a primary consideration, with some property access. Higher volumes than collector roads, but less than a major arterial. It consists of two or four lanes.
- **Major Arterial (Region):** Traffic movement is the primary function that serves longer distance and inter-regional travel across municipal boundaries. Higher volumes than a municipal arterial road, but less than an expressway. It consists of up to six lanes.
- **Expressways (MTO):** Movement of traffic is its primary function. Carries high volumes of traffic at high speeds usually having few if any intersections, limited points of access or exit, and a divider between lanes for traffic moving in opposite directions.

Standard cross-sections identified for each of these categories are shown in **Figure 2-4** through **Figure 2-8** below.

Figure 2-4 Minor Local Cross-Section - Milton TMP Update

Figure 52. Recommended Minor Local Road Typical Cross-Section (16m Right-of-Way)



Source: Created by WSP on Beyond Typicals

Figure 2-5 Major Local Cross-Section - Milton TMP Update

Figure 53. Recommended Major Local Typical Cross-Section (18m Right-of-Way)



Source: Created by WSP on Beyond Typicals

Figure 2-6 Minor Collector Cross-Section - Milton TMP Update

Figure 54. Recommended Minor Collector Typical Cross-Section (22m Right-of-Way)



Source: Created by WSP on Beyond Typicals

Figure 2-7 Major Collector Cross-Section - Milton TMP Update

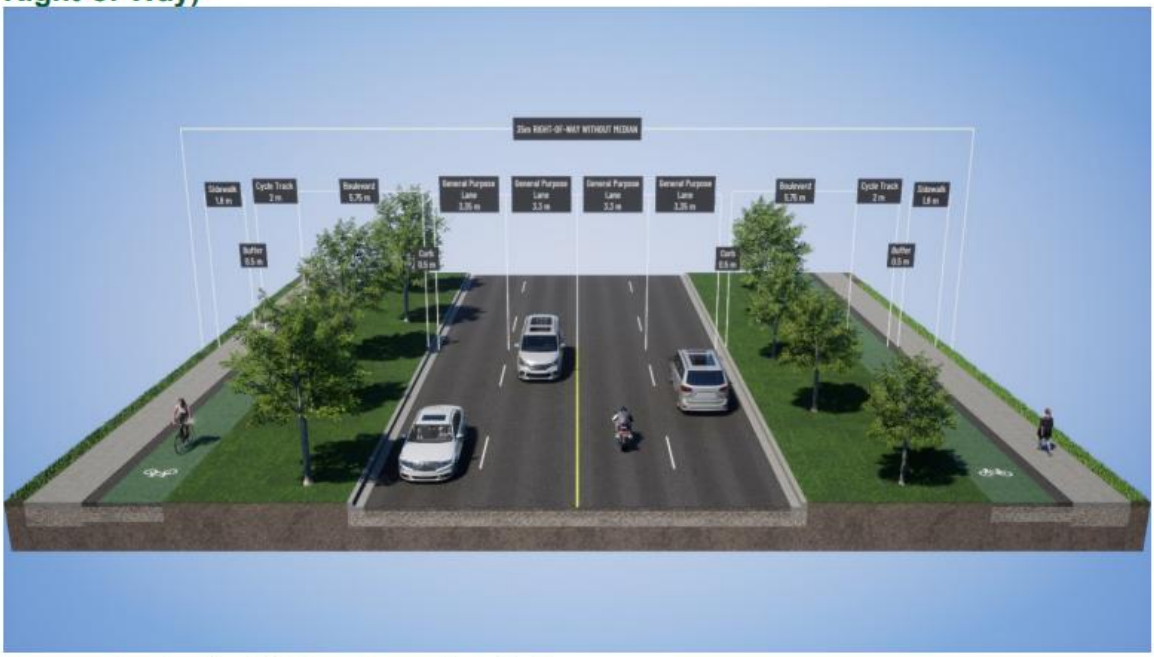
Figure 55. Recommended Major Collector Typical Cross-Section (26m Right-of-Way)



Source: Created by WSP on Beyond Typicals

Figure 2-8 Arterial (No Median) Cross-Section - Milton TMP Update

Figure 56. Recommended Arterial Without Median Typical Cross-Section (35m Right-of-Way)



Source: Created by WSP on Beyond Typicals

2.2.2 Right-of-Way Component Review

In keeping with Halton Region's Transportation Master Plan (TMP) and the Integrated Master Plan (IMP), the ultimate ROW for the regional arterial roads within the study area, including Trafalgar Road, Britannia Road, and Derry Road, has been established as 47 metres, accommodating a six-lane cross-section with provisions for active transportation and transit-supportive infrastructure. A 47 metre ROW on Trafalgar Road is also consistent with the preferred alternative in the ongoing Trafalgar Road Municipal Class Environmental Assessment. **Figure 2-9** illustrates the 2051 preferred strategy network in the vicinity of Agerton Secondary Plan Area.

A table from the 2025 TMP Update is provided outlining the minimum width for cross-section elements, as shown in **Figure 2-10**.

Within the Secondary Plan area, collector roads are proposed with a 22-metre ROW, providing two travel lanes, on-street parking, cycle track and sidewalk on both sides of the road.

To maximize walkability within the MTSA, major local roads are proposed with an 18-metre ROW, providing two travel lanes, on-street parking, and sidewalks on both sides of the road.

At intersections where collector roads connect to a Regional road, the design assumes one dedicated left-turn lane and shared through/right-turn lane as a preliminary assumption. Recommendations will be made as to the modification of intersection configurations within the Agerton SPA, based on the analysis completed as part of the Update.

Figure 2-9 2051 Preferred Strategy Network - Lane Configuration

Source: Figure 13 from Halton Region's Integrated Master Plan Volume 5 - Transportation (2026 March)

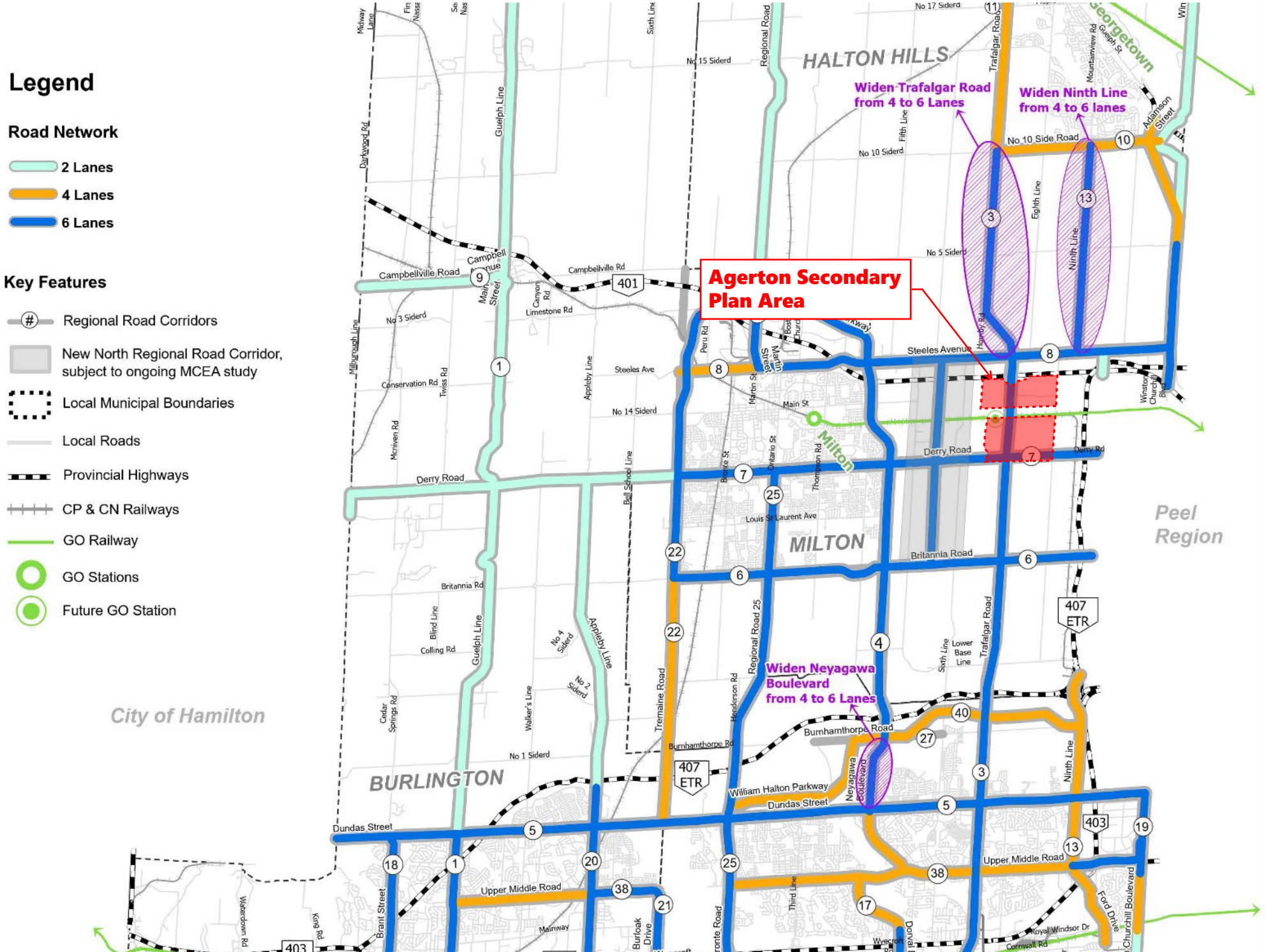


Figure 2-10 Minimum Width for Cross-Section Elements - 2025 TMP Update

Table 23. Minimum Widths for Cross Section Elements

Element	Minimum Width (m)
Setback	0.3
Sidewalk	1.8
Boulevard (with Canada Post mail box stations)	2.5
Boulevard (no Canada Post mail box stations)	2.0
Cycle track	1.5
Buffer between cycle track and sidewalk	0.25
Curb and gutter	0.5
General purpose lane (no transit operating in lane)	3.0
General purpose lane (with transit operating in lane)	3.3
On-street parking	2.0

2.2.3 Road Safety Criteria Review

Demonstrating the fulsome nature of TYLin's work completed for the Update, it is helpful to contextualize potential road safety concerns and accompanying criteria. This will assist in determining the appropriateness of integrating certain ROW elements (i.e., bike lanes) along roads in the Agerton SPA. Using resources available from the Town, Milton identifies safety guidelines for five categories. This includes pedestrians, cyclists, driving and traffic, neighbourhood, and school safety. Relevant categories to identify potential risks and criteria for purposes of the Update are active modes (pedestrian and cyclist) and automobile users.

2.2.3.1 Active Transportation and User Risks and Criteria

Potential conflicts for active users include collisions with vehicular traffic in addition to other active users. Without the presence of dedicated or clear active transportation facilities in the ROW, the risk of these conflicts is heightened. The implementation of roundabouts and pedestrian crossovers helps create a safer environment for pedestrians in Milton. For the Agerton SPA, where analysis of the Update demonstrates volumes, roadway performance or other factors pose a risk to the safety of active users, recommendations to mitigate conflicts will be put forth. Other strategies for creating a safer Active Transportation (AT) environment are highlighted in the cross-sections prepared for the 2025 TMP Update, which have been included in this Update. For instance, given the predominant presence of collector roads, cross-sections like **Figure 2-6** and **Figure 2-7** which feature separated, off-grade bike lanes and sidewalks, should be the standard pursued in the Agerton SPA. In addition, for local roadways, the provision of one-sided street parking as per **Figure 2-4** and **Figure 2-5**, can serve as a traffic calming measure and should also be pursued where permitted in the Agerton SPA.

Any physical infrastructure will be paired with appropriate pavement markings, signing and other

roadway elements per the requirements of the Town and / or Region). Specific recommendations as to the type of markings and signs are to be completed at a detailed design phase. Other features, such as stipulating roadway or curb dimensions, are also subject to further assessment during a later project phase.

2.2.3.2 Vehicles and Traffic Risks and Criteria

A foremost risk for vehicular traffic is the potential for road collisions. Milton currently has a Traffic Calming Policy which outlines tools, strategies and initiatives for managing traffic in residential areas. Milton's approach is largely premised on engineering, education and enforcement. The first category of engineering is most relevant to the work prepared for this Update.

Physical measures, including the type of traffic control used at a given intersection, are critical to the Update. Where analysis demonstrates levels of service that are not acceptable based on Halton Region TIS guidelines, network adjustments will be made. For example, an improvement might entail the integration of a signal at a previously unsignalized intersection.

Advising on the integration of physical infrastructure, such as speed cushions, bumps, and accompanying signage, is to be completed at a detailed design phase. Any future work related to these elements would be subject to municipal approvals and processing, with the need for adherence to Town and / or Region requirements.

2.2.4 Emerging Transportation Technologies and Market Conditions Review

A review of technologies identified in the 2025 TMP reveals the proposed integration of Transit Priority measures in the Town of Milton. In addition to this example, other emerging transportation technologies include micromobility devices and the growing adoption of electric vehicles (EVs) and the presence of automated vehicles (AVs).

2.2.4.1 Transit Priority Measures

The 2025 TMP Update identifies transit priority measures as the "use of technology and/or road widening to enhance transit travel times, boost reliability and increase bus speeds compared to private vehicles" (WSP, 2025). The benefits of implementing transit priority measures include those in **Figure 2-11**, which has been derived from the 2025 TMP Update. Examples of options available for achieving transit priority are highlighted in **Figure 2-12**.

In the context of the work completed for the Update, the results of analysis may illustrate the need for measures which improve transit service. Given the location of the proposed GO Station is situated within the Agerton SPA, transit priority is critical. In the subsequent section of the Update, which reviews the existing multi-modal network, a hypothetical transit servicing plan will be provided.

Figure 2-11 Transit Priority Benefits - 2025 TMP Update

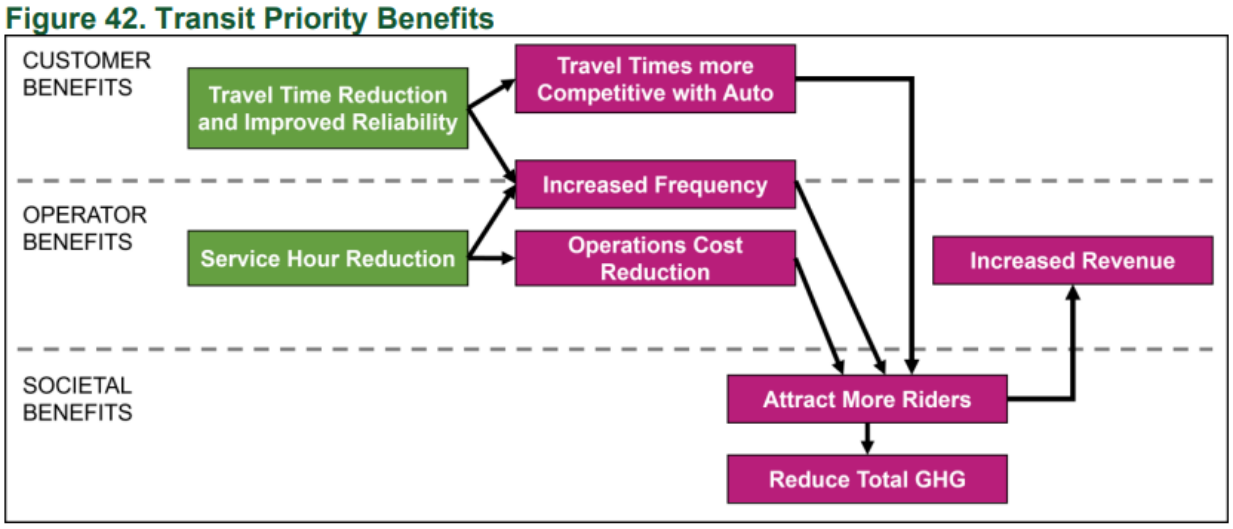
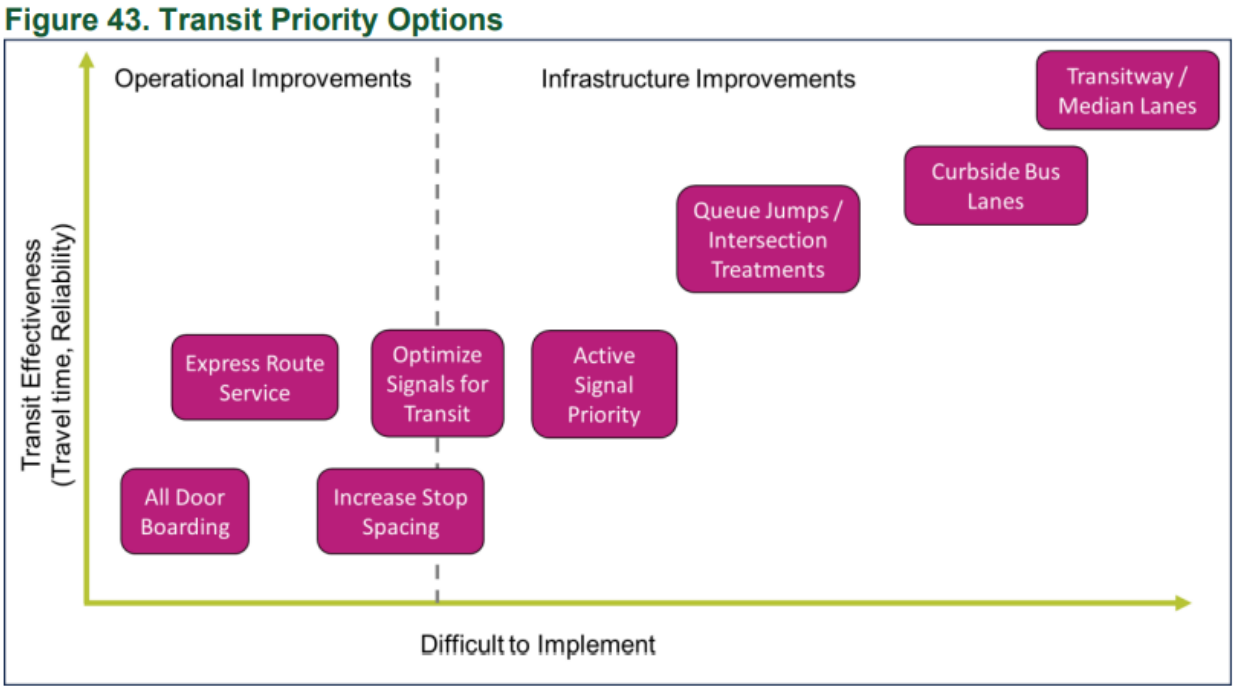


Figure 2-12 Transit Priority Options - 2025 TMP Update



2.2.4.2 Adoption of Micromobility

Municipalities in Ontario incorporate micromobility into roadway cross-sections by adding dedicated cycling facilities such as bike lanes, protected cycle tracks, and multi-use paths, in accordance with guidance from Ontario Traffic Manual Book 18. These facilities are selected based on roadway type and available space.

Where transit priority measures exist, such as bus lanes or BRT, cycling infrastructure is integrated using designs like floating bus stops to reduce conflicts between bikes and transit. Additional measures include providing bicycle parking and allowing bikes on transit. Overall, municipalities apply context-sensitive and complete streets principles, considering roadway classifications to create cross-sections that safely support all users, including cyclists, pedestrians, transit riders, and motorists.

Across municipalities in Ontario, the use of e-scooters, e-bikes, and similar devices has become more prevalent. Providers like Neuron currently operate in a total of seven cities in Ontario and a plethora of other communities across Canada. One of the key considerations with this technology is the ability for individuals to travel at faster speeds compared to conventional, non-motorized micromobility devices. In turn, this reiterates the need to prioritize safety and, as per the risk criteria identification in **Section 2.2.3.2**, emphasizes the need for separated pedestrian and cyclist or micromobility infrastructure along roads within the Agerton SPA where possible.

2.2.4.3 Adoption of Electric Vehicle and Autonomous Vehicle Technology

The implications of broader adoption of electric vehicle (EV) and autonomous vehicle (AV) technology for this Update and the Agerton SPA primarily relate to the presence of supportive infrastructure. At a high level, during future design phases, it may be advisable to integrate EV charging stations throughout the Agerton SPA, however, this will likely be achieved through individual actions on behalf of EV vehicle owners or will be supported at the proposed GO Station through parking lot design.

In the case of AV technology, the Province of Ontario (as of August 2025) has supported an ongoing AV Pilot Program, which is operating in various communities, including Milton. Like EV technology, the repercussions and means for supporting this emerging technology are largely the responsibility of owners or individuals. Over time, as the use of AVs becomes more prevalent, it is expected that the Province of Ontario will continue working with municipalities to define roadway design, signing and pavement marking guidelines to safely and effectively accommodate AV technology.

2.2.5 Review of Multi-Modal Network and Facility Types

Proposed facilities for active transportation users, including cyclists and pedestrians can be reviewed, alongside transit service planned for the Agerton SPA. The Trafalgar RNA completed by TYLin is used as a reference for discussing the multi-modal network and facility types.

2.2.5.1 Future Transit Corridors

Consistent with the Region's Integrated Master Plan (IMP), Trafalgar Road, Derry Road, and Britannia Road are identified within the Transit Priority Corridor network with a phased implementation approach. Derry Road is planned to incorporate mixed traffic operations with queue jump lanes and

transit signal priority in the near term (2037–2041), followed by conversion to HOV lanes (2042–2046) and ultimately to Bus Rapid Transit (BRT) in the long term (2047–2051). Britannia Road is planned for mixed traffic with queue jump lanes and transit signal priority (2042–2046), with a future conversion to HOV lanes (2047–2051). Trafalgar Road will implement HOV lanes with transit signal priority earlier (2032–2036), with conversion to BRT for the section south of the GO Milton Line in the medium term (2042–2046). **Figure 2-13** illustrates the ultimate transit priority corridor network envisioned for the 2051 horizon.

Milton's 2019 – 2023 Transit Services Review & Master Plan Update (2019) noted that planned future developments and transit stations in the Town of Milton will benefit from inter-regional transit. The Town proposed several long-term, fixed-route alignments to better connect future and existing residents to Oakville and Mississauga via inter-regional transit by providing 30-minute headways all day. Captured within the Agerton SPA, the proposed transit route is detailed below and illustrated in **Figure 2-14**.

- **Oakville GO to Georgetown GO** would be a GO Transit proposed route providing north-south service from Georgetown GO Station to Oakville GO Station.

2.2.5.2 Proposed Local Transit Framework – Trafalgar RNA Review

The Trafalgar RNA completed by TYLin proposed multiple new transit routes to address population growth occurring outside the Town's urbanized areas. Three routes have been carried forward in this report. Additionally, an alternative route is proposed to ensure adequate service of employment lands in the ASPA. In keeping with the RNA, these routes provide two-way, all-day service. These routes have been designed to facilitate convenient and accessible transit service between the ASPA and other major nodes within the Town of Milton and surrounding areas.

The proposed transit network for the development is illustrated in **Figure 2-14.** The proposed local transit routes were determined based on the proposed collector road network, the future land uses within the ASPA, and the walking distance to a transit stop.

According to Milton's 2019 – 2023 Transit Services Review & Master Plan Update, the Town assumed a 500m walking distance to an existing transit stop when analyzing the coverage of existing transit routes. It should be noted that the standard walking distance to a transit stop is 400m according to the Canadian Urban Transit Association (CUTA), but 500m was applied in Milton to account for the Town's access issues. For consistency, the 500m walking distance that was implemented in Milton's Master Plan Update was adopted in the Trafalgar RNA transit plan to assess the coverage of the proposed transit routes.

Figure 2-15 illustrates the 500m walking distance coverage of a proposed local transit route. In summary, the majority of the ASPA is serviced within 500m of a proposed local transit route, which is in line with the Town's transit goals. A detailed description of the proposed local Milton Transit

routes, with conceptual route numbers are provided below:

Modified Trafalgar RNA Proposed Transit Routes

- **Route 11** would operate from the future GO Station and travel south to service the Agerton development on the west side of Trafalgar Road before continuing south into the Trafalgar development. The portion of the route located within the ASPA would service multiple blocks, including those located along Collector A, B, C, D, E, F and H. This route would connect riders from both SPAs to the GO Station where they can transfer to the existing and proposed GO Transit routes, or the proposed Milton Transit Routes 12 and 13.
- **Route 12** would operate from the future MEV transit hub and travel east along Britannia Road before heading north onto Trafalgar Road to service the future GO Station. The route would then travel south to service the Agerton development on the west side of Trafalgar Road before continuing west onto Derry Road and terminating at the Milton GO Station. The portion of the route located within the ASPA would serve the same blocks as Route 11. This route would allow riders to transfer to any of the proposed inter-regional transit routes, GO Transit routes, or local Milton Transit Routes (11 and 13).
- **Route 13** would operate from the future GO Station, travel south along Trafalgar Road, and terminate at the Trafalgar/407 GO Carpool lot. This route would allow riders from Milton and the Trafalgar area to transfer to Oakville Transit.

New Agerton Transit Routes

- **Route 14** would operate from the Milton GO Station and would be an amendment to the service currently provided along Route 2 by Milton Transit. Once Future Main Street East is extended into the ASPA, this route can proceed east along Future Main Street past Trafalgar Road, turn left onto Trafalgar Road and eventually return to Future Main Street through Auburn Road, where the route would terminate at the potential GO Station parking lot. An alternative path could be pursued to minimize impacts on existing customers using Route 2, which is illustrated in **Figure 2-16**. Following the loop completed by the Milton Crossroads Centre, the route could turn right onto Steeles Avenue East until Trafalgar Road, where it would travel South until turning left into Auburn Road. Like the previously described routing, this iteration could still terminate at the new GO parking lot.

Figure 2-13 2051 Preferred Transit Priority Corridor Infrastructure Network

Source: Figure 19 from Halton Region's Integrated Master Plan Volume 5 - Transportation (2026 March)

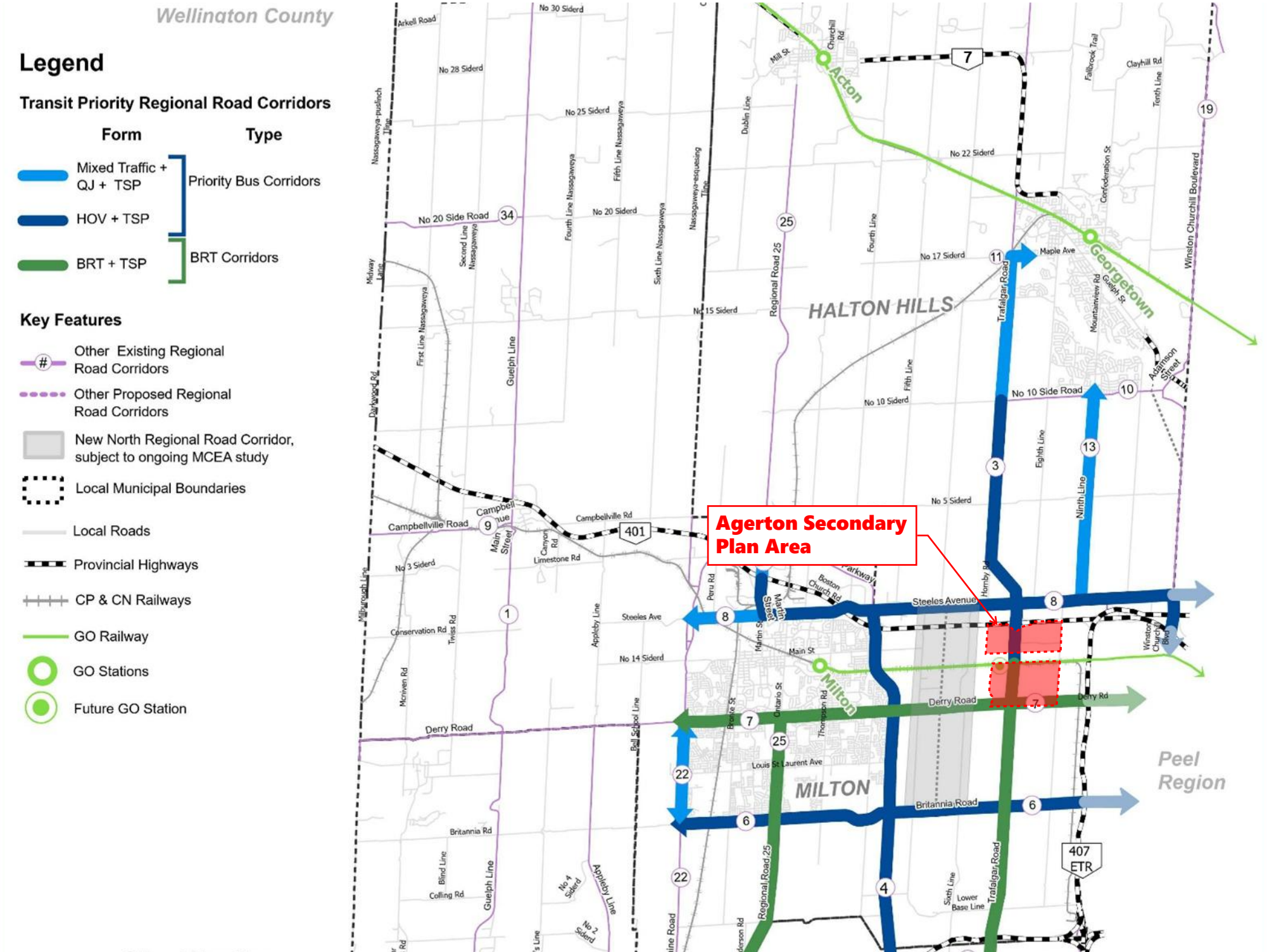


Figure 2-14 Proposed Transit Routes for ASPA and Trafalgar Routing

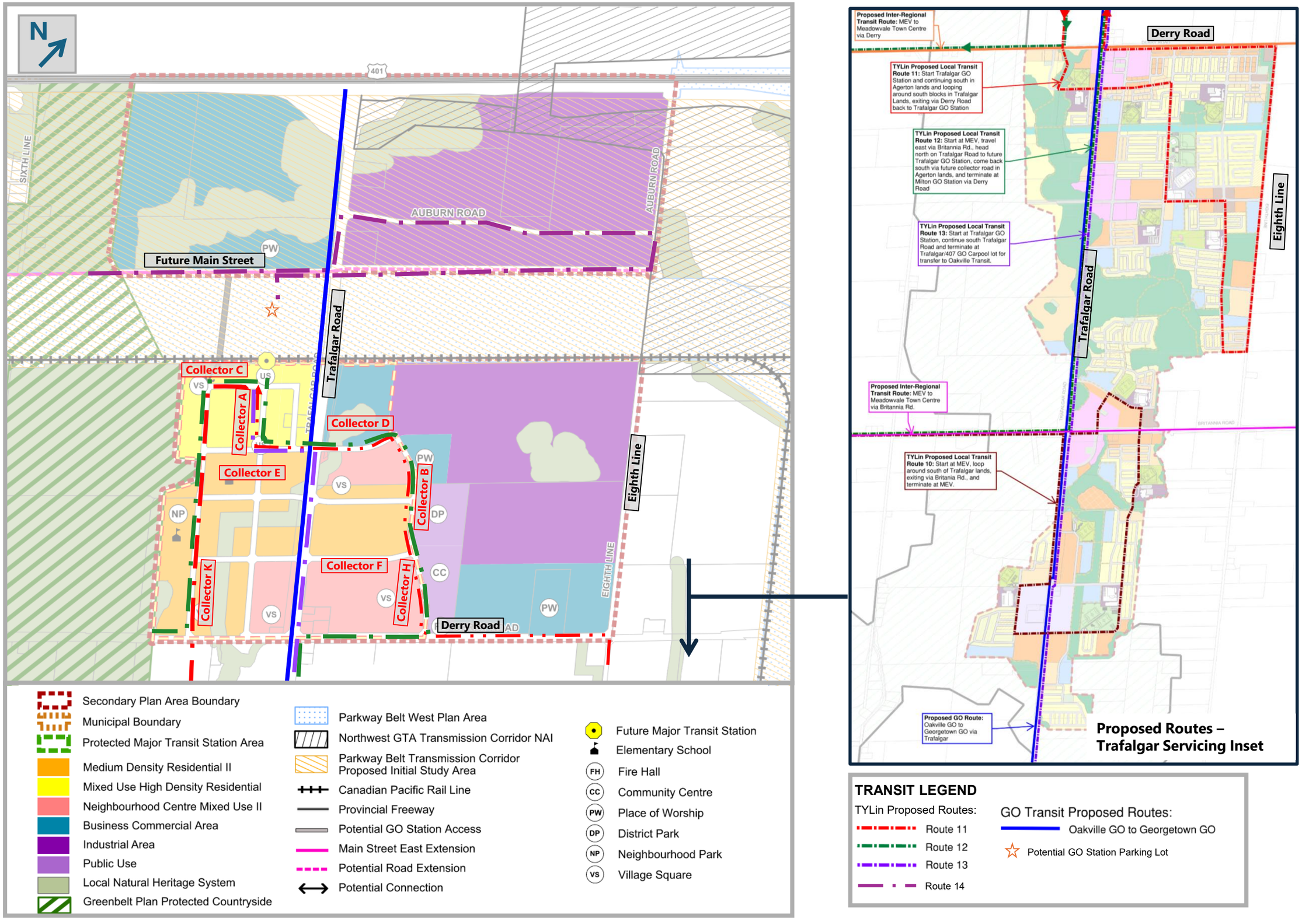
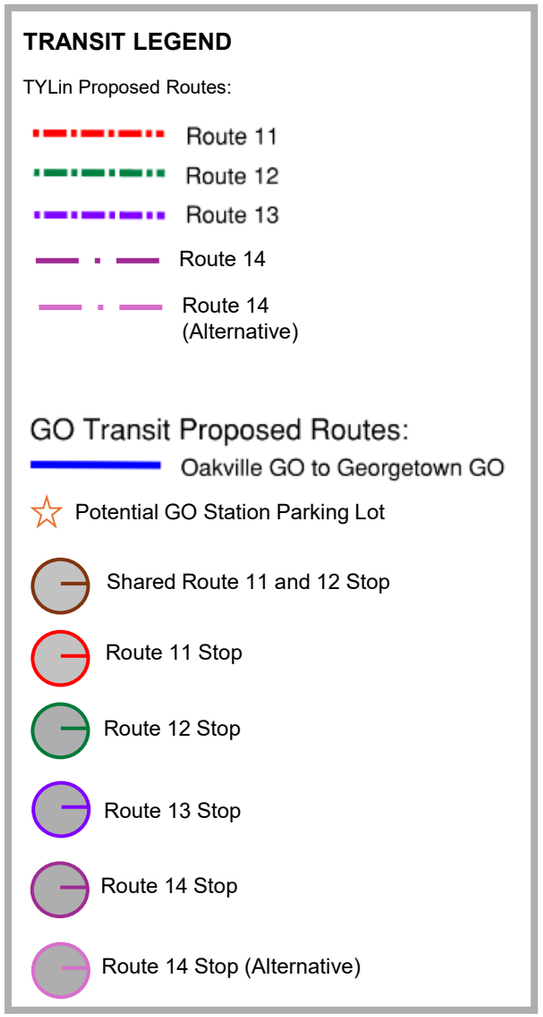


Figure 2-15 Transit Stop Servicing



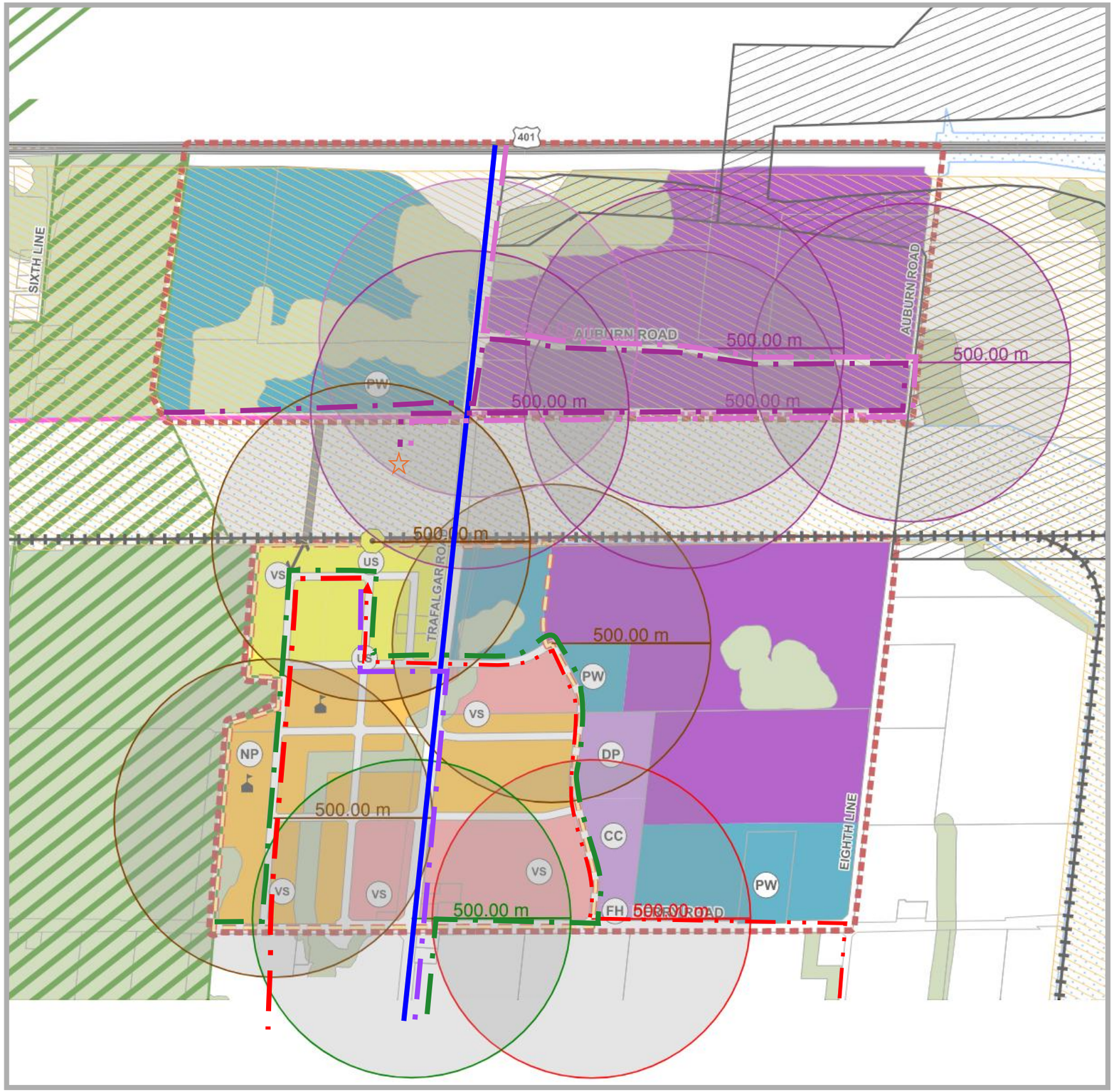
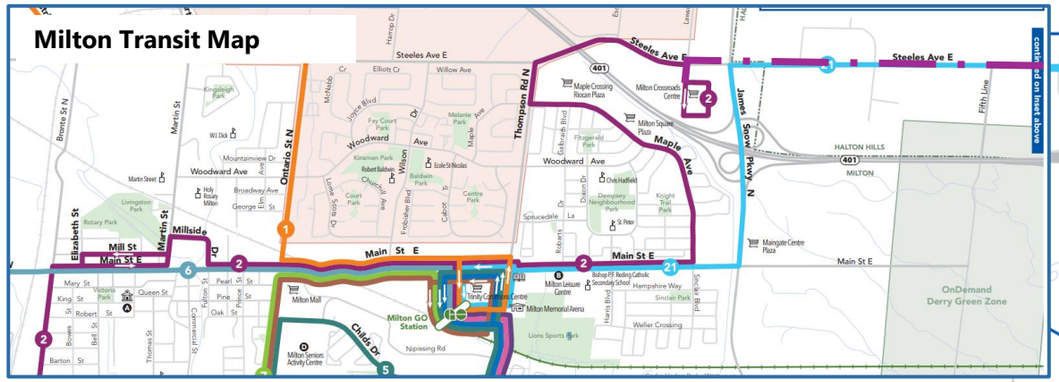
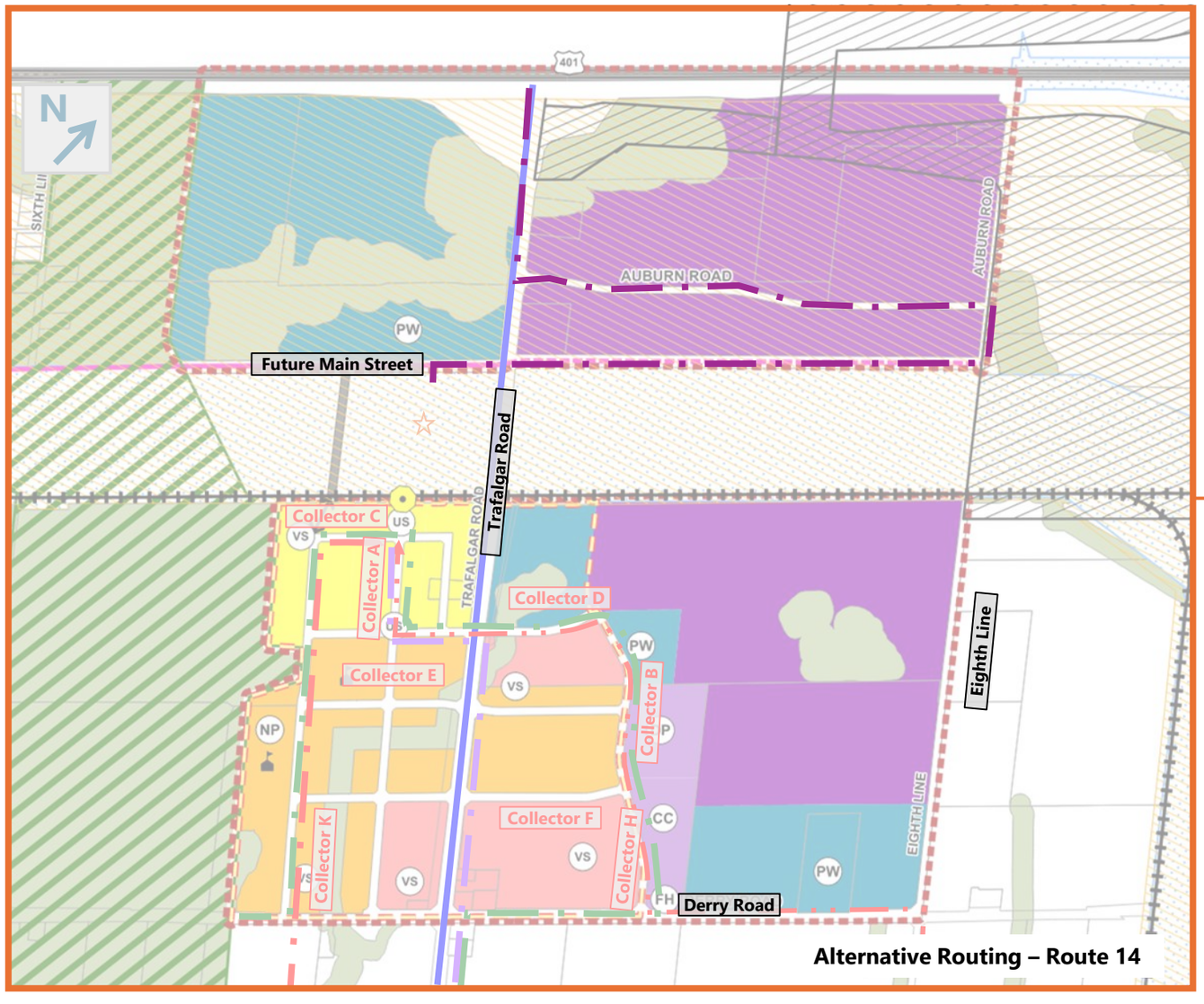


Figure 2-16 Alternate Routing for Route 14





TOWN OF MILTON OFFICIAL PLAN
Schedule C.X.C
AGERTON SECONDARY PLAN LAND USE PLAN

This schedule forms part of the Official Plan and should be read in conjunction with the text.
Copyright 2016: Town of Milton, Teranet Inc.
Prepared by: Malone Given Parsons Ltd.
February 2026

- SECONDARY PLAN AREA
- MUNICIPAL BOUNDARY
- GREENBELT PLAN PROTECTED COUNTRYSIDE
- PARKWAY BELT WEST PLAN AREA
- MTO PERMIT CONTROLLED LANDS (BUILDING OR OTHER STRUCTURE)
- NORTHWEST GTA TRANSMISSION CORRIDOR NARROWED AREA OF INTEREST
- CANADIAN PACIFIC RAIL LINE
- GO STATION
- GO TRANSIT ROUTE
- MAJOR TRANSIT STATION AREA
- MEDIUM DENSITY RESIDENTIAL II
- MIXED-USE HIGH DENSITY
- NEIGHBOURHOOD CENTRE MIXED USE II
- PUBLIC USE
- BUSINESS COMMERCIAL AREA
- EMPLOYMENT AREA
- NATURAL HERITAGE SYSTEM (SUBJECT TO REFINEMENT)
- MAIN STREET EXTENSION
- POTENTIAL ROAD EXTENTSION
- POTENTIAL GO STATION ACCESS
- POTENTIAL FULL-MOVES INTERSECTION
- POTENTIAL RIGHT-IN RIGHT-OUT INTERSECTION
- POTENTIAL CONNECTION
- SCHOOL
- FH FIRE HALL
- CC COMMUNITY CENTRE
- PW PLACE OF WORSHIP
- DP DISTRICT PARK
- NP NEIGHBOURHOOD PARK
- VS VILLAGE SQUARE
- US URBAN SQUARE

TRANSIT LEGEND

TYLin Proposed Routes:
- Route 11
- Route 12
- Route 13
- Route 14

GO Transit Proposed Routes:
- Oakville GO to Georgetown GO
- Potential GO Station Parking Lot

2.2.5.3 Proposed Active Transportation Facility Review

Cycling and Pedestrian Facilities (Roadway Based)

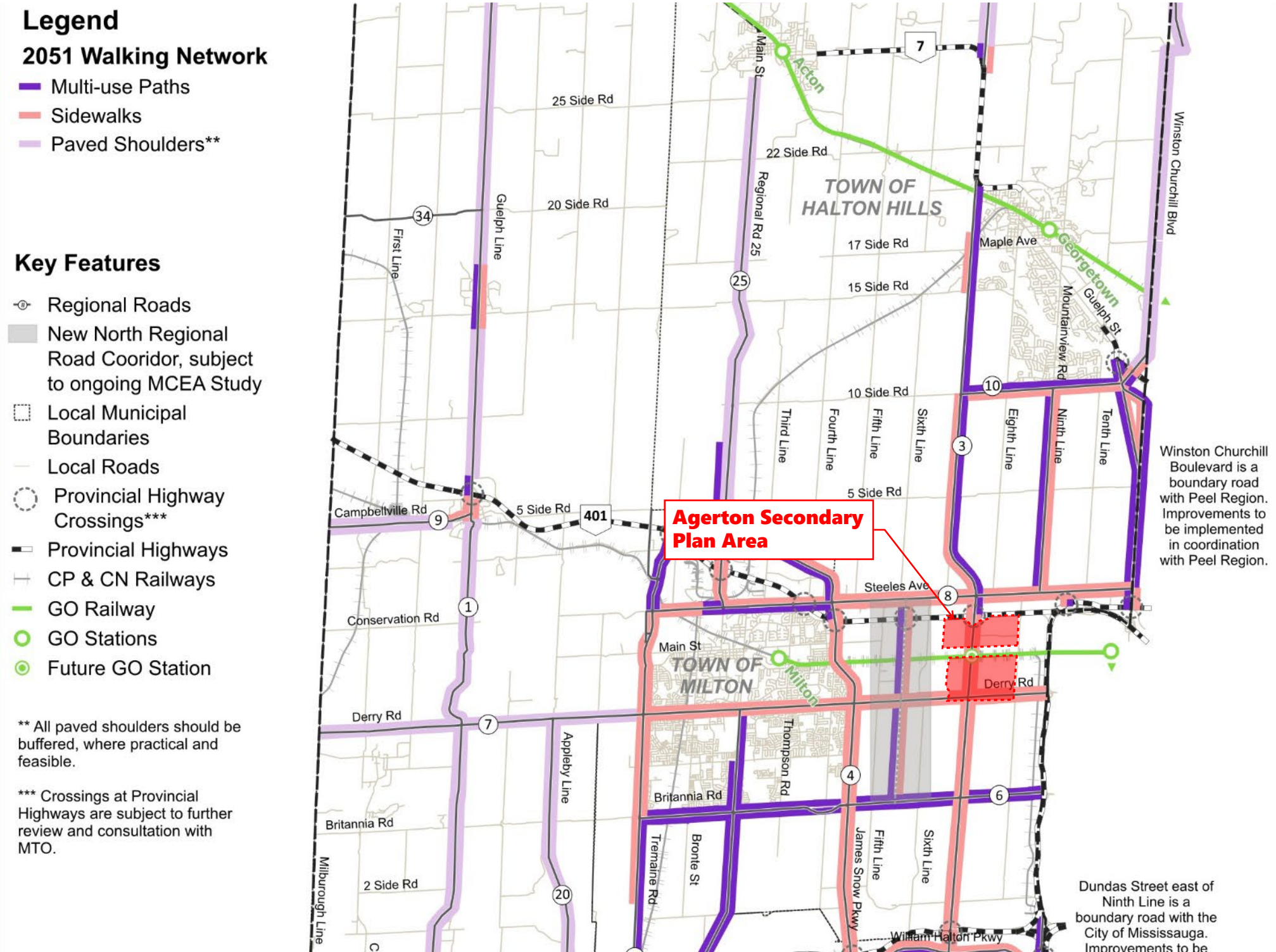
As per the review of the proposed functional classification criteria for ROWs within the Town of Milton, under the 2025 TMP review and the ongoing Halton Region's IMP, the cycling and pedestrian facilities proposed for the ASPA are presented in **Table 2-1** below. **Table 2-1** illustrates the 2051 active transportation network recommended for regional roads in Region's IMP.

Table 2-1 ROW Elements Based on Width

Roadway Name	Width (metres)	Facilities & Features (Under 2025 TMP)
Local		
Z-1	18	Sidewalk (1.8m)
Z-2	18	Sidewalk (1.8m)
Z-5	18	Sidewalk (1.8m)
Z-9	18	Sidewalk (1.8m)
Collectors		
Auburn Road	22/26	Sidewalk (1.8m), Cycle Track (1.5m)
Eighth Line	22/26	Sidewalk (1.8m), Cycle Track (1.5m)
Collector A	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector B	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector C	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector D	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector E	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector F	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector H	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector I	22	Sidewalk (1.8m), Cycle Track (1.5m)
Collector N	22	Sidewalk (1.8m), Cycle Track (1.5m)
Arterial		
Derry Road	47	Sidewalk, Cycle Track
Trafalgar Road	47	Sidewalk, Cycle Track
Britannia Road	47	Multi-use Path, Separated Bike Lanes
Future Main Street	35	Sidewalk (1.8m), Cycle Track (2m)
Louis St. Laurent Avenue	35	Sidewalk (1.8m), Cycle Track (2m)

Figure 2-17a 2051 Regional Active Transportation Network

Source: Figure 28 from Halton Region's Integrated Master Plan Volume 5 - Transportation (2026 March)



Natural Trail and Heritage System

According to Schedule C.X.B of the Agerton SP, multiple trails are available for AT users to access when navigating the ASPA. These facilities are shown in **Figure 2-18**. Based on the information presented in the SP, the proposed trail network provides strong north-south connectivity throughout the study area. It is also noted that one portion of the trail system within the realigned watercourse natural heritage system provides an east-west connection within the PMTSA. While trail-based east-west connections are more limited in extent, east-west active transportation travel is supported through the planned street network and associated pedestrian and cycling facilities. The primary function of longer-distance east-west travel is expected to be accommodated through the broader active transportation network. Overall, the combination of trails and on-street active transportation facilities will support non-automobile travel within the Secondary Plan area.

2.2.5.4 Summary of Proposed Facilities and Takeaways

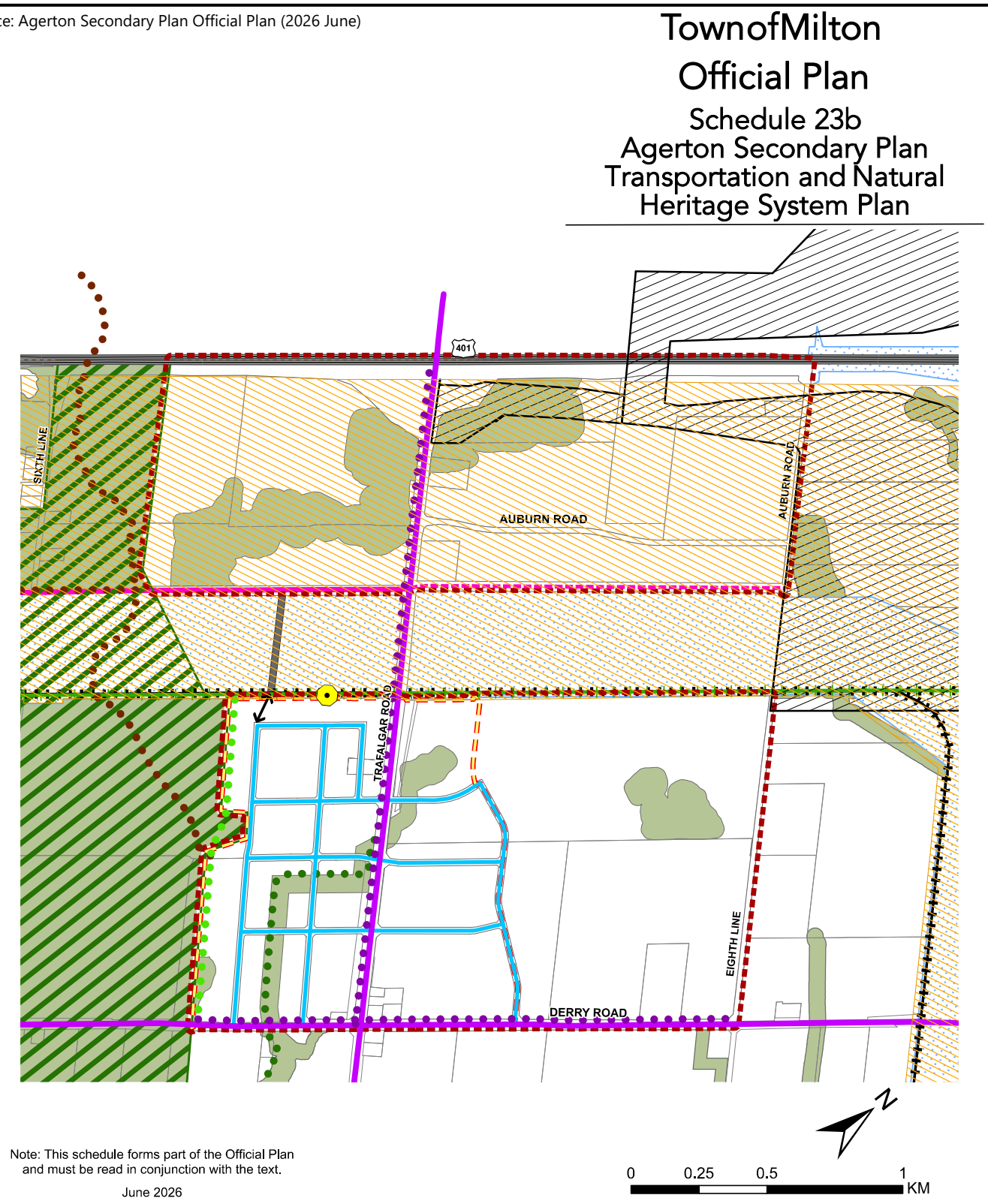
Based on the review conducted, the proposed AT facilities and recommended transit service are viewed as appropriate for the development being undertaken. In the case of AT infrastructure, the 2025 TMP prioritized the integration of separated facilities along most roadway types, enhancing the user experience of cyclists and individuals walking. As previously stated, during a more detailed design phase, modifications can be made to the elements proposed for each roadway.

Regarding transit, the routes identified to integrate with the adjacent Trafalgar Secondary Plan will connect individuals to various portions of the Town of Milton, connecting to key destinations including the proposed GO Station within the ASPA, the existing Milton GO, in addition to the MEV transit hub. Worth noting, TYLin proposed that an additional route be provided for transit servicing within the ASPA to ensure employment-related uses located along Future Main Street and Eighth Line are captured and can make use of enhanced multi-modal offerings in the area.

The active transportation network will work in conjunction with the transit network to provide multi-modal integration. Sidewalks, cycling facilities and trail connections are aligned with transit corridors and stops to facilitate last mile connectivity. Continuous sidewalks, multi-use paths and dedicated cycling facilities are present along major corridors such as Trafalgar Road, Britannia Road and Derry Road, enabling pedestrian and cycling connections access to transit stops and GO station.

Figure 2-18 Natural Heritage System and Trails

Source: Agerton Secondary Plan Official Plan (2026 June)



2.3 Planning Context

The Agerton Secondary Plan has been developed within the context of provincial, regional, and municipal planning policies and initiatives. A plethora of transportation plans and studies that apply to the Agerton area have been summarized for reference purposes.

2.3.1 Halton Region Transportation Master Plan (2011)

In the Region's 2011 Transportation Master Plan, *The Road to Change*, it is stated that the TMP "provides the strategies, policies and tools for the development of a balanced and sustainable transportation system and meet the Region's transportation needs safely, efficiently and cost effectively to 2031."

The 2011 TMP document also outlines the Vision and Guiding Principles that guided the TMP creation process. A key component of the TMP's Vision is to support a sustainable and multi-modal network that can accommodate a range of travel modes and choices. Such a network will provide those travelling in Halton Region with alternatives to single-occupant vehicle trips.

The TMP's five guiding principles are:

- **Balanced Needs** – provide choice for the travel needs of residents;
- **Healthy Communities** – support a healthy and active lifestyle;
- **Economic Vitality** – transportation will be a major contributor to the Region's prosperity;
- **Sustainability** – balance economic, social, and environmental goals; and
- **Well-Maintained Infrastructure** – keep the Region's infrastructure in a good state of repair.

The Region's TMP identified a 47 metre ROW for Trafalgar Road and Derry Roadwithin the study area. The future 47 metre ROW for the existing Regional arterial roads has been incorporated into the Update analysis. In accordance with Halton Region standards, all existing and future regional intersections shall have a minimum daylighting triangle requirement of 15x15m.

Note that the Region has completed an update to the 2011 TMP through the Integrated Master Plan (see **Section 2.3.7**).

2.3.2 Halton Region Active Transportation Master Plan (2015)

The Region's Active Transportation Master Plan (ATMP), released in 2015, was created in support of the policies outlined in the Region's 2011 TMP. The ATMP states that it "outlines the strategy, infrastructure, initiatives, and programs required to create an AT plan that is safe, affordable, and sustainable".

The ATMP's Vision is as follows:

- The ATMP will help to promote an integrated, sustainable, accessible, affordable, and efficient multi-modal transportation network where AT will be a viable alternative to strengthen linkages between communities and municipalities.
- The transportation system identified to 2031 must accommodate growth in travel demand in a manner that supports the vision and guiding principles of the TMP while maintaining current levels of service.
- An increase in the use of AT as a year-round travel mode option available for all members of the community.
- The ATMP must guide the Region to meet the mode share target for active transportation of 5% of all p.m. peak hour trips by 2031 from less than 2% in 2011. This represents a seven-fold increase over the 1,600 p.m. peak hour trips made by cycling and walking in 2011 to 11,500 trips by 2031.

Note that the Region has completed an update to the 2015 ATMP through the Integrated Master Plan (see **Section 2.3.7**).

2.3.3 Town of Milton Transportation Master Plan Update (2025)

As of May 2025, the 2025 Milton TMP ("2025 Update") has been released, building on the existing vision expressed for the Town's transportation network in 2018. Input from Town staff and officials, alongside key stakeholders, including the public, was used to inform the direction of the TMP.

In keeping with the intent of the 2018 TMP, the 2025 Update continues to take a balanced approach to transportation investment in Milton. Underlying this, Milton is seeking to forge a multi-modal future within the community. The document provides policy context for the approach to achieving this vision, including an outline of capital improvements and additional studies, as required. It should be noted that there are some notable differences between the two plans pertaining to active transportation infrastructure, right-of-way (ROW) widths, and road classifications.

Elaborating, in the 2025 Update, the Town has recommended updated road classification and right-of-way widths to better accommodate the anticipated growth within Milton by incorporating active transportation infrastructure in urban areas. All ROWs except the laneway and rural roadway ROWs in the 2025 TMP were revised. One of the main differences is the revised ROWs in the 2025 document, where on-street bicycle lanes were shifted to in-boulevard cycle tracks for all collector and arterial road cross-sections to provide that physical separation between cyclists and vehicles. This change also eliminates the multi-use paths that were previously identified in the 2018 TMP by incorporating and separating both sidewalks and cycle tracks to be provided on both sides of the collector and arterial roads. According to the 2018 TMP and Town standards, sidewalk widths were specified to be 1.5m for all local, collector, and arterial roads. In the 2025 Update, sidewalk widths were increased from 1.5m to 1.8m for all roadway types.

2.3.3.1 Milton TMP – Extension of Louis St. Laurent Avenue

Worth noting, the Town of Milton has planned for the extension of Louis St. Laurent Avenue from Fifth Line to Trafalgar Road by 2051, as identified in the Britannia Secondary Plan (2024).

Given that this work is projected to occur within the ultimate horizon associated with this Update, this infrastructure improvement is critical to mention. It is assumed that the extended portion of Louis St. Laurent Avenue will be designed as a 4-lane, 35 metre ROW arterial. Year 2051 peak-hour traffic volume projections were adjusted accordingly at the study intersections to account for the introduction of an additional east-west arterial roadway.

2.3.4 Town of Milton Transportation Master Plan for the Trafalgar and Agerton Secondary Plan (2019-2022)

The original TMP for the Trafalgar Agerton Secondary Plan was first completed in March 2019, with an updated version circulated in December 2020. The most recent version entails an Addendum completed in March 2022. Both have been reviewed as part of the preparation of the enclosed Agerton TMP Update.

The Trafalgar and Agerton TMP (2020) was prepared using the Town of Milton's 2018 TMP as a guiding document. This report further developed the traffic planning already in place for the TSPA and ASPA. The TMP (2020) assessed the high-level impacts of the proposed Trafalgar and Agerton Secondary Plans on the adjacent arterial roads, collector roads, and major intersections. Many of the existing study area intersections included in this Update were also analyzed in Trafalgar and Agerton TMP (2020).

The March 2022 TMP Addendum's analysis included 19,000 employees and 11,433 residential units, comprised of single detached dwellings, low-rise, and mid-rise developments. The March 2022 TMP Addendum concluded that should the projected future total volumes be actualized, a total of five study intersections are expected to experience capacity issues under future total conditions.

This includes the following intersections:

- Trafalgar Road and Highway 401 Eastbound Off-Ramp;
- Trafalgar Road and Derry Road;
- Trafalgar Road and Britannia Road;
- Trafalgar Road and E Lower Base Line; and
- Trafalgar Road and Future Main Street

The 2022 TMP Addendum recommends that in addition to applying signal timing optimization to study intersections, dedicated turning lanes, including dual left-turn lanes, can also be implemented

to help improve operations for turning movements. Lane configuration-based improvements are reflected in **Figure 2-19,** which has been derived from the March 2022 Addendum. Despite these improvements, many intersections will continue to operate with over-capacity movements under future total conditions, should the projected volumes be actualized. Regarding the dedicated turn lane improvements, TMP (2022) recommends that the "rights-of-way requirement be protected now, and the intersections be monitored regularly through the Region's Traffic Count Program and be further considered in the future Municipal Class Environmental Assessment Studies."

A summary of the recommended intersection improvements for Derry Road, Trafalgar Road, Lower Base Line, and Eighth Line from the 2022 TMP has been summarized in **Table 2-2.**

Table 2-2 Non-Lane-Configuration Improvements: 2022 TMP Addendum

Intersection	Improvements
Trafalgar Road & Highway 401 EB Off-Ramp *(Signalized)*	► Removed land utilization penalty for the HOV lanes on Trafalgar (expected to terminate at GO Station near Future Main Street East)
Trafalgar Road & Derry Road *(Signalized)*	► Added overlap phases for all exclusive right-turn movements with the corresponding left-turn phases
Trafalgar Road & Britannia Road *(Signalized)*	► Added overlap phases for all exclusive right-turn movements with the corresponding left-turn phases
Trafalgar Road & Future Main Street *(Signalized)*	► Added overlap phases for all exclusive right-turn movements with the corresponding left-turn phases

Figure 2-19 Future Total Lane Configurations Figure 2022 TMP Addendum

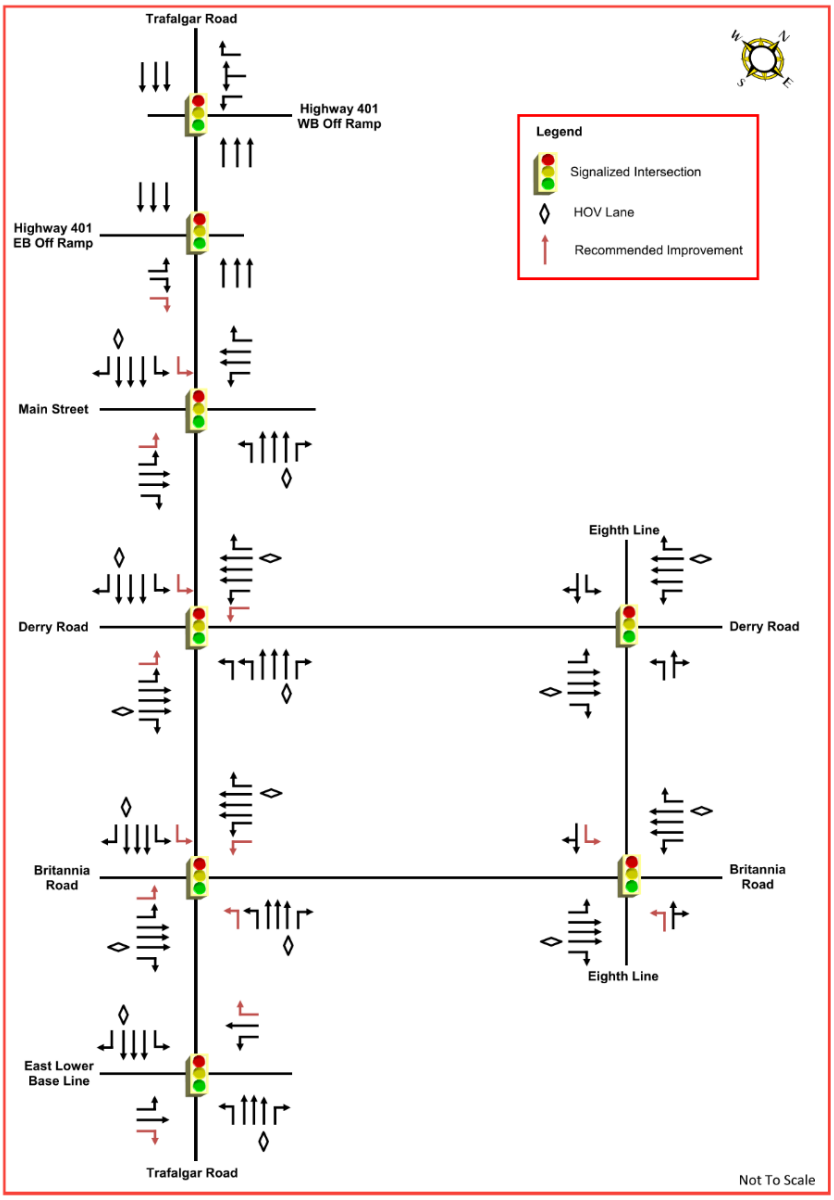


Figure 5-5
Future Total Lane Configurations with Recommended Improvements

2.3.5 Trafalgar Secondary Plan (2019, 2024)

The Trafalgar Secondary Plan was adopted by the Town of Milton on March 25, 2019 (By-law 030-2019) and has since been amended in accordance with Ontario Land Tribunal Orders issued on February 8, 2024 and July 22, 2024. The Tertiary Plan for the TSPA was prepared in accordance with the goals and objectives of the Trafalgar Secondary Plan and endorsed by Town of Milton Council in December 2025.

The Trafalgar Tertiary Plan includes a robust collector road network that proposes modifications to

the Town's standard right-of-way (ROW) collector road cross-sections. These modifications were discussed in greater detail within TYLin's Road Network Assessment (RNA) for the Trafalgar Tertiary Plan Area, which is outlined in **Section 2.4.3** of this Update. The Trafalgar Tertiary Plan Road Network Assessment proposed modifications often include active transportation elements, such as in-boulevard cycle tracks, buffered on-street cycle lanes, and Multi-use Paths (MUPs), that differ from the Town's ROW standards to better achieve the level of active transportation connectivity envisioned by the Secondary Plan.

In addition to ensuring active transportation infrastructure is available and accessible to all users, the proposed Trafalgar Tertiary Plan collector roads maintain general automobile travel lanes that are able to accommodate local transit vehicles (3.35m wide) while also providing on-street parking on at least one side of the road.

The population and employment numbers from the latest approved Trafalgar RNA (Nov 2025) have been considered in this TMP update analysis.

2.3.6 Agerton Secondary Plan

The Agerton Secondary Plan Preferred Land Use Concept and Secondary Plan Framework were endorsed in principle by Milton Council on March 25, 2019, as input into the Regional Municipal Comprehensive Review. Due to a variety of changes, particularly in Provincial policy and legislation, adjustments have been made to the Preferred Land Use Concept and Secondary Plan Framework. This TMP Update study has been undertaken through an integrated approach that combines the requirements of the Planning Act and the Environmental Assessment Act to create a coordinated Secondary Plan and Transportation Master Plan for the updated Agerton SPA.

The Agerton Secondary Plan incorporates mobility goals identified below:

- Create a multi-modal transit hub centred around a Major Transit Station that serves to connect people and goods within the Secondary Plan, other areas of the Town and surrounding urban areas in the Region;
- Identify Trafalgar Road and Derry Road corridors as Transit Priority Corridors to serve as key connectors and key Regional corridors to link people to existing and planned regional destinations and abutting municipalities.

2.3.6.1 Planning Changes and Population Pledges: Agerton

Since the completion of the 2022 TMP Addendum, ASPA has amended its forecasted population and employment to align with more recent planning density. The Agerton Secondary Plan establishes updated growth management targets of 14,100 residents and 17,500 jobs by 2051, compared to the 2022 TMP Addendum figures of 6,800 people and 15,000 jobs. This represents an approximate increase of 107% in population and 17% in employment forecasts.

2.3.7 Halton Integrated Master Plan

The Region of Halton's Integrated Master Plan (IMP) is a long-term plan that aims to expand water, wastewater, and transportation infrastructure to accommodate the growing population in the local municipalities within the Region to 2051 and beyond. The IMP states that it will:

- Guide the management and development of the Region's water, wastewater and transportation systems (including the active transportation network and master plan);
- Maximize capacity, system flexibility and extend the life expectancy of Regional water, wastewater and transportation infrastructure; and
- Outline the strategies for maintaining and improving these critical systems to ensure we meet the needs of the community now and in the future.

A selection of transportation strategies was also outlined in the IMP, which apply to the Update:

- Optimizing existing/planned transportation network;
- Localized corridor widening and improvements;
- Flexibility and adaptability to support the evolution of Transit Priority Corridors;
- Prioritizing walking and cycling facilities, including at intersections;
- Identifying supporting strategies and technologies (for example, transit signal priority).

The Integrated Master Plan (IMP) has identified a Transit Priority Corridor network which includes Derry Road, Britannia Road and Trafalgar Road within this Agerton TMP study area, along with the phasing of the Transit Priority Corridor infrastructure improvements. The timing of the Transit Priority Corridors includes:

- Derry Road: Mixed Traffic + Queue Jump + Transit Signal Priority (to be implemented in the 2037-2041 horizon), convert to HOV lanes (2042-2046 horizon), convert to BRT (2047-2051 horizon)
- Britannia Road: Mixed Traffic + Queue Jump + Transit Signal Priority (to be implemented in the 2042-2046 horizon), convert to HOV (2047-2051 horizon)
- Trafalgar Road: HOV + Transit Signal Priority (to be implemented in the 2032-2036 horizon), convert to BRT south of GO Milton Line (2042-2046 horizon)

The Transit Priority Corridor Network has been developed to be flexible to adapt to Local growth priorities and future travel demand.

2.3.8 Town of Milton Transit 5-year (2025-2029) Service Plan and Master Plan Update

The Town of Milton sets out a strategic vision and re-designed transit network to guide transit

planning and operations for 2025-2029 and beyond. The plan emphasizes a transition toward a more connected, frequent, and transit-supportive network that integrates land use planning with transportation infrastructure.

Key directions of the Transit Service Plan relevant to the study area include:

- Development of higher-frequency transit service along primary corridors such as Trafalgar Road, Britannia Road, and Derry Road.
- Improved last mile connectivity with a greater number of residents within walking distance of a bus stop.
- Frequency improvement, extended service hours including nights and Sundays, and redistribution of routes based on demand
- Short-term improvements for interim transit service enhancements prior to the start of operations at Trafalgar GO station.

2.4 Relevant Background Studies

Numerous studies have previously been completed within and adjacent to the study area to identify improvements required because of ongoing and future developments within the Town. A summary of the planning context and relevant background studies is provided in this section in order of completion.

2.4.1 Britannia Road Transportation Corridor Environmental Assessment (2014)

A Schedule 'C' Class Environmental Assessment (EA) was completed by Halton Region to identify transportation corridor improvements to satisfy future travel demands on Britannia Road from Tremaine Road to Highway 407 by balancing the potential impacts on natural, socio-economic and cultural environments.

Based on the EA assessment, proceeding with Britannia Road widening from two lanes to the ultimate six-lane configuration (47m ROW) from Regional Road 25 to Highway 407 immediately (Alternative 2) was selected as the preferred alternative. The widening work along Britannia Road, which was previously under construction and anticipated for completed in 2024, has since been completed at the time of this report.

2.4.2 Trafalgar GO Station

The Trafalgar GO Station is a significant transit development within the subject site. . The Trafalgar GO Station is to be located within the Agerton Major Transit Station Area (MTSA) to provide an effective rail connection for users. The Town of Milton's 5-year Transit Plan (**Section 2.3.8)** outlines frequent and extended transit service along key corridors, which would act as local bus feeders and

microtransit for the GO rail network enabling last mile connectivity.

As per the Traffic Update to the Trafalgar and Agerton 2022 TMP, the preferred location for the proposed Trafalgar GO Station is west of Trafalgar Road along the existing rail line.

It is noted that the station access location, as well as the conceptual parking and access arrangements, have not yet been confirmed at the time of preparing this TMP update. Detailed station access analysis and testing are outside the scope of this study and should be undertaken as part of future planning and design stages.

2.4.3 Main Street Extension Environmental Assessment (2023 – Ongoing)

The Town of Milton is currently undertaking the preparation of a Schedule 'C' MCEA for the Future Main Street between Fifth Line and Trafalgar Road. At present, the Town has identified the need for an extension to support east-west connectivity between the ASPA and Derry Green Corporate Business Park. The approximate boundary of this study is shown in **Figure 2-20** below. Note that the extended road is assumed to be a 4-lane, 35 metre ROW arterial. It is noted that the Future Main Street connection between Fifth Line and Trafalgar Road is not assumed to be constructed until the 2041 design horizon with its connectivity to Trafalgar Road at the intersection of Auburn Road still unknown, per Town of Milton development planning. The EA for this extension is currently underway, with the segment between Sixth Line and Trafalgar anticipated to be completed beyond 2035. The Main Street MCEA is currently underway, with alternative alignments being evaluated. It is anticipated that PIC #2, scheduled for late Spring 2026, will present a preferred alternative that will intersect south of the Auburn Road intersection. However, the ultimate location will be determined through the MCEA process.

A Public Open House was held on June 2, 2026 to provide an opportunity for the public and interested parties to comment on the study progress, the identification and evaluation of design alternatives and preliminary preferred design of the road extension for Main Street East. The potential future road alignment, cross-sections, and intersection configurations were proposed for the length of the corridor. The study will identify opportunities within the study area to curate a range of multi-modal transportation alternatives to support future travel demand, which will have impacts for traffic operations in the ASPA and TSPA. The Environmental Study Report (ESR) containing transportation assessment and other details is anticipated in the spring of 2027.

Figure 2-20 Town of Milton Official Plan Land Uses and Future Main Street MCEA Area



Source: Town of Milton Main Street EA - Online Engagement - October 2024

2.4.4 Trafalgar Road Corridor Study – Highway 407 (ETR) to Steeles Avenue (Regional Road 8) (2024 – Ongoing)

Halton Region is currently undertaking the preparation of a Schedule 'C' MCEA for the Trafalgar Road (Regional Road 3) corridor between Highway 407 (ETR) and Steeles Avenue (Regional Road 8), within the Town of Milton. The study examines a wide range of multi-modal transportation improvements, including roadway widening, active transportation, transit-supportive infrastructure, and intersection improvements along the corridor. Trafalgar Road has also been identified as a future Transit Priority Corridor through the Halton Region Integrated Master Plan. Two rounds of public engagement have been completed to date. The first online Public Information Centre (PIC #1) took place between September and October, 2024, focusing on design considerations, constraints, and existing conditions along the corridor. A second online Public Information Centre (PIC #2) was held between

February and March, 2026, presenting preliminary design recommendations and next steps. The study will have implications for traffic operations in the ASPA and TSPA, given Trafalgar Road's role as a key north-south Regional arterial serving employment and residential growth areas within Milton.

2.4.5 Trafalgar Tertiary Plan Road Network Assessment (Nov. 2025)

TYLin was retained by the MP4 Trafalgar Landowners Group (MP4T LOG) to prepare a Road Network Assessment determining traffic operations concerns, mitigation measures and infrastructure improvements required to support population and employment growth within the Milton Phase 4 Trafalgar Tertiary Plan, located immediately south of the Agerton Secondary Plan. Key takeaways of the RNA study include the recommended improvements summarized in **Table 2-3**.

Table 2-3 Intersection and Corridor Improvements (Trafalgar Tertiary Plan Road Network Assessment)

Intersection/ Location	Future Improvements
Trafalgar Road & Derry Road	► Addition of turning lanes including dual left turn lanes to meet additional demand ► Signal Coordination with updated cycle length of 140 seconds.
Derry Road & Eighth Line	► Addition of turning lanes to meet additional demand ► Signal Coordination with updated cycle length of 140 seconds
Britannia Road & Trafalgar Road	► Addition of turning lanes including dual left turn lanes to meet additional demand ► Signal Coordination with updated cycle length of 140 seconds
Britannia Road & Eighth Line	► Addition of turning lanes to meet additional demand ► Signal Coordination with updated cycle length of 140 seconds
Lower Base Line & Trafalgar Road	► Addition of turning lanes to meet additional demand ► Signal Coordination with updated cycle length of 140 seconds
Lower Base Line & Eighth Line	► Convert to signalized intersection ► Signal Coordination with updated cycle length of 140 seconds
Trafalgar, Derry and Britannia Corridors	► 47 m ROW protection ► Transit priority measures ► Active transportation infrastructure
Arterial-to-collector intersections	► Right turn lanes along regional roads
Internal collector-to-collector intersections	► All way stop control and left-turn lanes at some intersections to meet capacity demands
All major intersections	► Monitoring program ► Future EA/design-stage upgrades

2.4.6 Halton Region's Access By-Law No. 32-17

The TMP Update will consider Halton Region's Access By-Law. Elaborating, Section 6.1 (a) of the By-Law states that access to a Regional Road (Trafalgar within the Agerton SPA) from private property is to be permitted only where such access is necessary because access from a local road is not feasible.

2.4.7 Halton Region's Access Management Guidelines (2015)

The TMP Update will consider Halton Region's Access Management Guidelines (2015). Main takeaways from this document are to ensure safety mechanisms are in place for vehicles using accesses, ensuring sufficient sight distances are provided and that appropriate lane configurations are employed at access locations to mitigate and prevent collisions.

2.5 Existing Traffic Data

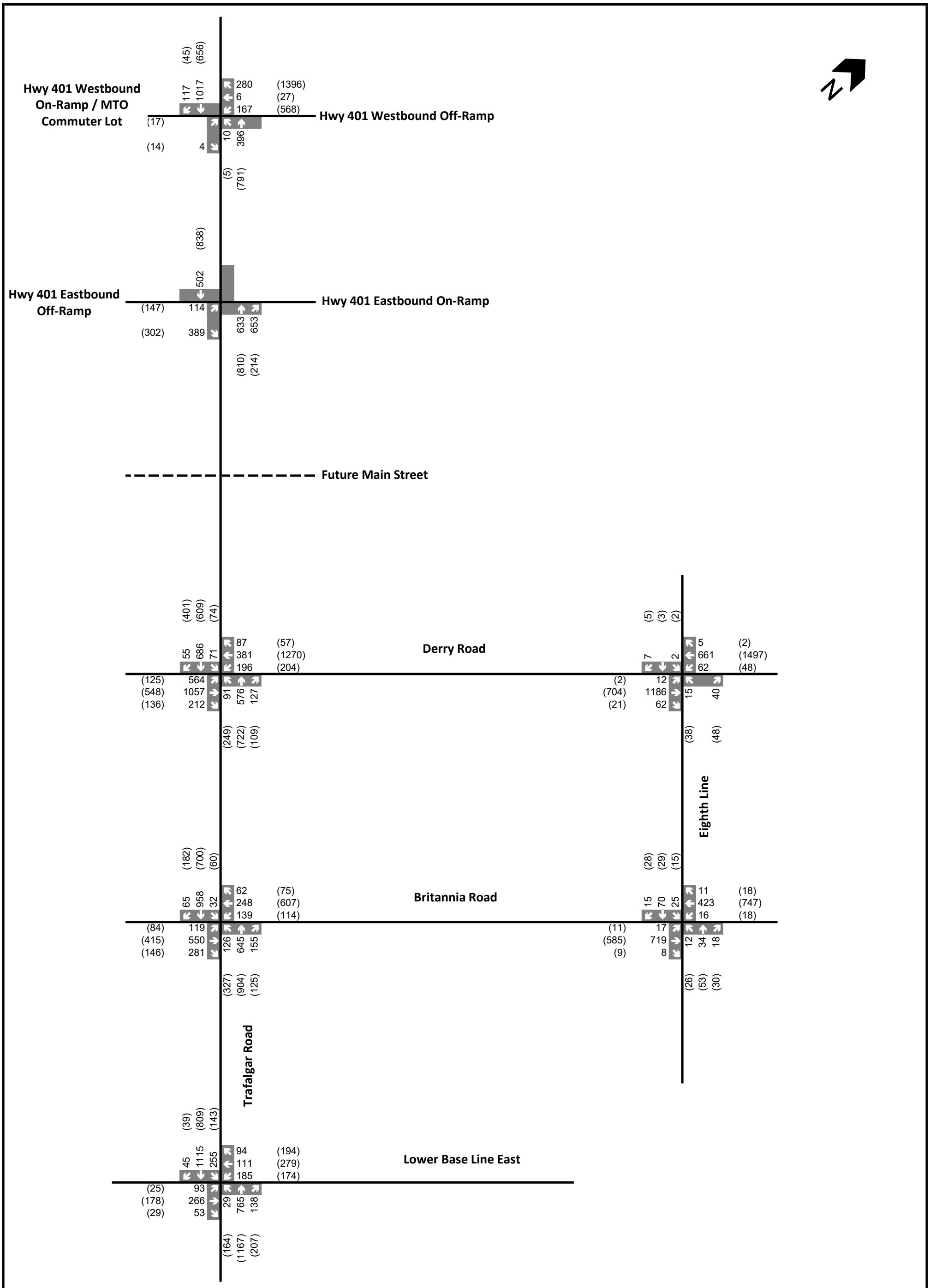
Existing turning movement counts (TMCs) were collected on May 28th, 2025 for both the weekday a.m. and p.m. peak periods. A summary of each intersection, including peak hours, is provided in **Table 2-4**. The traffic volumes used to conduct capacity and queuing analysis are illustrated in **Figure 2-21**. The existing signal timing plans and existing traffic data are provided in **Appendix A**.

Table 2-4 Intersection Turning Movement Count Summary

ID	Intersection	Control	TMC Count Date	Peak Hours	
				AM	PM
1	Derry Road and Trafalgar Road	Signalized Intersection	May 28th, 2025	7:45-8:45	4:45-5:45
2	Derry Road and Eighth Line	Unsignalized Intersection	May 28th, 2025	7:45-8:45	4:45-5:45
3	Britannia Road and Trafalgar Road	Signalized Intersection	May 28th, 2025	8:00-9:00	4:45-5:45
4	Britannia Road and Eighth Line	Signalized Intersection	May 28th, 2025	8:00-9:00	4:30-5:30
5	Lower Base Line and Trafalgar Road	Signalized Intersection	May 28th, 2025	8:00-9:00	4:45-5:45
7	Highway 401 WB Off-Ramp and Trafalgar Road	Signalized Intersection	May 28th, 2025	7:30-8:30	4:45-5:45
8	Highway 401 EB Off-Ramp and Trafalgar Road	Signalized Intersection	May 28th, 2025	7:30-8:30	4:30-5:30

Supporting signal timing plans (STP) were provided by Halton Region for the intersections identified below. Note that the accompanying date is provided for each intersection:

- Britannia Road and Trafalgar Road – October 24th, 2025
- Derry Road and Trafalgar Road – November 10th, 2025
- Lower Base Line and Trafalgar Road – June 3rd, 2017
- Highway 401 (North Terminal or WB Off-Ramp) and Trafalgar Road – January 10th, 2025
- Highway 401 (South Terminal or EB Off-Ramp) and Trafalgar Road – August 23rd. 2025
- Britannia Road and Eighth Line – January 6th, 2025



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 2-21

Existing Traffic Volumes
External Intersections

2.6 Existing Intersection Capacity and Queuing Analysis

2.6.1 Intersection Capacity and Queuing Parameters

The traffic capacity analysis identifies how well the intersections and access driveways are operating and how they are expected to operate in the future. The analysis contained in this report utilized the Highway Capacity Manual (HCM) 2000 methodology within the Synchro Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement.

Existing signal timings were modeled based on signal timing plans provided by Halton Region in February 2026. To maintain consistency with the recently approved Trafalgar Tertiary Plan RNA, Synchro parameters were adjusted to match assumptions detailed in that report, including lost time adjustments at three key intersections on Trafalgar Road (Derry Road, Britannia Road, and Lower Base Line).

The modelling framework, inputs and assumptions are summarized below:

- All intersections were evaluated for the weekday a.m. and p.m. peak hours.
- Turning movement volumes used in the Synchro models were derived from:
    - Observed traffic counts for existing baseline conditions;
    - Background traffic growth rates provided by the Region and Town; and
    - Site-generated traffic based on proposed land uses, developed using Traffic Analysis Zones (TAZs), trip generation rates (including reference to ITE Trip Generation manuals), and network assignment procedures
- A 140-second cycle length was assumed along major external intersections. The cycle length has been carried over from the RNA and is maintained in this TMP to prioritize operations along the Regional corridor, accommodating the anticipated higher traffic volumes and facilitate signal coordination along corridors.
- Additional through and turning lanes based on capacity and safety considerations.
- Intersection operations were assessed using standard Synchro/HCM metrics, including Volume to Capacity (v/c) ratio, control delay and Level of Service (LOS).
- A lane utilization factor of 0.80 was applied to the through movements in the Synchro model to simulate the effects of an HOV lane in future 2041 and 2051 conditions.
- Lost time adjustment of -1.0 seconds for protected/permitted left-turn movements and -2.0 seconds for through or right-turn movements for both peak hours at Trafalgar Road intersections at Derry Road, Britannia Road and Lower Baseline.

- Phasing splits were optimized for both peak hours.

As part of the capacity analysis, TYLin detailed the traffic operation at all turning movements at the study intersections. Critical turning movements were bolded in the summary table, identified as per Halton Region guidelines:

- Volume/capacity (V/C) ratios for overall intersection operations, through movements, or shared through/turning movements increased to 0.85 or above:
- V/C ratios for exclusive movements increased to 0.95 or above; or
- Queues for an individual movement are projected to exceed available turn-lane storage.

The analysis should also include unsignalized intersections where:

- Level of service (LOS), based on average delay per vehicle, on individual movements, exceeds LOS "D", or
- The estimated 95th percentile queue length for an individual movement exceeds the available queue storage.

2.6.2 Existing Conditions Results

The following tables **Table 2-5** and **Table 2-6** summarize the Synchro/HCM capacity and queuing results for the study intersections during the weekday a.m. and p.m. peak hours under existing conditions for the Base Line 2025 year. Queue reports detail locations where queues *exceed* available storage. Detailed Synchro reports are attached in **Appendix B**.

Table 2-5 Existing Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	*0.85*	*41*	*D*	**0.90**	*48*	*D*
	EBL	0.91	41	D	0.58	35	D
	EBT	0.68	34	C	0.41	31	C
	EBR	0.14	24	C	0.09	27	C
	WBL	0.70	40	D	0.50	24	C
	WBTR	0.49	43	D	**0.99**	64	E
	NBL	0.44	36	D	0.86	54	D
	NBTR	0.74	49	D	0.81	49	D
	SBL	0.40	38	D	0.38	35	C
	SBT	0.76	52	D	0.64	45	D
	SBR	0.04	38	D	0.56	45	D
Eighth Line & Derry Road (Unsignalized)	EBL	0.02	10	B	0.00	13	B
	EBTR	0.48	0	A	0.28	0	A
	WBL	0.12	13	B	0.05	9	A
	WBTR	0.27	0	A	0.59	0	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBL	0.34	**115**	**F**	0.58	**118**	**F**
	NBTR	0.10	15	B	0.08	11	B
	SBL	0.05	**94**	**F**	0.06	**129**	**F**
	SBTR	0.01	11	B	0.10	**56**	**F**
Trafalgar Road & Britannia Road	*Overall*	*0.55*	*36*	*D*	*0.67*	*39*	*D*
	EBL	0.38	50	D	0.49	51	D
	EBT	0.67	65	E	0.51	61	E
	EBR	0.29	59	E	0.10	57	E
	WBL	0.60	53	D	0.45	49	D
	WBT	0.30	59	E	0.71	65	E
	WBR	0.04	56	E	0.05	55	E
	NBL	0.41	15	B	0.68	22	C
	NBTR	0.40	18	B	0.52	20	B
	SBL	0.09	13	B	0.21	22	C
	SBTR	0.53	22	C	0.60	35	C
Eighth Line & Britannia Road	*Overall*	*0.29*	*6*	*A*	*0.27*	*6*	*A*
	EBL	0.04	4	A	0.03	4	A
	EBT	0.28	5	A	0.21	5	A
	EBR	0.01	4	A	0.01	4	A
	WBL	0.05	4	A	0.04	4	A
	WBTR	0.17	4	A	0.28	5	A
	NBL	0.07	15	B	0.13	15	B
	NBTR	0.17	15	B	0.26	16	B
	SBL	0.14	15	B	0.08	15	B
	SBTR	0.33	16	B	0.14	15	B
Trafalgar Road & Lower Base Line	*Overall*	*0.73*	*34*	*C*	*0.84*	*36*	*D*
	EBL	0.37	47	D	0.31	51	D
	EBTR	0.74	58	E	0.54	51	D
	WBL	0.72	44	D	0.57	39	D
	WBTR	0.31	33	C	0.82	53	D
	NBL	0.16	23	C	0.47	17	B
	NBTR	0.66	35	C	0.84	36	D
	SBL	0.71	27	C	0.69	44	D
	SBTR	0.67	27	C	0.52	25	C
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.48*	*21*	*C*	**0.92**	*49*	*D*
	EBL	0.00	0	0	0.32	65	E
	EBR	0.00	66	E	0.01	61	E
	WBL	0.64	63	E	0.37	23	C
	WBT	0.03	56	E	0.03	19	B
	WBR	0.12	56	E	**0.99**	58	E
	NBL	0.03	6	A	0.04	35	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBT	0.19	6	A	0.81	50	D
	SBT	0.47	11	B	0.77	52	D
	SBR	0.10	8	A	0.04	37	D
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.29*	*13*	*B*	*0.42*	*12*	*B*
	EBL	0.36	32	C	0.53	32	C
	EBR	0.15	31	C	0.37	32	C
	NBT	0.28	5	A	0.39	6	A
	SBT	0.23	5	A	0.40	6	A

Under existing conditions, majority of study area intersections operate with overall reserve capacity and acceptable delays during both the weekday a.m. and p.m. peak hours, except Trafalgar Road and Derry Road. Although select movements experience LOS F, the corresponding v/c ratio is less than 1.0 during both peak hours, indicating reserve capacity remains.

At the intersection of Trafalgar Road and Derry Road, the westbound through/right movement is approaching capacity, operating with a v/c ratio of 0.99. At the intersection of Trafalgar Road and Hwy 401 Westbound On/Off-ramps, the westbound right movement is approaching theoretical capacity during the p.m. peak hour, operating with a v/c ratio of 0.99.

Table 2-6 Existing Queueing Analysis: Critical Movements

Intersection	Movement	Proposed Storage (m)	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			50th Percentile Queue	95th Percentile Queue	50th Percentile Queue	95th Percentile Queue
Trafalgar Road & Derry Road	EBL	110	105	**161**	-	-
	NBL	65	-	-	47	**77**
	SBR	70	-	-	47	**85**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-Ramp	WBR	80	-	-	**224**	**309**

Under existing conditions, several movements are shown to have 95th percentile queues exceeding available storage. These movements include the eastbound and northbound left-turn movements at the intersection of Trafalgar Road and Derry Road, as well as the southbound right-turn movement. At Trafalgar Road's intersection with the Highway 401 north junction, the westbound right-movement is shown to exceed available storage. It should be noted that while this queue exceeds the officially striped right-turn storage length, the queue is not shown to extend to the Highway mainline.

3 FUTURE BACKGROUND CONDITIONS

3.1 Study Horizon Years

Based on discussions with Town and Region Staff, future study horizon years of 2031, 2041, and 2051 were selected for traffic analysis purposes. The ultimate horizon year of 2051 also aligns with the Region's latest EMME modeling.

3.2 Background Traffic Growth Methodology

Traffic volume forecasts for each analysis horizon were developed using a multi-step methodology tailored to account for regional background growth, site-specific traffic from the Agerton and Trafalgar Secondary Plan areas, and the influence of the proposed Trafalgar GO Station.

The applied forecasting methodology varies by horizon year and transit scenario as described below.

2031 Horizon — Without GO Station

A compound annual growth rate of 2.83% was applied to all existing movements to forecast 2031 Future Background Conditions. This growth rate accounts for a GO Station not being in place, but does not include traffic associated with the Agerton or Trafalgar Secondary Plan lands. Accordingly, the Trafalgar Tertiary Plan 2031 Phase 1 site traffic volumes, as referenced in *Figures 5-6* and *5-7* of the Trafalgar Tertiary Plan RNA, were added to the background volume forecasts to account for the Trafalgar Secondary Plan traffic. The extracted Trafalgar traffic figures from the RNA study are provided in **Appendix C**.

2031 Horizon — With GO Station

The same methodology as the 2031 Without GO Station scenario was followed, with the exception that the 2.83% growth rate was replaced with a rate of 2.65% compounded annually, as this rate accounts for the presence of a GO Station.

The future Milton-Trafalgar GO Station is a key aspect of analysis undertaken for this study. It is noted, however, that Metrolinx has acknowledged that while there is an initial Business Case for the station, the project is currently unfunded. Given the lack of funding and the proximity to 2031 it is considered very unlikely that a GO Station can be implemented and operational for the 2031 horizon. As such analysis for the 2031 horizon a With GO analysis has not been considered for analysis in this report.

2041 and 2051 Horizons — Without GO Station

For the 2041 and 2051 horizon years, growth rates in **Table 3-1**, provided by the Region of Halton from its IMP model were applied to the 2031 future Without GO background "base" volume to forecast traffic. It is noted that the IMP growth rates inherently also accounts for the Agerton land uses. These accounted for Agerton volumes were subtracted using EMME OD matrices to isolate background volumes (auto, light trucks, medium trucks and heavy trucks) under 2041/2051.

2041 and 2051 Horizons — With GO Station

The same methodology as the 2041 and 2051 With GO Station scenario was followed, with the exception that the 2031 base volumes were derived using the 2.65% growth rate in lieu of 2.83%. The same set of IMP growth rates was then applied to forecast the 2041 and 2051 background volumes, consistent with the Without GO Station scenario.

Growth Rate Assumptions for Remaining Road Segments

It is noted that the Region's screenline analysis did not calculate a growth rate for the segment of Trafalgar Road between Derry Road and Britannia Road. Accordingly, TYLin was instructed to apply the same growth rates provided for the segment of Trafalgar Road south of Britannia Road.

The Region's IMP growth rates for corridor segments included in TYLin's EMME modeling were used to inform minor updates to growth rates for the corridor segments/screenlines that were not included in the EMME road network (Britannia Road east and west of Trafalgar Road, and Trafalgar Road south of Britannia Road). The results of these updates to the growth rates are provided in **Appendix C**.

In order to apply growth rates to the Town's roads within and in the vicinity of the study area (Eighth Line and Lower Base Line), the growth rates and associated methodologies described in November 2025 Trafalgar RNA were adopted. Details of the growth rates applied to the Town roads are provided in **Appendix C**.

For the MTO-controlled approaches at the Highway 401 / Trafalgar Road ramp terminals, a 2% annual growth rate has been applied to all approaches to establish 2041 and 2051 future background traffic as advised by MTO. For the existing to 2031 horizon, the growth rates of 2.65% and 2.83% for the With and Without GO Station scenarios respectively are retained in lieu of the 2% rate, as these rates are considered more conservative and reflective of the anticipated growth along the Regional corridor for this horizon. Illegitimate

A summary of the growth rates applied to the study area road network for each horizon year is provided in **Table 3-1**, and the detailed background forecasting methodology provided by Halton Region is included in **Appendix C**.

Table 3-1 Background Growth Rates

Corridor	Existing to 2031		2031 to 2041	2041 to 2051
	With GO	Without GO		
Trafalgar Rd and Hwy 401 – North Terminal (All Approaches)	2.65%	2.83%	2.00%	2.00%
Trafalgar Rd and Hwy 401 – South Terminal (All Approaches)	2.65%	2.83%	2.00%	2.00%
Trafalgar Rd between Derry Rd and Auburn Road	2.65%	2.83%	1.00%	1.00%
Trafalgar Rd south of Britannia Rd	2.65%	2.83%	1.00%	2.00%
Trafalgar Rd between Derry Rd and Britannia Rd	2.65%	2.83%	1.00%	2.00%
Derry Rd west of Trafalgar Rd	2.65%	2.83%	3.00%	1.00%
Derry Rd east of Trafalgar Rd	2.65%	2.83%	2.00%	1.00%
Britannia Rd west of Trafalgar Rd	2.65%	2.83%	3.00%	1.00%
Britannia Rd east of Trafalgar Rd	2.65%	2.83%	2.00%	1.00%
Eighth Line south of Derry Rd	2.65%	2.83%	2.50%	3.00%
Eighth Line north of Derry Rd	2.65%	2.83%	2.50%	2.00%
Lower Base Line west of Trafalgar Rd	2.65%	2.83%	4.50%	2.00%
Lower Base Line east of Trafalgar Rd	2.65%	2.83%	3.50%	2.00%

The background growth rates summarized in **Table 3-1** were applied to all movements at existing intersections and to through traffic at future arterial-to-collector road intersections.

3.3 Background Developments

Specific background developments in proximity to the Agerton Secondary Plan, excluding the Trafalgar Secondary Plan immediately south of Derry Road, were not identified for explicit inclusion in the analysis. It is assumed that any significant sources of future background traffic are accounted for within the Region's IMP-derived growth rates for each horizon year, which also include traffic associated with the future Trafalgar GO Station.

Through consultation with Halton Region, it was confirmed that the Trafalgar Secondary Plan site traffic, as developed through the November 2025 Trafalgar RNA, would be incorporated as background development traffic for the 2031 horizon. As the Region's 2.65% and 2.83% growth rates do not account for Trafalgar or Agerton lands, the Trafalgar Secondary Plan 2031 Phase 1 site traffic volumes extracted from the RNA were added directly to the background volume forecasts across all movements. For the 2041 and 2051 horizons, Trafalgar Secondary Plan traffic is considered to be captured within the Region's IMP growth rates, and no separate addition of Trafalgar site traffic was required for these horizon years.

3.4 Future Background Volumes and Lane Configurations

3.4.1 Future Background Traffic Volumes

For each horizon year, the annual background corridor growth rates presented in **Table 3-1** were applied to the existing traffic volumes and subsequently to the future grown volumes of the preceding horizon year, together with the incorporation of background developments. The resulting 2031, 2041 and 2051 future background volumes are provided in **Figure 3-1** through **Figure 3-5**.

3.4.2 Future Background Lane Configurations

Under the Future Background scenarios, several geometric lane configuration improvements have been incorporated. These include planned improvements identified through municipal planning documents and previous transportation studies, as well as additional improvements recommended through this study to address future background traffic growth and optimize overall network operations. The recommended improvements are intended to represent general network optimization measures and do not pertain to, nor are they triggered by, Agerton-generated trips. Site-triggered improvements associated with traffic generated by the Agerton Secondary Plan development are assessed separately under the future total traffic conditions and are discussed in Section 5.2.

The lane configuration improvements identified in this study are categorized as follows:

- **Planned Improvements** – lane configuration improvements identified through municipal planning documents, environmental assessments, and previous transportation studies detailed in **Section 2.3** and **Section 2.4**, which are assumed to be implemented independently of the Agerton Secondary Plan development.
- **Recommended Improvements** – Additional improvements identified through this study to accommodate future background traffic growth and improve network operations. These measures are not attributable to, nor triggered by, Agerton-generated traffic.
- **Proposed Improvements** (to be discussed in **Section 5.1.2**)– Site-triggered improvements identified to mitigate operational impacts associated with traffic generated by the Agerton Secondary Plan development under future total traffic conditions.

Future background mitigation measures based on planned and recommended improvements are summarized in **Table 3-2** and lane configuration figures are provided in **Figure 3-6**, **Figure 3-7** and **Figure 3-8** for the 2031, 2041, and 2051 horizon years, respectively.

Table 3-2 Future Background Mitigations Measures

ID	Intersection	Planned by Others Recommended for Future Background	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FB	FB		FB		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
1	Derry Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches						Region
		Planned	Dedicated right turn lane	NBR WBR						Region
		Planned	Dual left turn lanes	NBL SBL EBL						Region
		Planned	Dual left turn lanes	WBL						Region
2	Derry Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT						Region
		Planned	Dedicated right turn lane	EBR WBR						Region
3	Britannia Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches						Region
		Planned	Dedicated right turn lane	All Approaches						Region
		Planned	Dual left turn lanes	EBL WBL						Region
		Planned	Dual left turn lanes	NBL SBL						Region
4	Britannia Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT						Region / Town

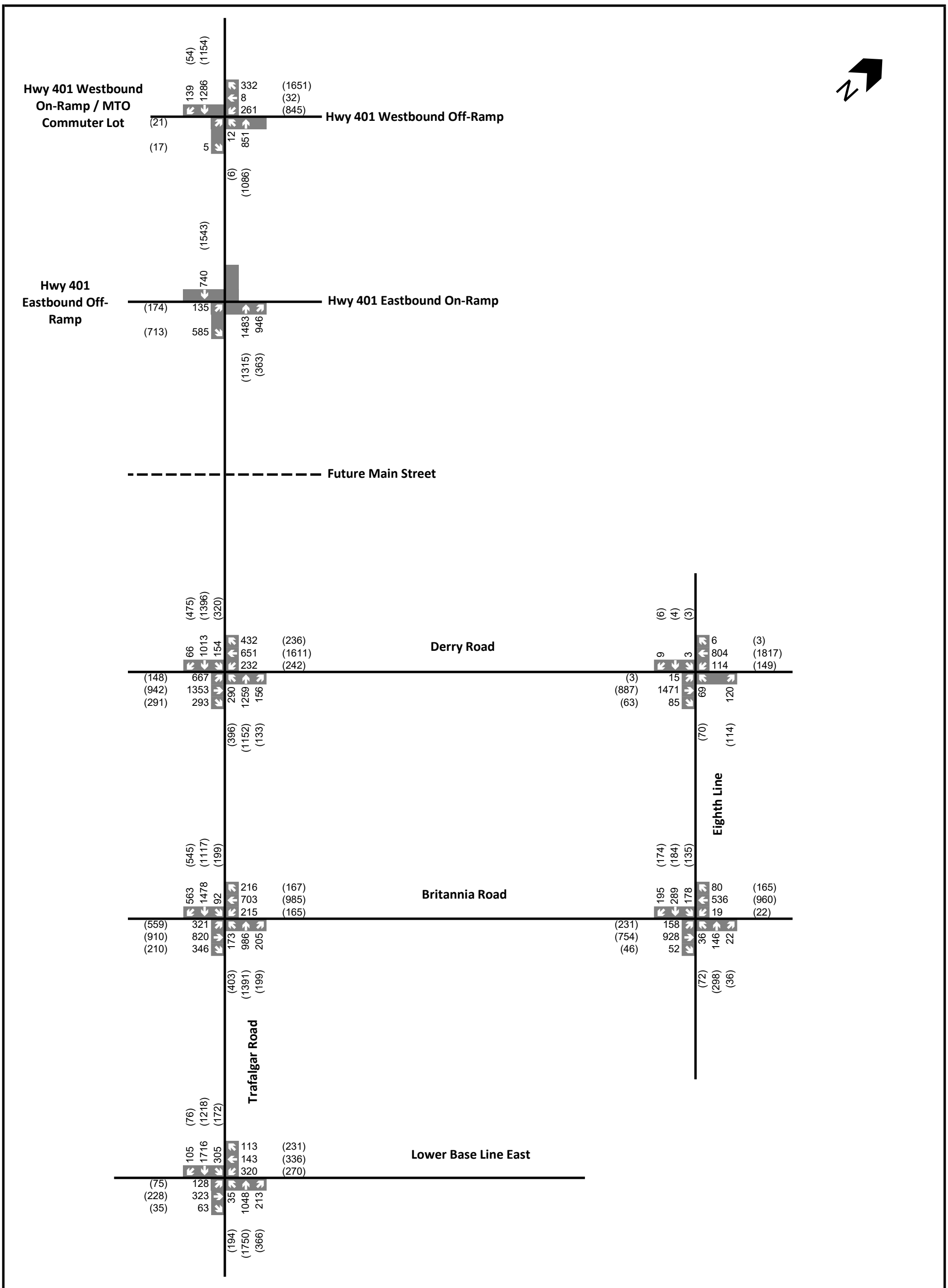
LEGEND: - Not Required **- Planned / Recommended**

ID	Intersection	Planned by Others Recommended for Future Background	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FB	FB		FB		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
		Planned	Dedicated right turn lane	WBR						Region / Town
5	Lower Baseline and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT						Region / Town
		Planned	Dedicated right turn lane	NBR SBR						Region / Town
		Planned	Dedicated left turn lane	NBL SBL EBL						Region / Town
		Planned	Dedicated right turn lane	EBR WBR						Region / Town
		Recommended	Dual left turn lanes	SBL						Region / Town
		Planned	Widening to 2 lanes per direction	EBT WBT						Region / Town
7	Commuter Lot/Highway 401 WB Off-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT						Region
8	Highway 401 EB Off-Ramp/On-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT						Region
115	Trafalgar Road and Main Street	**Planned**	Extension of Future Main Street with 2 lanes per direction	EBT WBT						Region

LEGEND: - Not Required **- Planned / Recommended**

ID	Intersection	Planned by Others Recommended for Future Background	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FB	FB		FB		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
		Planned	Shared right movement on through lane	EBR WBR NBR						Region
		Recommended	Dedicated left turn lane with storage: NBL: 125m SBL: 50m EBL: 75m WBL: 160m	All Approaches						Region
		Recommended	Dedicated right turn lane with storage of 75m	SBR						Region

LEGEND: - Not Required **- Planned / Recommended**

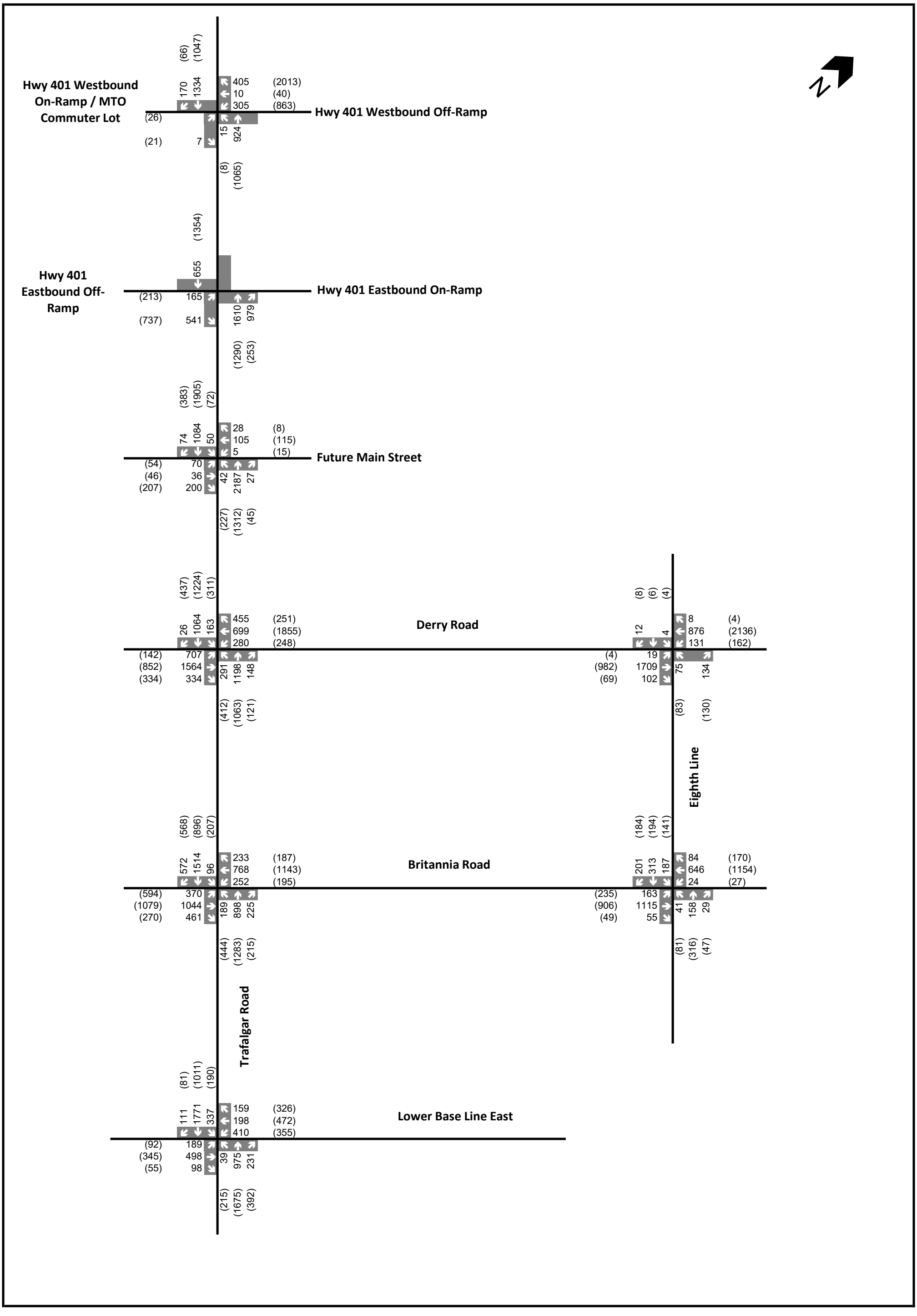


Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 3-1

2031 Future Background Traffic Volumes (Without GO)
External Intersections

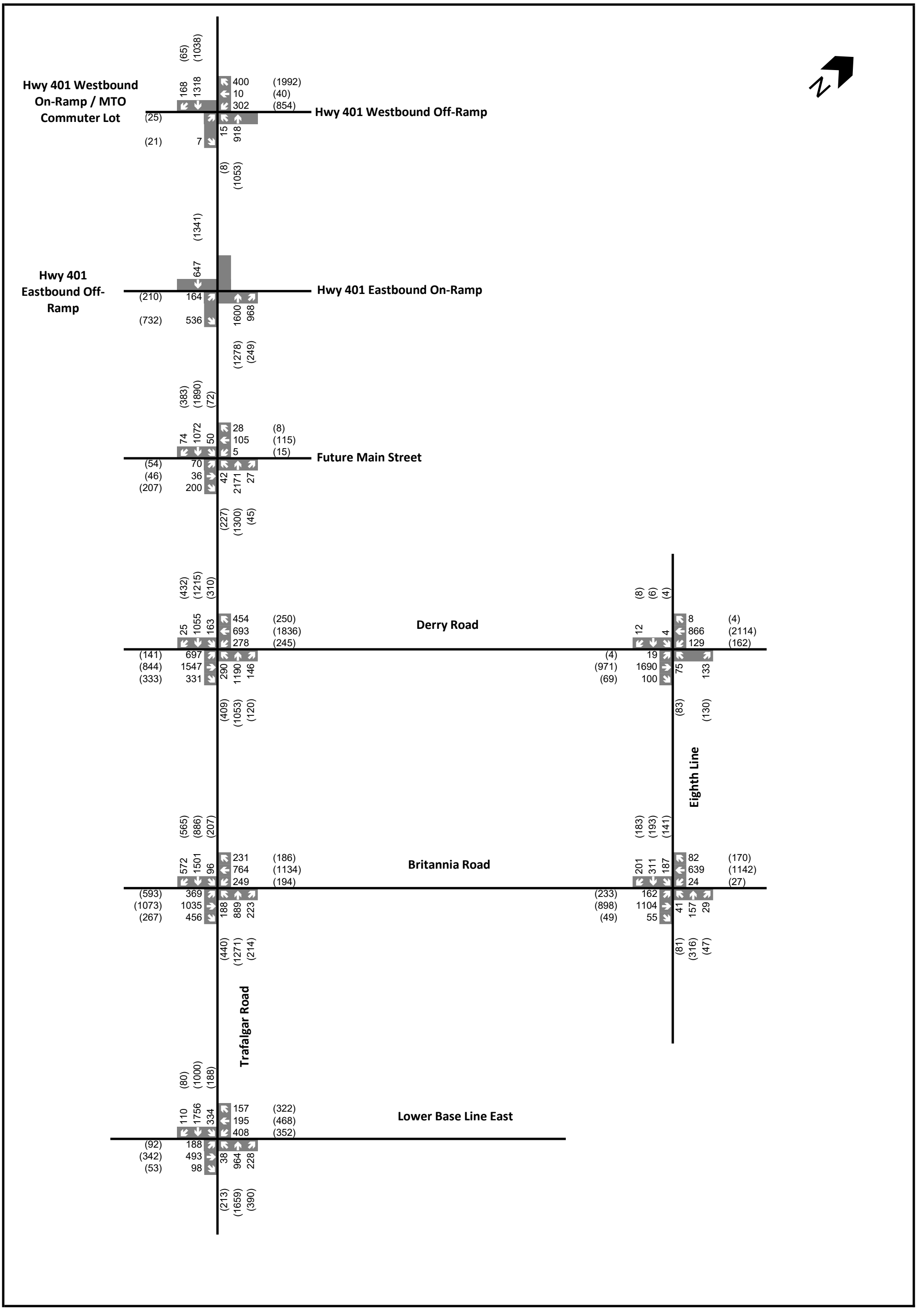


Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 3-2

2041 Future Background Traffic Volumes (Without GO)
External Intersections



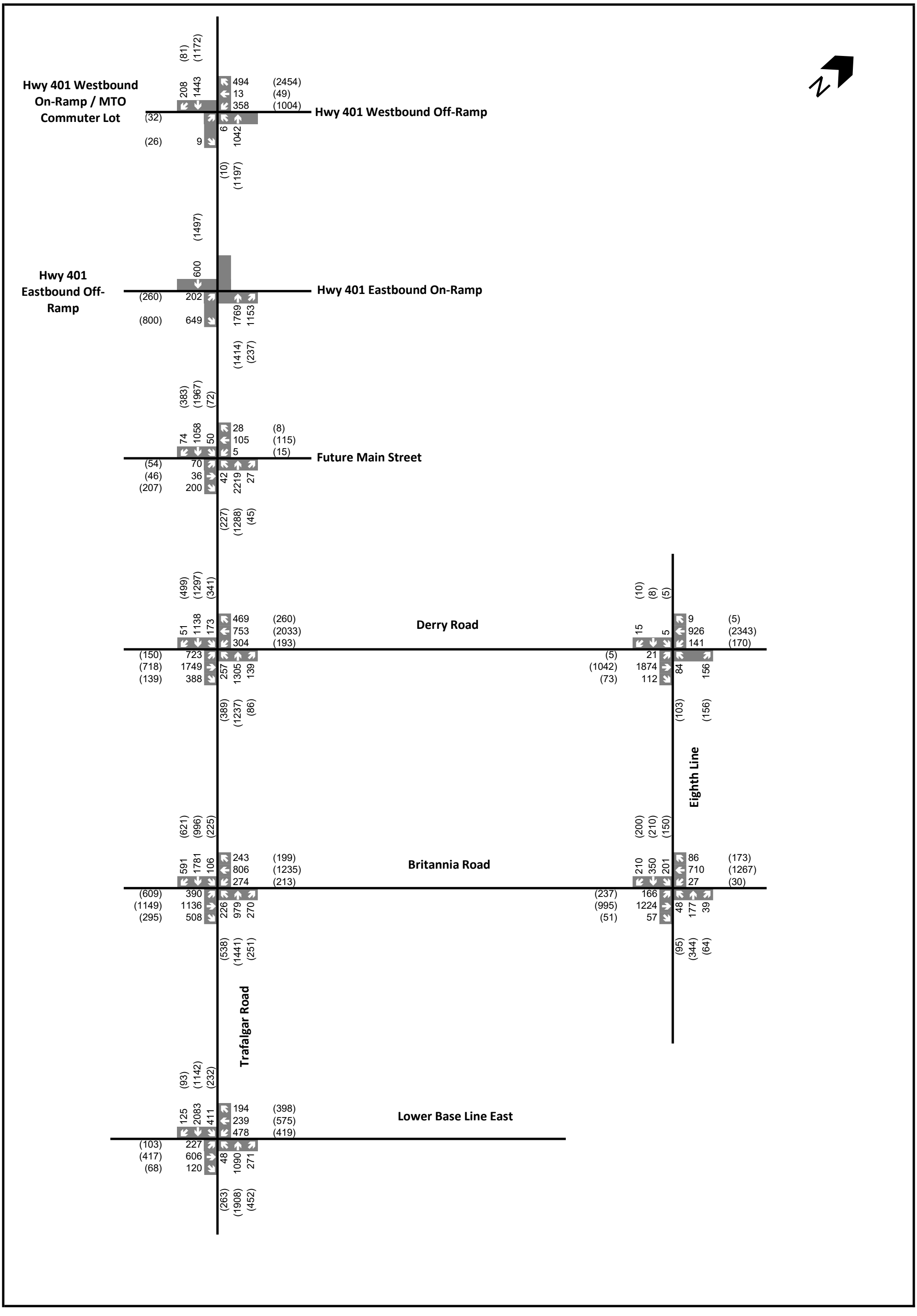
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 3-3

2041 Future Background Traffic Volumes (With GO)
External Intersections

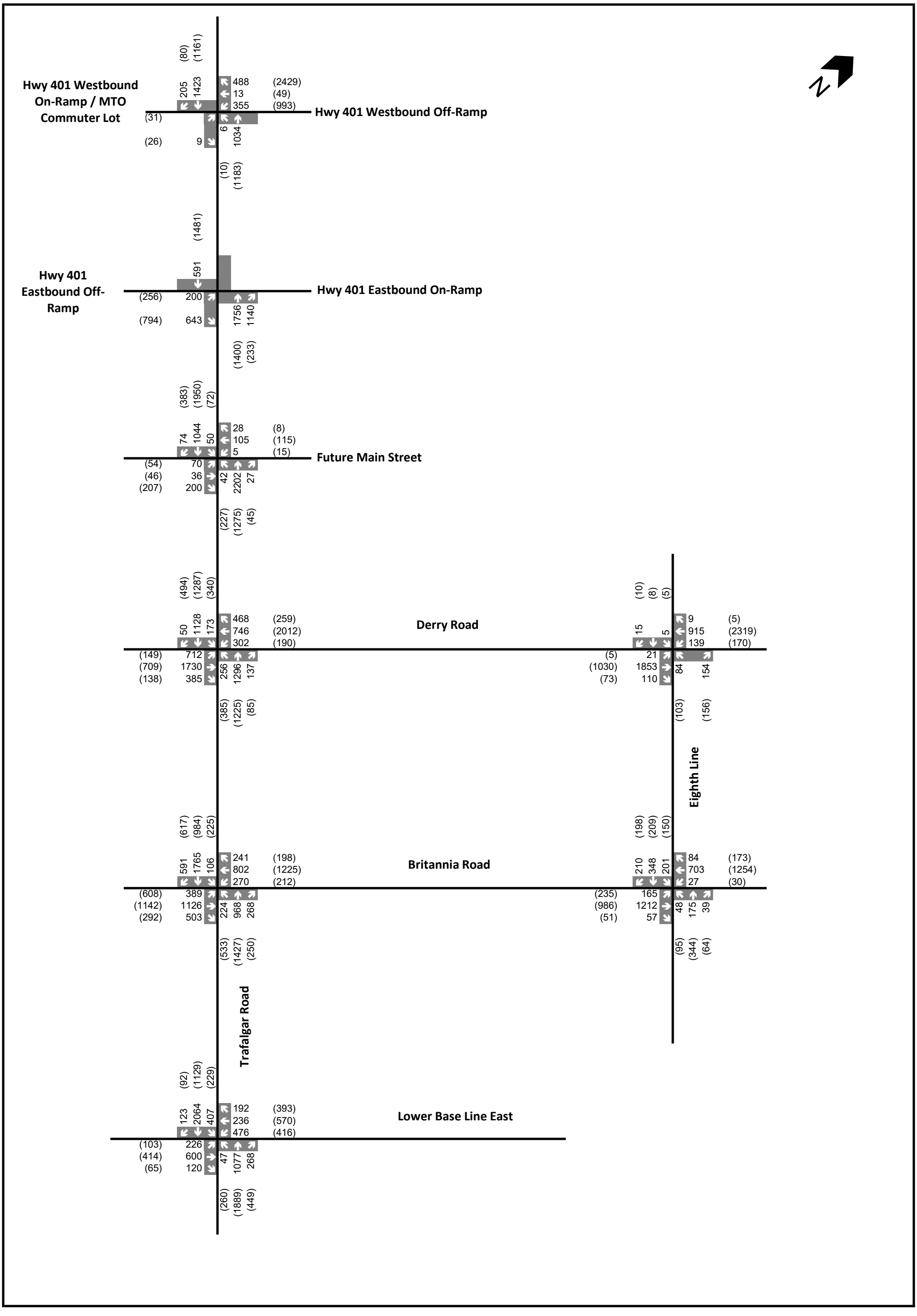


Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 3-4

2051 Future Background Traffic Volumes (Without GO)
External Intersections



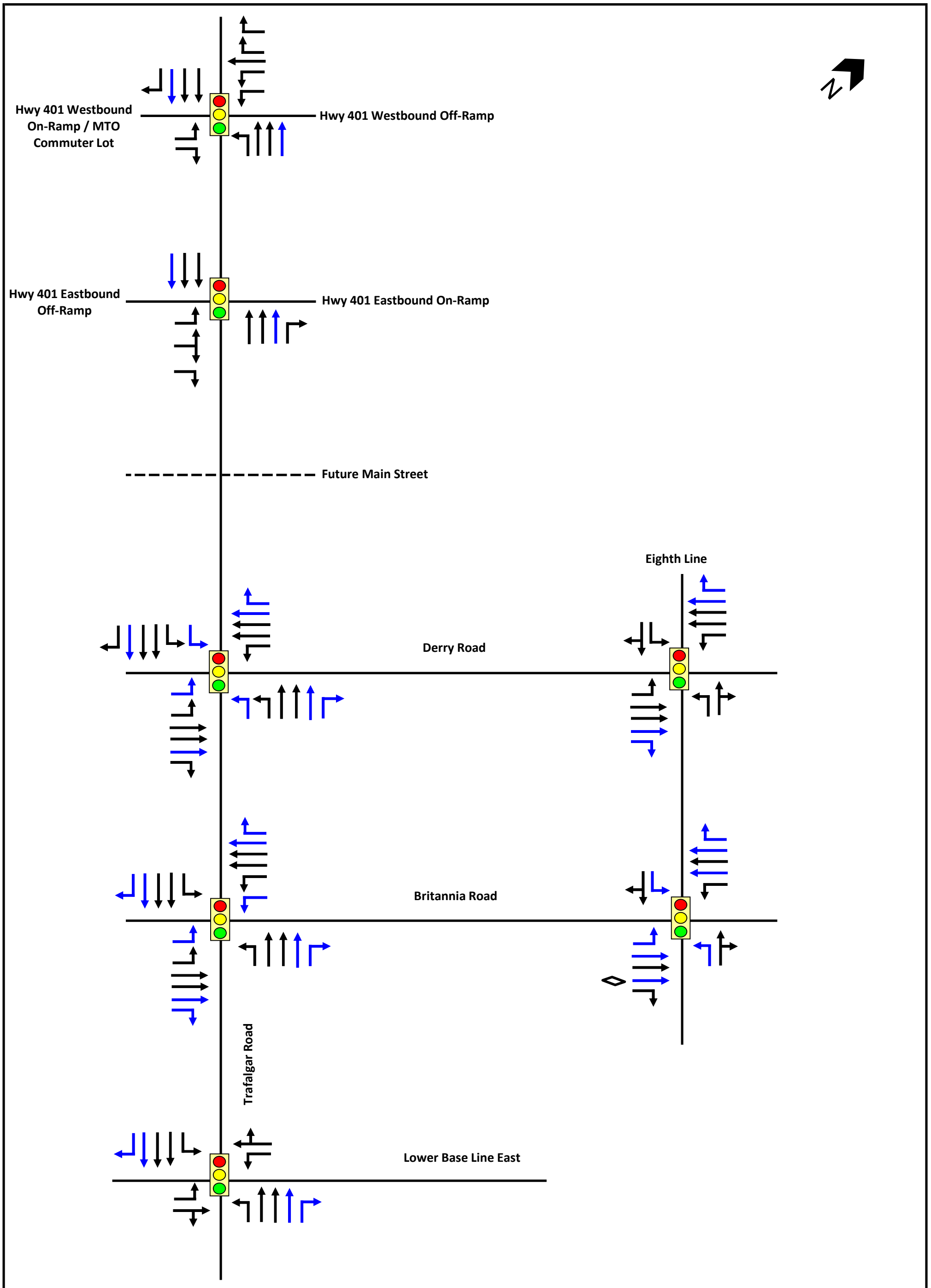
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 3-5

2051 Future Background Traffic Volumes (With GO)
External Intersections



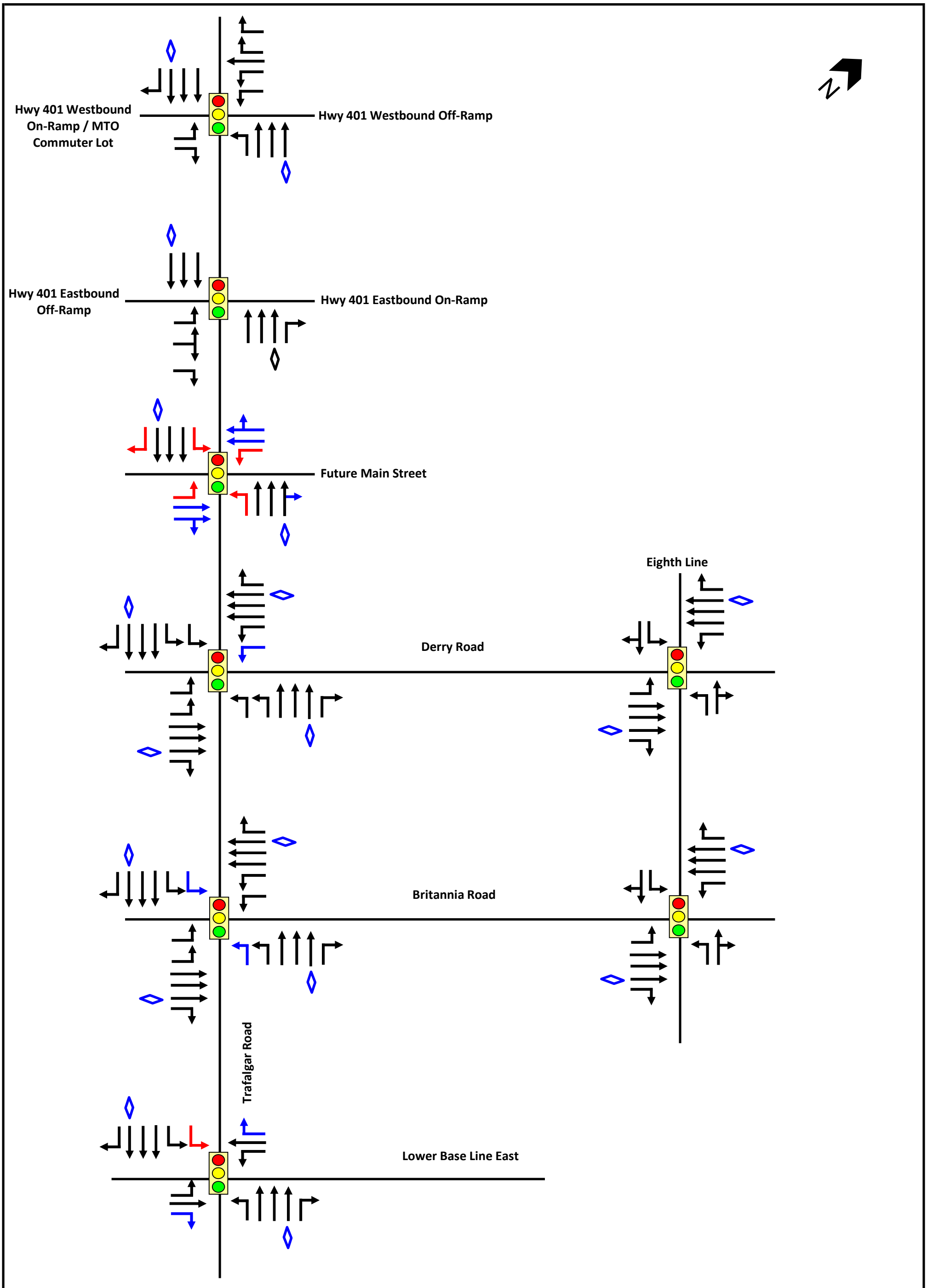
Legend

Signalized Intersection | Unsignalized Intersection | Recommended Improvement | Planned Improvement

TYLin

Figure 3-6

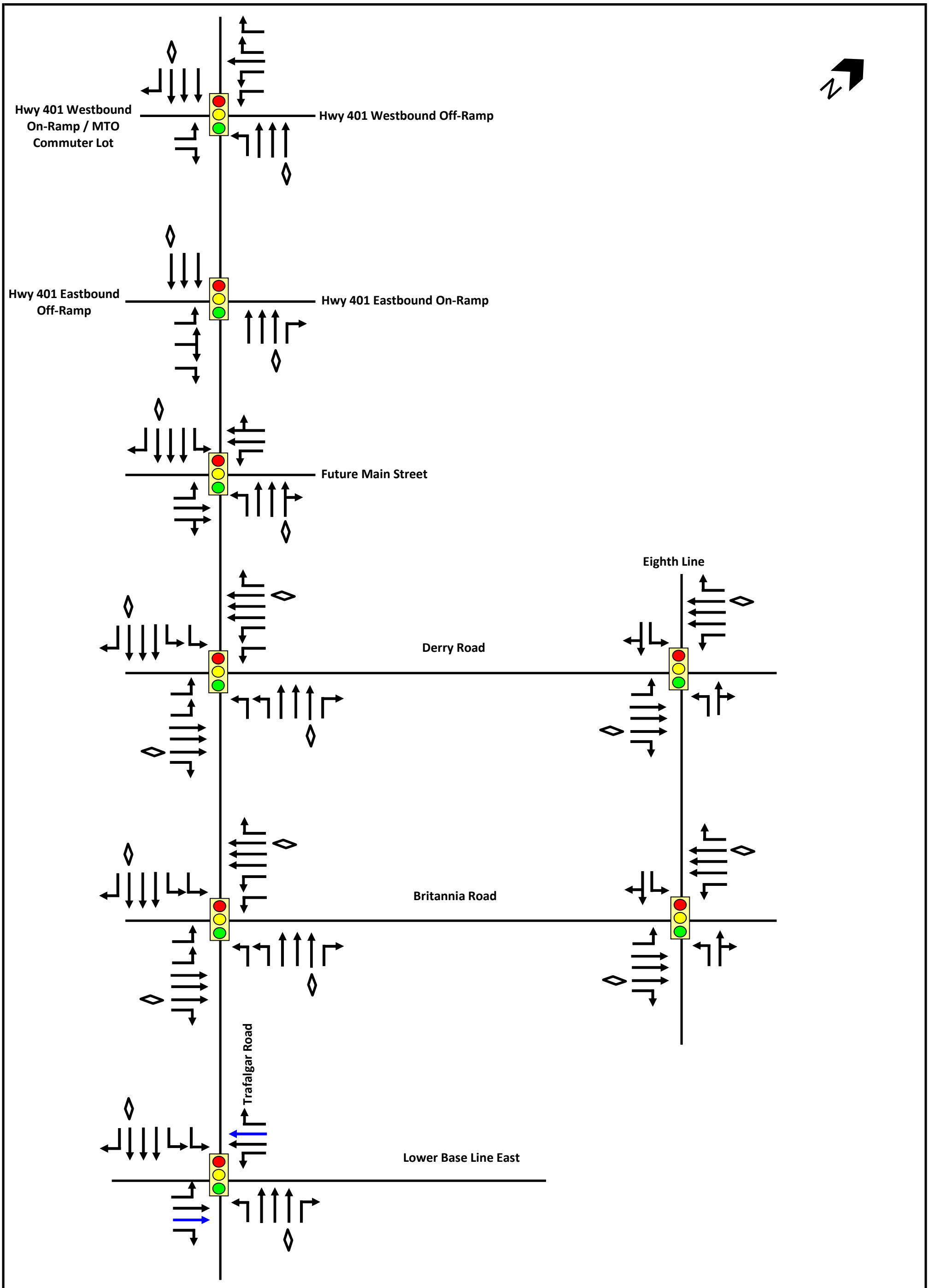
2031 Future Background Lane Configurations



TYLin

Figure 3-7

2041 Future Background Lane Configurations



Legend

Signalized Intersection

Unsignalized Intersection

Recommended Improvement

Planned Improvement on top of 2041

Planned HOV Lane

TYLin

Figure 3-8

2051 Future Background Lane Configurations

3.5 Future Background Intersection Capacity Analysis

Network analysis was completed and tables prepared to summarize Synchro/HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under future background conditions for all assessed future background scenarios for 2031, 2041 and 2051 horizons. Detailed Synchro reports for network analysis has been attached in **Appendix D**.

In undertaking background analysis modifications were applied to intersection signal timings which have been summarized in **Table 3-3**.

Table 3-3 Future Background Signal Timing Assumptions and Modifications

Intersection	A.M. Peak Hour	P.M. Peak Hour
All	It is noted that several intersections have additional lanes added under future conditions. Therefore, additional phases have been added to the signal timing plans accordingly.	
Trafalgar Road & Derry Road	Increased cycle length to 140 seconds.	
Derry Road & Eighth Line	This intersection is unsignalized under existing conditions for the purposes of this study. However, this intersection has recently been signalized (2025) and therefore it is assumed that this intersection will also be signalized with the proposed widening of Derry Road to 6 lanes.	
	Assumed a 140-second cycle length to match that of Trafalgar Road & Derry Road.	
Trafalgar Road & Britannia Road	Increased cycle length to 140 seconds.	
Britannia Road & Eighth Line	Increased cycle length to 140 seconds.	
Trafalgar Road & E Lower Base Line	Increased cycle length to 140 seconds.	
Eighth Line & Lower Baseline	Converted to signalized intersection with a cycle length of 140 seconds.	

It should be noted that mitigation measures were not applied to MTO ramp terminals. As per MTO policy signal timing, adjustments were not applied to the intersections so as not to remove approved green time from ramp terminal operations. Due to the critical movement at the Trafalgar Road and Highway 401 Westbound On-Ramp (SB)/Highway 401 Westbound Off-ramp during the p.m. peak hours it is recommended that MTO review the existing signal timing as a temporary mitigation measure while the MTO undertakes a MCEA of the ramp terminal to reduced v/c of the westbound right-turn movement during all horizon years.

3.5.1 2031 Future Background – Without GO

A single scenario was considered for the 2031 horizon, assessing network operation without the implementation of GO transit service. Additional adjustments were made to the signal timing

plans under future background conditions in order to accommodate the addition of background traffic. When possible, the existing cycle lengths were maintained. These modifications are summarized in **Table 3-3**. Cycle lengths at major intersections were increased to 140 seconds to support signal coordination, accommodate network demand and maintain consistency with the Trafalgar RNA report, as described in **Section 2.6.1.**

The capacity results for study intersections during the weekday a.m. and p.m. peak hours under 2031 future background conditions are summarized in **Table 3-4**.

All study intersections were analyzed as signalized intersections under 2031 future background traffic conditions. Due to the widening of Trafalgar Road and Derry Road to three lanes in each direction, the intersections along these corridors were assumed to be signalized in 2031.

Table 3-4 2031 Future Background – Without GO Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**0.88**	*57*	*E*	**1.05**	*66*	*E*
	EBL	0.86	**81**	**F**	0.76	**119**	**F**
	EBT	0.76	28	C	0.66	32	C
	EBR	0.35	20	B	0.35	20	C
	WBL	0.81	51	D	0.75	43	D
	WBT	0.52	45	D	**0.89**	46	D
	WBR	0.85	66	E	0.25	33	C
	NBL	**1.38**	**270**	**F**	**1.21**	**153**	**F**
	NBT	0.80	51	D	0.59	24	C
	NBR	0.13	48	D	0.08	51	D
	SBL	0.76	80	E	**1.72**	**407**	**F**
	SBT	0.68	41	D	0.84	42	D
	SBR	0.07	32	C	**1.12**	**123**	**F**
Eighth Line & Derry Road	*Overall*	*0.42*	*17*	*B*	*0.45*	*12*	*B*
	EBL	0.04	7	A	0.02	9	A
	EBT	0.41	21	C	0.23	18	B
	EBR	0.06	20	C	0.04	26	C
	WBL	0.37	5	A	0.28	3	A
	WBT	0.20	3	A	0.43	4	A
	WBR	0.00	2	A	0.00	2	A
	NBL	0.54	42	D	0.53	74	E
	NBTR	0.08	58	E	0.07	58	E
	SBL	0.03	58	E	0.03	58	E
	SBTR	0.01	58	E	0.03	58	E
Trafalgar Road & Britannia Road	*Overall*	*0.73*	*40*	*D*	**1.00**	**87**	**F**
	EBL	0.76	67	E	**1.98**	**515**	**F**

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	EBT	0.67	50	D	0.69	49	D
	EBR	0.54	48	D	0.13	40	D
	WBL	0.68	61	E	0.61	**86**	**F**
	WBT	0.70	51	D	0.80	43	D
	WBR	0.28	44	D	0.15	40	D
	NBL	0.71	57	E	0.94	67	E
	NBT	0.42	29	C	0.60	53	D
	NBR	0.13	75	E	0.13	**150**	**F**
	SBL	0.31	13	B	0.87	79	E
	SBT	0.68	27	C	0.67	26	C
	SBR	0.54	20	B	0.74	25	C
Eighth Line & Britannia Road	*Overall*	*0.55*	*32*	*C*	*0.74*	*30*	*C*
	EBL	0.31	24	C	0.70	50	D
	EBT	0.31	23	C	0.29	6	A
	EBR	0.03	59	E	0.03	1	A
	WBL	0.07	21	C	0.08	23	C
	WBT	0.23	23	C	0.49	28	C
	WBR	0.05	21	C	0.10	23	C
	NBL	0.55	57	E	0.44	42	D
	NBTR	0.54	50	D	0.84	58	E
	SBL	0.52	36	D	0.53	42	D
	SBTR	0.84	54	D	0.55	43	D
Trafalgar Road & Lower Base Line	*Overall*	**1.07**	*59*	*E*	**0.93**	*55*	*D*
	EBL	0.51	45	D	0.56	47	D
	EBTR	**1.04**	**112**	**F**	0.58	50	D
	WBL	**1.41**	**248**	**F**	0.75	41	D
	WBTR	0.58	49	D	**1.04**	**99**	**F**
	NBL	0.28	22	C	0.75	31	C
	NBT	0.49	28	C	0.81	37	D
	NBR	0.14	23	C	0.32	26	C
	SBL	0.84	49	D	0.88	88	F
	SBT	0.67	35	D	0.56	41	D
	SBR	0.07	**107**	**F**	0.05	**539**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.41*	*19*	*B*	**0.98**	*74*	*E*
	EBR	0.00	66	E	0.01	61	E
	WBL	0.69	63	E	0.56	28	C
	WBT	0.04	54	D	0.04	22	C
	WBR	0.12	55	D	**1.22**	**143**	**F**
	NBL	0.05	6	A	0.07	32	C
	NBT	0.23	7	A	0.62	39	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBT	0.38	11	B	0.74	46	D
	SBR	0.09	8	A	0.03	33	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.48*	*13*	*B*	*0.65*	*17*	*B*
	EBL	0.49	30	C	0.55	25	C
	EBLR	0.49	30	C	0.55	25	C
	EBR	0.58	33	C	0.81	37	D
	NBT	0.45	8	A	0.48	12	B
	SBT	0.22	6	A	0.56	13	B

Under 2031 future background conditions, following study area intersections are predicted to operate above capacity:

- Trafalgar Road & Derry Road during p.m. peak hour
- Trafalgar Road & Britannia Road during p.m. peak hour
- Trafalgar Road & Lower Base Line during a.m. peak hour

At the intersection of Trafalgar Road and Derry Road under the p.m. peak hour, the southbound left and southbound right turn movements are expected to exceed capacity. Further, the northbound left movement is expected to exceed capacity under both a.m. and p.m. peak hours.

At the intersection of Trafalgar Road & Britannia Road under the p.m. peak hour, the eastbound left turn movement is expected to exceed capacity.

At the intersection of Trafalgar Road & Hwy 401 WB Off-ramp under the p.m. peak hour, the westbound right turn movement is expected to exceed capacity.

Additionally, at the intersection of Trafalgar Road and Lower Base Line the eastbound through/right-turn and westbound left turn movements under the a.m. peak hour are also expected to exceed capacity. The westbound through/right-turn movement under the p.m. peak hour is also expected to exceed capacity.

As noted previously, Lower Base Line is planned to be widened to two travel lanes per direction. This widening however, is not scheduled to occur until the 2051 design horizon. The operational summary provided in **Table 3-4** for the intersection of Trafalgar Road and Lower Base Line provides support for the potential acceleration of such a widening project to better accommodate future demands of future background traffic volumes.

3.5.2 2041 Future Background – Without GO

The previous signal modifications made under the 2031 future background Without GO conditions were carrier forward and further optimized for critical intersection movements under the 2041 future background Without GO scenario, to accommodate increased traffic volumes and

changes in traffic patterns expected on the regional road network.

In addition to the signal optimizations made under the 2041 future background conditions, dual southbound left-turn lanes were added at the intersection of Trafalgar Road and Lower Base Line due to the capacity constraints experienced under the a.m. peak hour. Dedicated right turn lane on southbound right and dual left turn lanes on all approaches are also included at Trafalgar Road and Future Main Street to address the increased traffic demand on the regional road network.

HOV/Bus lanes are to be implemented on Trafalgar Road, Britannia Road, and Derry Road under future background and future total conditions upon Regional widening of Trafalgar Road and Derry Road to three lanes in each direction, consistent with the Transit Priority Corridor network phasing identified in Region's Integrated Master Plan (IMP).

The capacity results for study intersections during the weekday a.m. and p.m. peak hours under the 2041 future background traffic conditions are summarized in **Table 3-5**.

Table 3-5 2041 Future Background - Without GO Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**0.93**	*54*	*B*	**0.96**	*49*	*D*
	EBL	0.93	**85**	**F**	0.85	**114**	**F**
	EBT	**0.91**	47	D	0.51	29	C
	EBR	0.39	21	C	0.29	19	B
	WBL	0.93	97	**F**	0.64	62	E
	WBT	0.66	50	D	**0.93**	42	D
	WBR	0.72	48	D	0.24	23	C
	NBL	0.91	**110**	**F**	**1.07**	**118**	**F**
	NBT	0.84	41	D	0.85	37	D
	NBR	0.13	25	C	0.08	22	C
	SBL	0.89	**119**	**F**	0.91	**104**	**F**
	SBT	0.85	44	D	**1.03**	64	E
	SBR	0.02	34	C	0.71	23	C
Eighth Line & Derry Road	*Overall*	*0.59*	*16*	*B*	*0.62*	*12*	*B*
	EBL	0.09	10	B	0.06	10	A
	EBT	0.61	16	B	0.33	10	B
	EBR	0.07	10	A	0.04	8	A
	WBL	0.58	26	C	0.40	6	A
	WBT	0.27	5	A	0.61	8	A
	WBR	0.00	4	A	0.00	4	A
	NBL	0.40	53	D	0.58	57	E
	NBTR	0.09	57	E	0.08	57	E
	SBL	0.08	65	E	0.04	51	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBTR	0.01	65	E	0.03	51	D
Trafalgar Road & Britannia Road	*Overall*	*0.84*	*84*	*D*	**0.93**	*51*	*D*
	EBL	0.78	66	E	0.94	77	E
	EBT	0.83	52	D	0.63	36	D
	EBR	0.72	42	D	0.17	29	C
	WBL	0.71	67	E	0.62	**84**	**F**
	WBT	0.72	51	D	**0.95**	48	D
	WBR	0.28	43	D	0.18	19	B
	NBL	0.75	74	E	0.93	64	E
	NBT	0.48	29	C	**0.86**	73	E
	NBR	0.15	24	C	0.20	**117**	**F**
	SBL	0.52	75	E	0.85	**104**	**F**
	SBT	0.85	31	C	0.77	27	C
	SBR	0.72	26	C	0.70	6	A
Eighth Line & Britannia Road	*Overall*	*0.67*	*34*	*C*	*0.78*	*33*	*C*
	EBL	0.43	20	C	0.74	65	E
	EBT	0.48	23	C	0.35	12	B
	EBR	0.04	17	B	0.04	9	A
	WBL	0.16	31	C	0.12	26	C
	WBT	0.37	32	C	0.60	32	C
	WBR	0.05	28	C	0.13	25	C
	NBL	0.35	42	D	0.40	42	D
	NBTR	0.39	46	D	0.85	61	E
	SBL	0.45	33	C	0.67	44	D
	SBTR	**0.86**	59	E	0.61	40	D
Trafalgar Road & Lower Base Line	*Overall*	**1.04**	*59*	*E*	**0.94**	*56*	*E*
	EBL	0.45	37	D	0.46	43	D
	EBT	**1.08**	**119**	**F**	0.84	68	E
	EBR	0.06	42	D	0.04	43	D
	WBL	**1.12**	**130**	**F**	**0.98**	**103**	**F**
	WBT	0.32	36	D	0.73	66	E
	WBR	0.11	33	C	0.42	74	E
	NBL	0.85	**139**	**F**	0.72	31	C
	NBT	0.70	46	D	**0.87**	42	D
	NBR	0.17	36	D	0.35	28	C
	SBL	0.84	76	E	0.87	78	E
	SBT	**0.90**	42	D	0.61	66	E
	SBR	0.09	21	C	0.05	27	C
	Overall	*0.53*	*22*	*C*	**1.20**	**160**	**F**
	EBR	0.00	66	E	0.01	59	E

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	0.75	63	E	0.63	33	C
	WBT	0.04	50	D	0.05	24	C
	WBR	0.19	52	D	**1.68**	**349**	**F**
	NBL	0.08	8	A	0.09	30	C
	NBT	0.35	10	A	0.69	39	D
	SBT	0.49	14	B	0.75	45	D
	SBR	0.14	11	B	0.05	32	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.58*	*14*	*B*	*0.69*	*19*	*B*
	EBL	0.55	32	C	0.60	24	C
	EBR	0.41	31	C	0.82	38	D
	NBT	0.59	9	A	0.59	15	B
	SBT	0.24	6	A	0.61	15	B
Trafalgar Road & Future Main Street	*Overall*	*0.69*	*19*	*B*	*0.71*	*30*	*C*
	EBL	0.36	51	D	0.31	54	D
	EBTR	0.15	54	D	0.20	57	E
	WBL	0.04	57	E	0.13	57	E
	WBTR	0.34	60	E	0.37	61	E
	NBL	0.45	57	E	0.75	44	D
	NBTR	0.75	15	B	0.45	17	B
	SBL	0.41	31	C	0.31	15	B
	SBT	0.38	10	A	0.74	32	C
	SBR	0.05	19	B	0.30	31	C

Under 2041 future background conditions, overall, the network predominately operates at satisfactory levels, with the majority of intersections and movements operating with reserve capacity and acceptable delays during assessed weekday a.m. and p.m. peak hours. The Trafalgar Road and Lower Base Line intersection operates beyond capacity during both the a.m. and p.m. peak hours. Additionally during the p.m. peak hour the intersections of Trafalgar Road and Derry Road as well as Trafalgar Road and Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp, each have specific movements operating over capacity. Thus illustrating that the network is anticipated to operate similarly to the 2031 horizon year.

With the addition of more background traffic relative to 2031, the intersection of Trafalgar Road and Lower Base Line is projected to deteriorate, with the westbound left, westbound through, northbound through, and southbound left-turn movements projected to operate with v/c ratios over 1.0 during one or both peak hours. As noted previously, these results indicate that the acceleration of the planned Lower Base Line widening may be required to accommodate projected background traffic growth.

3.5.3 2041 Future Background – With GO

The previous signal modifications made under the 2031 future background Without GO conditions were carried over and further optimized under the 2041 future background With GO conditions. **Table 3-6** summarizes capacity results under 2041 future background Without Go conditions.

Table 3-6 2041 Future Background - With GO Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
Trafalgar Road & Derry Road	*Overall*	**0.92**	*54*	*D*	**0.95**	*48*	*D*
	EBL	0.92	**85**	**F**	0.84	**113**	**F**
	EBT	**0.90**	47	D	0.50	29	C
	EBR	0.39	20	C	0.29	19	B
	WBL	0.92	**95**	**F**	0.63	61	E
	WBT	0.65	50	D	**0.92**	41	D
	WBR	0.72	47	D	0.24	24	C
	NBL	0.91	**109**	**F**	**1.06**	**116**	**F**
	NBT	0.84	41	D	0.84	36	D
	NBR	0.13	26	C	0.08	23	C
	SBL	0.89	**118**	**F**	0.90	**103**	**F**
	SBT	0.84	43	D	**1.02**	61	E
	SBR	0.02	34	C	0.70	23	C
Eighth Line & Derry Road	*Overall*	*0.59*	*16*	*B*	*0.62*	*12*	*B*
	EBL	0.09	10	B	0.06	10	A
	EBT	0.61	16	B	0.32	10	B
	EBR	0.07	10	A	0.04	8	A
	WBL	0.57	24	C	0.39	6	A
	WBT	0.27	6	A	0.61	8	A
	WBR	0.00	4	A	0.00	4	A
	NBL	0.39	53	D	0.58	57	E
	NBTR	0.09	57	E	0.08	57	E
	SBL	0.08	65	E	0.04	51	D
	SBTR	0.01	65	E	0.03	51	D
Trafalgar Road & Britannia Road	*Overall*	*0.84*	*42*	*D*	**0.93**	*51*	*D*
	EBL	0.78	66	E	0.94	76	E
	EBT	0.83	52	D	0.63	36	D
	EBR	0.72	41	D	0.17	29	C
	WBL	0.70	67	E	0.62	**84**	**F**
	WBT	0.72	51	D	**0.94**	47	D
	WBR	0.28	43	D	0.18	19	B
	NBL	0.74	73	E	0.92	67	E
	NBT	0.48	29	C	**0.86**	74	E
	NBR	0.14	24	C	0.20	**118**	**F**
	SBL	0.52	75	E	0.85	**104**	**F**
	SBT	0.85	30	C	0.76	27	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
	SBR	0.72	26	C	0.70	6	A
Eighth Line & Britannia Road	*Overall*	*0.66*	*33*	*C*	*0.77*	*33*	*C*
	EBL	0.42	20	C	0.73	63	E
	EBT	0.48	23	C	0.35	12	B
	EBR	0.04	17	B	0.04	9	A
	WBL	0.15	31	C	0.12	25	C
	WBT	0.36	32	C	0.59	32	C
	WBR	0.05	28	C	0.13	25	C
	NBL	0.35	43	D	0.40	42	D
	NBTR	0.39	46	D	0.85	61	E
	SBL	0.46	33	C	0.67	44	D
	SBTR	**0.86**	59	E	0.60	40	D
Trafalgar Road & Lower Baseline	*Overall*	**1.03**	*58*	*E*	**0.92**	*55*	*E*
	EBL	0.44	37	D	0.46	43	D
	EBT	**1.07**	**116**	**F**	0.85	70	E
	EBR	0.06	42	D	0.03	44	D
	WBL	**1.12**	**128**	**F**	**0.96**	**97**	**F**
	WBT	0.31	36	D	0.73	66	E
	WBR	0.11	33	C	0.41	75	E
	NBL	0.83	**133**	**F**	0.71	30	C
	NBT	0.69	45	D	**0.86**	41	D
	NBR	0.17	36	D	0.35	27	C
	SBL	0.83	76	E	0.86	77	E
	SBT	**0.89**	41	D	0.60	65	E
	SBR	0.09	21	C	0.05	27	C
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.52*	*22*	*C*	**1.19**	**155**	**F**
	EBR	0.00	66	E	0.01	59	E
	WBL	0.75	63	E	0.62	32	C
	WBT	0.04	51	D	0.05	24	C
	WBR	0.17	52	D	**1.65**	**336**	**F**
	NBL	0.07	8	A	0.09	31	C
	NBT	0.34	9	A	0.68	39	D
	SBT	0.49	14	B	0.75	45	D
	SBR	0.13	11	B	0.05	32	C
Trafalgar Road & Hwy 401 EB Off-ramp	*Overall*	*0.57*	*13*	*B*	*0.69*	*19*	*B*
	EBTR	0.54	32	C	0.59	24	C
	EBR	0.39	31	C	0.82	37	D
	NBT	0.58	9	A	0.58	15	B
	SBT	0.24	6	A	0.60	15	B
Trafalgar Road & Future Main Street	*Overall*	*0.69*	*19*	*B*	*0.71*	*30*	*C*
	EBL	0.36	51	D	0.31	54	D
	EBTR	0.15	54	D	0.20	57	E
	WBL	0.04	57	E	0.13	57	E
	WBTR	0.34	60	E	0.37	61	E
	NBL	0.45	57	E	0.75	44	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
	NBTR	0.75	15	B	0.44	17	B
	SBL	0.41	31	C	0.31	15	B
	SBT	0.37	10	A	0.73	32	C
	SBR	0.05	19	B	0.30	31	C

Overall, under the 2041 future background conditions with the implementation of the GO, the network is anticipated to operate similarly to the 2041 Background conditions without GO. Critical intersections remain the same in both scenarios, with the intersections of Trafalgar Road and Baseline Road operates above capacity in both the a.m. and p.m. peak hours. During the p.m. peak hour the intersections of Trafalgar Road and Derry Road as well as Trafalgar Road and Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp, each have the same movements operating over capacity, however to a lesser degree once the GO is introduced to the network.

3.5.4 2051 Future Background – Without GO

The previous signal modifications made under the 2041 future background Without GO conditions were carried over and further optimized under the 2051 future background Without GO conditions. **Table 3-8** summarizes capacity results under 2051 future background conditions.

Table 3-7 2051 Future Background - Without GO Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	***1.01***	***87***	***F***	***1.03***	***93***	***F***
	EBL	**1.00**	**94**	**F**	0.66	**85**	**F**
	EBT	**1.25**	**172**	**F**	0.55	40	D
	EBR	0.58	38	D	0.09	26	C
	WBL	0.90	**89**	**F**	0.49	61	E
	WBT	**0.89**	**68**	**E**	**1.33**	**193**	**F**
	WBR	0.93	**76**	**E**	0.34	29	C
	NBL	**1.20**	**200**	**F**	**1.32**	**221**	**F**
	NBT	0.78	31	C	0.77	26	C
	NBR	0.11	23	C	0.05	50	D
	SBL	0.95	**136**	**F**	**0.99**	**109**	**F**
	SBT	0.69	30	C	0.78	40	D
	SBR	0.04	26	C	0.62	30	C
Eighth Line & Derry Road	*Overall*	*0.66*	*23*	*C*	*0.70*	*14*	*B*
	EBL	0.10	10	B	0.09	12	B
	EBT	0.68	27	C	0.35	11	B
	EBR	0.08	18	B	0.05	9	A
	WBL	0.65	43	D	0.45	7	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBT	0.29	5	A	0.68	10	A
	WBR	0.01	4	A	0.00	4	A
	NBL	0.47	55	D	0.65	60	E
	NBTR	0.10	57	E	0.10	56	E
	SBL	0.11	65	E	0.05	50	D
	SBTR	0.01	65	E	0.05	50	D
Trafalgar Road & Britannia Road	*Overall*	***0.93***	*52*	*D*	***1.04***	***82***	***F***
	EBL	0.72	60	E	0.91	70	E
	EBT	**0.86**	53	D	0.77	44	D
	EBR	0.81	48	D	0.28	35	C
	WBL	0.76	70	E	0.64	**89**	**F**
	WBT	0.77	53	D	**1.29**	**171**	**F**
	WBR	0.36	45	D	0.23	15	B
	NBL	**1.14**	**172**	**F**	**1.31**	**207**	**F**
	NBT	0.54	31	C	0.83	60	E
	NBR	0.17	25	C	0.23	**82**	**F**
	SBL	0.62	63	E	**1.13**	**172**	**F**
	SBT	**0.99**	54	D	0.69	25	C
	SBR	0.71	31	C	0.68	31	C
Eighth Line & Britannia Road	*Overall*	*0.73*	*36*	*D*	*0.83*	*39*	*D*
	EBL	0.50	24	C	0.83	82	F
	EBT	0.57	28	C	0.42	22	C
	EBR	0.04	20	C	0.04	35	C
	WBL	0.25	40	D	0.17	31	C
	WBT	0.45	38	D	0.74	41	D
	WBR	0.05	32	C	0.16	30	C
	NBL	0.37	41	D	0.41	39	D
	NBTR	0.43	45	D	0.84	56	E
	SBL	0.45	29	C	0.63	40	D
	SBTR	0.84	53	D	0.58	35	C
Trafalgar Road & Lower Base Line	*Overall*	***1.08***	*72*	*E*	***0.97***	*53*	*D*
	EBL	0.62	52	D	0.48	51	D
	EBT	**1.22**	**183**	**F**	**0.96**	**95**	**F**
	EBR	0.08	59	E	0.04	55	D
	WBL	**1.21**	**163**	**F**	**1.06**	**130**	**F**
	WBT	0.32	53	D	0.67	72	E
	WBR	0.13	51	D	0.68	58	E
	NBL	0.51	41	D	0.87	47	D
	NBT	0.63	39	D	**0.88**	37	D
	NBR	0.21	31	C	0.39	24	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBL	0.90	**87**	**F**	0.82	69	E
	SBT	**0.97**	50	D	0.57	32	C
	SBR	0.09	19	B	0.06	**103**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.58*	*24*	*C*	***1.46***	***268***	***F***
	EBR	0.01	66	E	0.02	59	E
	WBL	0.78	62	E	0.78	40	D
	WBT	0.04	48	D	0.07	27	C
	WBR	0.49	52	D	**2.23**	**600**	**F**
	NBL	0.04	10	A	0.13	29	C
	NBT	0.40	11	B	0.72	38	D
	SBT	0.54	16	B	0.78	44	D
	SBR	0.18	12	B	0.06	30	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.66*	*15*	*B*	*0.77*	*21*	*C*
	EBL	0.61	31	C	0.64	24	C
	EBR	0.49	30	C	0.86	40	D
	NBT	0.67	11	B	0.67	17	B
	SBT	0.23	7	A	0.71	18	B
Trafalgar Road & Main Street	*Overall*	*0.69*	*17*	*B*	*0.70*	*20*	*B*
	EBL	0.37	52	D	0.41	57	E
	EBT	0.08	54	D	0.12	53	D
	EBR	0.13	54	D	0.52	58	E
	WBL	0.03	56	E	0.11	53	D
	WBTR	0.33	59	E	0.32	55	D
	NBL	0.14	5	A	0.70	44	D
	NBTR	0.76	13	B	0.41	7	A
	SBL	0.41	34	C	0.28	9	A
	SBT	0.35	9	A	0.72	19	B
	SBR	0.05	4	A	0.32	13	B

Under 2051 future background without GO conditions, most external intersections are expected to operate with similar or increased delays and v/c ratios compared to 2041 future background conditions. The following intersections are expected to exceed capacity:

- Trafalgar Road & Derry Road during both a.m. and p.m. peak hours
- Trafalgar Road & Britannia Road during the p.m. peak hour
- Trafalgar Road & Lower Base Line during the a.m. peak hour
- Trafalgar Road & Hwy 401 WB Off-ramp during the p.m. peak hours

Overall operations are anticipated to present additional areas of capacity constraint with some intersections operating slightly over capacity including specific movements in the network during

the a.m. and p.m. peak hours. Despite the constraints identified the network does largely indicate reserve capacity is available.

It should be noted that these levels of delay are expected despite the assumption that Lower Base Line would be widened before the 2051 design horizon.

3.5.5 2051 Future Background – With GO

Signal modifications made under the 2041 future background With GO conditions were carried over and further optimized under the 2051 future background With GO conditions. **Table 3-8** summarizes capacity results under 2041 future background Without Go conditions.

Table 3-8 2051 Future Background - With GO Capacity Analysis Summary

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.00**	**85**	**F**	**1.02**	**90**	**F**
	EBL	**0.97**	**89**	**F**	0.66	**85**	**F**
	EBT	**1.24**	**166**	**F**	0.54	39	D
	EBR	0.57	37	D	0.09	25	C
	WBL	0.88	**84**	**F**	0.48	61	E
	WBT	**0.88**	67	E	**1.31**	**185**	**F**
	WBR	0.93	76	E	0.33	28	C
	NBL	**1.20**	**198**	**F**	**1.31**	**215**	**F**
	NBT	0.78	31	C	0.76	26	C
	NBR	0.10	23	C	0.05	51	D
	SBL	0.95	**135**	**F**	**0.99**	**109**	**F**
	SBT	0.68	30	C	0.77	40	D
	SBR	0.04	26	C	0.61	30	C
Eighth Line & Derry Road	*Overall*	*0.65*	*23*	*C*	*0.69*	*14*	*B*
	EBL	0.10	10	B	0.09	12	B
	EBT	0.67	27	C	0.35	11	B
	EBR	0.08	18	B	0.05	9	A
	WBL	0.64	41	D	0.44	7	A
	WBT	0.29	5	A	0.68	10	A
	WBR	0.01	4	A	0.00	4	A
	NBL	0.46	55	D	0.65	61	E
	NBTR	0.10	57	E	0.10	56	E
	SBL	0.11	65	E	0.05	50	D
	SBTR	0.01	65	E	0.05	49	D
Trafalgar Road & Britannia Road	*Overall*	**0.92**	*51*	*D*	**1.04**	**81**	**F**
	EBL	0.71	60	E	0.91	70	E
	EBT	**0.86**	52	D	0.76	44	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	EBR	0.81	47	D	0.27	34	C
	WBL	0.75	69	E	0.64	**89**	**F**
	WBT	0.77	54	D	**1.28**	**167**	**F**
	WBR	0.35	45	D	0.23	15	B
	NBL	**1.11**	**160**	**F**	**1.30**	**202**	**F**
	NBT	0.53	30	C	0.82	60	E
	NBR	0.17	25	C	0.22	**83**	**F**
	SBL	0.61	62	E	**1.13**	**172**	**F**
	SBT	**0.99**	52	D	0.68	25	C
	SBR	0.71	31	C	0.67	31	C
Eighth Line & Britannia Road	*Overall*	*0.72*	*36*	*D*	*0.83*	*39*	*D*
	EBL	0.49	24	C	0.82	**81**	**F**
	EBT	0.56	28	C	0.41	22	C
	EBR	0.04	20	C	0.04	34	C
	WBL	0.25	39	D	0.17	31	C
	WBT	0.45	38	D	0.73	40	D
	WBR	0.05	32	C	0.16	29	C
	NBL	0.37	41	D	0.40	39	D
	NBTR	0.43	45	D	0.84	56	E
	SBL	0.45	29	C	0.63	40	D
	SBTR	0.84	53	D	0.58	35	C
Trafalgar Road & Lower Base Line	*Overall*	**1.08**	*71*	*E*	**0.96**	*52*	*D*
	EBL	0.62	52	D	0.48	51	D
	EBT	**1.21**	**178**	**F**	**0.95**	**93**	**F**
	EBR	0.08	59	E	0.04	55	D
	WBL	**1.20**	**161**	**F**	**1.05**	**128**	**F**
	WBT	0.32	53	D	0.67	71	E
	WBR	0.13	51	D	0.67	57	E
	NBL	0.50	40	D	0.86	43	D
	NBT	0.62	38	D	**0.87**	37	D
	NBR	0.20	31	C	0.38	24	C
	SBL	0.90	**86**	**F**	0.81	68	E
	SBT	**0.96**	48	D	0.56	31	C
	SBR	0.09	19	B	0.06	**104**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.57*	*24*	*C*	**1.44**	**261**	**F**
	EBR	0.01	66	E	0.02	59	E
	WBL	0.78	62	E	0.77	39	D
	WBT	0.04	48	D	0.07	27	C
	WBR	0.47	52	D	**2.19**	**582**	**F**
	NBL	0.04	10	A	0.13	29	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBT	0.40	11	B	0.71	38	D
	SBT	0.53	15	B	0.77	44	D
	SBR	0.17	11	B	0.06	30	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.65*	*15*	*B*	*0.76*	*21*	*C*
	EBL	0.60	31	C	0.64	24	C
	EBR	0.46	30	C	0.85	39	D
	NBT	0.67	11	B	0.66	17	B
	SBT	0.23	6	A	0.70	18	B
Trafalgar Road & Main Street	*Overall*	*0.69*	*17*	*B*	*0.69*	*20*	*B*
	EBL	0.37	52	D	0.41	57	E
	EBT	0.08	54	D	0.12	53	D
	EBR	0.13	54	D	0.52	58	E
	WBL	0.03	56	E	0.11	53	D
	WBTR	0.33	59	E	0.32	55	D
	NBL	0.14	5	A	0.70	44	D
	NBTR	0.76	13	B	0.41	7	A
	SBL	0.41	34	C	0.28	9	A
	SBT	0.35	9	A	0.72	19	B
	SBR	0.05	4	A	0.32	13	B

Overall, under the 2051 Background conditions with the implementation of the GO station, the network is anticipated to operate similarly to the 2051 Background conditions without Go. Critical intersections remain the same in both scenarios, however, to a lesser degree once the GO station is introduced to the network.

Traffic demands at intersections along Trafalgar Road, which include Derry Road, Britannia Road, and Lower Base will remain high resulting in intersections operating near or above capacity during the peak hours. Generally, as traffic flow begins to approach capacity, traffic will divert to less congested routes. This level of capacity constraint however, is not uncommon for arterial intersections within the GTA/surrounding areas and is not unexpected within the area.

3.6 Future Background Queuing Analysis

Queueing analysis for future background conditions have been detailed in this section including mitigations measures to accommodate future queuing demand. Queueing reports for assessed future study horizons have been provided in **Appendix D**.

3.6.1 2031 Future Background Queues – Without GO

Full queueing analysis summary table for 2031 future background Without Go traffic conditions, identifying individual critical movements that exceed storage lengths, during either peak hour, are provided in **Table 3-9**.

Table 3-9 2031 Future Background Queueing Analysis – Without GO

Intersection	Movement	Proposed Storage (m)	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			50th Percentile Queue	95th Percentile Queue	50th Percentile Queue	95th Percentile Queue
Trafalgar Road & Derry Road	WBR	70	**87**	**152**	24	39
Trafalgar Road & Britannia Road	EBL	125	47	65	**130**	**168**
Trafalgar Road & Lower Base Line	WBL	110	107	**168**	54	75
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	36	49	93	**135**
	WBR	80	0	15	**298**	**385**
	SBR	85	0	10	0	0

Under the 2031 future background conditions, select movements are expected to queue beyond the proposed storage length with 95th percentile queues anticipated to spill back into the through lanes. The southbound right movement at the intersection of Trafalgar Road and Derry Road and the westbound right movement at the intersection of Trafalgar Road and Highway 401 westbound on- and off-ramp were also previously identified under existing conditions to exceed the existing storage, demonstrating that it is an existing issue.

3.6.2 2041 Future Background Queues – Without GO

Queueing analysis summaries for 2041 future background Without Go traffic conditions, identifying individual critical movements that exceed storage lengths, during either peak hour, are provided in **Table 3-10**.

Table 3-10 2041 Future Background Queueing Analysis – Without GO: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	112	**145**	22	42
	WBR	70	**82**	**123**	23	22
Trafalgar Road & Britannia Road	EBL	125	54	72	95	**134**
	EBR	85	**94**	**135**	0	18

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
	SBR	140	**159**	**205**	1	4
Eighth Line & Britannia Road	EBL	70	25	46	46	**72**
Trafalgar Road & Lower Baseline	WBL	120	**128**	**196**	90	**135**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	49	64	**100**	**145**
	WBR	80	2	18	**437**	**521**
Trafalgar Road & Future Main Street	SBR	75	0	0	35	**84**

Under the 2041 future background conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 future background conditions. At the intersection of Trafalgar Road and Derry Road, the eastbound left movement is projected to queue beyond the proposed storage but is expected to be contained by the taper distance and cleared within a single signal cycle, which is deemed acceptable. At the intersection of Trafalgar Road and Britannia Road the eastbound left turn during the p.m. peak hour is anticipated to extend past the existing storage however it is anticipated to be accommodated by the taper length. Similarly to the eastbound left turn at the intersection of Eighth Line and Britannia Road. At the intersection of Trafalgar Road and Lower Base Line, the 95th percentile queues for the westbound left and right turns are projected to queue beyond the proposed storage length during the a.m. and p.m. peak hours, however during the p.m. peak hour the queue is anticipated to be contained within the taper length.

3.6.3 2041 Future Background Queues – With GO

Queueing analysis summaries for 2041 future background With Go traffic conditions, identifying individual critical movements that exceed storage lengths, during either peak hour, are provided in **Table 3-11**.

Table 3-11 2041 Future Background Queueing Analysis – With GO: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	110	**141**	22	42
	WBR	70	**82**	**123**	23	24
Trafalgar Road & Britannia Road	EBL	125	54	72	95	**134**
	EBR	85	**92**	**133**	0	18

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
	SBR	140	**159**	**206**	1	4
Trafalgar Road & Lower Baseline	WBL	120	**127**	**195**	89	**134**
	WBR	70	0	16	57	**100**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	EBR	10	0	0	7	**16**
	WBL	90	48	63	**98**	**142**
	WBR	80	0	17	**428**	**512**

Under the 2041 future background with GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2041 future background without GO conditions. The exception being that all movements at the intersection of Eighth Line and Britannia Road do not exceed the available storage lengths.

3.6.4 2051 Future Background Queues – Without GO

Queueing analysis summaries for 2051 future background Without Go traffic conditions, identifying individual critical movements that exceed storage lengths, during either peak hour, are provided in **Table 3-12**.

Table 3-12 2051 Future Background Queueing Analysis – Without GO: Critical Movements

Intersection	Movement	Storage (m)	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			50th Percentile Queue	95th Percentile Queue	50th Percentile Queue	95th Percentile Queue
Trafalgar Road & Derry Road	EBL	130	121	**142**	24	41
	WBR	70	**104**	**161**	30	32
	SBR	85	0	0	79	**115**
Trafalgar Road & Britannia Road	EBL	125	56	72	96	**132**
	EBR	85	**114**	**162**	14	40
	SBR	140	**143**	**192**	**166**	**203**
Eighth Line & Britannia Road	EBL	70	28	51	60	**79**
Trafalgar Road & Lower Baseline	WBL	120	**176**	**249**	**127**	**179**
	WBR	70	0	23	65	**121**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	57	73	**131**	**193**
	WBR	80	21	43	**607**	**675**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	12	39	61	**133**
Trafalgar Road & Future Main Street	NBL	50	2	3	40	**67**

Under the 2051 future background conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 and 2041 future background conditions. All movements are anticipated to have their respective 95th percentile queue lengths captured within the available taper lengths with queues dispersing with each cycle lengths. Exceptions include the westbound right (a.m.) and the southbound right (p.m.) at Trafalgar Road and Derry Road, the eastbound right (a.m.) and the southbound right (a.m. and p.m.) at Trafalgar Road and Britannia Road, the westbound left (a.m. and p.m.) and right (p.m.) at Trafalgar and Lower Baseline, and the westbound left and right during the p.m. peak at the intersection of Trafalgar Road and the hwy 401 westbound off ramp.

3.6.5 2051 Future Background Queues – With GO

Queueing analysis summaries for 2051 future background With Go traffic conditions, identifying individual critical movements that exceed storage lengths, during either peak hour, are provided in **Table 3-13**.

Table 3-13 2051 Future Background Queueing Analysis – With GO: Critical Movements

Intersection	Movement	Storage (m)	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			50th Percentile Queue	95th Percentile Queue	50th Percentile Queue	95th Percentile Queue
Trafalgar Road & Derry Road	EBL	130	118	**141**	24	41
	WBR	70	**103**	**160**	30	32
	SBR	85	0	0	78	**113**
Trafalgar Road & Britannia Road	EBL	125	56	71	96	**132**
	EBR	85	**112**	**160**	14	39
	SBR	140	**143**	**193**	**164**	**203**
Trafalgar Road & Lower Baseline	WBL	120	**175**	**247**	**125**	**177**
	WBR	70	0	23	63	**120**
	EBL	10	0	0	8	**21**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	56	72	**130**	**189**
	WBR	80	20	41	**596**	**665**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	11	37	59	**131**
Trafalgar Road & Future Main Street	NBL	50	2	3	40	**67**
	NBTR	50	**124**	**132**	48	**75**

Under the 2051 future background with GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2051 future background without GO conditions. The exception being the northbound shared through-right turn lane, which will exceed capacity during both the a.m. and p.m. peak hours.

3.6.6 Queue Analysis Mitigation Summary

Based on queue analysis summary tables, improvements are required to existing turning lane storage to accommodate future background queue lengths. Required queue storage based on background analysis has been summarized in **Table 3-14**. Mitigation measure recommendations will be based on queue demands for future total conditions.

Table 3-14 Future Background Queueing Mitigation Summary Table

Intersection	Movement	Original Storage (m)	Required Storage (m)
Trafalgar Road & Derry Road	EBL	130	145
	WBR	70	130
	SBR	85	175
Trafalgar Road & Britannia Road	EBL	125	220
	EBR	85	165
	SBR	140	325
Trafalgar Road & Lower Baseline	WBL	120	250
	WBR	70	150
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	190
	WBR	80	670
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	140

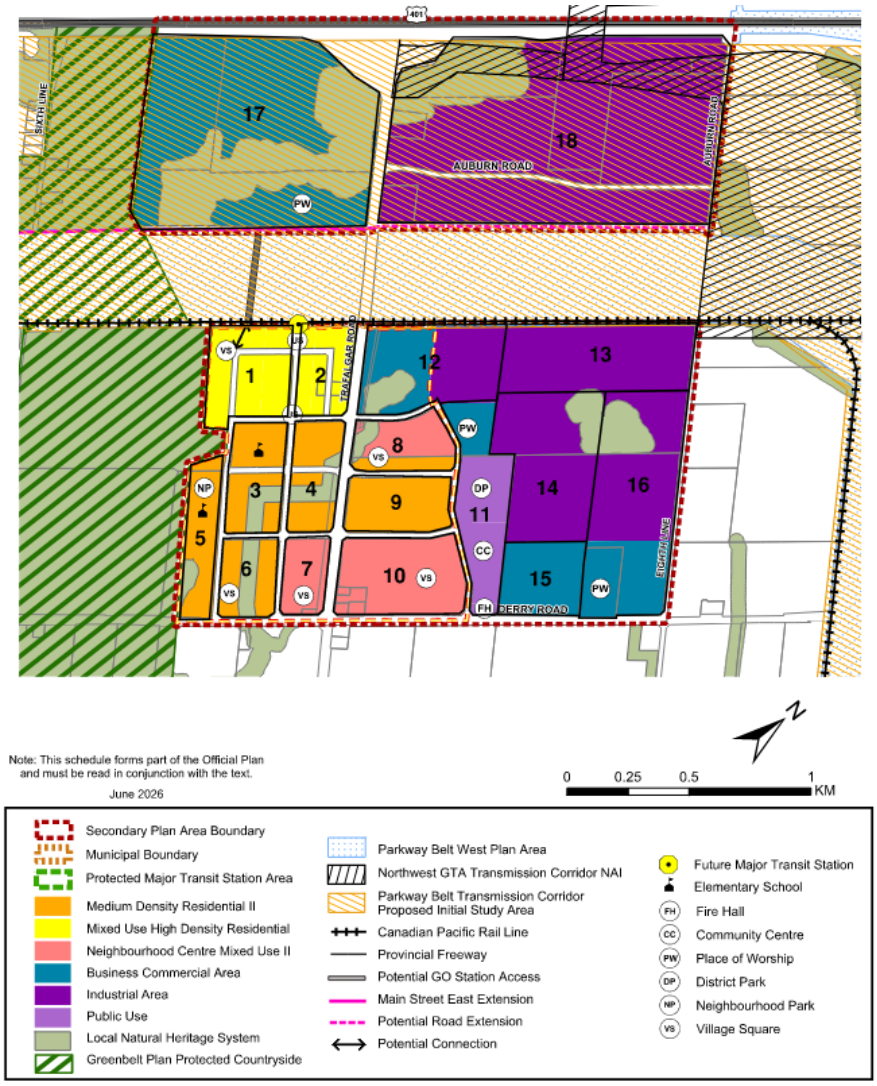
4 AGERTON SECONDARY PLAN SITE TRAFFIC

4.1 Traffic Analysis Zones

The Agerton Secondary Plan Area was divided into 18 Traffic Analysis Zones (TAZs) for the purposes of trip generation and assignment. The TAZ boundaries are generally defined by the collector road network and NHS features, conforming to the shape of future development blocks when possible.

The proposed land uses and site statistics for each TAZ were used to inform the site trip generation process. The resulting trips were then assigned to the collector road and broader transportation network based on each TAZ's location within the Agerton Secondary Plan Area. The locations and boundaries of each TAZ are illustrated in **Figure 4-1**.

Figure 4-1 Traffic Analysis Zones



4.2 Site Statistics

The Agerton Secondary Plan establishes a target of 14,100 residents and 17,500 jobs within the Secondary Plan area, with the Milton Trafalgar Major Transit Station Area (MTSA) identified as the highest-density, transit-oriented node centered on the future Milton Trafalgar GO Station. The Secondary Plan is estimated to accommodate the following general site statistics to the 2051 planning horizon:

- 6,600 Residential Units
- 66,900 m^2 Office Space
- 38,600 m^2 Retail Commercial Space
- 160 ha Industrial land
- 1 Community Centre and Library
- 1 District Park
- 2 Elementary Schools

Building on the above, SGL Planning and Design Inc. (SGL) prepared a sensitivity analysis to assess the number of residential units required to achieve the Secondary Plan population target of 14,100 residents under varying unit mix scenarios. The analysis found that, depending on the unit mix, achieving the population target could require up to approximately 7,130 residential units. As this represents a more conservative assumption than the forecasted 6,600 residential units, the higher unit count has been adopted for the purpose of trip generation estimates in this study.

For the commercial, mixed-use, and employment land uses, additional assumptions were required to translate the planning land use framework into a format compatible with ITE trip generation methodologies. SGL provided land area and employment forecasts for the various non-residential land use designations. To facilitate trip generation, these forecasts were converted into estimated gross floor area (GFA) values using assumptions regarding employment density and building floor space characteristics. The resulting GFA was then allocated among the applicable ITE land use categories, including retail, office, business park, and industrial uses, based on the planned land use composition. As a result of these conversions and assumptions, the GFA figures used for transportation modelling may not exactly correspond to the floor area statistics presented elsewhere in the Secondary Plan or related planning documents. However, the methodology provides a reasonable and consistent basis for estimating transportation demand associated with the proposed development.

Based on the above, the general site statistics for the 2051 scenario utilized for this study are as follows:

- 7,132 Residential Units
- Commercial and Mixed Use G.F.A. of 2,233,000 ft^2
- Employment G.F.A. of 20,624,000 ft^2
- 1 Community Centre and Library with a combined G.F.A. of 142,000 ft^2
- 1 District Park
- 2 Elementary Schools

It is noted that the Agerton Secondary Plan identifies two elementary school sites (serving two school boards) within the plan which are to be located with relatively close proximity to each other. Based on comments from school boards, one elementary school is anticipated to accommodate 600–700 students. Considering the anticipated internal trip capture within the community, the planning approach applied for Trafalgar RNA was carried forward to this TMP, and an assumption of 750 students was adopted for the schools within Agerton for trip generation purposes.

School catchment areas are anticipated to localize the majority of school generated trips thus limiting most trips to collector roads in the immediate vicinity of the school. The elementary schools are proposed on the west side of Trafalgar Road and localizing of school trips is anticipated to have a minimal impact on Trafalgar Road itself with low east-west traffic across this major arterial road. It is noted that trip forecasts for only one elementary school have been applied in this report analysis.

It is anticipated that the conservative student population (750 students) assessed and localization of school trips along future local and collector roads would reasonably compensate for the assessment conducted with assignment for one school. Additionally school related traffic associated with further increases of student population is expected to have minimal impact on regional intersections, as the majority of trips would be internal in nature to Agerton and would be dispersed throughout the local and collector network, primarily west of Trafalgar Road where majority of residential lands are located. Future collector road analysis will also demonstrate reserve capacity to accommodate these trips.

A preliminary phased build-out schedule for residential and employment land uses within the Agerton Secondary Plan that aligns with the Region's estimates has been incorporated into this study. This estimated build-out, tabulated in **Table 4-1**, have been incorporated into the trip generation and traffic analysis to reflect the anticipated timing and intensity of development.

Table 4-1 Agerton Development Phasing

Horizon Year	Residential Phasing	Employment Phasing
2031	50%	30%
2041	90%	55%
2051	100%	100%

Table 4-2 summarizes the phased site statistics assessed for the Agerton Secondary Plan and identifies Institute of Transportation Engineers (ITE) Land Use Codes (LUCs) applied to each land use for the purposes of trip generation calculations.

Table 4-2 Agerton Site Statistics for Trip Generation

Land Use Type	ITE Land Use	LUC	Unit	2031 Parameters	2041 Parameters[1]	2051 Parameters[1]
Townhouses	Multifamily Housing (Low-Rise)	220	units	471	842	937
Stacks	Multifamily Housing (Mid-Rise)	221	units	259	462	514
Apartments	Multifamily Housing (High-Rise)	222	units	2,843	5,114	5,681
Total Residential Units			**units**	**3,573**	**6,418**	**7,132**
Mixed Use Transit + Neighbourhood Centre Mixed Use	Shopping Center	820	sq. ft GFA	265,000	484,000	882,000
	General Office Building	710	sq. ft GFA	110,000	200,000	364,000
Mixed Use Commercial Corridor	Business Park	770	sq. ft GFA	296,000	542,000	987,000
Employment	Industrial Park	130	sq. ft GFA	6,186,000	11,345,000	20,624,000
Community Centre	Community Centre + Library	CUSTOM (495 + 590)	sq. ft GFA	142,000	142,000	142,000
District Park	Public Park	411	acres	15	15	15
Elementary School[2]	Elementary School	520	students	750	750	750

1 – The site statistics are cumulative in each horizon years, which align with the percentage shown in Table 4-1
2 – Analysis based on volumes for a single school

The Community Centre planned within the Agerton Secondary Plan was assumed to have a total of 142,000 square feet Gross Floor Area (sq.ft. G.F.A.), inclusive of 12,000 sq.ft G.F.A. for a branch of the Milton Public Library. The community centre G.F.A. square footage assumptions are based on preliminary information provided to TYLin by Town Staff during the early planning stages.

Detailed descriptions of each ITE land use type adopted in the analysis, as defined in the Trip Generation Manual, 12th Edition, are provided in **Appendix E**.

4.3 Dense Multi-Use Urban Setting

Based on the Town's vision for multi-use urban development within the Agerton Secondary Plan area (particularly with the implementation of the Trafalgar GO Station/MTSA), the Agerton Secondary Plan exhibits characteristics of a Dense Multi-Use Urban context, as defined in ITE's *Trip Generation* 12th Edition. Key attributes of ITE's definition of a Dense Multi-Use Urban location are as follows, with a detailed definition provided in **Appendix E**.

- Diverse, complementary land uses (residential, office, retail, commercial, etc.) in close proximity;
- High-density residential development within an urban area;
- A pedestrian, cycling, and transit supportive community in addition to vehicular travel;
- High transit mode share supported by frequent and convenient transit access, including regional rail, regional and local bus routes, and HOV/transit priority corridors; and
- Significant potential for short trips within the multi-use area (internal trip capture) via non-automobile travel due to walkable urban design.

The Dense Multi-Use Urban dataset was selected for the following ITE land uses to better reflect the planned urban form and multimodal environment envisioned in the Agerton Secondary Plan.

- ITE LUC 220 – Multifamily Housing (Low-Rise)
- ITE LUC 221 – Multifamily Housing (Mid-Rise)
- ITE LUC 222 – Multifamily Housing (High-Rise)
- ITE LUC 710 – General Office Building

4.4 With / Without Trafalgar GO Station Scenarios

Through consultation with Town Staff, it was determined that the traffic analysis would assess the impact of the future Trafalgar GO Station. As noted in **Section 3.2**, the annual background growth rates provided by the Region account for traffic associated with the future Trafalgar GO Station.

Based on the assumption that the Trafalgar GO Station will not be constructed by the 2031 study horizon, the enclosed traffic analysis assesses the impact of the Trafalgar GO Station on future total traffic for the 2041 and 2051 study horizon years. Accordingly, results for "With GO Station" and "Without GO Station" scenarios are provided for the 2041 and 2051 horizon years. The 2031 future total results align with the "Without GO Station" scenario.

For ITE LUC 220, 221, and 222, the ITE Trip Generation Manual, 12th Edition provides separate subcategories based on proximity to rail transit.

- "Not Close to Rail Transit" was applied to the Without GO scenario

- "Close to Rail Transit", defined as a walking distance of 0.5 mile (approximately 800 metres) or less from the residential site entrance to the rail transit station entrance, was applied to the With GO scenario.

It is acknowledged that the introduction of a GO Station may result in both a reduction in automobile trips due to mode shift to transit and an increase in station-generated traffic, including commuter park-and-ride demand and associated peak-period vehicle trips. Given the planned location of the Trafalgar GO Station within the Secondary Plan area, the "Close to Rail Transit" subcategory was appropriately applied to residential land uses for the With GO scenario as a balanced representation of the net transportation impact associated with the planned Trafalgar GO Station. For all other land uses, trip generation rates remain consistent between scenarios.

Mode Split reductions to site trips, discussed in **Section 4.5**, were not applied to the estimated residential site trips. ITE's *dense multi-use urban location* and the *"close" or "not close"* to rail transit subcategories were applied for the residential uses to account for GO station implementation. It was considered that further applying the Region's 28% mode split target to the residential trips would not be appropriate for forecasting purposes and analysis results.

4.5 Non-Automobile Mode Split Reductions

A Base Line non-automobile mode split reduction of 28% was applied to trips generated by all ITE land use codes under the "without GO" scenario. This 28% reduction aligns directly with the methodology employed in the March 2022 Trafalgar Transportation Master Plan, which references the 2031 targets from the Region's 2011 TMP: 5% active transportation, 20% transit, and 3% other transportation demand management (TDM) measures.

The 28% mode split reduction was not applied to the residential (ITE LUC 220, 221, and 222) and office (ITE LUC 710) land uses. For these land uses, trip generation rates were derived from ITE's Dense Multi-Use Urban dataset, which inherently reflects higher transit and active transportation mode shares due to urban form, density, and proximity to multimodal infrastructure. Accordingly, additional mode split reductions were not applied beyond the dataset's Base Line assumptions as a conservative measure.

Under the "with GO" scenario, an additional 5% non-automobile mode split reduction was applied to all land use types except the aforementioned residential and office categories, along with the elementary school (ITE LUC 520). The additional 5% mode split reduction was not applied to the Elementary School as a conservative measure, as it is assumed that the majority of the school traffic will be generated locally and would not see significant reductions due to the presence of regional rail.

The 5% mode split adjustment accounts for induced transit demand associated with the implementation of the Trafalgar GO Station. The resulting cumulative 33% non-automobile mode

share (28% base + 5% GO-induced) aligns with Metrolinx policy as outlined in the GO Rail Station Access report, which targets 25% transit access for stations in transit-priority areas, representing a 5% increase over the Region's 2011 TMP transit target of 20%.

4.6 Trip Generation

Trips generated by the proposed land uses within the Agerton Secondary Plan were estimated using the 12th edition of ITE's Trip Generation Manual.

In an effort to acknowledge that some land use types will produce and capture a significant number of internal trips within the Secondary Plan area, such as schools, the net trips produced by some land uses were divided between internal and external trips. The assumed splits of internal and external trips, as applicable, are identified in the trip generation summary tables.

4.6.1 2031 Horizon Year

Based on the phased site statistics detailed in **Table 4-2**, estimated site trip generation of the Agerton Secondary Plan for the "Without GO Station" scenario in 2031 is summarized in **Table 4-3**.

Table 4-3 Agerton 2031 (without GO Station) Trip Generation Summary

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) ITE LUC 220 471 Units	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
	Directional Split	10%	90%	-	90%	10%	-
	Gross Trips	19	162	181	121	13	134
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**19**	**162**	**181**	**121**	**13**	**134**
Multifamily Housing (Mid-Rise) ITE LUC 221 259 Units	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
	Directional Split	14%	86%	-	74%	26%	-
	Gross Trips	14	83	97	51	18	69
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**14**	**83**	**97**	**51**	**18**	**69**
Multifamily Housing (High-Rise) ITE LUC 222 2,843 Units	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
	Directional Split	25%	75%	-	73%	27%	-
	Gross Trips	171	511	682	388	143	531
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**171**	**511**	**682**	**388**	**143**	**531**
Total Residential 3,573 Units	Gross Trips	204	756	960	560	174	734
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**204**	**756**	**960**	**560**	**174**	**734**

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
265,000 sq. ft GFA	Gross Trips	144	89	233	815	848	1,663
	Mode Split Reduction (28%)	41	24	65	228	237	465
	Pass-by (34% PM)	0	0	0	208	208	416
	Net Trips	**103**	**65**	**168**	**379**	**403**	**782**
	Net Trips (90% Internal)	93	59	152	341	363	704
	Net Trips (10% External)	10	6	16	38	40	78
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
110,000 sq. ft GFA	Gross Trips	179	26	205	20	109	129
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**179**	**26**	**205**	**20**	**109**	**129**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	179	26	205	20	109	129
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
296,000 sq. ft GFA	Gross Trips	131	28	159	63	153	216
	Mode Split Reduction (28%)	37	8	45	18	42	60
	Net Trips	**94**	**20**	**114**	**45**	**111**	**156**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	94	20	114	45	111	156
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
6,186,000 sq. ft GFA	Gross Trips	1,249	372	1,621	468	1,206	1,674
	Mode Split Reduction (28%)	350	105	455	130	338	468
	Net Trips	**899**	**267**	**1,166**	**338**	**868**	**1,206**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	899	267	1,166	338	868	1,206
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	Net Trips (80% External)	95	48	143	122	132	254
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	2,163	852	3,015	1,635	2,613	4,248
	Mode Split Reduction	557	231	788	451	700	1,151
	Pass-by	0	0	0	208	208	416
	Net Trips	**1,606**	**621**	**2,227**	**976**	**1,705**	**2,681**
	Net Trips (Internal)	297	226	523	406	437	843
	Net Trips (External)	1,309	395	1,704	570	1,268	1,838
Total Trips	Gross Trips	2,367	1,608	3,975	2,195	2,787	4,982
	Mode Split Reduction	557	231	788	451	700	1,151
	Pass-by	0	0	0	208	208	416
	Net Trips	**1,810**	**1,377**	**3,187**	**1,536**	**1,879**	**3,415**
	Net Trips (Internal)	297	226	523	406	437	843
	Net Trips (External)	1,513	1,151	2,664	1,130	1,442	2,572

A total of 3,187 net auto trips, consisting of 1,810 inbound and 1,377 outbound trips, are predicted to be generated by the Agerton Secondary Plan area under 2031 (without GO Station) conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 1,536 inbound and 1,879 outbound net auto site trips are predicted, totaling 3,415 trips.

4.6.2 2041 Horizon Year

Based on the phased site statistics detailed in **Table 4-2**, estimated site trip generation of the Agerton Secondary Plan for the "With GO Station" and "Without GO Station" scenarios in 2041 are summarized in **Table 4-4** and **Table 4-5**, respectively.

Table 4-4 Agerton 2041 (with GO Station) Trip Generation Summary

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
842 Units	Gross Trips	28	260	288	239	26	265
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**28**	**260**	**288**	**239**	**26**	**265**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
462 Units	Gross Trips	17	100	117	90	34	124
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**17**	**100**	**117**	**90**	**34**	**124**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
5,114 Units	Gross Trips	107	869	976	549	249	798
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**107**	**869**	**976**	**549**	**249**	**798**
Total Residential	Gross Trips	152	1,229	1,381	878	309	1,187
	Mode Split Reduction (0%)	0	0	0	0	0	0
6,418 Units	**Net Trips**	**152**	**1,229**	**1,381**	**878**	**309**	**1,187**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
484,000 sq. ft GFA	Gross Trips	263	163	426	1,210	1,263	2,473
	Mode Split Reduction (33%)	87	55	142	400	417	817
	Pass-by (34% PM)	0	0	0	286	286	572
	Net Trips	**176**	**108**	**284**	**524**	**560**	**1,084**
	Net Trips (90% Internal)	159	97	256	472	504	976
	Net Trips (10% External)	17	11	28	52	56	108
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
200,000 sq. ft GFA	Gross Trips	235	34	269	32	172	204
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**235**	**34**	**269**	**32**	**172**	**204**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	235	34	269	32	172	204
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
542,000 sq. ft GFA	Gross Trips	341	75	416	120	295	415
	Mode Split Reduction (33%)	113	25	138	40	97	137
	Net Trips	**228**	**50**	**278**	**80**	**198**	**278**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	228	50	278	80	198	278
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
11,345,000 sq. ft GFA	Gross Trips	1,804	539	2,343	700	1,801	2,501
	Mode Split Reduction (33%)	597	179	776	230	595	825
	Net Trips	**1,207**	**360**	**1,567**	**470**	**1,206**	**1,676**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	1,207	360	1,567	470	1,206	1,676
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (33%)	54	27	81	70	76	146
	Net Trips	**110**	**57**	**167**	**143**	**155**	**298**
	Net Trips (20% Internal)	22	12	34	29	31	60
	Net Trips (80% External)	88	45	133	114	124	238
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	3,103	1,148	4,251	2,331	3,828	6,159
	Mode Split Reduction	934	357	1,291	755	1,203	1,958

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	Pass-by	0	0	0	286	286	572
	Net Trips	**2,169**	**791**	**2,960**	**1,290**	**2,339**	**3,629**
	Net Trips (Internal)	362	263	625	535	575	1,110
	Net Trips (External)	1,807	528	2,335	755	1,764	2,519
Total Trips	Gross Trips	3,255	2,377	5,632	3,209	4,137	7,346
	Mode Split Reduction	934	357	1,291	755	1,203	1,958
	Pass-by	0	0	0	286	286	572
	Net Trips	**2,321**	**2,020**	**4,341**	**2,168**	**2,648**	**4,816**
	Net Trips (Internal)	362	263	625	535	575	1,110
	Net Trips (External)	1,959	1,757	3,716	1,633	2,073	3,706

A total of 4,341 net auto trips, consisting of 2,321 inbound and 2,020 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2041 (with GO Station) conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 2,168 inbound and 2,648 outbound net auto site trips are predicted, totaling 4,816 trips.

Table 4-5 Agerton 2041 (without GO Station) Trip Generation Summary

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) ITE LUC 220 842 Units	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
	Directional Split	10%	90%	-	90%	10%	-
	Gross Trips	27	243	270	202	22	224
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**27**	**243**	**270**	**202**	**22**	**224**
Multifamily Housing (Mid-Rise) ITE LUC 221 462 Units	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
	Directional Split	14%	86%	-	74%	26%	-
	Gross Trips	21	127	148	89	31	120
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**21**	**127**	**148**	**89**	**31**	**120**
Multifamily Housing (High-Rise) ITE LUC 222 5,114 Units	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) – 1.36		
	Directional Split	25%	75%	-	73%	27%	-
	Gross Trips	307	922	1,229	677	251	928
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**307**	**922**	**1,229**	**677**	**251**	**928**
Total Residential 6,418 Units	Gross Trips	355	1,292	1,647	968	304	1,272
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**355**	**1,292**	**1,647**	**968**	**304**	**1,272**

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
484,000 sq. ft GFA	Gross Trips	263	163	426	1,210	1,261	2,471
	Mode Split Reduction (28%)	73	45	118	338	354	692
	Pass-by (34% PM)	0	0	0	310	310	620
	Net Trips	**190**	**118**	**308**	**562**	**597**	**1,159**
	Net Trips (90% Internal)	171	107	278	507	538	1,045
	Net Trips (10% External)	19	11	30	55	59	114
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
200,000 sq. ft GFA	Gross Trips	235	34	269	32	171	203
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**235**	**34**	**269**	**32**	**171**	**203**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	235	34	269	32	171	203
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) – 29.56			T = 0.81 (X) – 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
542,000 sq. ft GFA	Gross Trips	341	75	416	120	295	415
	Mode Split Reduction (28%)	95	21	116	35	83	118
	Net Trips	**246**	**54**	**300**	**85**	**212**	**297**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	246	54	300	85	212	297
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
11,345,000 sq. ft GFA	Gross Trips	1,804	539	2,343	700	1,801	2,501
	Mode Split Reduction (28%)	505	149	654	197	503	700
	Net Trips	**1,299**	**390**	**1,689**	**503**	**1,298**	**1,801**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	1,299	390	1,689	503	1,298	1,801
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	Net Trips (80% External)	95	48	143	122	132	254
Public Park – District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	3,103	1,148	4,251	2,331	3,825	6,156
	Mode Split Reduction	802	309	1,111	645	1,023	1,668
	Pass-by	0	0	0	310	310	620
	Net Trips	**2,301**	**839**	**3,140**	**1,376**	**2,492**	**3,868**
	Net Trips (Internal)	375	274	649	572	612	1,184
	Net Trips (External)	1,926	565	2,491	804	1,880	2,684
Total Trips	Gross Trips	3,458	2,440	5,898	3,299	4,129	7,428
	Mode Split Reduction	802	309	1,111	645	1,023	1,668
	Pass-by	0	0	0	310	310	620
	Net Trips	**2,656**	**2,131**	**4,787**	**2,344**	**2,796**	**5,140**
	Net Trips (Internal)	375	274	649	572	612	1,184
	Net Trips (External)	2,281	1,857	4,138	1,772	2,184	3,956

A total of 4,787 net auto trips, consisting of 2,656 inbound and 2,131 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2041 (without GO Station) conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 2,344 inbound and 2,796 outbound net auto site trips are predicted, totaling 5,140 trips.

4.6.3 2051 Horizon Year

Based on the phased site statistics detailed in **Table 4-2**, estimated site trip generation of the Agerton Secondary Plan for the "With GO Station" and "Without GO Station" scenarios in 2051 are summarized in **Table 4-6** and **Table 4-7**, respectively.

Table 4-6 Agerton 2051 (with GO Station) Trip Generation Summary

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
937 Units	Gross Trips	32	283	315	262	29	291
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**32**	**283**	**315**	**262**	**29**	**291**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
514 Units	Gross Trips	20	108	128	102	33	135
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**20**	**108**	**128**	**102**	**33**	**135**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
5,681 Units	Gross Trips	121	957	1,078	602	273	875
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**121**	**957**	**1,078**	**602**	**273**	**875**
Total Residential	Gross Trips	173	1,348	1,521	966	335	1,301
	Mode Split Reduction (0%)	0	0	0	0	0	0
7,132 Units	**Net Trips**	**173**	**1,348**	**1,521**	**966**	**335**	**1,301**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
882,000 sq. ft GFA	Gross Trips	481	295	776	1,801	1,873	3,674
	Mode Split Reduction (33%)	158	98	256	594	618	1,212
	Pass-by (34% PM)	0	0	0	426	426	852
	Net Trips	**323**	**197**	**520**	**781**	**829**	**1,610**
	Net Trips (90% Internal)	291	178	469	703	746	1,449
	Net Trips (10% External)	32	19	51	78	83	161
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
364,000 sq. ft GFA	Gross Trips	338	50	388	55	285	340
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**338**	**50**	**388**	**55**	**285**	**340**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	338	50	388	55	285	340
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
987,000 sq. ft GFA	Gross Trips	719	159	878	226	550	776
	Mode Split Reduction (33%)	237	52	289	75	181	256
	Net Trips	**482**	**107**	**589**	**151**	**369**	**520**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	482	107	589	151	369	520
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
20,624,000 sq. ft GFA	Gross Trips	2,806	836	3,642	1,116	2,869	3,985
	Mode Split Reduction (33%)	925	276	1,201	368	945	1,313
	Net Trips	**1,881**	**560**	**2,441**	**748**	**1,924**	**2,672**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	1,881	560	2,441	748	1,924	2,672
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (33%)	54	27	81	70	76	146
	Net Trips	**110**	**57**	**167**	**143**	**155**	**298**
	Net Trips (20% Internal)	22	12	34	29	31	60
	Net Trips (80% External)	88	45	133	114	124	238
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	4,804	1,677	6,481	3,467	5,874	9,341
	Mode Split Reduction	1,457	524	1,981	1,122	1,838	2,960

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	Pass-by	0	0	0	426	426	852
	Net Trips	**3,347**	**1,153**	**4,500**	**1,919**	**3,610**	**5,529**
	Net Trips (Internal)	494	344	838	766	817	1,583
	Net Trips (External)	2,853	809	3,662	1,153	2,793	3,946
Total Trips	Gross Trips	4,977	3,025	8,002	4,433	6,209	10,642
	Mode Split Reduction	1,457	524	1,981	1,122	1,838	2,960
	Pass-by	0	0	0	426	426	852
	Net Trips	**3,520**	**2,501**	**6,021**	**2,885**	**3,945**	**6,830**
	Net Trips (Internal)	494	344	838	766	817	1,583
	Net Trips (External)	3,026	2,157	5,183	2,119	3,128	5,247

A total of 6,021 net auto trips, consisting of 3,520 inbound and 2,501 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2051 (with GO Station) conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 2,885 inbound and 3,945 outbound net auto site trips are predicted, totaling 6,830 trips.

Table 4-7 Agerton 2051 (without GO Station) Trip Generation Summary

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
937 Units	Gross Trips	29	263	292	223	26	249
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**29**	**263**	**292**	**223**	**26**	**249**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
514 Units	Gross Trips	22	140	162	99	35	134
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**22**	**140**	**162**	**99**	**35**	**134**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
5,681 Units	Gross Trips	341	1,022	1,363	749	278	1,027
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**341**	**1,022**	**1,363**	**749**	**278**	**1,027**
Total Residential	Gross Trips	392	1,425	1,817	1,071	339	1,410
	Mode Split Reduction (0%)	0	0	0	0	0	0
7,132 Units	**Net Trips**	**392**	**1,425**	**1,817**	**1,071**	**339**	**1,410**

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
882,000 sq. ft GFA	Gross Trips	481	295	776	1,801	1,875	3,676
	Mode Split Reduction (28%)	135	83	218	504	526	1,030
	Pass-by (34% PM)	0	0	0	454	454	908
	Net Trips	**346**	**212**	**558**	**843**	**895**	**1,738**
	Net Trips (90% Internal)	312	191	503	759	806	1,565
	Net Trips (10% External)	34	21	55	84	89	173
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
364,000 sq. ft GFA	Gross Trips	338	50	388	55	284	339
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**338**	**50**	**388**	**55**	**284**	**339**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	338	50	388	55	284	339
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
987,000 sq. ft GFA	Gross Trips	719	159	878	226	551	777
	Mode Split Reduction (28%)	202	43	245	64	155	219
	Net Trips	**517**	**116**	**633**	**162**	**396**	**558**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	517	116	633	162	396	558
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
20,624,000 sq. ft GFA	Gross Trips	2,806	836	3,642	1,116	2,869	3,985
	Mode Split Reduction (28%)	786	235	1,021	313	802	1,115
	Net Trips	**2,020**	**601**	**2,621**	**803**	**2,067**	**2,870**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	2,020	601	2,621	803	2,067	2,870
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	Net Trips (80% External)	95	48	143	122	132	254
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	4,804	1,677	6,481	3,467	5,876	9,343
	Mode Split Reduction	1,252	455	1,707	956	1,566	2,522
	Pass-by	0	0	0	454	454	908
	Net Trips	**3,552**	**1,222**	**4,774**	**2,057**	**3,856**	**5,913**
	Net Trips (Internal)	516	358	874	824	880	1,704
	Net Trips (External)	3,036	864	3,900	1,233	2,976	4,209
Total Trips	Gross Trips	5,196	3,102	8,298	4,538	6,215	10,753
	Mode Split Reduction	1,252	455	1,707	956	1,566	2,522
	Pass-by	0	0	0	454	454	908
	Net Trips	**3,944**	**2,647**	**6,591**	**3,128**	**4,195**	**7,323**
	Net Trips (Internal)	516	358	874	824	880	1,704
	Net Trips (External)	3,428	2,289	5,717	2,304	3,315	5,619

A total of 6,591 net auto trips, consisting of 3,944 inbound and 2,647 outbound trips, are estimated to be generated by the Agerton Secondary Plan area under 2051 (without GO Station) conditions during the weekday a.m. peak hour. During the weekday p.m. peak hour, 3,128 inbound and 4,195 outbound net auto site trips are predicted, totaling 7,323 trips.

A detailed summary of land use statistics and trip generation for the 18 TAZs can be found in **Appendix F** for each horizon year and the applicable with/without GO Station scenarios.

4.7 Trip Distribution

Due to the current rural/greenfield status of the subject lands, TTS data would not properly reflect the future land uses and associated travel patterns within the study area. Further, nearby future infrastructure improvements, the proposed GO Station, and other proposed developments will all contribute to changes in existing traffic patterns within the vicinity of the study area.

The 2022 Trafalgar TMP estimated the trip distribution of the Trafalgar and Agerton Secondary Plans using the Region's 2031 EMME model. The external distribution was broken down by locations in the GTA, as summarized in Table 4-7 of the 2022 Trafalgar TMP Addendum, which was then applied to the site assignment of Trafalgar and Agerton traffic to develop the Origin-Destination (O-D) matrices outlined in Appendix F of the 2022 TMP. The 2022 TMP site traffic O-D matrices were developed for two different scenarios – trip generation with and without the GO Station operating.

While TYLin received an updated version of the Region's EMME Modeling, only O-D matrices and a portion of the EMME model road network specific to the Agerton Secondary Plan was provided. The updated model from the Region also included the assumption that the GO Station was operational (thus impacting traffic patterns). Updated EMME O-D matrices for the Trafalgar area were not provided to TYLin.

To better align with the 2022 Trafalgar TMP, TYLin derived a trip distribution specific to the "With GO" and "Without GO" scenario from the Site Assignment O-D matrices in Appendix F of the 2022 TMP using the site trips bound to/from external gateways of the study area. Appendix F of the 2022 TMP and TYLin's calculations are provided in **Appendix G**.

The 2022 TMP site traffic O-D matrices assumed the Future Main Street extension to Trafalgar Road. Given the design and construction timeline for the Future Main Street extension outlined in the MCEA, construction of Future Main Street East from Sixth Line to Trafalgar Road is not currently defined and is expected to be constructed sometime beyond 2035. Since the Future Main Street extension to Trafalgar Road is not planned to be constructed by the 2031 horizon year, the trip distribution from Future Main Street has been reassigned to take Derry Road, given the close proximity to the Future Main Street extension and its central location within the Town's roadway network. The 2031 study horizon trip distribution is summarized in **Table 4-8**, without the GO Station and Future Main Street extension.

Table 4-8 External Gateway Trip Distribution: 2031 Without GO

Gateway Number	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
1	Trafalgar Road to/from north	10.47%	15.62%	15.68%	10.15%
2	Eighth Line to/from north	0.00%	0.00%	0.00%	0.00%
3	Derry Road to/from east	4.87%	4.05%	4.11%	4.89%
4	Britannia Road to/from east	3.29%	3.46%	3.45%	3.37%
5	Lower Base Line to/from east	4.74%	5.46%	5.37%	4.89%
6	Trafalgar Road to/from south	23.12%	19.80%	19.79%	24.02%
7	Lower Base Line to/from west	0.86%	0.94%	0.92%	0.81%
8	Britannia Road to/from west	14.16%	13.70%	13.63%	15.09%
9	Derry Road to/from west	15.55%	14.94%	14.98%	14.91%
10	Highway 401 to/from east	7.77%	7.30%	7.25%	7.59%
11	Highway 401 to/from west	15.15%	14.72%	14.81%	14.28%
12	Future Main Street to/from west	0.00%	0.00%	0.00%	0.00%
13	Louis St. Laurent to/from west	0.00%	0.00%	0.00%	0.00%
TOTAL		**100.00%**	**100.00%**	**100.00%**	**100.00%**

For the 2041 study horizon years, **Table 4-9** and **Table 4-10** summarize the trip distribution to the external gateways at the boundaries of the study area, without the GO Station and with the GO Station, respectively.

Table 4-9 External Gateway Trip Distribution: 2041 Without GO

Gateway Number	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
1	Trafalgar Road to/from north	10.47%	15.62%	15.68%	10.15%
2	Eighth Line to/from north	0.00%	0.00%	0.00%	0.00%
3	Derry Road to/from east	4.87%	4.05%	4.11%	4.89%
4	Britannia Road to/from east	3.29%	3.46%	3.45%	3.37%
5	Lower Base Line to/from east	4.74%	5.46%	5.37%	4.89%
6	Trafalgar Road to/from south	23.12%	19.80%	19.79%	24.02%
7	Lower Base Line to/from west	0.86%	0.94%	0.92%	0.81%
8	Britannia Road to/from west	14.16%	13.70%	13.63%	15.09%
9	Derry Road to/from west	8.76%	8.45%	8.48%	8.49%
10	Highway 401 to/from east	7.77%	7.30%	7.25%	7.59%
11	Highway 401 to/from west	15.15%	14.72%	14.81%	14.28%
12	Future Main Street to/from west	6.79%	6.49%	6.51%	6.42%
13	Louis St. Laurent to/from west	0.00%	0.00%	0.00%	0.00%
TOTAL		**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 4-10 External Gateway Trip Distribution: 2041 With GO

Gateway Number	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
1	Trafalgar Road to/from north	10.42%	15.38%	15.32%	10.26%
2	Eighth Line to/from north	0.00%	0.00%	0.00%	0.00%
3	Derry Road to/from east	5.27%	4.34%	4.25%	5.31%
4	Britannia Road to/from east	2.93%	3.11%	2.96%	2.88%
5	Lower Base Line to/from east	4.34%	5.29%	5.08%	4.29%
6	Trafalgar Road to/from south	22.49%	19.44%	19.53%	22.97%
7	Lower Base Line to/from west	0.68%	0.71%	0.73%	0.64%
8	Britannia Road to/from west	12.88%	12.74%	12.29%	13.06%
9	Derry Road to/from west	10.29%	9.42%	9.51%	10.49%
10	Highway 401 to/from east	8.72%	7.73%	7.73%	8.65%
11	Highway 401 to/from west	15.09%	15.28%	15.39%	14.83%
12	Future Main Street to/from west	6.89%	6.56%	7.21%	6.63%
13	Louis St. Laurent to/from west	0.00%	0.00%	0.00%	0.00%
TOTAL		**100.00%**	**100.00%**	**100.00%**	**100.00%**

For the 2051 study horizon year, the distribution of site traffic derived from the 2022 Trafalgar TMP was modified to account for the impact of the extension of Louis St. Laurent Avenue to Trafalgar Road. It was assumed that a portion of traffic that travelled to/from the west via Derry Road or Britannia Road would divert to the new route to/from the west via the extension of Louis St. Laurent Avenue to Trafalgar Road that is expected to be completed by 2051. It was assumed that 20% of the total traffic traveling to/from the west via Derry Road and Britannia Road would shift to Louis St. Laurent Avenue. The amount of traffic shifted from each existing road to Louis St. Laurent Avenue was calculated in proportion to each road's share of traffic. calculations are provided in **Appendix G**.

For the 2051 study horizon year, **Table 4-11** and **Table 4-12** summarize the trip distribution to the external gateways at the boundaries of the study area, without the GO Station and with the GO Station, respectively.

Table 4-11 External Gateway Trip Distribution: 2051 Without GO

Gateway Number	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
1	Trafalgar Road to/from north	10.47%	15.62%	15.68%	10.15%
2	Eighth Line to/from north	0.00%	0.00%	0.00%	0.00%
3	Derry Road to/from east	4.87%	4.05%	4.11%	4.89%
4	Britannia Road to/from east	3.29%	3.46%	3.45%	3.37%
5	Lower Base Line to/from east	4.74%	5.46%	5.37%	4.89%
6	Trafalgar Road to/from south	23.12%	19.80%	19.79%	24.02%
7	Lower Base Line to/from west	0.86%	0.94%	0.92%	0.81%
8	Britannia Road to/from west	11.33%	10.96%	10.90%	12.07%
9	Derry Road to/from west	7.01%	6.76%	6.78%	6.79%
10	Highway 401 to/from east	7.77%	7.30%	7.25%	7.59%
11	Highway 401 to/from west	15.15%	14.72%	14.81%	14.28%
12	Future Main Street to/from west	6.79%	6.49%	6.51%	6.42%
13	Louis St. Laurent to/from west	4.58%	4.43%	4.42%	4.71%
TOTAL		**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 4-12 External Gateway Trip Distribution: 2051 With GO

Gateway Number	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
1	Trafalgar Road to/from north	10.42%	15.38%	15.32%	10.26%
2	Eighth Line to/from north	0.00%	0.00%	0.00%	0.00%
3	Derry Road to/from east	5.27%	4.34%	4.25%	5.31%
4	Britannia Road to/from east	2.93%	3.11%	2.96%	2.88%
5	Lower Base Line to/from east	4.34%	5.29%	5.08%	4.29%
6	Trafalgar Road to/from south	22.49%	19.44%	19.53%	22.97%
7	Lower Base Line to/from west	0.68%	0.71%	0.73%	0.64%
8	Britannia Road to/from west	10.31%	10.19%	9.83%	10.45%
9	Derry Road to/from west	8.23%	7.54%	7.60%	8.39%
10	Highway 401 to/from east	8.72%	7.73%	7.73%	8.65%
11	Highway 401 to/from west	15.09%	15.28%	15.39%	14.83%
12	Future Main Street to/from west	6.89%	6.56%	7.21%	6.63%
13	Louis St. Laurent to/from west	4.63%	4.43%	4.36%	4.71%
TOTAL		**100.00%**	**100.00%**	**100.00%**	**100.00%**

4.8 Trip Assignment

Site assignment was based on a TAZ-specific level, as trip generation estimates were tailored to each TAZ's proposed land uses and residential unit types. Trips were further subdivided into internal and external trips for assignment purposes, as discussed in **Section 4.6**.

Figure 4-2 outlines the location of existing and future study intersections throughout the Agerton Secondary Plan area. Due to the large number of intersections analyzed and the layout of the proposed collector road system, all study intersections are not able to be presented on a single traffic volume figure. **Figure 4-2** provides the intersection ID number assigned to each intersection and collector road names to be used in conjunction with site traffic volume figures.

2051 full build-out site traffic (with GO scenario) volumes at external intersections are provided in **Figure 4-3**. Predicted 2051 site traffic volumes at the intersections of new collector roads with existing arterial roads are provided in **Figure 4-4**, while volumes at internal collector-to-collector intersections for full build-out are provided in **Figure 4-5**. Site traffic volumes for other horizon years and scenarios are provided in **Appendix H**.

4.8.1 External Assignment

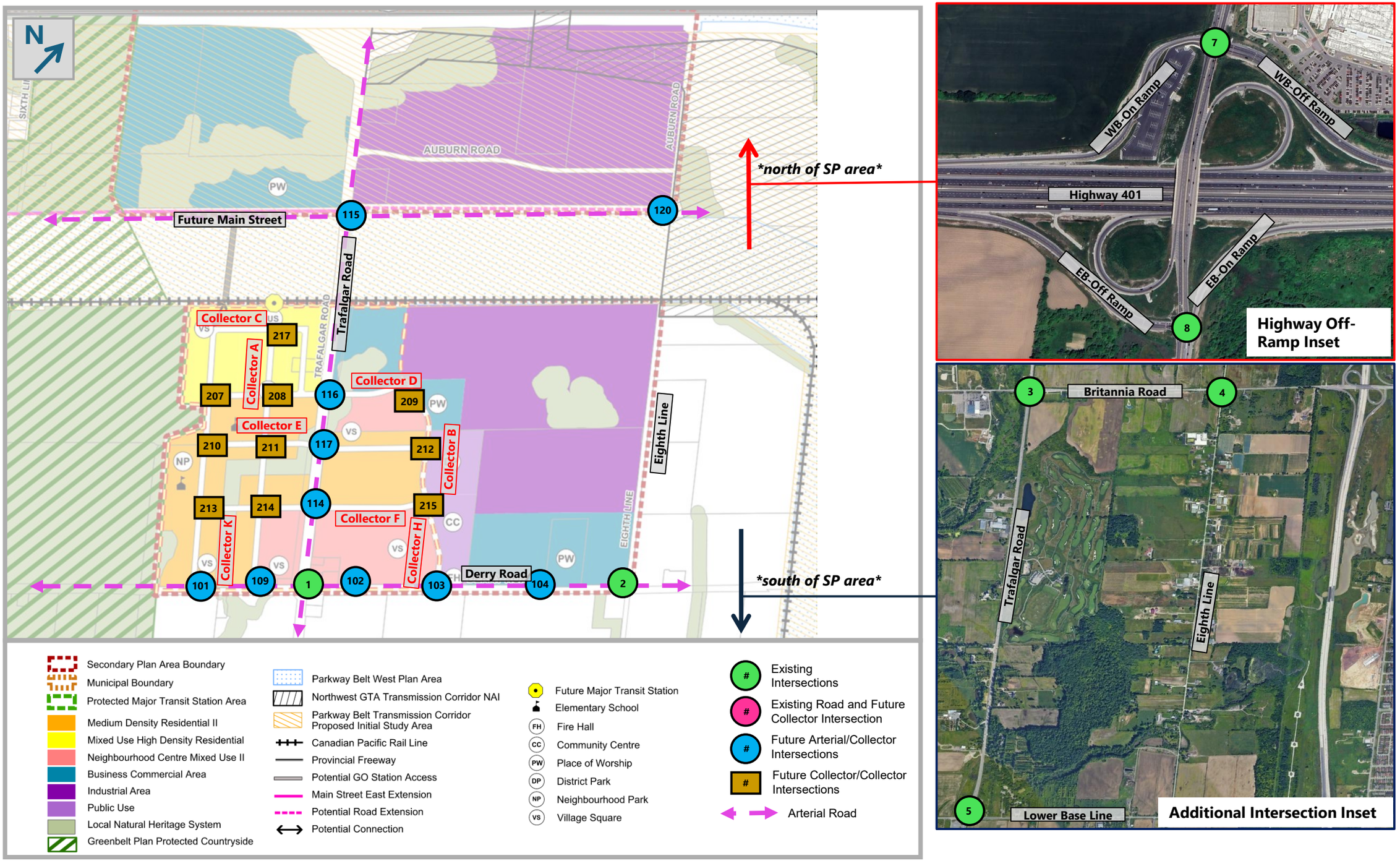
External trips to/from each TAZ were assigned first to a collector road within or adjacent to the TAZ and then traveled via logical routing to one of the external road network gateways, as per the trip distributions summarized in **Section 4.7**.

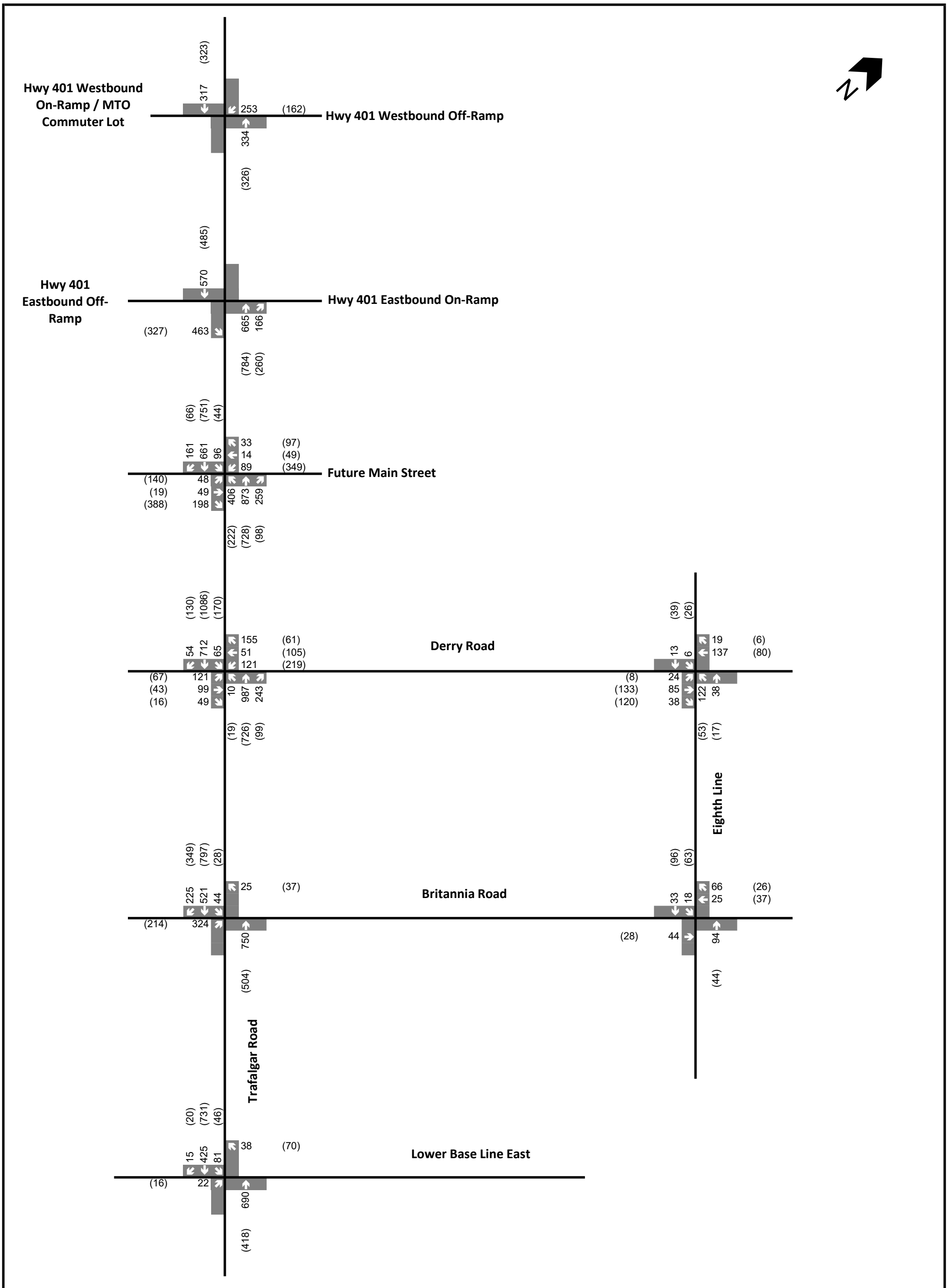
4.8.2 Internal Assignment

Internal site assignment was applied to non-residential land uses such as schools and retail blocks that would attract vehicle trips from within the Agerton Secondary Plan's boundaries. The internal assignment of site trips did not further reduce the total net trips generated but merely kept a portion of the trips internal to the site instead of 100% of the net trips being assigned to external road network gateways.

In the case of land uses for which internal assignment applied, such as schools, a "catchment area" approach as taken. For example, each TAZ with residential units was assigned to the elementary school, imitating a school's catchment area. Inbound and outbound internal trips generated by the school were assigned to/from each TAZ in the catchment area proportionate to the number of residential units in each TAZ. Completing internal assignment should be considered a conservative measure, particularly when it comes to the design of the collector road intersections and assessment of capacity. Internal assignment accounts for trips completed between TAZs (between residential and non-residential land uses), and not just commuter traffic in and out of the Agerton Secondary Plan area. This results in more varied travel patterns throughout the collector road network, ensuring the collector roads and intersections have been designed with sufficient capacity for both internal and external traffic travel patterns.

Figure 4-2 Future Intersections



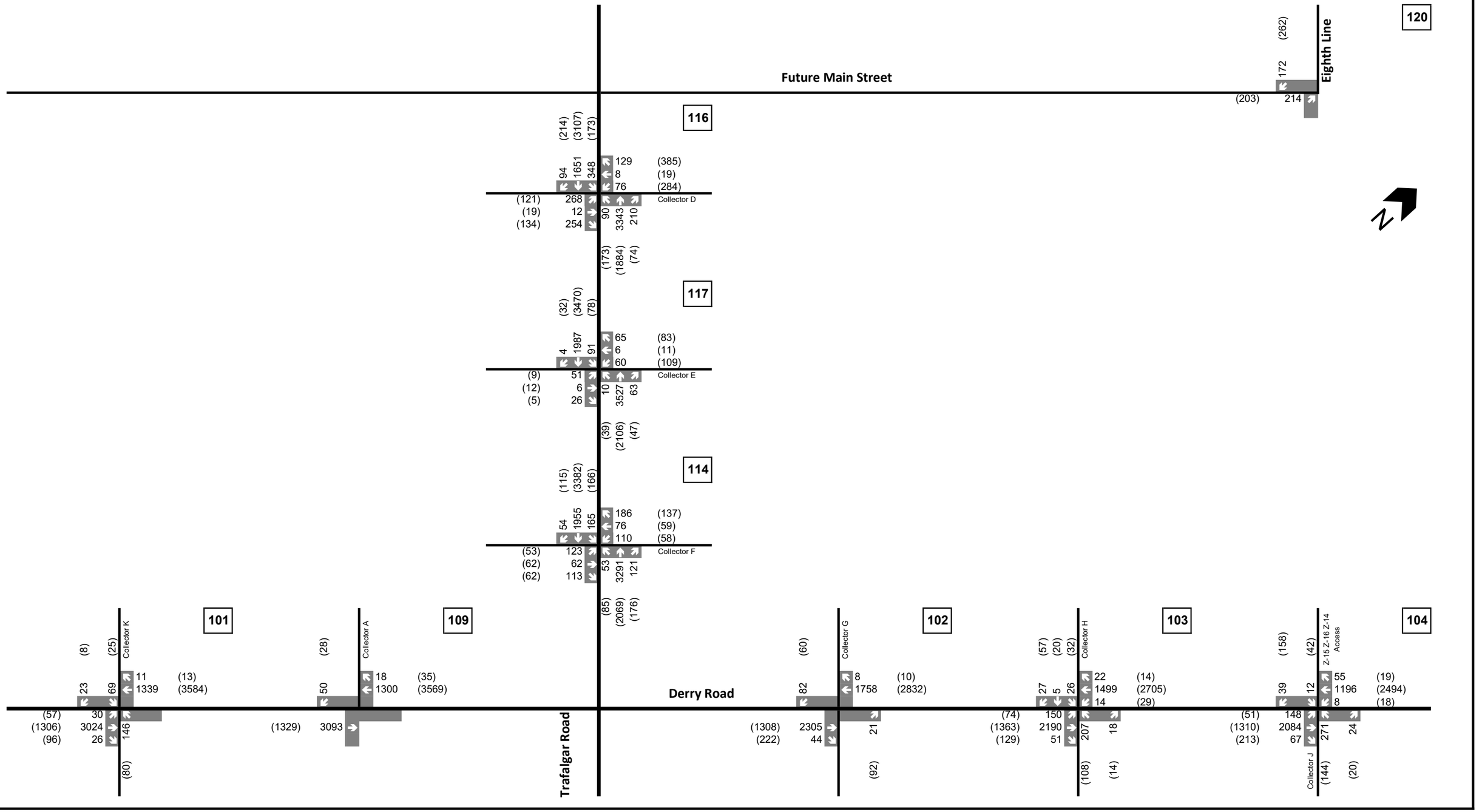


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Figure 4-3

2051 Full Build-Out Site Traffic Volumes (With GO Station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



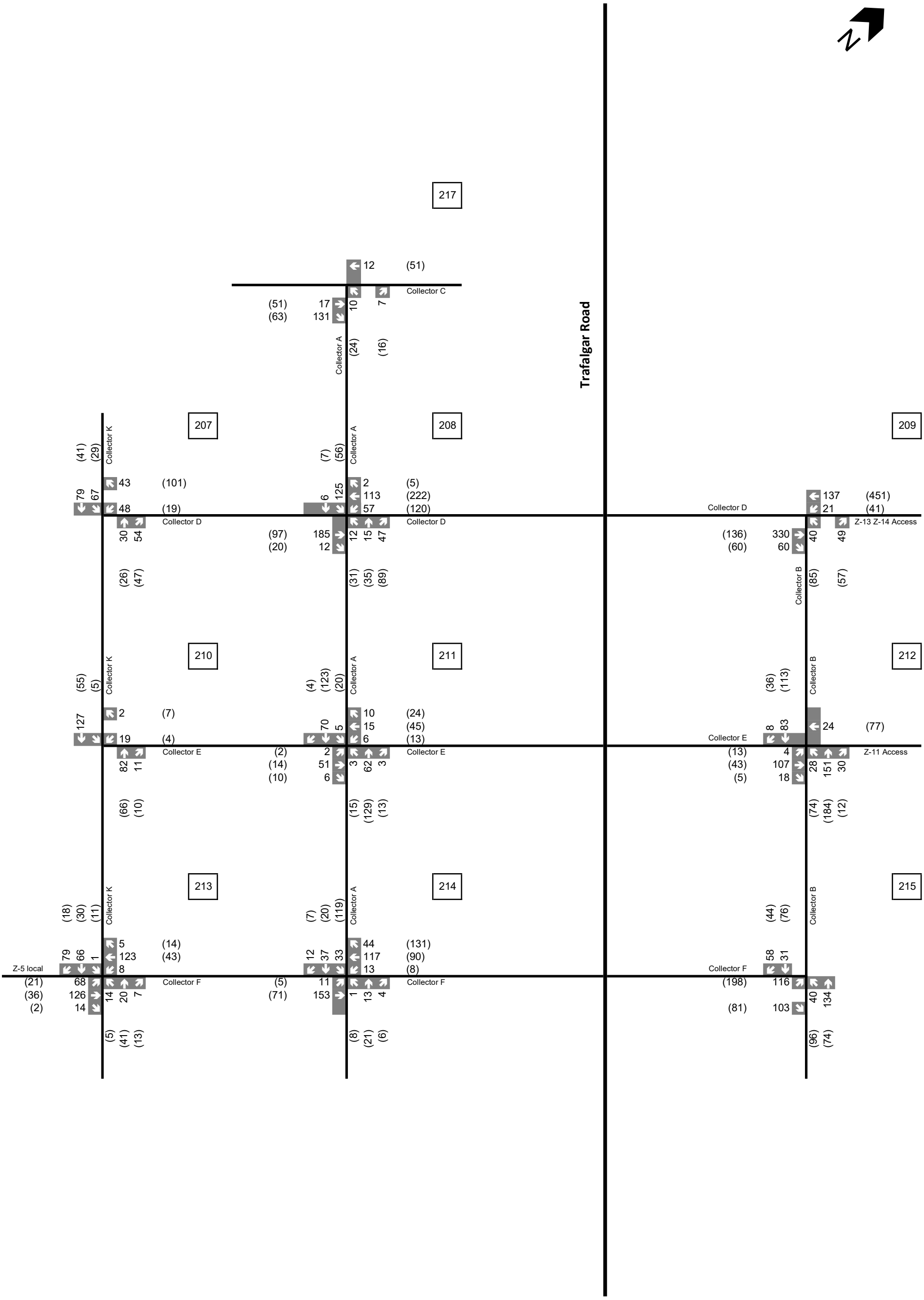
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 4-4

2051 Full Build-Out Site Traffic Volumes (With GO Station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 4-5

2051 Full Build-Out Site Traffic Volumes (With GO Station)
Collector-Collector Intersections

5 FUTURE TOTAL CONDITIONS

5.1 Future Total Volumes and Lane Configurations

5.1.1 Future Total Traffic Volumes

The future total volumes were developed by combining the future background volumes with the estimated site traffic, Trafalgar traffic, and background traffic rerouting adjustments derived from the March 2022 Trafalgar TMP Addendum. This analysis incorporates three horizon years of future background data, with two sets of trip generation calculations for each year under with- and without-GO Station scenarios.

For each traffic volume set, three distinct figures were prepared, including one for existing arterial intersections (plus the future intersection of Trafalgar Road and Future Main Street), one for arterial-collector intersections, and one for collector-collector intersections, as tabulated in **Table 5-1**, illustrating the future total traffic volumes across all scenarios and horizon years.

Table 5-1 Summary of Future Total Traffic Volume Figures

Horizon Year	Without GO Scenario			With GO Scenario		
	Arterial Intersections	Arterial-Collector Intersections	Collector-Collector Intersections	Arterial Intersections	Arterial-Collector Intersections	Collector-Collector Intersections
2031	Figure 5-1	Figure 5-2	Figure 5-3	-	-	-
2041	Figure 5-4	Figure 5-5	Figure 5-6	Figure 5-7	Figure 5-8	Figure 5-9
2051	Figure 5-10	Figure 5-11	Figure 5-12	Figure 5-13	Figure 5-14	Figure 5-15

5.1.2 Future Total Lane Configurations

In addition to the background network improvements detailed in **Table 3-2**, further mitigation measures are proposed to accommodate traffic associated with the Agerton development. These improvements are intended to support operating conditions at key study intersections under total traffic conditions. The proposed site-related mitigation measures are summarized in **Table 5-2** and lane configuration figures for the future total road network are provided in **Figure 5-16**, **Figure 5-17,** and **Figure 5-18** for the 2031, 2041, and 2051 horizon years, respectively.

Table 5-2 Future Total Proposed Mitigation Measures

ID	Intersection	Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031 FT w/o GO	2041 FT with GO	2041 FT w/o GO	2051 FT with GO	2051 FT w/o GO	Anticipated Responsibility
External Intersections										
115	Trafalgar Road and Future Main Street	**Proposed**	Dual right turn lanes with storage of 100m	EBR						Region / Agerton Developers
		Proposed	Dual left turn lanes	NBL						Region / Agerton Developers
		Proposed	Dedicated right turn lane with storage of 50m	NBR						Region / Agerton Developers
Arterial-to-Collector Intersections										
101	Derry Road and Collector K	**Proposed**	3 lanes for left / through / right movements	SB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	WBR						Region / Agerton Developers
		Proposed	Dedicated left turn lane	EBL						Region / Agerton Developers
		Proposed	Shared through movement on Shared left / right lane	NB						Region / Agerton Developers
		Proposed	Dedicated right turn lane	WBR						Region / Agerton Developers
102	Derry Road and Collector G (Trafalgar	**Proposed**	Right turn lane	SBR						Region / Agerton Developers

LEGEND: - Not Required **- Proposed**

ID	Intersection	Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FT	FT		FT		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
	Secondary Plan collector) / Z-10 Local	**Proposed**	Shared right movement on through lane	WBR						Region / Agerton Developers
103	Derry Road and Collector H	**Proposed**	Shared left / through / right lane	SB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	WBR						Region / Agerton Developers
		Proposed	Dedicated left turn lane	EBL						Region / Agerton Developers
		Proposed	Shared through movement on Shared left / right lane	NB						Region / Agerton Developers
104	Derry Road and Collector J (Trafalgar Secondary Plan collector) / Z-15 Local Access	**Proposed**	Shared left / through / right lane	SB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	WBR						Region / Agerton Developers
		Proposed	Dedicated left turn lane	EBL						Region / Agerton Developers
		Proposed	Shared through movement on Shared left / right lane	NB						Region / Agerton Developers
109	Derry Road and Collector A	**Proposed**	New Road intersecting Derry Road Right turn lane	SBR						Region / Agerton Developers
		Proposed	Dedicated right turn lane	WBR						Region / Agerton Developers

LEGEND: - Not Required **- Proposed**

ID	Intersection	Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FT	FT		FT		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
114	Collector F and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches						Region / Agerton Developers
		Proposed	Shared through / right lane	EB WB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	NB SB						Region / Agerton Developers
		Proposed	Dedicated right turn lane	NBR						Region / Agerton Developers
116	Collector D and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches						Region / Agerton Developers
		Proposed	Shared through / right lane	EB WB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	NB SB						Region / Agerton Developers
		Proposed	Dedicated right turn lane	NBR SBR						Region / Agerton Developers
		Proposed	Dual left turn lanes	SBL						Region / Agerton Developers
		Proposed	Dual left turn lanes	NBL						Region / Agerton Developers

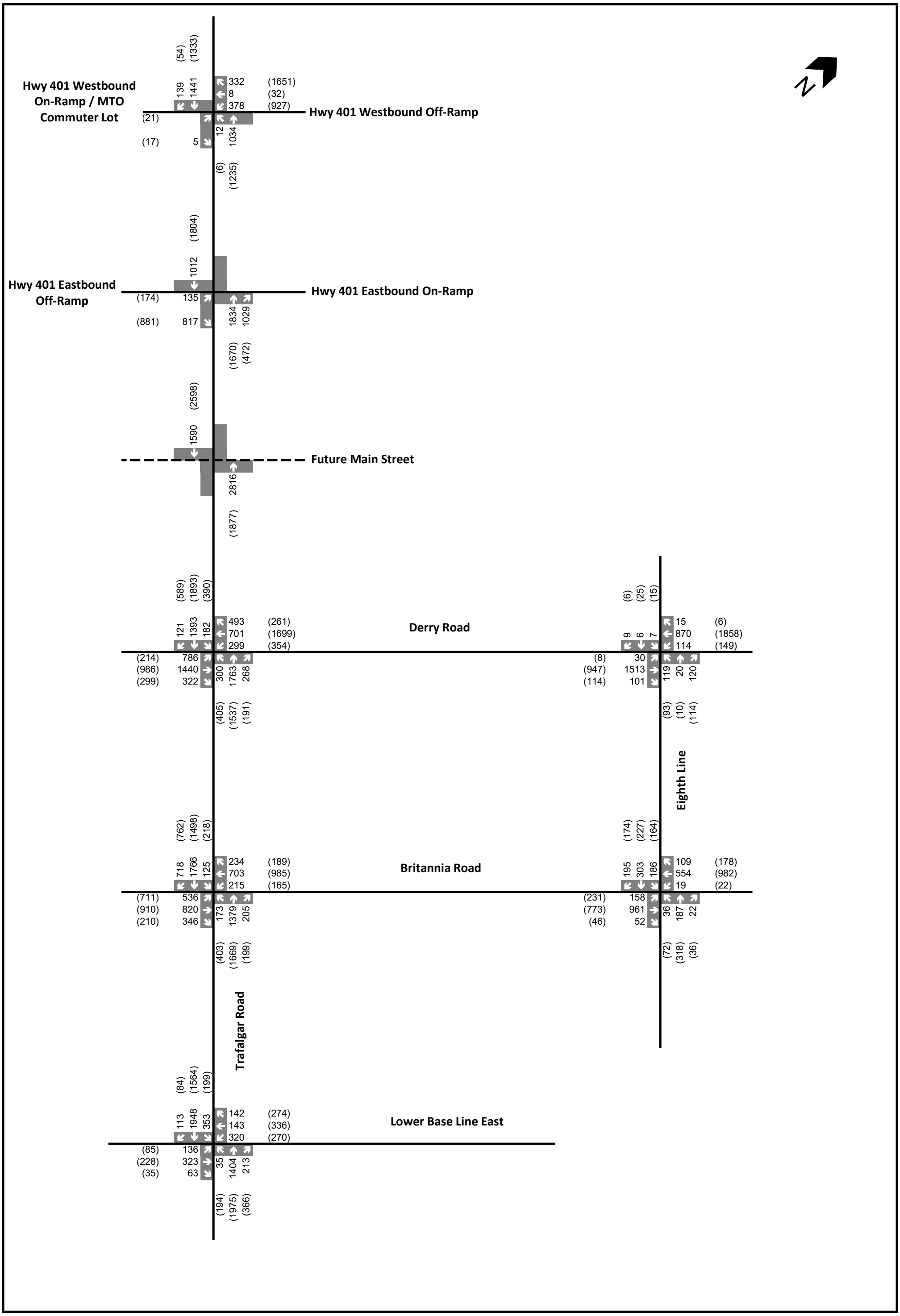
LEGEND: - Not Required **- Proposed**

ID	Intersection	Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FT	FT		FT		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
117	Collector E and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches						Region / Agerton Developers
		Proposed	Shared through / right lane	EB WB						Region / Agerton Developers
		Proposed	Shared right movement on through lane	NB SB						Region / Agerton Developers
Collector-to-Collector Intersections										
207	Collector D and Collector K	**Proposed**	Proposed 1 lane configuration with shared movements	All Approaches						Agerton Developers
208	Collector D and Collector A	**Proposed**								
209	Collector D and Collector B / Z-13 Z-14 Access	**Proposed**								
210	Collector E and Collector K	**Proposed**								
211	Collector E and Collector A	**Proposed**								
212	Collector E and Collector B	**Proposed**								
213	Collector F / Z-5 Local and Collector K	**Proposed**								
214	Collector F and Collector A	**Proposed**								

LEGEND: - Not Required **- Proposed**

ID	Intersection	Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031	2041		2051		Anticipated Responsibility
					FT	FT		FT		
					w/o GO	with GO	w/o GO	with GO	w/o GO	
215	Collector F and Collector B	**Proposed**								
217	Collector C and Collector A	**Proposed**								

LEGEND: - Not Required **- Proposed**



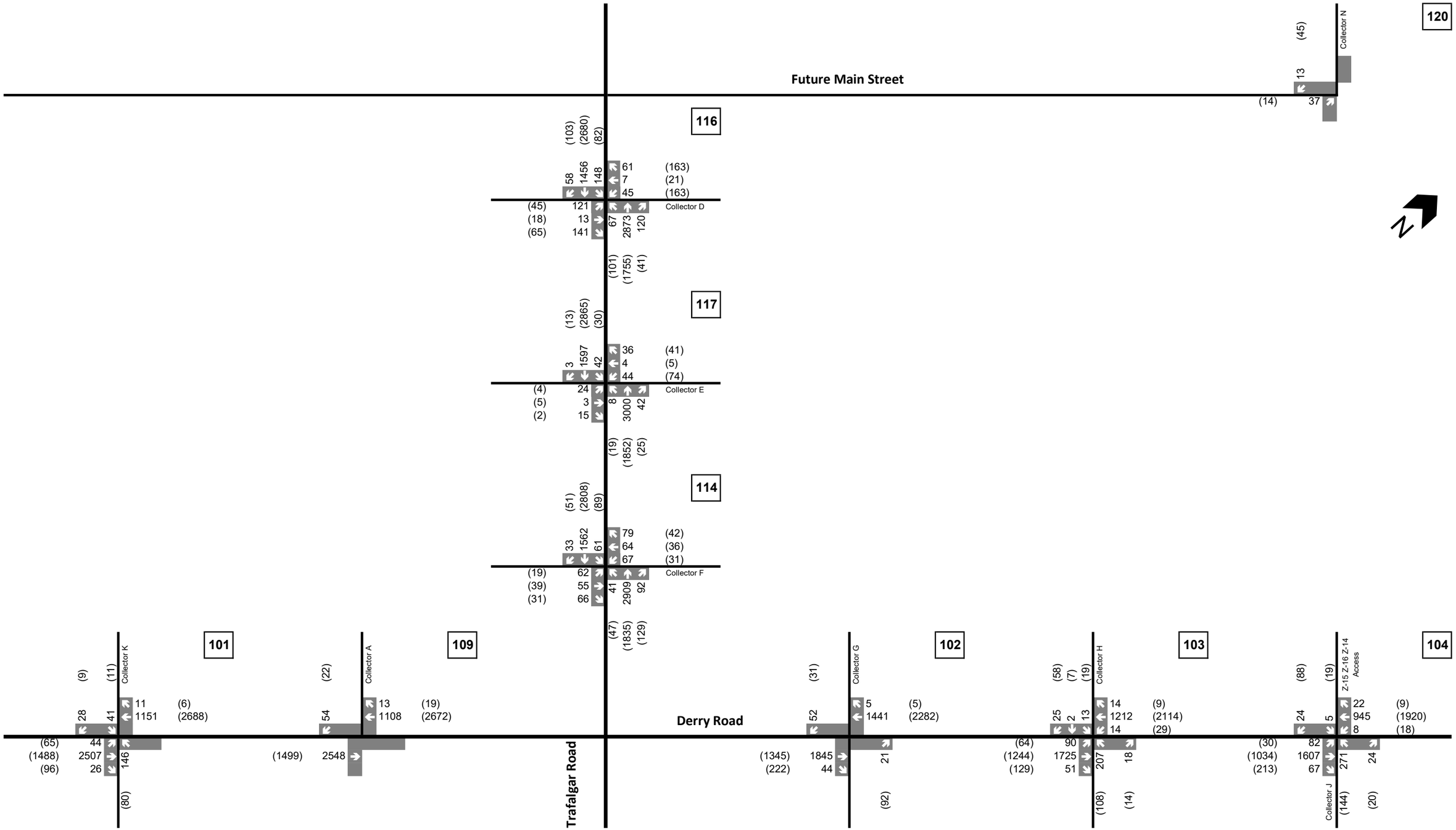
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-1

2031 Future Total Volumes (without GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

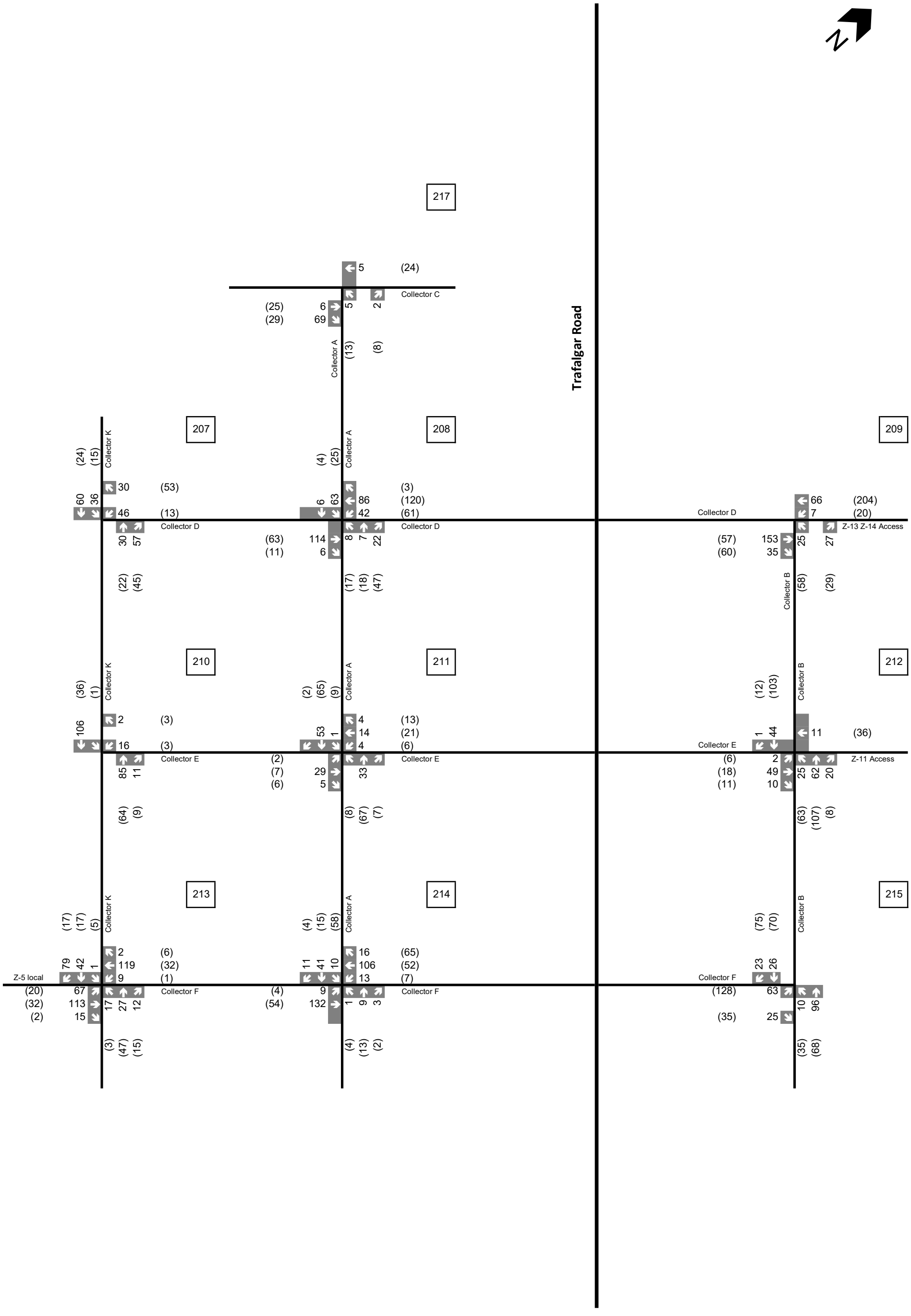
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-2

2031 Future Total Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS

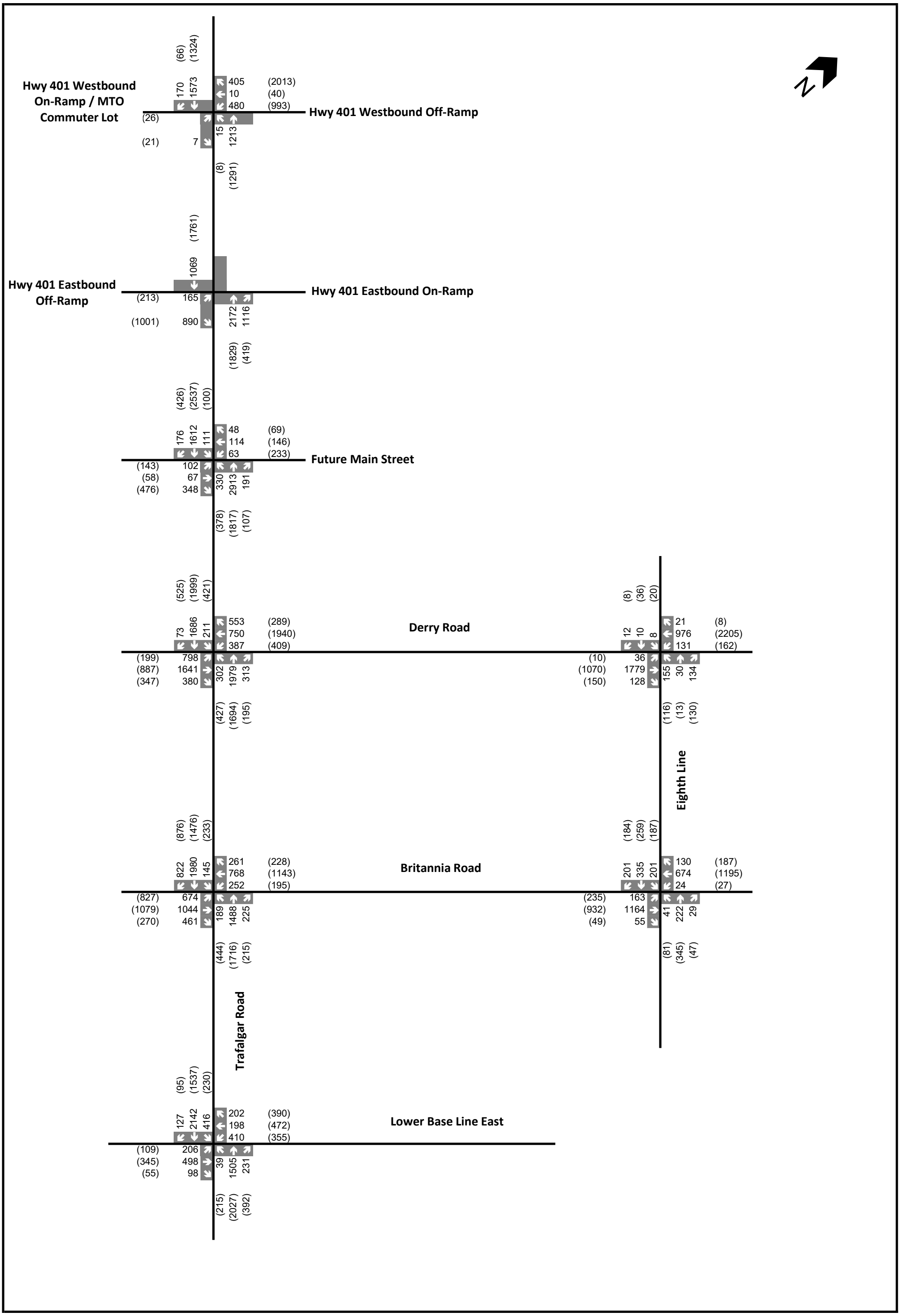


Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-3

2031 Future Total Volumes (without GO station)
Collector-Collector Intersections



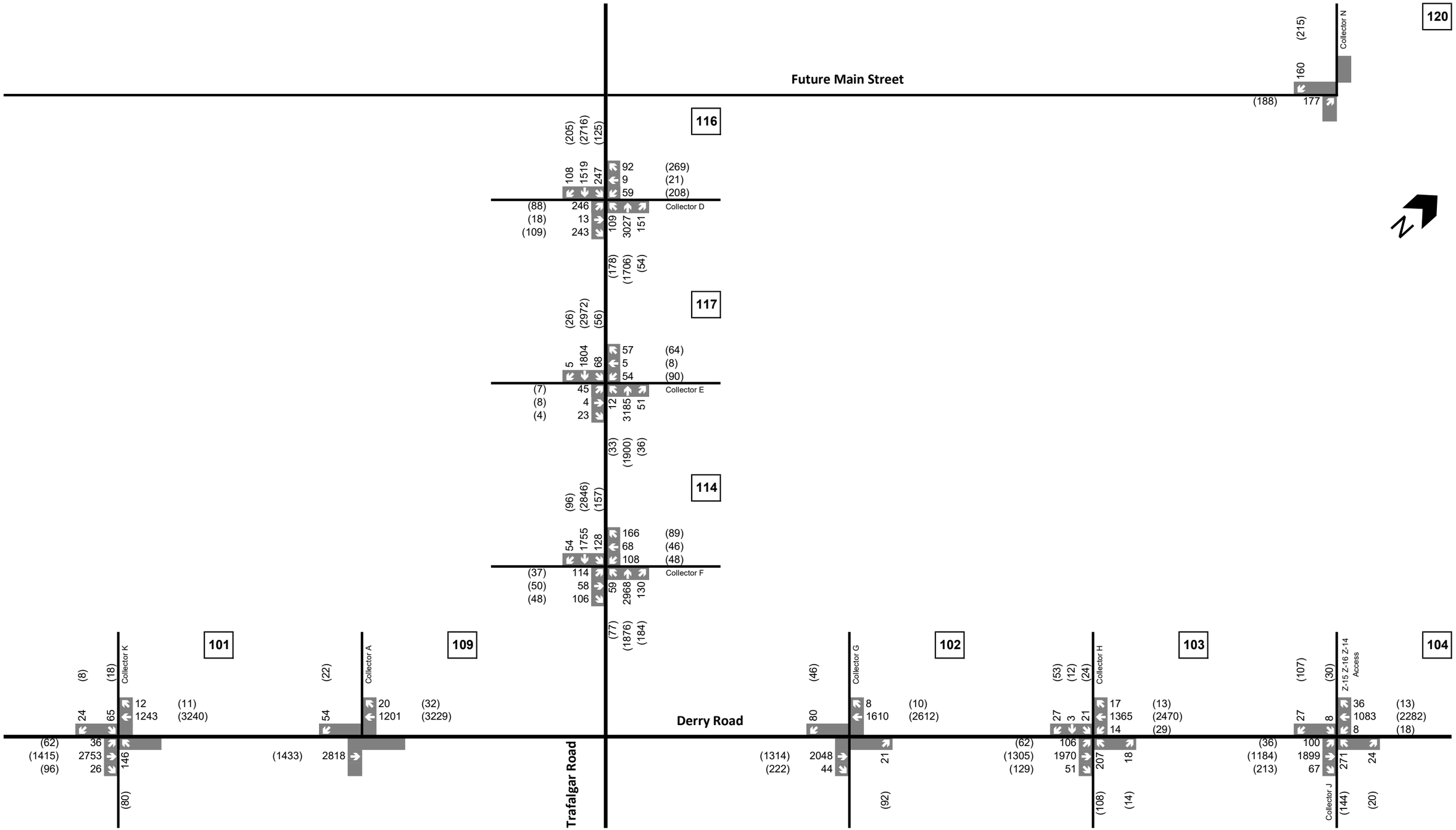
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-4

2041 Future Total Volumes (without GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

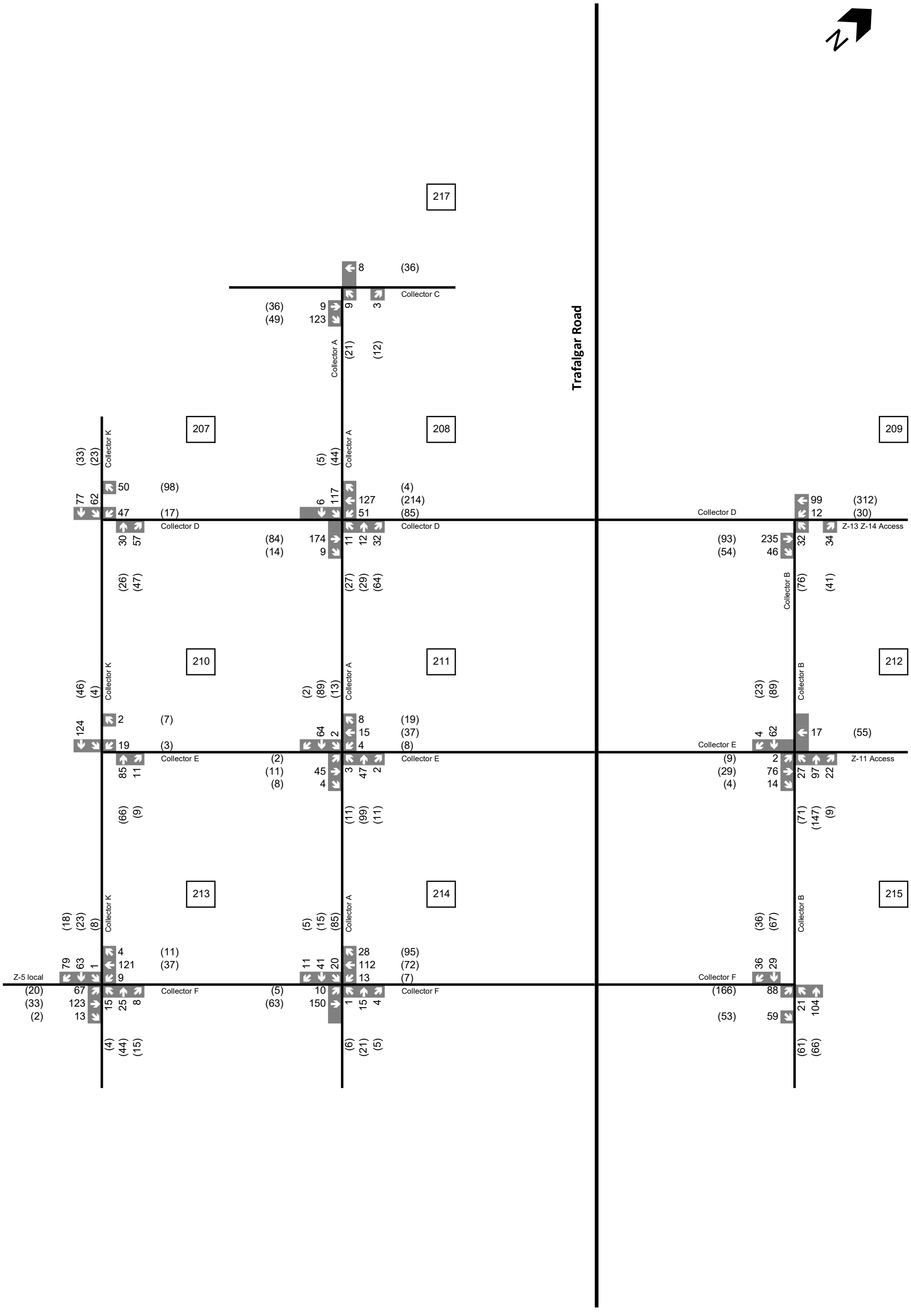
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-5

2041 Future Total Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS

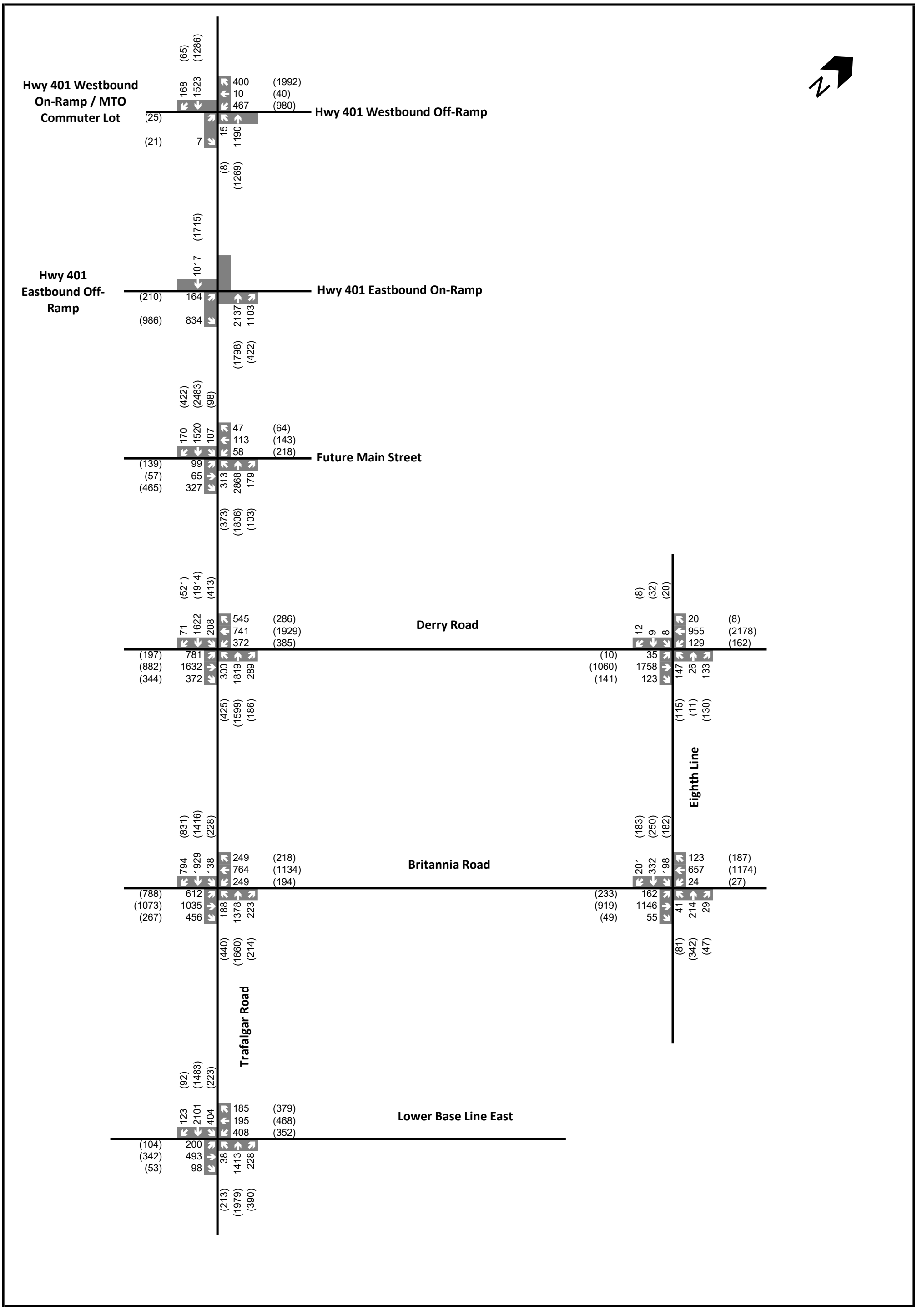


Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-6

2041 Future Total Volumes (without GO station)
Collector-Collector Intersections



Legend

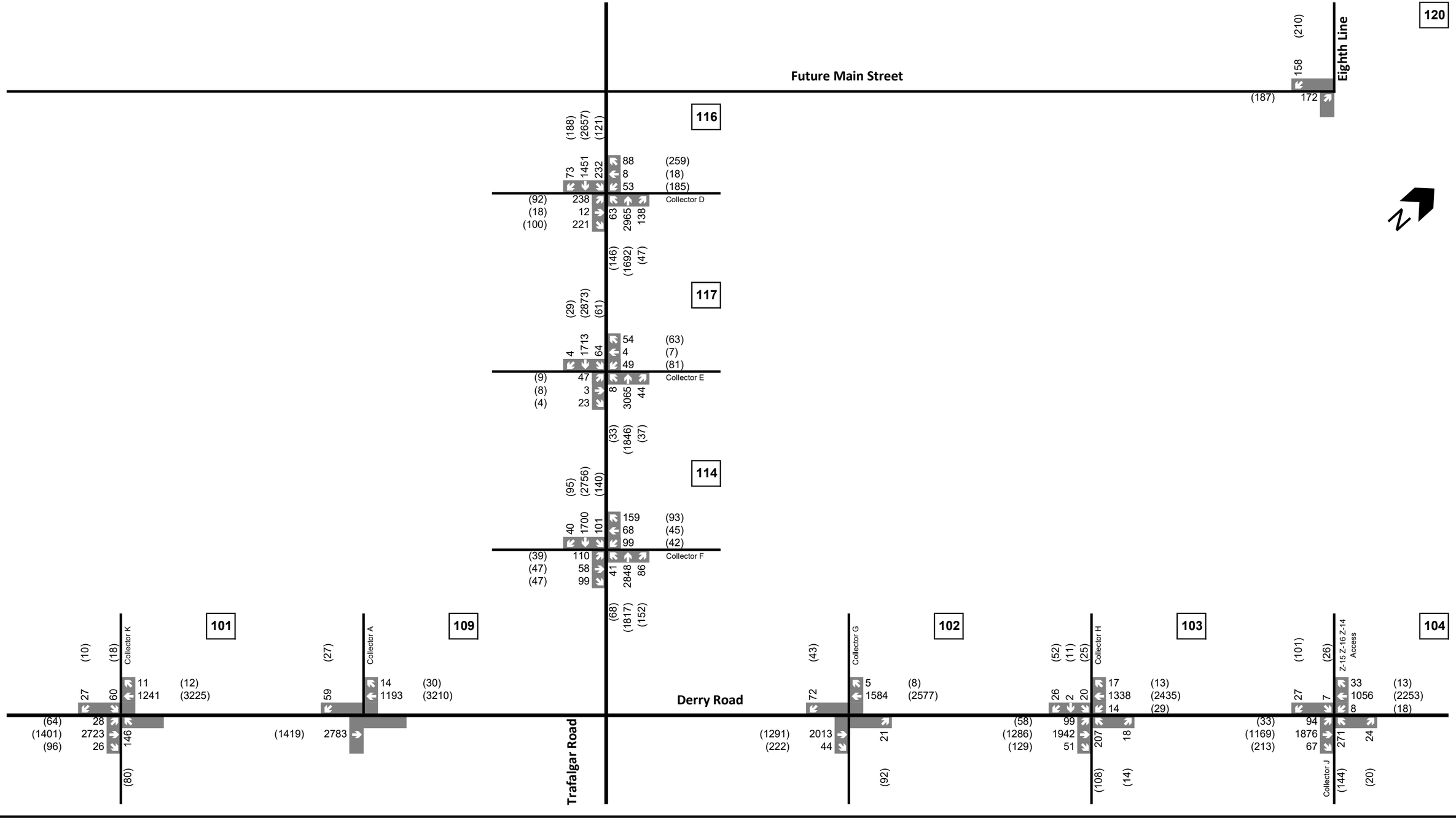
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-7

2041 Future Total Volumes (with GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

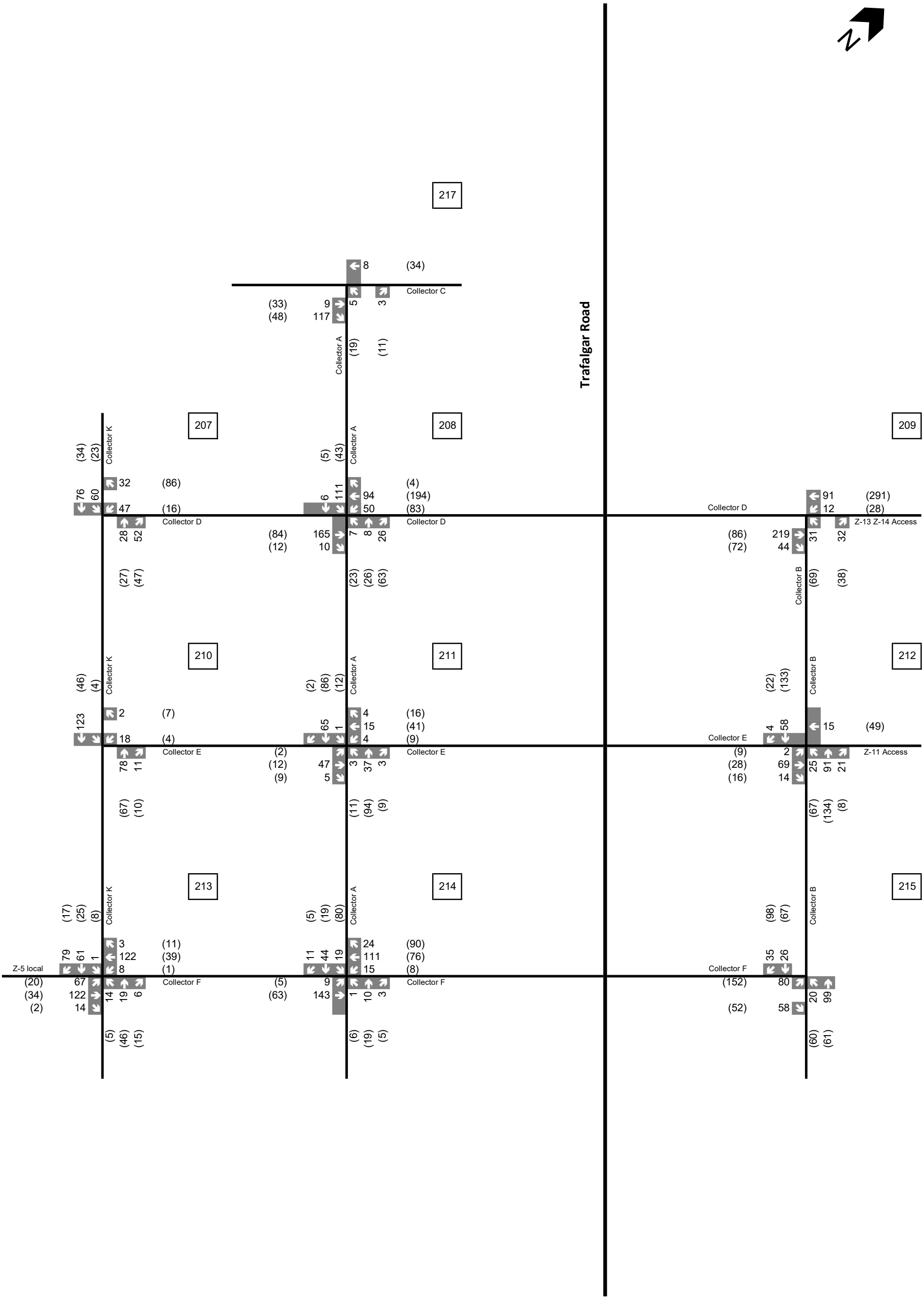
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-8

2041 Future Total Volumes (with GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



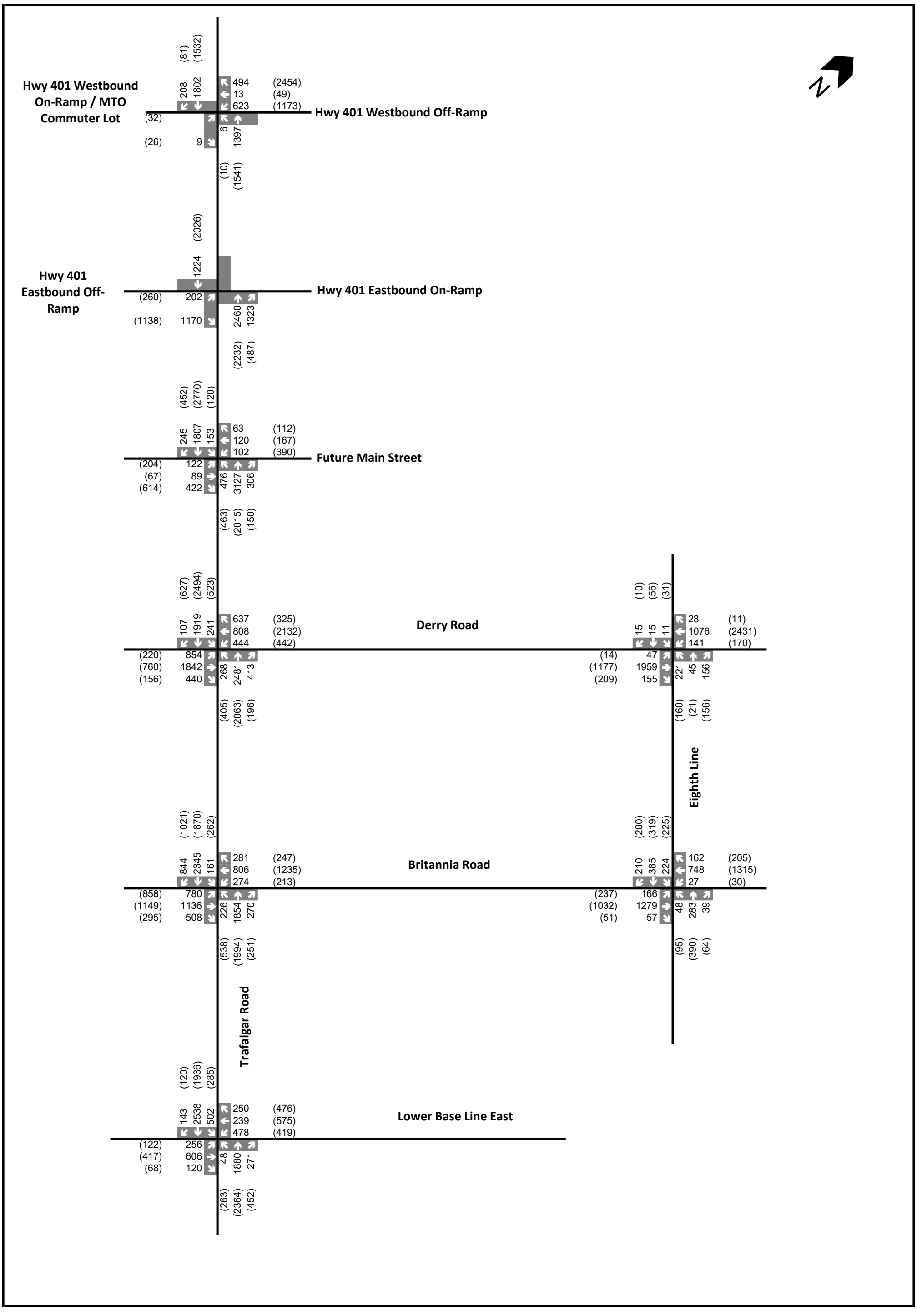
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-9

2041 Future Total Volumes (with GO station)
Collector-Collector Intersections



TYLin

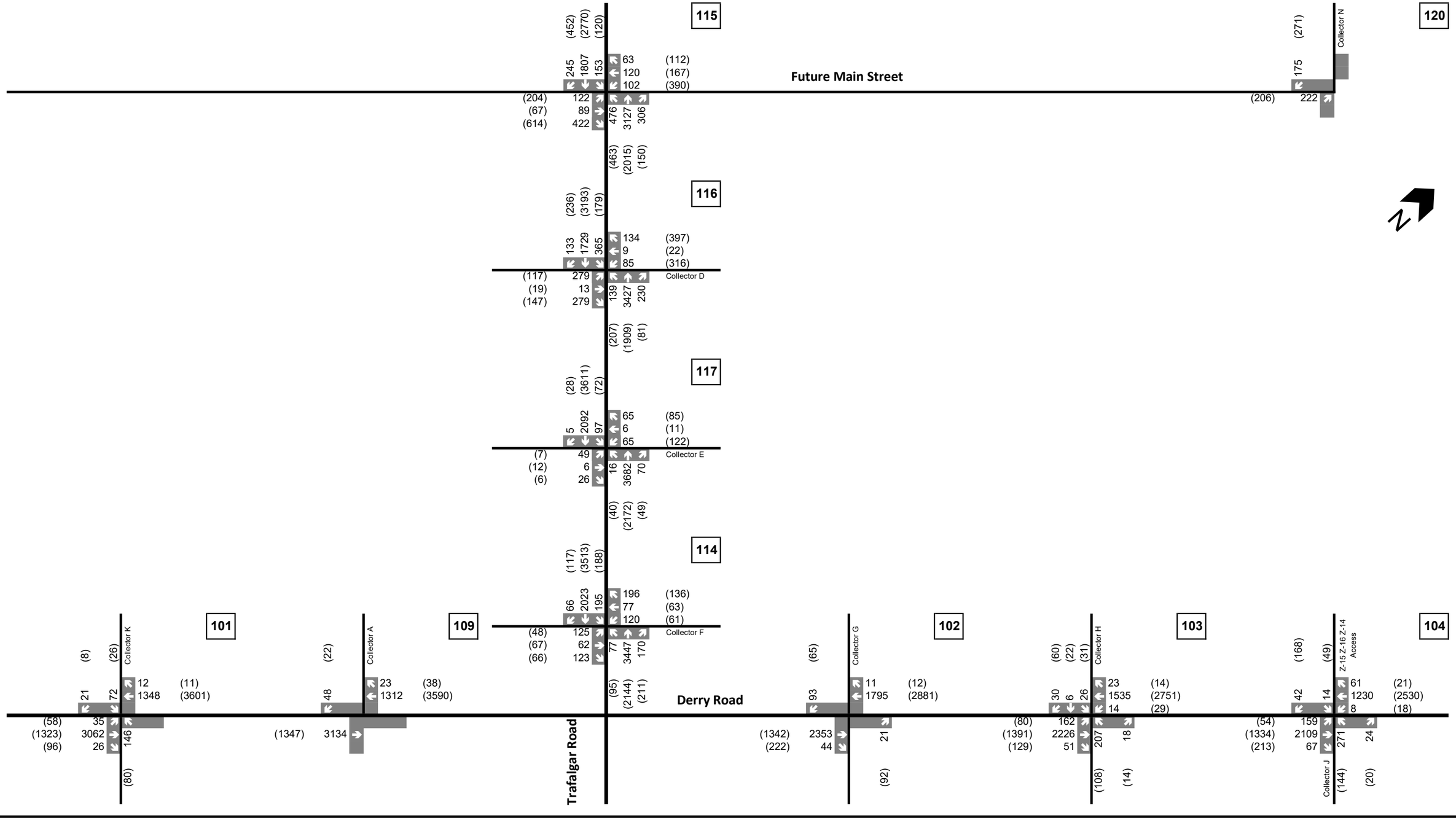
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-10

2051 Future Total Volumes (without GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

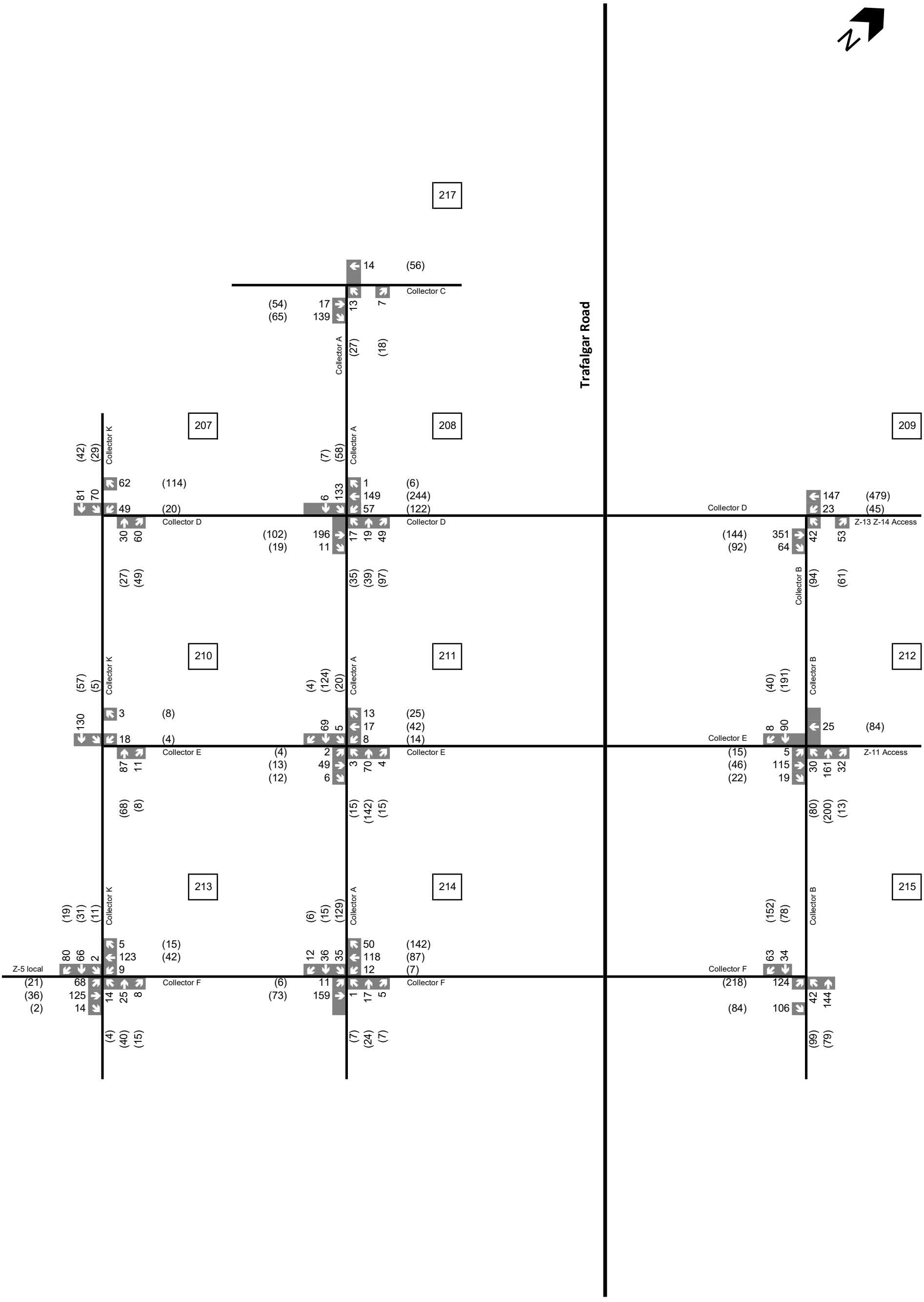
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-11

2051 Future Total Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



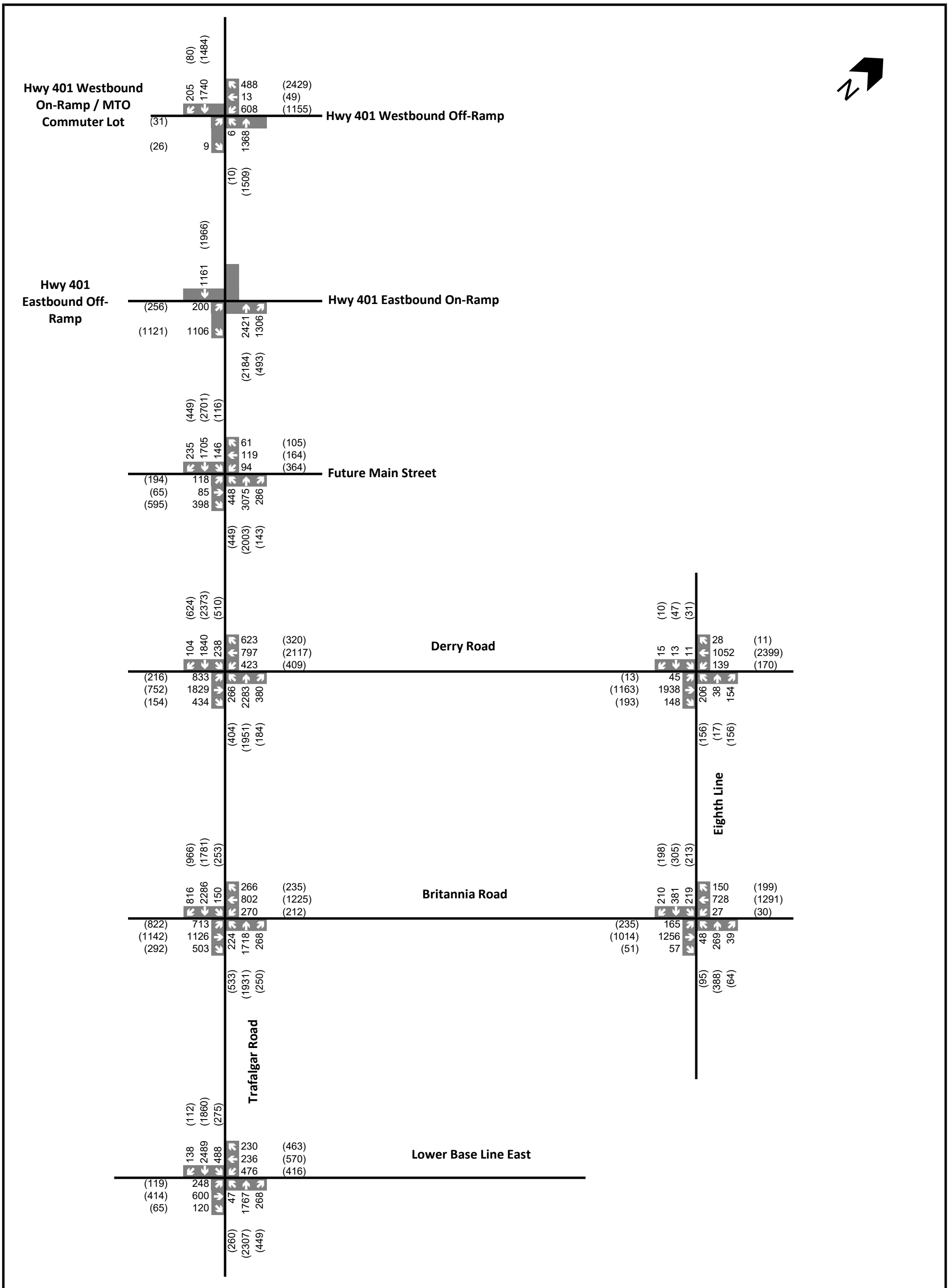
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-12

2051 Future Total Volumes (without GO station)
Collector-Collector Intersections



Legend

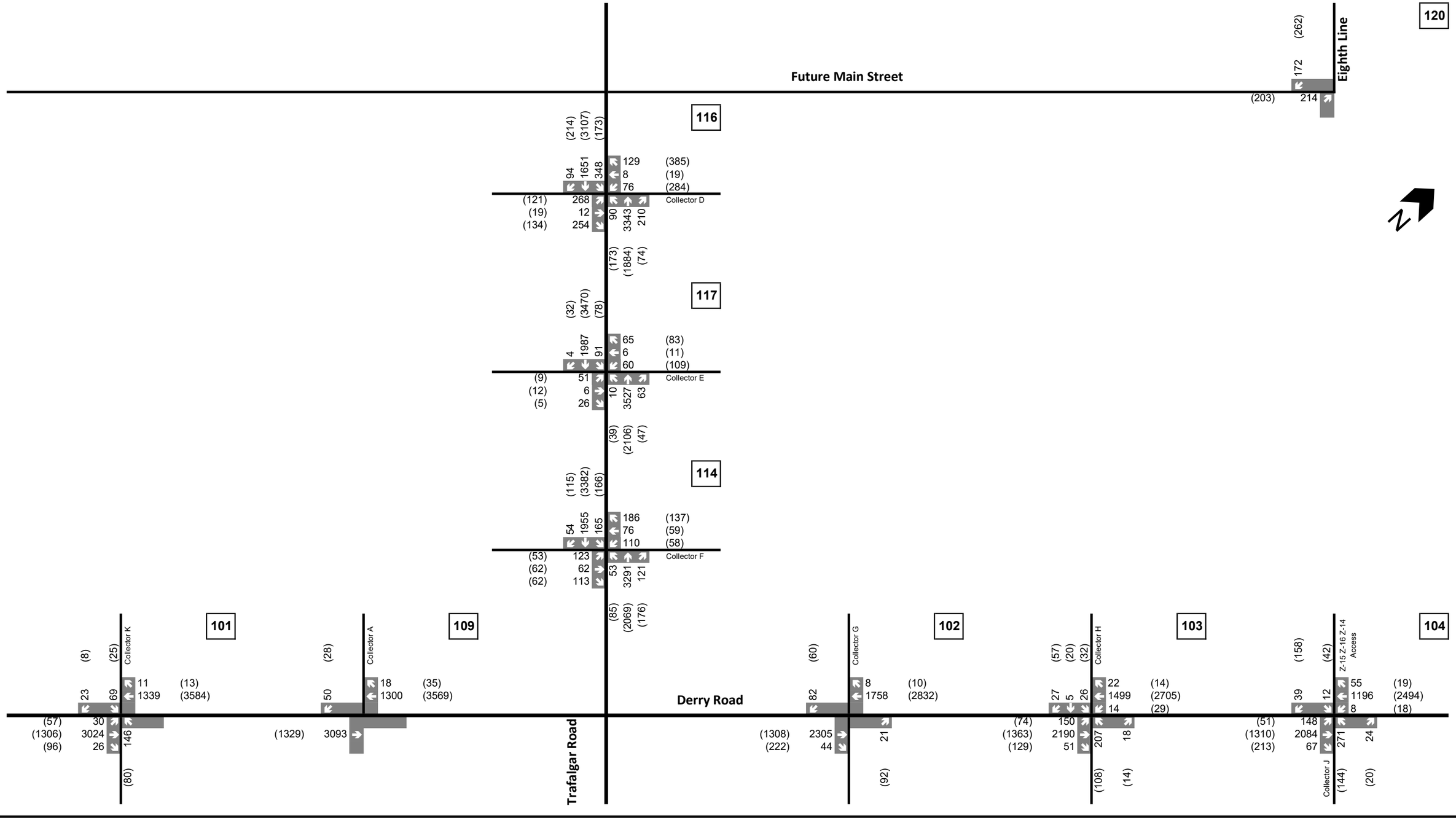
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-13

2051 Future Total Volumes (with GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

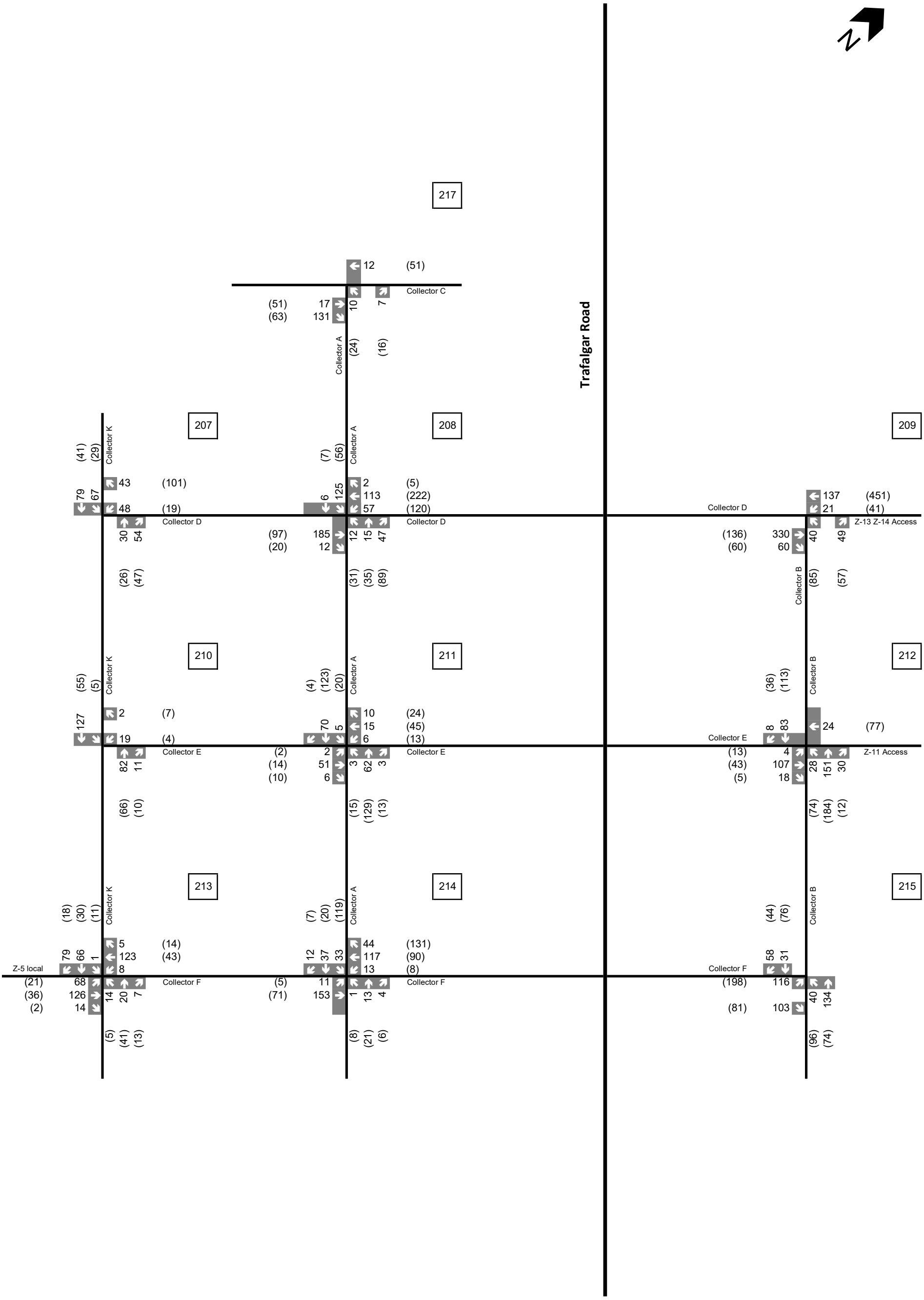
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-14

2051 Future Total Volumes (with GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



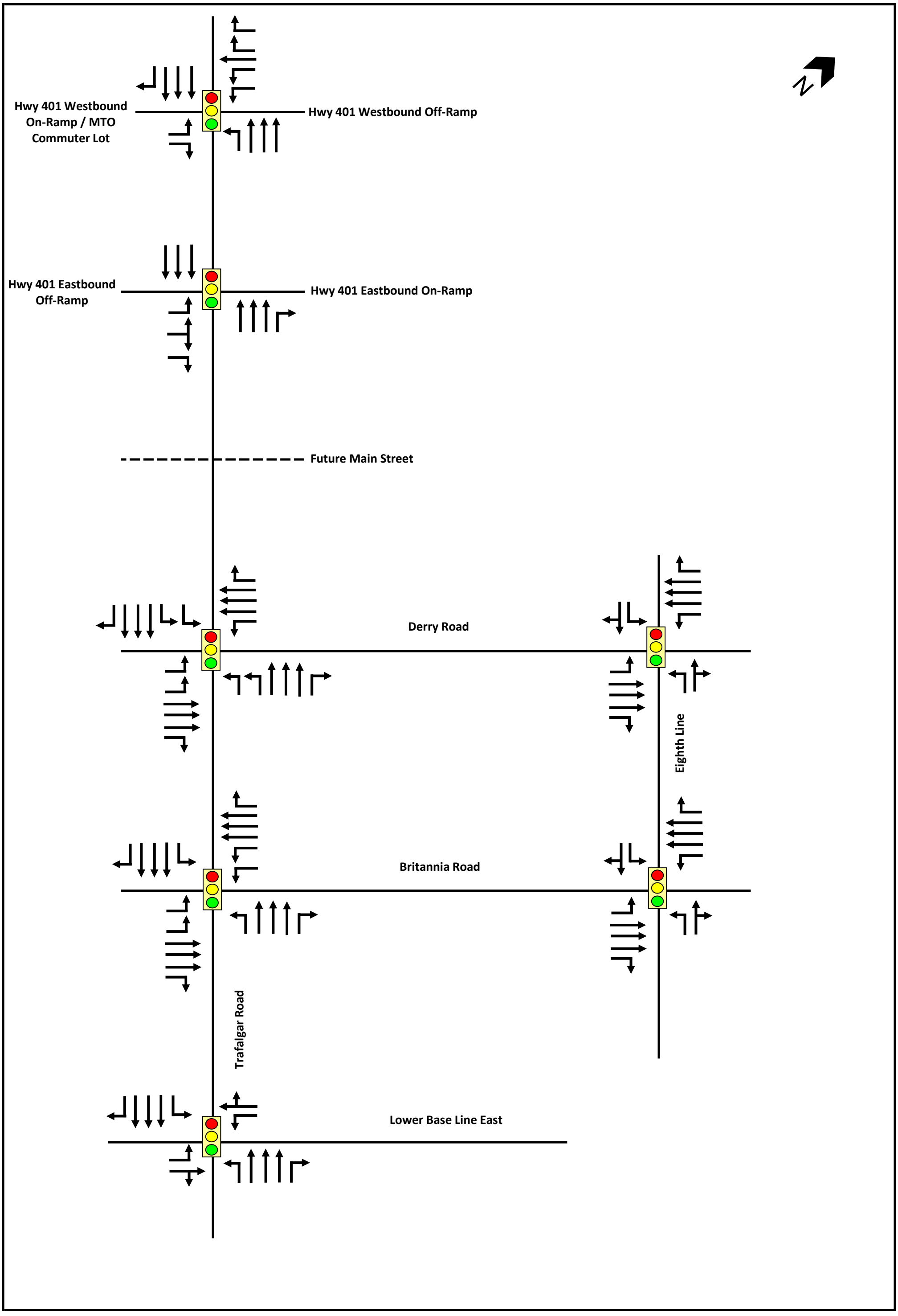
TYLin

Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Figure 5-15

2051 Future Total Volumes (with GO station)
Collector-Collector Intersections



TYLin

Legend

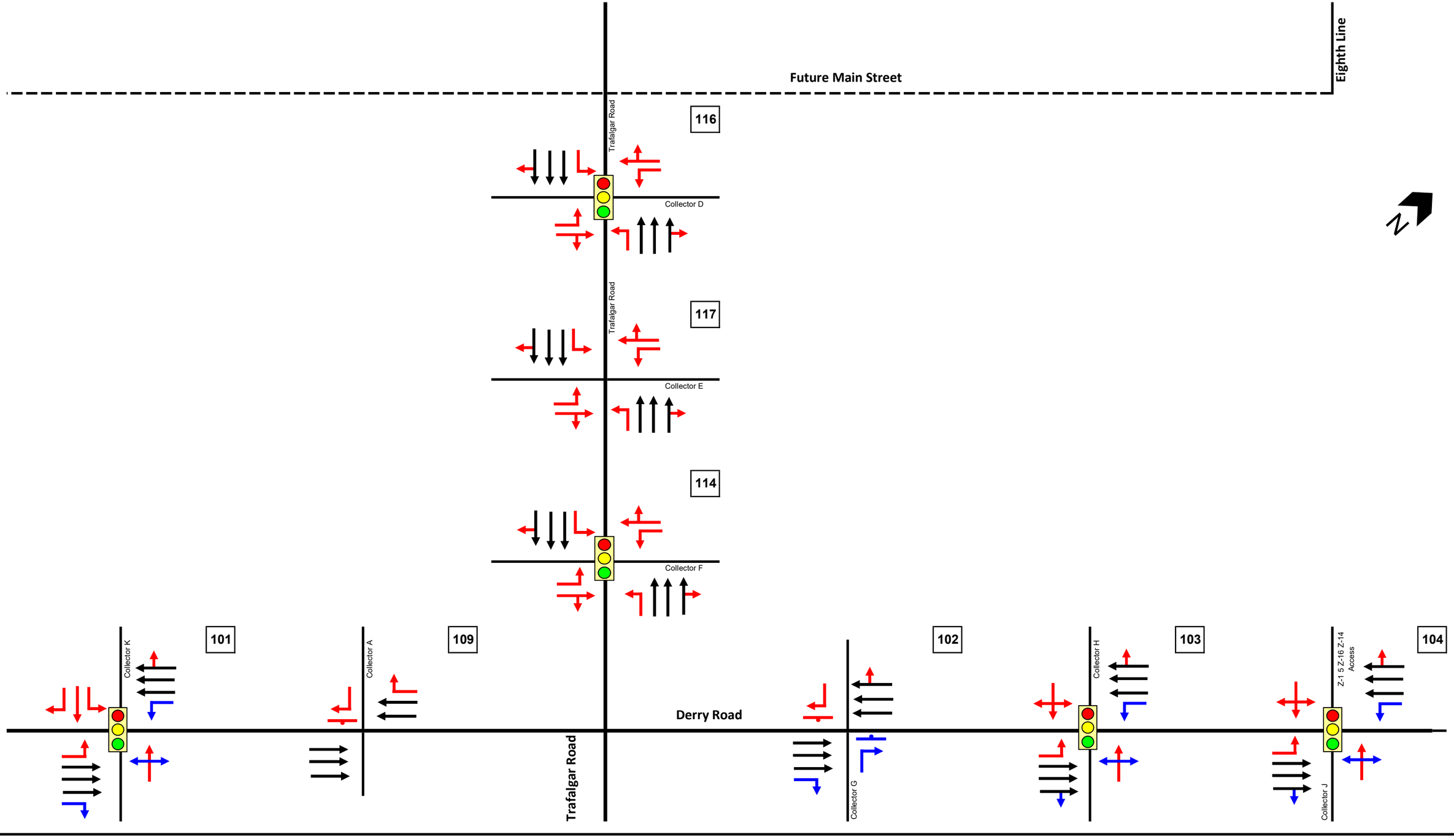
Signalized Intersection

Existing / Planned Lane

Figure 5-16a

2031 Future Total Lane Configuration
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

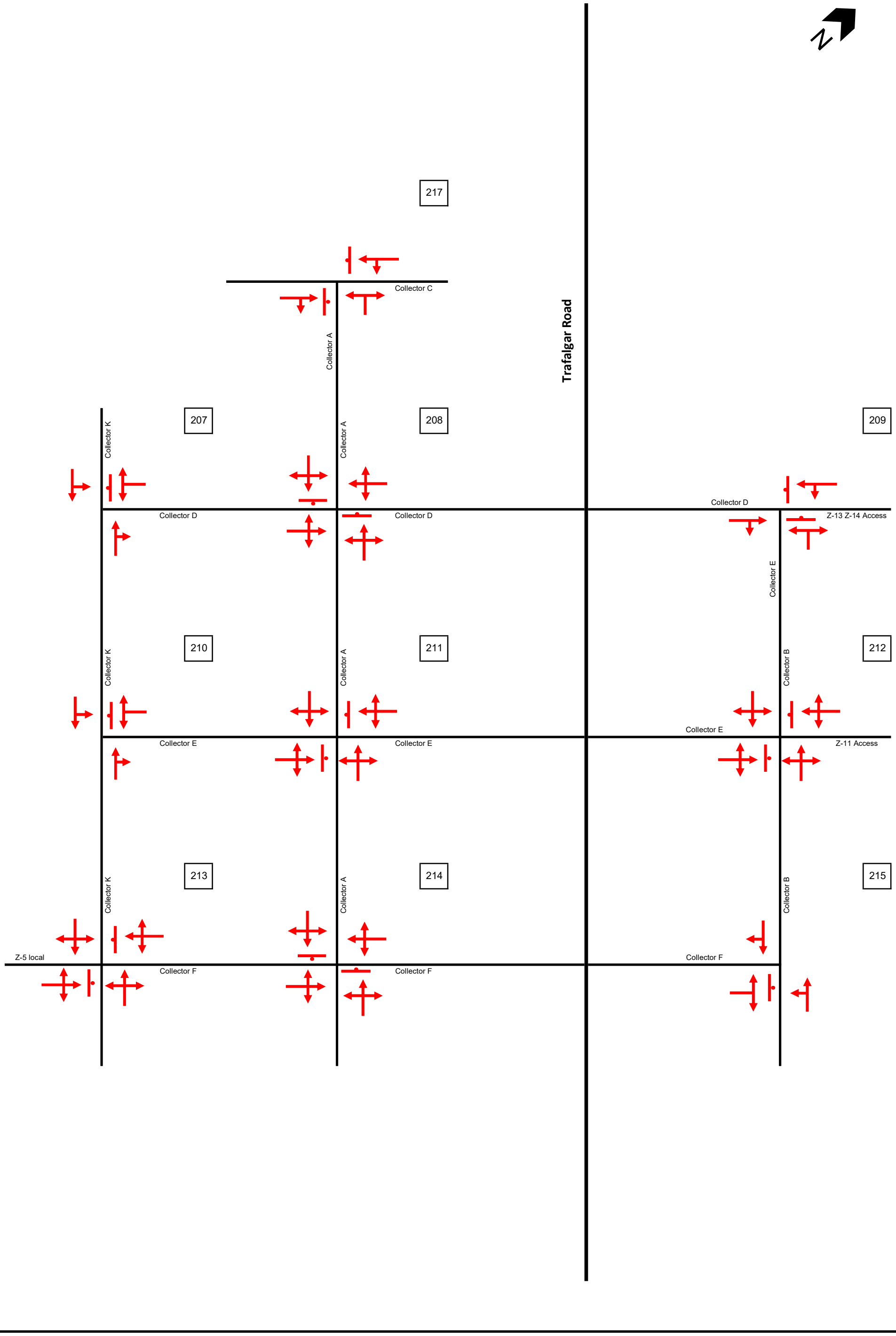
Signalized Intersection | Unsignalized Intersection | Existing / Planned Lane | Proposed Lane | Planned Lane (Trafalgar RNA)

TYLin

Figure 5-16b

2031 Future Total Lane Configurations
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



TYLin

Legend

Unsignalized Intersection

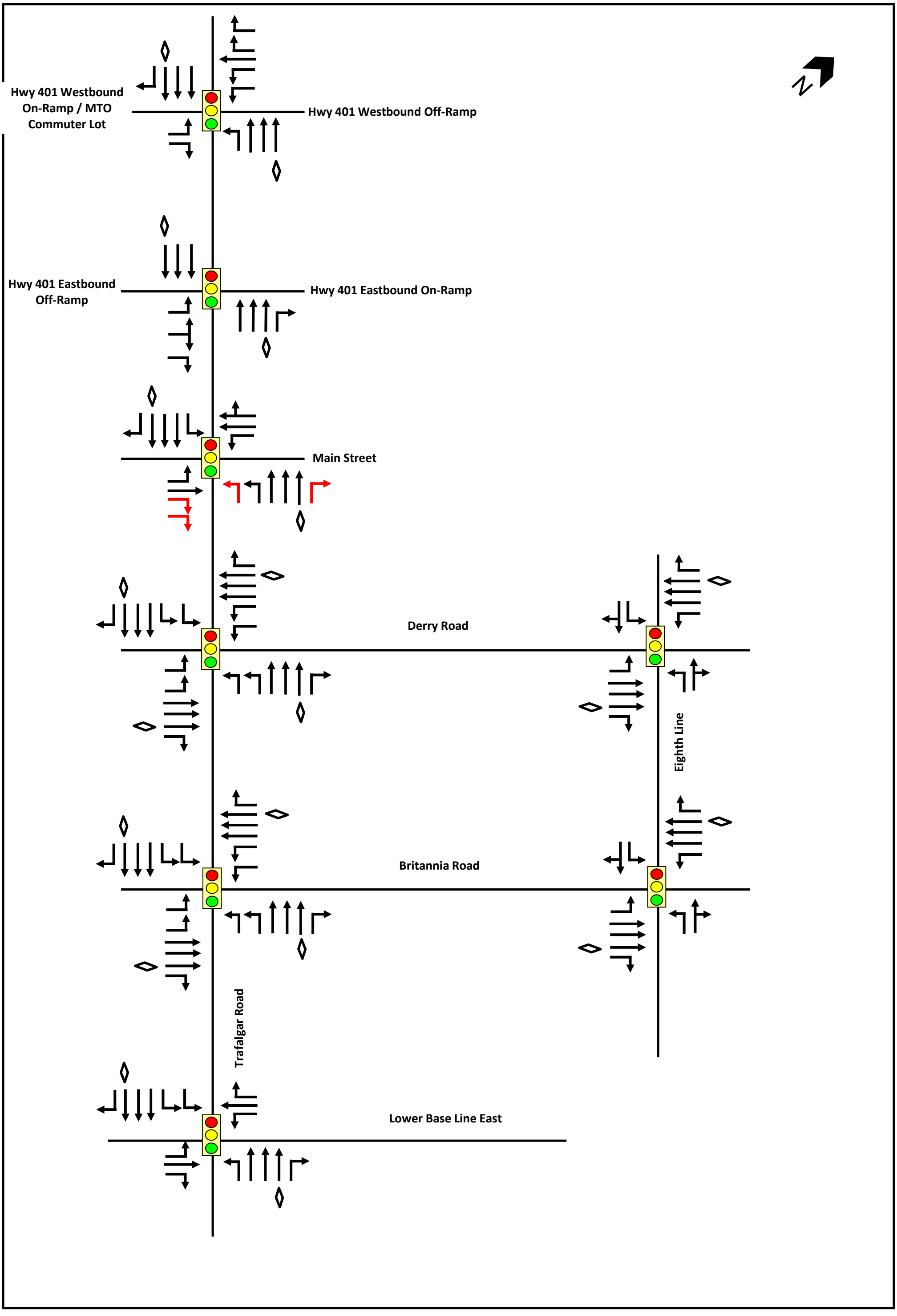
Existing / Planned Lane

Proposed Lane

Figure 5-16c

2031 Future Total Lane Configurations

Collector-Collector Intersections



Legend

Signalized Intersection | Unsignalized Intersection | Existing / Planned Lane

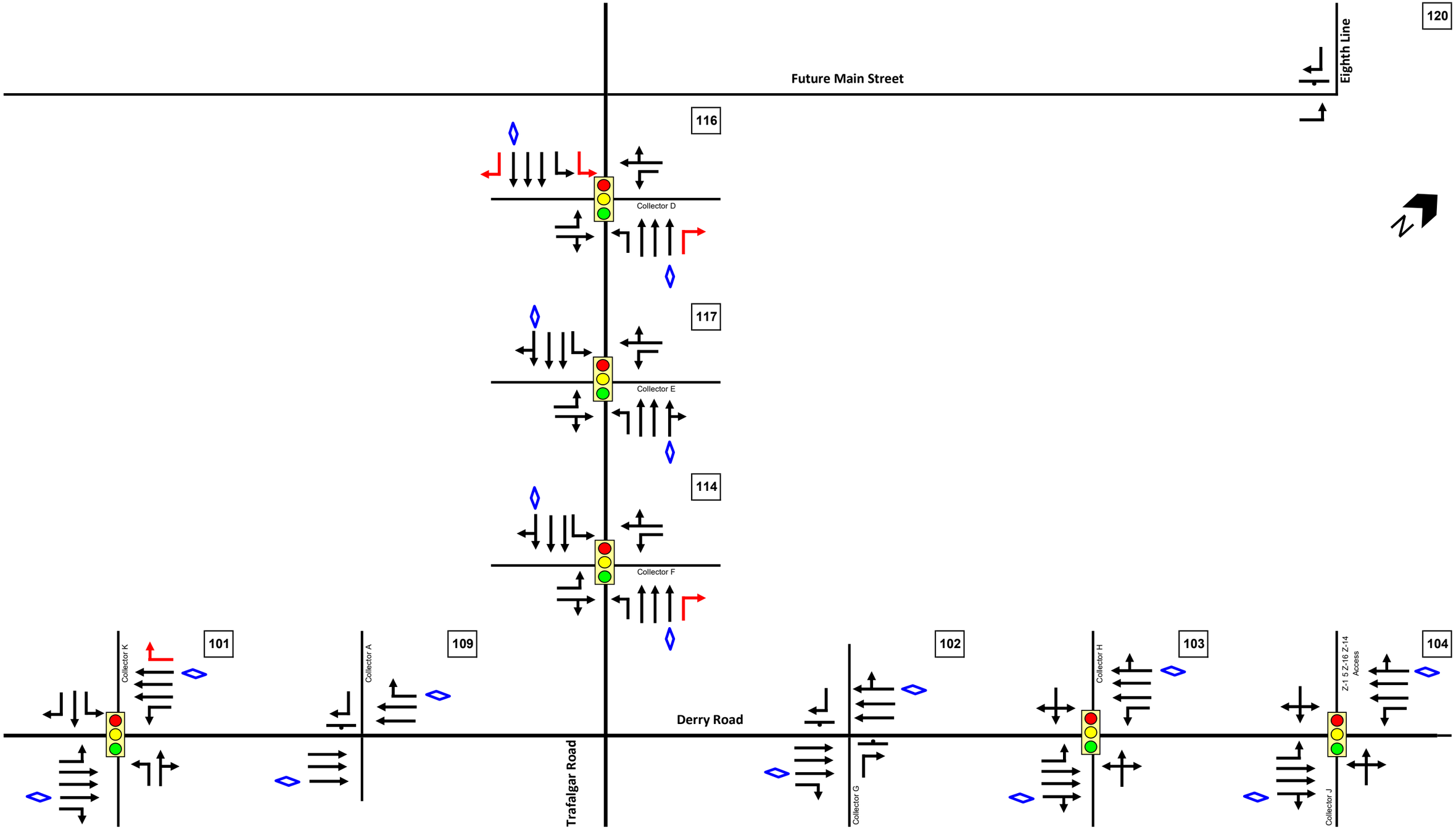
Planned HOV Lane | Proposed Lane on top of 41 FB

TYLin

Figure 5-17a

2041 Future Total Lane Configuration
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

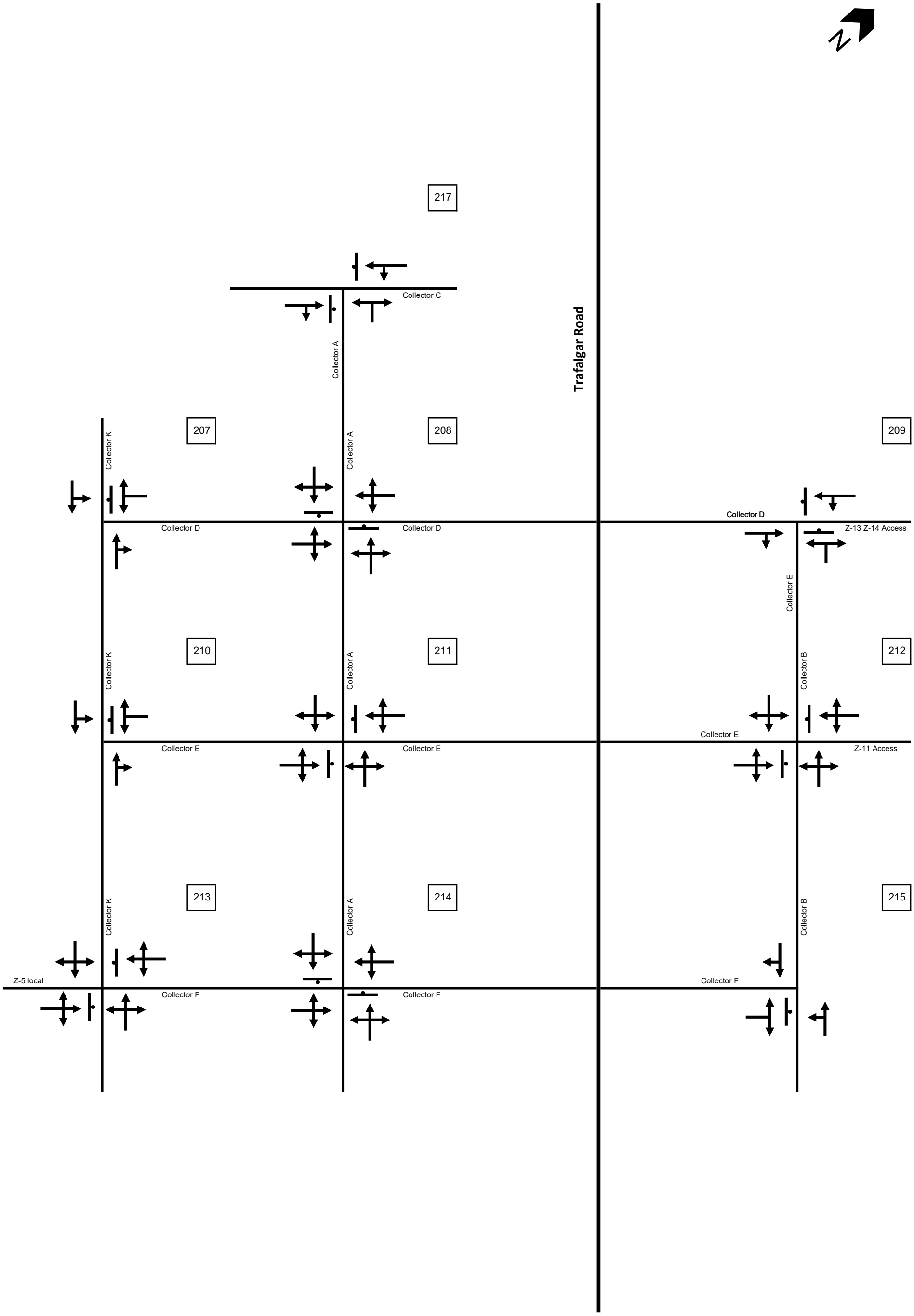
Signalized Intersection | Unsignalized Intersection | Existing / Planned Lane | Proposed Lane on top of 31 FT | Planned HOV Lane

TYLin

Figure 5-17b

2041 Future Total Lane Configurations
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



TYLin

Legend

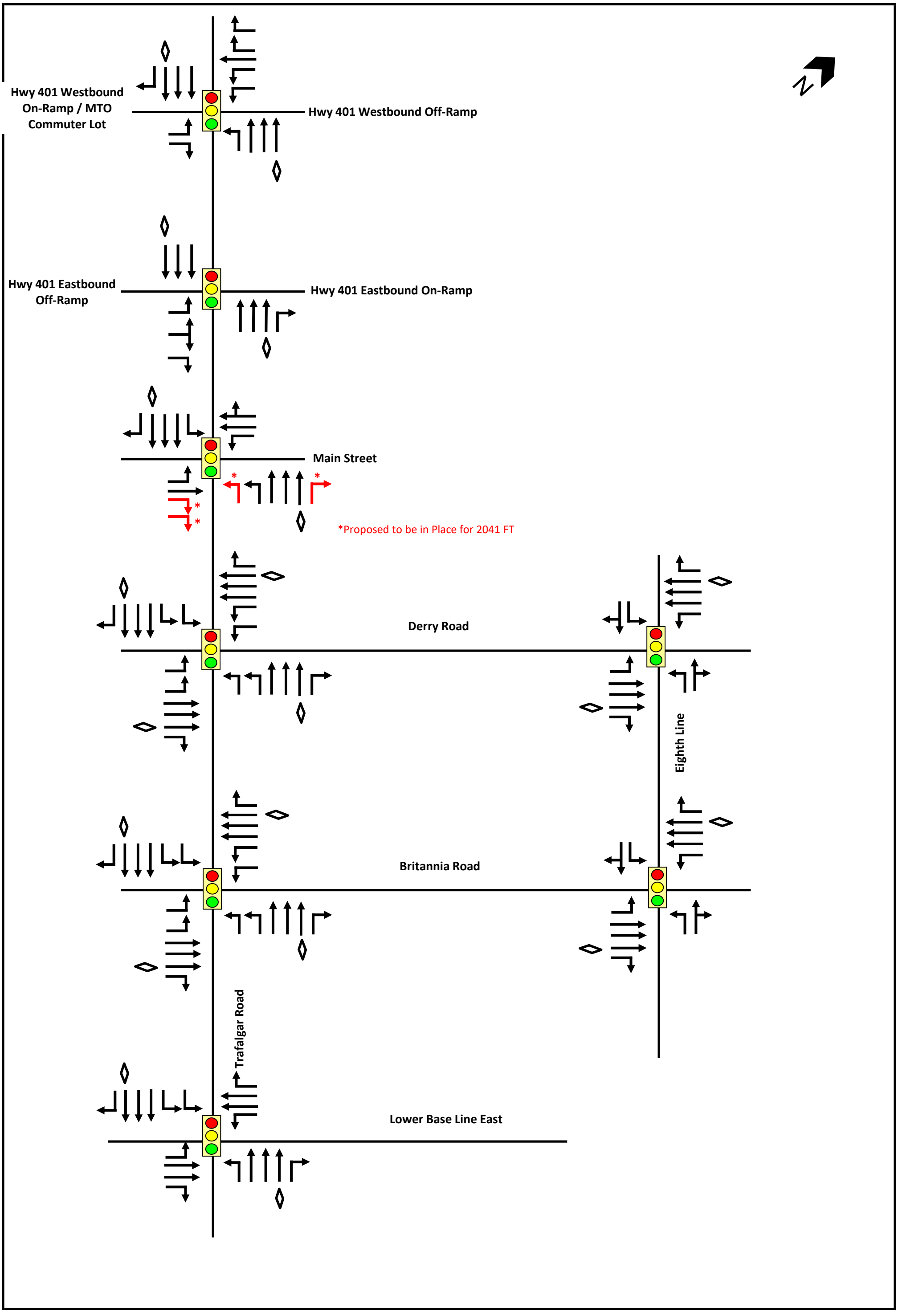
Unsignalized Intersection

Existing / Planned Lane

Proposed Lane on top of 31 FT

Figure 5-17c

2041 Future Total Lane Configurations
Collector-Collector Intersections



Legend

Signalized Intersection | Unsignalized Intersection | Existing / Planned Lane

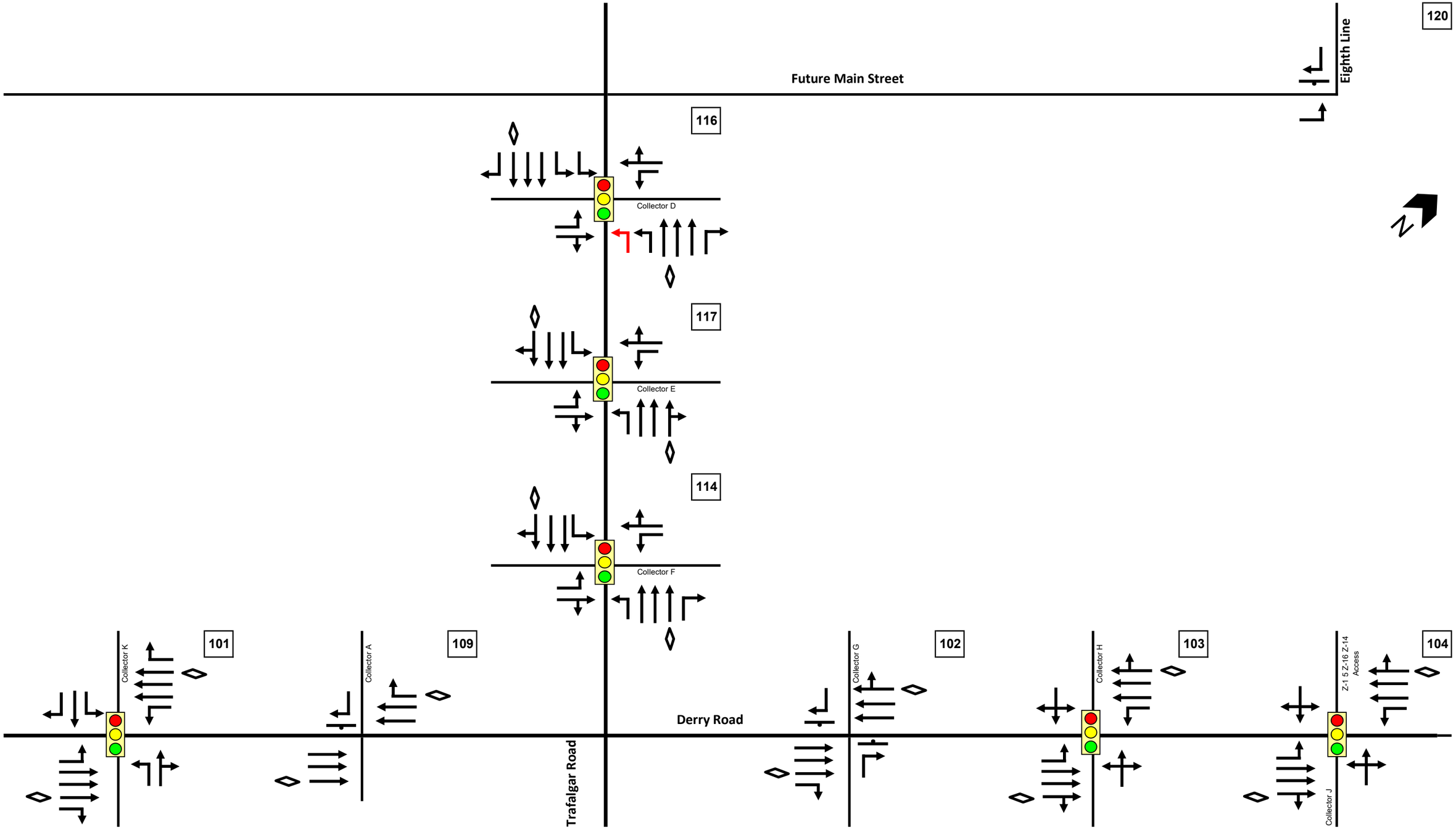
Planned HOV Lane | Proposed Lane on top of 51 FB

TYLin

Figure 5-18a

2051 Future Total Lane Configuration
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



Legend

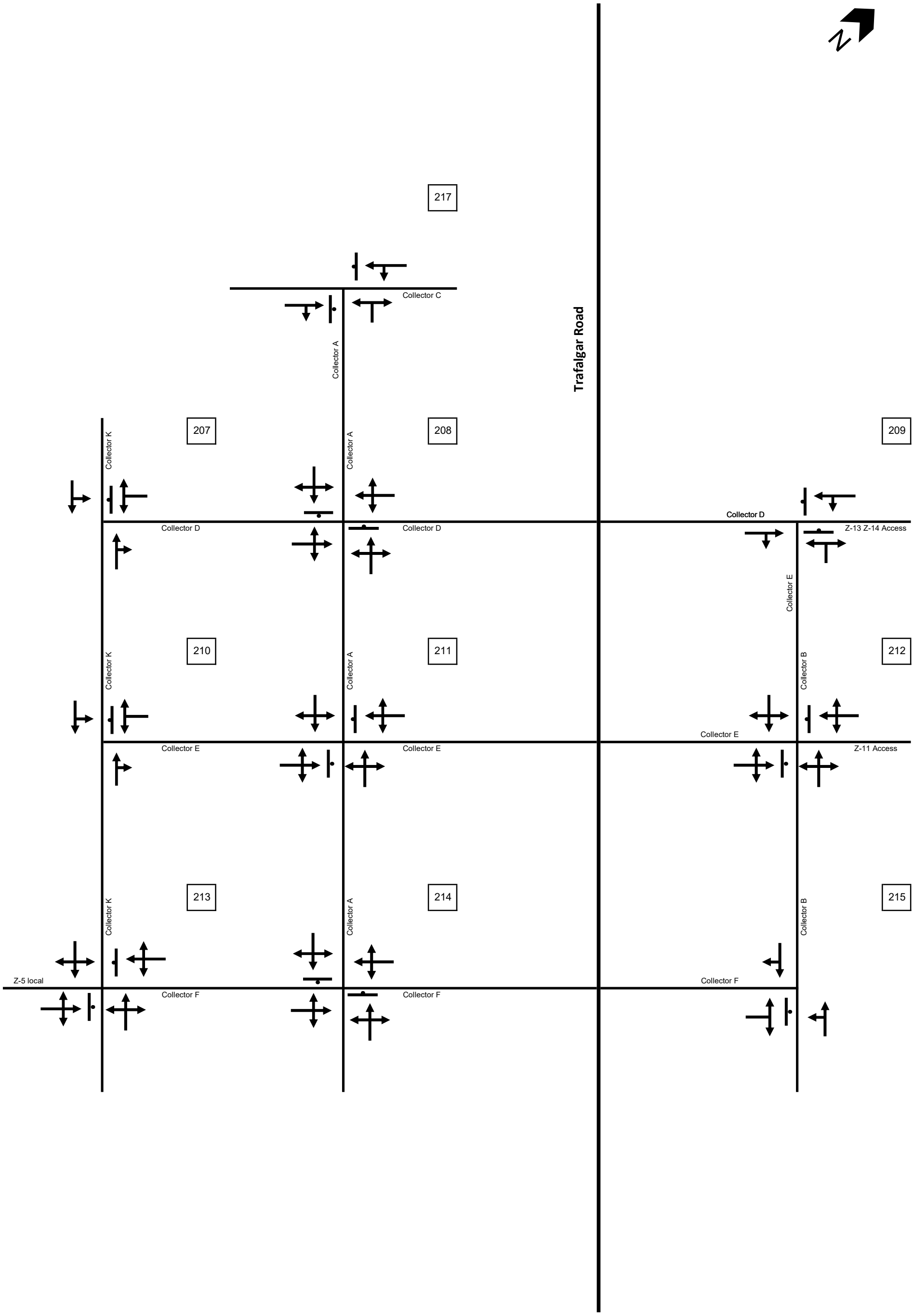
Signalized Intersection | Unsignalized Intersection | Existing / Planned Lane | Proposed Lane on top of 41 FT | Planned HOV Lane

TYLin

Figure 5-18b

2051 Future Total Lane Configurations
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



TYLin

Legend

Unsignalized Intersection

Existing / Planned Lane

Proposed Lane on top of 41 FT

Figure 5-18c

2051 Future Total Lane Configurations
Collector-Collector Intersections

5.2 Future Total Intersection Capacity Analysis

5.2.1 2031 Future Total – Without GO

The following tables in this section summarize the Synchro/HCM capacity and queuing results for the study intersections during the weekday a.m. and p.m. peak hours under future total conditions for the 2031 horizon without the GO Station.

The capacity results for the external and collector-to-arterial intersections during the weekday a.m. and p.m. peak hours under 2031 future total analysis without the GO Station are summarized in **Table 5-3** and **Table 5-4** respectively. Detailed Synchro reports are attached in **Appendix I.**

Table 5-3 2031 Future Total Capacity Analysis Summary: External Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.04**	*69*	*E*	**1.10**	*64*	*E*
	EBL	**1.08**	**124**	**F**	**0.99**	**137**	**F**
	EBT	**0.89**	39	D	0.77	48	D
	EBR	0.41	28	C	0.31	32	C
	WBL	**1.03**	**102**	**F**	**1.13**	**150**	**F**
	WBT	0.60	46	D	**0.99**	60	E
	WBR	**0.98**	**88**	**F**	0.29	35	C
	NBL	0.94	109	F	**1.05**	**102**	**F**
	NBT	**1.03**	71	E	**0.89**	27	C
	NBR	0.29	33	C	0.18	22	C
	SBL	**0.99**	**125**	**F**	0.90	66	E
	SBT	**0.91**	58	E	**1.05**	**88**	**F**
	SBR	0.10	**128**	**F**	0.86	66	E
Eighth Line & Derry Road	*Overall*	*0.48*	*19*	*B*	*0.48*	*15*	*B*
	EBL	0.11	11	B	0.05	13	B
	EBT	0.44	24	C	0.26	16	B
	EBR	0.07	27	C	0.07	40	D
	WBL	0.40	6	A	0.30	3	A
	WBT	0.23	4	A	0.44	4	A
	WBR	0.01	3	A	0.00	3	A
	NBL	0.70	48	D	0.62	74	E
	NBTR	0.18	40	D	0.13	**95**	**F**
	SBL	0.09	55	D	0.14	57	E
	SBTR	0.04	54	D	0.13	57	E
Trafalgar Road & Britannia Road	*Overall*	**0.87**	*52*	*D*	**1.16**	*72*	*E*
	EBL	**0.98**	**91**	**F**	**1.09**	**116**	**F**
	EBT	0.60	45	D	0.49	35	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	EBR	0.56	46	D	0.13	30	C
	WBL	0.65	55	D	0.61	**84**	**F**
	WBT	0.70	54	D	0.85	40	D
	WBR	0.37	50	D	0.17	6	A
	NBL	0.73	65	E	**1.33**	**212**	**F**
	NBT	0.66	54	D	**0.95**	**82**	**F**
	NBR	0.16	**104**	**F**	0.20	**103**	**F**
	SBL	0.62	32	C	**1.07**	**112**	**F**
	SBT	**0.93**	39	D	**1.02**	47	D
	SBR	**0.95**	50	D	**1.05**	76	E
Eighth Line & Britannia Road	*Overall*	*0.56*	*35*	*D*	*0.73*	*30*	*C*
	EBL	0.31	26	C	0.67	37	D
	EBT	0.32	27	C	0.27	11	B
	EBR	0.04	74	E	0.03	7	A
	WBL	0.08	21	C	0.08	24	C
	WBT	0.24	22	C	0.44	28	C
	WBR	0.07	20	C	0.11	24	C
	NBL	0.54	55	D	0.34	37	D
	NBTR	0.75	58	E	**0.86**	50	D
	SBL	0.61	38	D	0.63	44	D
	SBTR	**0.86**	55	E	0.61	43	D
Trafalgar Road & Lower Base Line	*Overall*	**1.04**	*66*	*E*	**0.96**	*62*	*E*
	EBL	0.42	39	D	0.66	52	D
	EBTR	**0.96**	**88**	**F**	0.54	47	D
	WBL	**0.99**	**88**	**F**	0.69	49	D
	WBTR	0.52	54	D	**1.00**	**90**	**F**
	NBL	0.33	33	C	0.87	68	E
	NBT	**0.89**	53	D	**0.94**	49	D
	NBR	0.20	35	C	0.35	29	C
	SBL	**1.03**	**93**	**F**	**0.96**	**97**	**F**
	SBT	**0.89**	66	E	0.77	60	E
	SBR	0.08	**137**	**F**	0.05	**366**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.54*	*23*	*C*	**1.06**	**91**	**F**
	EBR	0.00	66	E	0.01	62	E
	WBL	0.79	62	E	0.68	34	C
	WBT	0.03	47	D	0.04	24	C
	WBR	0.14	48	D	**1.36**	**206**	**F**
	NBL	0.06	10	A	0.08	29	C
	NBT	0.35	11	B	0.66	37	D
	SBT	0.49	16	B	0.79	44	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBR	0.11	12	B	0.04	30	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	*0.79*	*20*	*B*	*0.84*	*23*	*C*
	EBL	0.60	26	C	**0.86**	23	C
	EBLR	0.60	26	C	**0.86**	23	C
	EBR	0.91	52	D	0.94	53	D
	NBT	0.72	16	B	0.71	19	B
	SBT	0.40	11	B	0.76	20	B
Trafalgar Road & Future Main Street	*Overall*	*0.71*	*8*	*A*	*0.67*	*13*	*B*
	WBL	0.38	66	E	0.68	68	E
	WBR	0.01	62	E	0.02	55	D
	NBTR	0.75	9	A	0.51	19	B
	SBL	0.32	32	C	0.11	5	A
	SBT	0.37	2	A	0.65	5	A

Under 2031 future total conditions, following study area intersections are predicted to operate above capacity:

- Trafalgar Road & Derry Road during a.m. and p.m. peak hour (v/c 1.04 and 1.10, respectively)
- Trafalgar Road and Britannia Road during p.m. peak hour (v/c 1.16)
- Trafalgar Road and Lower Base Line during a.m. peak hour (v/c 1.04)
- Trafalgar Road and Hwy 401 WB Off-ramp (during p.m. peak hour (v/c 1.06)

It should also be noted that several movements are projected to operate with high levels of delay (LOS E or LOS F) but with relatively low v/c ratios (less than 0.80). This scenario can be an indication that a given movement's delay is primarily attributable to long cycle lengths, as opposed to a lack of adequate green time for the specified movement's vehicular demand. This configuration is common at high-volume regional roads where signal timings are designed with long cycle lengths, with priority given to through movements, often at the expense of minor-leg or left-turn movements.

At the intersection of Trafalgar Road and Derry Road, the eastbound left, westbound left and northbound through movements are expected to exceed capacity under the a.m. peak hour. Under the p.m. peak hour, the westbound left, northbound left and southbound through movements are expected to exceed capacity.

At the intersection of Trafalgar Road at Britannia Road, the eastbound left, northbound left, and southbound left, through and right movements are expected to exceed capacity during the p.m. peak hour.

At the intersection of Trafalgar Road and Lower Base Line, the southbound left-turn movement is expected to exceed capacity during the a.m. peak hours. Under p.m. peak hour conditions, the westbound through-right movement is expected to operate at a v/c ratio over 1.0. These operations are consistent with 2031 future background conditions without the addition of site traffic.

The 2031 future total conditions without the GO Station is expected to experience an increase in movements that are predicted to be over capacity at the external intersections. This factor should be considered when interpreting the capacity results, as they represent conservative estimates of the 2031 future total traffic conditions without the operation of the future GO Station, resulting in residents and visitors being auto dependent. Despite constraints at some locations, future development studies can play a pivotal role in informing Regional and municipal staff of changes in available network capacity and identify any growing capacity constraints occurring across the network. Studies can assist the Region and the Town in the identification of triggers for mitigation measures as development is implemented. Additionally, as the road network within the vicinity of the study area becomes busier, and as new linkages/alternative routes are created elsewhere in the broader Regional and Town road networks, existing traffic may relocate to alternative routes resulting in changes in network travel patterns.

Table 5-4 2031 Future Total Capacity Analysis Summary: Arterial-Collector Intersections

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Derry Road & Collector K	*Overall*	*0.78*	*25*	*C*	*0.69*	*8*	*A*
	EBL	0.21	14	B	0.63	33	C
	EBT	**0.87**	26	C	0.38	6	A
	EBR	0.02	11	B	0.06	4	A
	WBTR	0.47	20	B	0.76	6	A
	NBL	0.39	38	D	0.37	54	D
	SBL	0.20	53	D	0.05	51	D
	SBR	0.02	50	D	0.01	50	D
Derry Road & Collector G/Z-10 Local	EBT	0.39	0	A	*0.69*	*8*	*A*
	EBR	0.03	0	A	0.26	0	A
	WBT	0.37	0	A	0.13	0	A
	WBR	0.19	0	A	0.54	0	A
	NBR	0.03	10	A	0.27	0	A
	SBR	0.07	10	A	0.1	3	A
Derry Road & Collector H	*Overall*	*0.60*	*17*	*B*	*0.62*	*10*	*A*
	EBL	0.42	16	B	0.60	28	C
	EBTR	0.53	19	B	0.34	3	A
	WBL	0.14	6	A	0.11	5	A

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBTR	0.37	5	A	0.52	8	A
	NBLTR	0.82	70	E	0.72	75	E
	SBLTR	0.07	41	D	0.38	57	E
Derry Road & Collector J/Z-15 Access	*Overall*	*0.64*	*18*	*B*	*0.55*	*12*	*B*
	EBL	0.30	16	B	0.24	15	B
	EBTR	0.55	15	B	0.32	8	A
	WBL	0.08	10	A	0.06	5	A
	WBTR	0.31	9	A	0.49	6	A
	NBLTR	**0.86**	68	E	0.83	**85**	**F**
	SBLTR	0.03	38	D	0.36	54	D
Derry Road & Collector A	EBT	0.54	0	A	0.29	0	A
	WBT	0.35	0	A	0.79	0	A
	WBR	0.00	0	A	0.01	0	A
	SBR	0.09	2	B	0.06	2	C
Trafalgar Road & Collector F	*Overall*	**0.87**	*22*	*C*	*0.70*	*10*	*A*
	EBL	0.84	**111**	**F**	0.20	62	E
	EBTR	0.52	61	E	0.35	62	E
	WBL	0.74	**86**	**F**	0.32	65	E
	WBTR	0.65	67	E	0.32	64	E
	NBL	0.21	4	A	0.39	34	C
	NBTR	**0.90**	23	C	0.53	10	A
	SBL	0.50	51	D	0.42	18	B
	SBTR	0.47	7	A	0.74	5	A
Trafalgar Road & Collector D	*Overall*	**0.94**	*34*	*C*	*0.82*	*17*	*B*
	EBL	0.74	73	E	0.34	53	D
	EBTR	0.16	53	D	0.11	49	D
	WBL	0.43	57	E	0.78	73	E
	WBTR	0.08	52	D	0.36	52	D
	NBL	0.33	7	A	0.61	78	E
	NBTR	**1.06**	43	D	0.54	2	A
	SBL	0.60	47	D	0.41	12	B
	SBTR	0.47	9	A	**0.86**	18	B
Trafalgar Road & Collector E	*Overall*	*0.80*	*6*	*A*	*0.71*	*6*	*A*
	EBL	0.29	64	E	0.03	58	E
	EBTR	0.04	61	E	0.03	60	E
	WBL	0.52	68	E	0.56	66	E
	WBTR	0.06	63	E	0.06	57	E
	NBL	0.05	3	A	0.19	34	C
	NBTR	0.85	5	A	0.49	1	A
	SBL	0.37	54	D	0.17	4	A
	SBTR	0.43	3	A	0.75	6	A

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Future Main Street & Eighth Line	EBL	0.06	7	A	0.02	7	A
	EBR	0.00	6	A	0	6	A
	SBR	0.01	7	A	0.04	7	A

Under 2031 future total conditions, all the arterial-to-collector intersections operate well overall with v/c ratios under 1.00 and level of service (LOS) under E. Some individual turning movements at intersections do however experience constrained operation. Examples of this include a.m. eastbound and westbound left-turns at Trafalgar Road and Collector F operating at LOS F or the Trafalgar Road and Collector D, shared northbound through-right with a v/c ratio of 1.06. Despite the constrainted operation of these specific movements however, overall v/c ratios and LOS are operating within an acceptable range. Based on the overall 2031 analysis it is considered that 2031 volumes can be accommodated on the study network.

It is noted that the proposed intersection of Trafalgar Road with the proposed Collector E would not conform to the minimum spacing requirement of 300 metres between the proposed adjacent full-moves intersections at Collector D and Collector F along Trafalgar Road per Halton Region's Access Management Guidelines. While the conversion of this intersection to a right-in/right-out configuration was considered, complying with Halton Region spacing guidelines, the resulting redistribution of inbound and outbound left-turn traffic to adjacent full-moves intersections would create high levels of delay and queuing. As shown in the table above, eastbound and westbound movements at Trafalgar Road's intersections with Collector D and Collector F are already projected with high levels of delay (typically LOS E) under the assumption that the Collector E intersection would operate as signalized and with full moves. Overall network demand and operational performance of adjacent intersections indicated additional capacity was required to accommodate turning movements. Environmental constraints also impacted potential access locations along Trafalgar Road. Intersection spacing is provided at a reduced spacing approximately 250 metres north and south of Collector E. Due to the proposed signal control, network operational and other limiting factors the intersection spacing is considered reasonable for a full moves access at this location.

5.2.2 2041 Future Total – Without GO

The signal timing modifications applied under 2041 future background conditions were carried forward and optimized to accommodate the addition of site traffic under the 2041 future total conditions. In addition to optimizing signal timing plans under 2041 future total conditions without the GO Station, the proposed improvements beyond the planned and recommended improvements include dual eastbound right-turn lanes, dual northbound left-turn lanes, and a dedicated northbound right-turn lane at the intersections of Trafalgar Road and Future Main

Street. For all other arterial-to-collector and collector-to-collector intersections, refer to the detailed recommendations summarized in **Table 5-2**. These geometric recommendations have been incorporated into the analysis. The capacity results for the external and collector-to-arterial intersections during the weekday a.m. and p.m. peak hours under 2041 future total analysis without the GO Station are summarized in **Table 5-5** and **Table 5-6**, respectively. Detailed Synchro reports are attached in **Appendix I.**

Table 5-5 2041 Future Total Capacity Analysis Summary – Without GO: External Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.20**	*112*	*F*	**1.23**	*111*	*F*
	EBL	**1.03**	**101**	**F**	**1.04**	**151**	**F**
	EBT	**1.06**	**84**	**F**	0.79	50	D
	EBR	0.51	32	C	0.52	40	D
	WBL	**1.33**	**234**	**F**	0.86	80	E
	WBT	0.85	64	E	**1.29**	**179**	**F**
	WBR	**1.12**	**130**	**F**	0.37	37	D
	NBL	**1.29**	**220**	**F**	**1.26**	**203**	**F**
	NBT	**1.23**	**141**	**F**	**1.01**	47	D
	NBR	0.36	30	C	0.19	23	C
	SBL	**1.30**	**236**	**F**	**1.23**	**167**	**F**
	SBT	**1.09**	97	**F**	**1.19**	143	**F**
	SBR	0.06	28	C	0.66	51	D
Eighth Line & Derry Road	*Overall*	*0.69*	*21*	*C*	*0.68*	*16*	*B*
	EBL	0.21	16	B	0.19	19	B
	EBT	0.70	22	C	0.38	14	B
	EBR	0.10	13	B	0.10	11	B
	WBL	0.64	40	D	0.46	8	A
	WBT	0.33	8	A	0.67	12	B
	WBR	0.01	6	A	0.00	6	A
	NBL	0.58	51	D	0.69	55	E
	NBTR	0.21	51	D	0.14	65	E
	SBL	0.12	61	E	0.12	47	D
	SBTR	0.10	62	E	0.10	46	D
Trafalgar Road & Britannia Road	*Overall*	**1.02**	*63*	*E*	**1.13**	*77*	*E*
	EBL	**1.01**	**93**	**F**	**1.31**	**206**	**F**
	EBT	0.77	47	D	0.72	42	D
	EBR	0.73	42	D	0.24	34	C
	WBL	0.71	67	E	0.59	**88**	**F**
	WBT	0.83	60	E	**1.13**	**104**	**F**
	WBR	0.48	50	D	0.31	15	B

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBL	**1.09**	**158**	**F**	**1.08**	**100**	**F**
	NBT	0.84	41	D	**0.99**	69	E
	NBR	0.20	26	C	0.22	76	E
	SBL	0.82	**81**	**F**	**1.17**	**167**	**F**
	SBT	**1.10**	**83**	**F**	**1.02**	41	D
	SBR	0.94	49	D	**0.99**	34	C
Eighth Line & Britannia Road	*Overall*	*0.70*	*35*	*C*	*0.81*	*38*	*D*
	EBL	0.46	23	C	0.78	75	E
	EBT	0.53	26	C	0.38	20	C
	EBR	0.04	19	B	0.04	32	C
	WBL	0.18	35	C	0.14	30	C
	WBT	0.41	35	D	0.69	39	D
	WBR	0.08	31	C	0.17	29	C
	NBL	0.32	42	D	0.41	41	D
	NBTR	0.54	48	D	0.83	57	E
	SBL	0.51	32	C	0.77	50	D
	SBTR	0.84	54	D	0.65	38	D
Trafalgar Road & Lower Baseline	*Overall*	**1.14**	*87*	*F*	**1.02**	*65*	*E*
	EBL	0.49	38	D	0.74	63	E
	EBT	**1.08**	**119**	**F**	**0.99**	**104**	**F**
	EBR	0.06	42	D	0.04	47	D
	WBL	**1.12**	**130**	**F**	**1.03**	**124**	**F**
	WBT	0.32	36	D	0.84	80	E
	WBR	0.14	33	C	0.61	**83**	**F**
	NBL	0.85	**139**	**F**	0.84	63	E
	NBT	**1.06**	**91**	**F**	**0.98**	51	D
	NBR	0.27	37	D	0.36	25	C
	SBL	**1.07**	**128**	**F**	**0.97**	**84**	**F**
	SBT	**1.09**	**86**	**F**	0.83	56	E
	SBR	0.12	22	C	0.06	**115**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.68*	*27*	*C*	**1.28**	*184*	*F*
	EBL	0.00	66	E	0.01	60	E
	WBL	0.82	60	E	0.82	43	D
	WBT	0.03	43	D	0.06	28	C
	WBR	0.29	46	D	**1.90**	**453**	**F**
	NBL	0.12	14	B	0.11	28	C
	NBT	0.50	15	B	0.73	36	D
	SBT	0.64	21	C	0.82	43	D
	SBR	0.15	14	B	0.05	27	C
	Overall	**0.99**	*33*	*C*	**0.96**	*32*	*C*
	EBLR	**0.91**	26	C	**1.06**	28	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	EBR	**0.98**	68	E	**1.17**	**125**	**F**
	NBT	**1.00**	37	D	0.84	21	C
	SBT	**1.00**	13	B	0.80	20	B
Trafalgar Road & Future Main Street	*Overall*	**0.95**	*40*	*D*	**1.00**	*69*	*E*
	EBL	0.62	63	E	0.65	60	E
	EBT	0.38	61	E	0.24	55	E
	EBR	0.13	58	E	0.74	67	E
	WBL	0.38	58	E	0.65	48	D
	WBTR	0.41	61	E	0.26	48	D
	NBL	0.72	63	E	0.93	**89**	**F**
	NBT	**1.03**	48	D	0.74	25	C
	NBR	0.16	10	A	0.07	14	B
	SBL	0.59	58	E	0.64	28	C
	SBT	0.62	18	B	**1.15**	**112**	**F**
	SBR	0.14	9	A	0.44	27	C

Under 2041 future total without GO conditions, most external intersections are anticipated to operate similarly to the 2041 background without GO conditions. The intersections of Trafalgar Road and Derry Road, Trafalgar Road and Britannia Road, and, Trafalgar Road and Lower Baseline are all anticipated to operate at or near capacity, with operations continuing to deteriorate compared to 2031.

Additionally the intersection of Trafalgar Road and Hwy 401 EB ramp terminals is anticipated to have the majority of movements nearing or over capacity. The intersection of Trafalgar Road and Main Street is anticipated to operate approaching capacity in the a.m. peak and at 1.00 during the p.m. peak. Both of these intersections were anticipated to operate at satisfactory levels during the background only scenarios.

The 2041 future total conditions without the GO Station is expected to experience an increase in movements that are predicted to be over capacity at the external intersections. This factor should be considered when interpreting the capacity results, as they represent conservative estimates of the 2041 future total traffic conditions without the operation of the future GO Station, requiring residents and visitors to be auto dependent. Development planning applications up to 2041 will continue to provide an understanding of network operations and highlight areas experiencing capacity constraint. As the road network within the vicinity of the study area becomes busier, and as new linkages/alternative routes are created elsewhere in the broader Regional and Town road networks, existing traffic may relocate to alternative routes.

As development approaches the 2041 horizon year the implementation of GO service would be considered necessary to aid in the overall traffic operations within the study network and wider area network within the Town of Milton and Region of Halton, based on the criteria and

assumptions assessed.

Table 5-6 2041 Future Total Capacity Analysis Summary – Without GO: Arterial-Collector Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Collector K & Derry Road	*Overall*	**0.89**	*15*	*B*	**0.91**	*16*	*B*
	EBL	0.18	7	A	0.60	51	D
	EBT	**0.88**	17	B	0.40	5	A
	EBR	0.02	5	A	0.06	4	A
	WBT	0.44	2	A	**1.00**	20	B
	WBR	0.01	7	A	0.01	6	A
	NBL	0.68	63	E	0.44	58	E
	SBL	0.30	55	D	0.10	55	D
	SBR	0.02	49	D	0.01	53	D
Collector G/Z-10 Local & Derry Road	EBT	0.44	0	A	0.26	0	A
	EBR	0.03	0	A	0.13	0	A
	WBT	0.41	0	A	0.61	0	A
	WBR	0.21	0	A	0.31	0	A
	NBR	0.03	1	B	0.10	9	A
	SBR	0.10	2	A	0.06	10	B
Collector H & Derry Road	*Overall*	*0.71*	*15*	*B*	*0.72*	*13*	*B*
	EBL	0.50	12	B	0.50	35	C
	EBTR	0.66	11	B	0.39	6	A
	WBL	0.29	20	C	0.15	7	A
	WBTR	0.51	10	B	0.74	12	B
	NBLTR	0.81	76	E	0.61	70	E
	SBLTR	0.11	51	D	0.28	59	E
Collector J/Z-15 Access & Derry Road	*Overall*	*0.77*	*17*	*B*	*0.75*	*17*	*B*
	EBL	0.44	5	A	0.34	18	B
	EBTR	0.71	9	A	0.41	7	A
	WBL	0.18	22	C	0.09	8	A
	WBTR	0.46	18	B	0.72	16	B
	NBLTR	0.83	69	**E**	0.79	88	**F**
	SBLTR	0.02	42	D	0.20	59	E
Derry Road & Collector A	EBT	0.60	0	A	0.28	0	A
	WBT	0.38	0	A	**0.95**	0	A
	WBR	0.01	0	A	0.02	0	A
	SBR	0.08	10	B	0.12	28	D
Trafalgar Road & Collector F	*Overall*	**1.14**	*94*	*F*	**0.86**	*24*	*C*
	EBL	0.93	112	**F**	0.52	68	**E**
	EBTR	0.50	59	E	0.44	62	E
	WBL	0.64	63	E	0.48	65	E

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBTR	0.81	81	**F**	0.50	64	E
	NBL	0.55	24	C	0.51	41	D
	NBT	**1.25**	149	**F**	0.61	23	C
	NBR	0.12	14	B	0.14	14	B
	SBL	0.73	62	E	0.65	36	D
	SBTR	0.71	21	C	**0.91**	20	B
Trafalgar Road & Collector D	*Overall*	**1.23**	*129*	*F*	**1.03**	*56*	*E*
	EBL	0.95	97	**F**	0.71	79	E
	EBTR	0.50	51	D	0.36	61	E
	WBL	0.40	52	D	0.86	78	**E**
	WBTR	0.09	40	D	0.62	54	D
	NBL	0.68	37	D	0.86	78	**E**
	NBT	**1.37**	204	**F**	0.66	22	C
	NBR	0.15	17	B	0.03	13	B
	SBL	**1.14**	171	**F**	0.53	68	**E**
	SBT	0.69	27	C	**1.08**	77	**E**
	SBR	0.09	17	B	0.19	16	B
Trafalgar Road & Collector E	*Overall*	**0.98**	*38*	*D*	**0.89**	*19*	*B*
	EBL	0.42	63	E	0.13	70	E
	EBTR	0.04	59	E	0.11	70	E
	WBL	0.49	64	E	0.60	67	E
	WBTR	0.07	59	E	0.08	58	E
	NBL	0.11	5	A	0.31	32	C
	NBTR	**1.06**	54	D	0.60	11	B
	SBL	0.55	50	D	0.38	10	A
	SBTR	0.57	7	A	**0.92**	22	C
Main Street & Eighth Line	EBL	0.29	9	A	0.29	10	A
	EBR	0.00	7	A	0.00	7	A
	SBR	0.19	8	A	0.23	8	A

Under 2041 future total conditions, most movements at the internal arterial-to-collector intersections are projected to operate well with overall reserve capacity. Select movements at the intersections of Derry Road at Collector K, Trafalgar Road at Collector F, Trafalgar Road at Collector D, and, Trafalgar Road at Collector E are projected to operate over capacity.

It should be noted that the majority of critical movements are turning movements within the internal network. Due to the higher anticipated volumes on the arterial roads, the turning phases have limited green time allocated as to prioritize the high volume through movements throughout the network. Additionally, the results present a more conservative assessment as it does not consider the operation of the future GO Station to be in effect, highlighting residents and visitors auto dependency.

5.2.3 2041 Future Total – With GO

The signal timing modifications and geometric recommendations under the 2041 future total conditions without the GO Station have been carried forward and applied to 2041 future total conditions with the GO Station. The signal timings have been optimized under the 2041 future total conditions with the GO Station. The capacity results for the external and collector-to-arterial intersections during the weekday a.m. and p.m. peak hours under 2041 future total analysis without the GO Station are summarized in **Table 5-7** and **Table 5-8**, respectively. Detailed Synchro reports are attached in **Appendix I.**

Table 5-7 2041 Future Total Capacity Analysis Summary – With GO: External Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.14**	*97*	*F*	**1.20**	*103*	*F*
	EBL	**1.01**	**96**	**F**	**1.03**	**148**	**F**
	EBT	**1.05**	**82**	**F**	0.78	49	D
	EBR	0.50	31	C	0.51	39	D
	WBL	**1.28**	**213**	**F**	0.81	75	E
	WBT	0.84	63	E	**1.28**	**175**	**F**
	WBR	**1.10**	**124**	**F**	0.37	36	D
	NBL	**1.28**	**220**	**F**	**1.25**	**201**	**F**
	NBT	**1.13**	**98**	**F**	**0.95**	38	D
	NBR	0.32	26	C	0.18	22	C
	SBL	**1.28**	**229**	**F**	**1.20**	**160**	**F**
	SBT	**1.05**	**82**	**F**	**1.14**	**122**	**F**
	SBR	0.06	28	C	0.66	50	D
Eighth Line & Derry Road	*Overall*	*0.67*	*21*	*C*	*0.67*	*16*	*B*
	EBL	0.19	15	B	0.19	19	B
	EBT	0.68	21	C	0.38	13	B
	EBR	0.09	13	B	0.09	11	B
	WBL	0.63	39	D	0.46	8	A
	WBT	0.32	8	A	0.66	12	B
	WBR	0.01	6	A	0.00	6	A
	NBL	0.56	51	D	0.68	55	D
	NBTR	0.19	52	D	0.13	64	E
	SBL	0.13	61	E	0.12	47	D
	SBTR	0.09	62	E	0.09	46	D
Trafalgar Road & Britannia Road	*Overall*	**0.99**	*57*	*E*	**1.10**	*71*	*E*
	EBL	0.92	73	E	**1.25**	**180**	**F**
	EBT	0.76	47	D	0.71	42	D
	EBR	0.72	42	D	0.23	34	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBL	0.70	67	E	0.59	**87**	**F**
	WBT	0.83	60	E	**1.12**	**101**	**F**
	WBR	0.45	49	D	0.28	15	B
	NBL	**1.06**	**148**	**F**	**1.07**	**97**	**F**
	NBT	0.77	38	D	**0.96**	65	E
	NBR	0.19	26	C	0.21	77	E
	SBL	0.79	80	E	**1.14**	**156**	**F**
	SBT	**1.08**	72	E	**0.98**	30	C
	SBR	0.91	45	D	0.94	26	C
Eighth Line & Britannia Road	*Overall*	*0.69*	*35*	*C*	*0.80*	*38*	*D*
	EBL	0.45	22	C	0.77	73	E
	EBT	0.52	26	C	0.38	20	B
	EBR	0.04	19	B	0.04	31	C
	WBL	0.18	34	C	0.14	29	C
	WBT	0.40	35	C	0.67	38	D
	WBR	0.08	30	C	0.16	29	C
	NBL	0.32	42	D	0.40	41	D
	NBTR	0.52	48	D	0.83	57	E
	SBL	0.49	31	C	0.75	49	D
	SBTR	0.84	54	D	0.64	37	D
Trafalgar Road & Lower Baseline	*Overall*	**1.13**	*78*	*E*	**1.00**	*64*	*E*
	EBL	0.48	38	D	0.63	51	D
	EBT	**1.08**	**118**	**F**	**0.96**	**93**	**F**
	EBR	0.06	42	D	0.03	46	D
	WBL	**1.12**	**132**	**F**	**1.00**	**115**	**F**
	WBT	0.31	36	D	0.82	76	E
	WBR	0.13	33	C	0.56	**82**	**F**
	NBL	0.83	**132**	**F**	0.84	62	E
	NBT	**0.97**	65	E	**0.97**	51	D
	NBR	0.25	36	D	0.36	26	C
	SBL	**1.10**	**141**	**F**	0.94	80	E
	SBT	**1.06**	76	E	0.82	58	E
	SBR	0.11	21	C	0.06	**125**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.66*	*26*	*C*	**1.26**	*176*	*F*
	EBL	0.00	66	E	0.01	60	E
	WBL	0.82	60	E	0.79	42	D
	WBT	0.03	44	D	0.06	28	C
	WBR	0.28	46	D	**1.85**	**427**	**F**
	NBL	0.11	13	B	0.11	28	C
	NBT	0.49	15	B	0.73	37	D
	SBT	0.62	21	C	0.81	4	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBR	0.15	14	B	0.05	28	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	**0.95**	*27*	*C*	**0.95**	*31*	*C*
	EBLR	**0.87**	27	C	**1.03**	27	C
	EBR	0.93	57	E	**1.14**	**113**	**F**
	NBT	**0.96**	29	C	0.83	21	C
	SBT	0.46	12	B	0.78	19	B
Trafalgar Road & Main Street	*Overall*	**0.93**	*37*	*D*	**0.98**	*64*	*E*
	EBL	0.60	62	E	0.65	60	E
	EBT	0.37	61	E	0.24	56	E
	EBR	0.12	58	E	0.72	66	E
	WBL	0.35	58	E	0.62	47	D
	WBTR	0.41	61	E	0.26	49	D
	NBL	0.71	64	E	0.89	80	E
	NBT	**1.00**	42	D	0.72	24	C
	NBR	0.15	10	A	0.07	14	B
	SBL	0.59	58	E	0.63	26	C
	SBT	0.58	16	B	**1.12**	**101**	**F**
	SBR	0.12	9	A	0.39	30	C

Under 2041 future total with GO conditions, most external intersections are anticipated to operate similarly to the 2041 background with GO conditions. The intersections of Trafalgar Road and Derry Road, Trafalgar Road and Britannia Road, and, Trafalgar Road and Lower Baseline are all anticipated to operate at or near capacity, with operations continuing to deteriorate compared to 2031 conditions.

Similarly to the 2041 without GO scenario, the intersection of Trafalgar Road and Hwy 401 EB ramp terminal is anticipated to have movements nearing or over capacity. The intersection of Trafalgar Road and Main Street is anticipated to operate near capacity during the a.m. peak and p.m. peak periods.

With the introduction of the GO, generally, all intersections and movements are anticipated to operate with improved LOS and v/c ratios in comparison to without GO. Operational constraints or deficiencies will still occur, however, at locations across the network.

Table 5-8 2041 Future Total Capacity Analysis Summary – With GO: Arterial-Collector Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Collector K & Derry Road	*Overall*	**0.88**	*14*	*B*	**0.91**	*15*	*B*
	EBL	0.14	6	A	0.62	52	D
	EBT	**0.87**	16	B	0.39	5	A
	EBR	0.02	5	A	0.06	4	A
	WBT	0.44	2	A	**1.00**	18	B
	WBR	0.01	7	A	0.01	6	A
	NBL	0.68	63	E	0.44	58	E
	SBL	0.28	54	D	0.10	55	D
	SBR	0.02	49	D	0.01	53	D
Collector G/Z-10 Local & Derry Road	EBT	0.43	0	A	0.25	0	A
	EBR	0.03	0	A	0.13	0	A
	WBT	0.41	0	A	0.61	0	A
	WBR	0.21	0	A	0.31	0	A
	NBR	0.03	1	B	0.10	9	A
	SBR	0.09	2	A	0.06	10	B
Collector H & Derry Road	*Overall*	*0.70*	*15*	*B*	*0.71*	*13*	*B*
	EBL	0.46	11	B	0.47	34	C
	EBTR	0.65	11	B	0.39	6	A
	WBL	0.27	19	B	0.14	7	A
	WBTR	0.50	10	B	0.73	12	B
	NBLTR	0.81	76	E	0.61	70	E
	SBLTR	0.10	51	D	0.28	59	E
Collector J/Z-15 Access & Derry Road	*Overall*	*0.76*	*17*	*B*	*0.74*	*16*	*B*
	EBL	0.40	4	A	0.31	17	B
	EBTR	0.70	10	A	0.40	7	A
	WBL	0.18	22	C	0.09	8	A
	WBTR	0.45	18	B	0.71	15	B
	NBLTR	0.83	69	E	0.78	**87**	**F**
	SBLTR	0.02	42	D	0.17	59	E
Derry Road & Collector A	EBT	0.59	0	A	0.28	0	A
	WBT	0.38	0	A	**0.94**	0	A
	WBR	0.00	0	A	0.02	0	A
	SBR	0.09	11	B	0.15	28	D
Trafalgar Road & Collector F	*Overall*	**1.08**	*71*	*E*	*0.83*	*21*	*C*
	EBL	0.90	**102**	**F**	0.57	72	E
	EBTR	0.49	59	E	0.42	62	E
	WBL	0.58	60	E	0.42	64	E
	WBTR	0.80	80	E	0.50	64	E
	NBL	0.37	17	B	0.53	35	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBT	**1.16**	**105**	**F**	0.58	21	C
	NBR	0.06	12	B	0.11	12	B
	SBL	0.71	61	E	0.59	25	C
	SBTR	0.68	19	B	**0.86**	16	B
Trafalgar Road & Collector D	*Overall*	**1.20**	*122*	*F*	**0.97**	*50*	*D*
	EBL	0.94	**93**	**F**	0.72	80	E
	EBTR	0.43	50	D	0.27	59	E
	WBL	0.33	50	D	0.73	61	E
	WBTR	0.08	40	D	0.57	52	D
	NBL	0.44	19	B	0.72	59	E
	NBT	**1.34**	**192**	**F**	0.65	22	C
	NBR	0.13	17	B	0.03	13	B
	SBL	**1.01**	**128**	**F**	0.53	69	E
	SBT	0.63	23	C	**1.06**	68	E
	SBR	0.05	14	B	0.17	16	B
Trafalgar Road & Collector E	*Overall*	**0.94**	*24*	*C*	*0.85*	*18*	*B*
	EBL	0.55	70	E	0.17	71	E
	EBTR	0.04	61	E	0.11	70	E
	WBL	0.55	70	E	0.54	64	E
	WBTR	0.07	61	E	0.07	58	E
	NBL	0.07	4	A	0.31	28	C
	NBTR	**1.00**	31	C	0.59	11	B
	SBL	0.53	50	D	0.40	10	A
	SBTR	0.52	5	A	**0.89**	20	B
Main Street & Eighth Line	EBL	0.28	9	A	0.28	9	A
	EBR	0.00	7	A	0.00	7	A
	SBR	0.19	8	A	0.23	8	A

Similar to the 2041 without GO scenario, the 2041 with GO scenario is anticipated to have most movements at the internal arterial-to-collector intersections projected to operate well with overall reserve capacity. Select movements at the intersections of Derry Road at Collector K, Trafalgar Road at Collector F, Trafalgar Road at Collector D, and, Trafalgar Road at Collector E are projected to operate at or over capacity. The addition of the GO was shown to reduce the overall impact the background traffic growth, background developments and the Site generated traffic have on the overall internal network. Based on the operations, the study intersections with site generated traffic and the addition of the GO can be said to operate at satisfactory levels during the 2041 horizon.

It should be noted that the majority of critical movements are turning movements within the internal network. Due to the higher anticipated volumes on the arterial roads, the turning phases have limited green time allocated as to prioritize the high volume through movements throughout the network.

Additionally, the results present a more conservative assessment as it does not consider the operation of the future GO Station to be in effect, forcing residents and visitors to be auto dependent.

5.2.4 2051 Future Total – Without GO

The signal timing modifications under the 2051 future background conditions and the geometric recommendations made under the 2051 future background conditions and 2041 future total conditions without GO Station have been carried forward and applied to 2051 future total conditions without the GO Station. The signal timings have been optimized under this scenario, and a northbound right-turn lane is recommended at the intersection of Trafalgar Road at Collector F, which has been included in the analysis. The capacity results for the external, collector-to-arterial intersections, and collector-to-existing collector intersections during the weekday a.m. and p.m. peak hours under 2051 future total analysis without the GO Station are summarized in **Table 5-9** and **Table 5-10**, respectively. Detailed Synchro reports are attached in **Appendix I.**

Table 5-9 2051 Future Total Capacity Analysis Summary – Without GO: External Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.38**	**158**	**F**	**1.36**	**161**	**F**
	EBL	**1.26**	**196**	**F**	**1.15**	**187**	**F**
	EBT	**1.16**	**130**	**F**	0.60	44	D
	EBR	0.66	37	D	0.10	27	C
	WBL	**1.53**	**317**	**F**	0.93	94	F
	WBT	0.84	62	E	**1.25**	**161**	**F**
	WBR	**1.31**	**207**	**F**	0.41	45	D
	NBL	**1.25**	**195**	**F**	**1.38**	**259**	**F**
	NBT	**1.43**	**234**	**F**	**1.23**	**139**	**F**
	NBR	0.48	31	C	0.20	18	B
	SBL	**1.32**	**240**	**F**	**1.52**	**293**	**F**
	SBT	**1.12**	**103**	**F**	**1.43**	**243**	**F**
	SBR	0.09	25	C	0.78	50	D
Eighth Line & Derry Road	*Overall*	0.80	25	C	0.78	21	C
	EBL	0.30	20	B	0.26	25	C
	EBT	0.78	25	C	0.44	17	B
	EBR	0.13	18	B	0.13	13	B
	WBL	0.66	44	D	0.56	12	B
	WBT	0.36	9	A	0.77	16	B
	WBR	0.02	6	A	0.01	7	A
	NBL	0.83	70	E	0.76	60	E
	NBTR	0.45	55	D	0.18	81	F

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBL	0.14	59	E	0.17	44	D
	SBTR	0.14	61	E	0.15	44	D
Trafalgar Road & Britannia Road	*Overall*	**1.19**	**100**	**F**	**1.29**	**131**	**F**
	EBL	**1.21**	**166**	**F**	**1.27**	**188**	**F**
	EBT	0.84	50	D	0.77	44	D
	EBR	0.81	48	D	0.29	35	C
	WBL	0.76	70	E	0.64	90	F
	WBT	**0.85**	**60**	**E**	**1.31**	**176**	**F**
	WBR	0.53	50	D	0.39	13	B
	NBL	**1.30**	**234**	**F**	**1.31**	**197**	**F**
	NBT	**1.05**	75	E	**1.15**	**129**	**F**
	NBR	0.27	28	C	0.27	62	E
	SBL	0.92	91	F	1.31	230	F
	SBT	**1.31**	**172**	**F**	**1.30**	**159**	**F**
	SBR	**0.98**	52	D	**1.14**	**96**	**F**
Eighth Line & Britannia Road	*Overall*	0.77	38	D	**0.93**	**43**	**D**
	EBL	0.54	27	C	0.85	86	F
	EBT	0.62	31	C	0.45	25	C
	EBR	0.04	22	C	0.04	38	D
	WBL	0.31	46	D	0.19	34	C
	WBT	0.51	41	D	0.83	47	D
	WBR	0.10	35	C	0.21	33	C
	NBL	0.37	40	D	0.52	37	D
	NBTR	0.62	48	D	**0.85**	51	D
	SBL	0.58	31	C	0.94	79	E
	SBTR	**0.85**	52	D	0.70	37	D
Trafalgar Road & Lower Base Line	*Overall*	**1.21**	**111**	**F**	**1.11**	**75**	**E**
	EBL	0.68	54	D	0.57	53	D
	EBT	**1.22**	**183**	**F**	**0.96**	**95**	**F**
	EBR	0.08	59	E	0.04	55	D
	WBL	**1.21**	**163**	**F**	**1.06**	**129**	**F**
	WBT	0.33	54	D	0.68	77	E
	WBR	0.21	53	D	0.84	76	E
	NBL	0.51	42	D	**1.06**	**120**	**F**
	NBT	**1.08**	**95**	**F**	**1.09**	**85**	**F**
	NBR	0.29	33	C	0.42	24	C
	SBL	**1.09**	**136**	**F**	**1.00**	72	E
	SBT	**1.18**	**124**	**F**	**0.97**	52	D
	SBR	0.12	20	B	0.08	97	F
	Overall	0.81	32	C	**1.56**	**303**	**F**

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	EBL	0.01	66	E	0.02	60	E
	WBL	0.86	59	E	**1.05**	**86**	**F**
	WBT	0.03	38	D	0.08	31	C
	WBR	0.43	43	D	**2.58**	**758**	**F**
	NBL	0.08	19	B	0.13	28	C
	NBT	0.62	21	C	0.81	37	D
	SBT	0.79	29	C	**0.87**	44	D
	SBR	0.21	18	B	0.06	25	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	**1.22**	**74**	**E**	**1.14**	**52**	**D**
	EBL	**1.23**	38	D	**1.29**	44	D
	EBLR	**1.23**	38	D	**1.29**	44	D
	EBR	**1.38**	**212**	**F**	**1.42**	**232**	**F**
	NBT	**1.13**	**83**	**F**	**0.99**	35	C
	SBT	0.57	14	B	**0.89**	23	C
Trafalgar Road & Future Main Street	*Overall*	**1.07**	**76**	**E**	**1.23**	**1.5**	**F**
	EBL	0.76	77	E	0.86	78	E
	EBT	0.52	64	E	0.20	49	D
	EBR	0.15	59	E	0.80	63	E
	WBL	0.58	62	E	**1.24**	**185**	**F**
	WBTR	0.41	61	E	0.31	50	D
	NBL	0.75	58	E	0.87	71	E
	NBT	**1.20**	**123**	**F**	0.81	28	C
	NBR	0.29	15	B	0.13	15	B
	SBL	0.56	51	D	0.70	41	D
	SBT	0.77	27	C	**1.33**	**188**	**F**
	SBR	0.23	14	B	0.51	24	C

Under 2051 future total without GO conditions, most external intersections along Trafalgar Road are expected to operate near or above capacity in one or both the assessed peak hour periods. Eighth Line intersections are forecasted to operate with good LOS and reserve capacity with all movements having v/c ratios less than 1.0.

The following intersections are expected to exceed capacity:

- Trafalgar Road & Derry Road during both a.m. and p.m. peak hours
- Trafalgar Road & Britannia Road during both a.m. and p.m. peak hours
- Trafalgar Road & Lower Base Line during both a.m. and p.m. peak hours
- Trafalgar Road & Hwy 401 WB Off-ramp during the p.m. peak hour
- Trafalgar Road & Hwy 401 EB Off-ramp during both a.m. and p.m. peak hours

- Trafalgar Road & Future Main Street during both a.m. and p.m. peak hours

Several individual movements at intersections along Trafalgar Road including Derry Road, Britannia Road, Lower Base Line, Highway 401 EB Off-ramp and, at Future Main Street are expected to exceed capacity during both a.m. and p.m. peak hours.

The 2051 future total conditions without the GO Station are expected to experience an increase in operational constraint as more movements are predicted to be over capacity at external intersections. Analysis and estimates continue to be considered conservative for the 2051 future total traffic conditions without the operation of the future GO Station for the full build-out of Agerton, with residents and visitors being auto dependent.

Table 5-10 2051 Future Total Capacity Analysis Summary – Without GO: Arterial-Collector Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Collector K & Derry Road	*Overall*	**0.87**	*14*	*B*	**0.89**	*13*	*B*
	EBL	0.16	6	A	0.56	48	D
	EBT	**0.86**	15	B	0.33	5	A
	EBR	0.02	5	A	0.06	4	A
	WBT	0.42	2	A	**0.98**	14	B
	WBR	0.01	7	A	0.01	6	A
	NBL	0.68	63	E	0.44	58	E
	SBL	0.33	56	E	0.14	56	E
	SBR	0.01	49	D	0.01	53	D
Collector G/Z-10 Local & Derry Road	EBT	0.50	0	A	0.26	0	A
	EBR	0.50	0	A	0.13	0	A
	WBTR	0.46	0	A	0.68	0	A
	NBR	0.03	10	A	0.10	9	A
	SBR	0.12	10	A	0.11	12	B
Collector H & Derry Road	*Overall*	*0.79*	*21*	*C*	*0.81*	*16*	*B*
	EBL	0.71	42	D	0.52	48	D
	EBTR	0.75	13	B	0.42	6	A
	WBL	0.30	29	C	0.17	8	A
	WBTR	0.62	19	B	0.85	17	B
	NBLTR	0.82	78	E	0.69	78	E
	SBLTR	0.15	49	D	0.48	61	E
Collector J/Z-15 Access & Derry Road	*Overall*	**1.07**	*25*	*C*	*0.85*	*22*	*C*
	EBL	**1.11**	127	F	0.48	32	C
	EBTR	0.77	17	B	0.47	9	A
	WBL	0.17	13	B	0.12	11	B

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBTR	0.46	9	A	0.84	23	C
	NBLTR	**0.95**	89	**F**	0.82	90	**F**
	SBLTR	0.07	42	D	0.47	59	E
Derry Road & Collector A	EBT	0.67	0	A	0.26	0	A
	WBT	0.42	0	A	**1.06**	0	A
	WBR	0.01	0	A	0.02	0	A
	SBR	0.08	11	B	0.18	5	E
Trafalgar Road & Collector F	*Overall*	**1.35**	*153*	*F*	**1.10**	*76*	*E*
	EBL	**0.97**	119	**F**	0.79	108	**F**
	EBTR	0.50	56	E	0.51	60	E
	WBL	0.66	64	E	0.55	64	E
	WBTR	**0.88**	88	**F**	0.68	69	E
	NBL	0.63	38	D	0.58	42	D
	NBT	**1.47**	247	**F**	0.76	33	C
	NBR	0.17	15	B	0.17	21	C
	SBL	**1.33**	239	**F**	0.72	52	D
	SBTR	**0.87**	30	C	**1.18**	107	**F**
Trafalgar Road & Collector D	*Overall*	**1.45**	*198*	*F*	**1.27**	*121*	*F*
	EBL	**1.17**	166	**F**	**0.98**	133	F
	EBTR	0.55	53	D	0.30	51	D
	WBL	0.59	51	D	**1.04**	114	**F**
	WBTR	0.12	39	D	0.75	53	D
	NBL	0.62	72	E	**1.33**	255	**F**
	NBT	**1.64**	324	**F**	0.83	34	C
	NBR	0.26	21	C	0.05	18	B
	SBL	**1.38**	259	**F**	0.80	86	**F**
	SBT	**1.00**	33	C	**1.34**	188	**F**
	SBR	0.81	33	C	**1.34**	188	**F**
Trafalgar Road & Collector E	*Overall*	**1.15**	***99***	***F***	**1.09**	*55*	*E*
	EBL	0.42	62	E	0.13	70	E
	EBTR	0.06	58	E	0.17	71	E
	WBL	0.55	65	E	0.81	**90**	**F**
	WBTR	0.09	58	E	0.11	59	E
	NBL	0.20	8	A	0.36	43	D
	NBTR	**1.29**	**154**	**F**	0.71	14	B
	SBL	0.58	52	D	0.50	26	C
	SBTR	0.67	9	A	**1.12**	80	E
Main Street & Eighth Line	EBL	0.36	10	B	0.32	10	B
	EBR	0.00	7	A	0.00	7	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBR	0.21	8	A	0.30	9	A

Under 2051 future total conditions, many arterial-to-collector intersections are expected to operate with increased delays with v/c ratios over capacity. Intersections with movements or overall operating over capacity include:

- Collector J (Trafalgar Secondary Plan collector) / Z-15 Local Access & Derry Road during both a.m. peak hour
- Trafalgar Road & Collector F during both a.m. and p.m. peak hours
- Trafalgar Road & Collector D during both a.m. and p.m. peak hours
- Trafalgar Road & Collector E during both a.m. and p.m. peak hours

Several individual movements at the intersections of Collector J / Z-15 Local Access & Derry Road, Derry Road & Collector A, Trafalgar Road & Collector F, Trafalgar Road & Collector D and, Trafalgar Road & Collector E are expected to exceed capacity during both a.m. and p.m. peak hours.

As noted previously, these results present a more conservative assessment as it does not consider the operation of the future GO Station to be in effect during the full build-out of the Agerton development, forcing residents and visitors to rely on auto modes of travel.

5.2.5 2051 Future Total – With GO

The signal timing modifications and geometric recommendations under the 2051 future total conditions without the GO Station have been carried forward and applied to the 2051 future total conditions with the GO Station. The capacity results for the external, collector-to-arterial intersections, and collector-to-existing collector intersections during the weekday a.m. and p.m. peak hours under 2051 future total analysis without the GO Station are summarized in **Table 5-11** and **Table 5-12**, respectively. Detailed Synchro reports are attached in **Appendix I.**

Table 5-11 2051 Future Total Capacity Analysis Summary – With GO: External Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Trafalgar Road & Derry Road	*Overall*	**1.31**	**138**	**F**	**1.32**	**145**	**F**
	EBL	**1.22**	**184**	**F**	**1.13**	**179**	**F**
	EBT	**1.15**	**126**	**F**	0.59	44	D
	EBR	0.65	36	D	0.10	27	C
	WBL	**1.45**	**286**	**F**	**0.86**	**86**	**F**
	WBT	0.83	62	E	**1.24**	**157**	**F**
	WBR	**1.28**	**194**	**F**	0.40	44	D
	NBL	**1.24**	**197**	**F**	**1.37**	**257**	**F**
	NBT	**1.32**	**181**	**F**	**1.16**	**109**	**F**
	NBR	0.43	30	C	0.18	17	B
	SBL	**1.30**	**234**	**F**	**1.49**	**275**	**F**
	SBT	**1.07**	**85**	**F**	**1.37**	**213**	**F**
	SBR	0.08	25	C	0.78	50	D
Eighth Line & Derry Road	*Overall*	*0.78*	*24*	*C*	*0.77*	*20*	*C*
	EBL	0.28	18	B	0.24	23	C
	EBT	0.76	24	C	0.43	16	B
	EBR	0.12	13	B	0.12	13	B
	WBL	0.66	44	D	0.54	12	B
	WBT	0.35	8	A	0.76	16	B
	WBR	0.02	6	A	0.01	7	A
	NBL	0.80	66	E	0.75	60	E
	NBTR	0.36	55	D	0.16	**82**	**F**
	SBL	0.15	60	E	0.17	44	D
	SBTR	0.13	62	E	0.13	44	D
Trafalgar Road & Britannia Road	*Overall*	**1.15**	**89**	**F**	**1.25**	**116**	**F**
	EBL	**1.11**	**125**	**F**	**1.22**	**166**	**F**
	EBT	0.83	50	D	0.76	44	D
	EBR	0.81	47	D	0.29	35	C
	WBL	0.75	69	E	0.64	**90**	**F**
	WBT	0.84	59	E	**1.30**	**172**	**F**
	WBR	0.48	49	D	0.35	13	B
	NBL	**1.28**	**230**	**F**	**1.30**	**195**	**F**
	NBT	**0.97**	55	D	**1.11**	**114**	**F**
	NBR	0.26	27	C	0.27	63	E
	SBL	0.86	**84**	**F**	**1.26**	**210**	**F**
	SBT	**1.28**	**158**	**F**	**1.24**	**131**	**F**
	SBR	0.95	47	D	**1.07**	69	E
Eighth Line & Britannia Road	*Overall*	*0.76*	*38*	*D*	**0.90**	*42*	*D*
	EBL	0.53	26	C	0.85	**87**	**F**

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	EBT	0.61	31	C	0.45	24	C
	EBR	0.04	22	C	0.04	37	D
	WBL	0.29	44	D	0.19	34	C
	WBT	0.49	40	D	0.81	45	D
	WBR	0.09	34	C	0.20	32	C
	NBL	0.38	40	D	0.49	36	D
	NBTR	0.59	47	D	0.85	52	D
	SBL	0.55	30	C	0.89	69	E
	SBTR	0.85	52	D	0.68	36	D
Trafalgar Road & Lower Baseline	*Overall*	**1.20**	**102**	**F**	**1.09**	*70*	*E*
	EBL	0.66	53	D	0.55	52	D
	EBT	**1.21**	**178**	**F**	**0.95**	**93**	**F**
	EBR	0.08	59	E	0.04	55	D
	WBL	**1.20**	**161**	**F**	**1.05**	**127**	**F**
	WBT	0.33	54	D	0.67	76	E
	WBR	0.16	52	D	0.81	73	E
	NBL	0.50	42	D	**1.04**	**116**	**F**
	NBT	**1.02**	74	E	**1.07**	75	E
	NBR	0.29	32	C	0.42	24	C
	SBL	**1.06**	**125**	**F**	**0.97**	65	E
	SBT	**1.16**	**115**	**F**	**0.93**	49	D
	SBR	0.11	20	B	0.07	**107**	**F**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	*Overall*	*0.78*	*31*	*C*	**1.53**	**292**	**F**
	EBL	0.01	66	E	0.02	60	E
	WBL	0.86	59	E	**1.02**	76	E
	WBT	0.03	39	D	0.08	31	C
	WBR	0.42	43	D	**2.51**	**726**	**F**
	NBL	0.08	18	B	0.13	27	C
	NBT	0.61	20	C	0.80	37	D
	SBT	0.76	27	C	**0.86**	43	D
	SBR	0.20	17	B	0.06	25	C
Trafalgar Road & Hwy 401 EB Off-ramp/Hwy 401 EB On-Ramp (NB)	*Overall*	**1.17**	*66*	*E*	**1.12**	*48*	*D*
	EBL	**1.15**	34	C	**1.27**	42	D
	EBLR	**1.15**	34	C	**1.27**	42	D
	EBR	**1.28**	**173**	**F**	**1.40**	**221**	**F**
	NBT	**1.11**	76	E	**0.97**	31	C
	SBT	0.54	14	B	**0.86**	21	C
Trafalgar Road & Future Main Street	*Overall*	**1.05**	*67*	*E*	**1.18**	**96**	**F**
	EBL	0.74	75	E	0.79	67	E
	EBT	0.51	64	E	0.22	52	D
	EBR	0.14	59	E	0.85	71	E

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBL	0.53	60	E	0.91	71	E
	WBTR	0.41	61	E	0.26	45	D
	NBL	0.76	60	E	**1.14**	**150**	**F**
	NBT	**1.16**	**102**	**F**	0.85	32	C
	NBR	0.27	14	B	0.10	16	B
	SBL	0.57	53	D	0.77	51	D
	SBT	0.71	23	C	**1.30**	**171**	**F**
	SBR	0.21	13	B	0.50	22	C

Under 2051 future total with GO conditions, implementation of the GO Station generally results in improved operations throughout the network. It is noted however, capacity constraints remain common and widespread across the network, especially along Trafalgar Road.

Following intersections are expected to exceed capacity:

- Trafalgar Road & Derry Road during both a.m. and p.m. peak hours
- Trafalgar Road & Britannia Road during both a.m. and p.m. peak hours
- Trafalgar Road & Lower Base Line during both a.m. and p.m. peak hours
- Trafalgar Road & Hwy 401 WB Off-ramp during the p.m. peak hours
- Trafalgar Road & Hwy 401 EB Off-ramp during both a.m. and p.m. peak hours
- Trafalgar Road & Future Main Street during both a.m. and p.m. peak hours

Several individual movements at the intersections along Trafalgar Road at Derry Road, Britannia Road, Lower Base Line, Highway 401 EB Off-ramp and, Future Main Street are expected to exceed capacity during both a.m. and p.m. peak hours.

In comparison to the 2051 future total conditions without the GO Station, the difference in results illustrate the positive impact a GO Station would have on the surrounding road network and the need for a GO Station to support the future intensification within the Agerton area under 2051. Arterial to collector intersection analysis summarized in **Table 5-12** indicate that most movements

Table 5-12 2051 Future Total Capacity Analysis Summary – With GO: Arterial-Collector Intersections

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
Collector K & Derry Road	*Overall*	**0.86**	*13*	*B*	**0.88**	*12*	*B*
	EBL	0.14	6	A	0.55	47	D
	EBT	0.85	15	B	0.32	5	A
	EBR	0.02	5	A	0.06	4	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
	WBT	0.41	2	A	**0.98**	13	B
	WBR	0.01	7	A	0.01	6	A
	NBL	0.68	63	E	0.44	58	E
	SBL	0.32	55	E	0.14	56	E
	SBR	0.02	49	D	0.01	53	D
Collector G/Z-10 Local & Derry Road	EBT	0.49	0	A	0.26	0	A
	EBR	0.45	0	A	0.13	0	A
	WBTR	0.23	0	A	0.67	0	A
	NBR	0.03	10	A	0.34	9	A
	SBR	0.10	10	A	0.10	12	B
Collector H & Derry Road	*Overall*	*0.78*	*17*	*B*	*0.79*	*16*	*B*
	EBL	0.66	33	C	0.50	46	D
	EBTR	0.73	13	B	0.41	6	A
	WBL	0.30	22	C	0.16	8	A
	WBTR	0.59	12	B	0.83	16	B
	NBLTR	0.82	77	E	0.67	75	E
	SBLTR	0.13	50	D	0.46	61	E
Collector J/Z-15 Access & Derry Road	*Overall*	*0.81*	*18*	*B*	*0.84*	*21*	*C*
	EBL	0.71	25	C	0.46	30	C
	EBTR	0.77	9	A	0.46	9	A
	WBL	0.18	22	C	0.12	11	B
	WBTR	0.52	19	B	0.82	21	C
	NBLTR	0.82	68	E	0.82	**90**	**F**
	SBLTR	0.04	43	D	0.39	58	E
Derry Road & Collector A	EBT	0.66	0	A	0.26	0	A
	WBT	0.42	0	A	**1.05**	0	A
	WBR	0.01	0	A	0.02	0	A
	SBR	0.08	11	B	0.23	42	E
Trafalgar Road & Collector F	*Overall*	**1.29**	**134**	**F**	**1.08**	*61*	*E*
	EBL	**0.96**	**114**	**F**	0.91	**148**	**F**
	EBTR	0.49	56	E	0.48	60	E
	WBL	0.60	60	E	0.52	63	E
	WBTR	**0.86**	**86**	**F**	0.67	68	E
	NBL	0.50	27	C	0.54	43	D
	NBT	**1.41**	**217**	**F**	0.71	29	C
	NBR	0.11	15	B	0.14	17	B
	SBL	**1.08**	**146**	**F**	0.72	52	D
	SBTR	0.82	26	C	**1.13**	**82**	**F**
Trafalgar Road & Collector D	*Overall*	**1.39**	**190**	**F**	**1.19**	**107**	**F**
	EBL	**1.11**	**148**	**F**	**0.98**	**135**	**F**
	EBTR	0.45	51	D	0.25	51	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay(s)	LOS	v/c	Delay(s)	LOS
	WBL	0.47	45	D	0.93	**83**	**F**
	WBTR	0.11	39	D	0.73	53	D
	NBL	0.46	69	E	**0.98**	**130**	**F**
	NBT	**1.60**	**307**	**F**	0.81	32	C
	NBR	0.23	21	C	0.05	17	B
	SBL	**1.31**	**232**	**F**	0.78	**84**	**F**
	SBT	0.76	30	C	**1.30**	**172**	**F**
	SBR	0.07	17	B	0.21	18	B
Trafalgar Road & Collector E	*Overall*	**1.10**	**80**	**F**	**1.04**	*45*	*D*
	EBL	0.46	63	E	0.17	71	E
	EBTR	0.06	58	E	0.17	71	E
	WBL	0.52	65	E	0.73	78	E
	WBTR	0.09	59	E	0.11	59	E
	NBL	0.12	7	A	0.35	43	D
	NBTR	**1.22**	**123**	**F**	0.69	14	B
	SBL	0.57	52	D	0.52	29	C
	SBTR	0.63	8	A	**1.08**	63	E
Main Street & Eighth Line	EBL	0.35	10	B	0.32	10	A
	EBR	0.00	7	A	0.00	7	A
	SBR	0.21	8	A	0.29	9	A

Under 2051 future total conditions **Table 5-12** illustrates that implementation of the GO station generally improves operations of arterial-to-collector intersections however capacity constraints still occur at multiple .

The intersections :

- Trafalgar Road & Collector F during both a.m. and p.m. peak hours
- Trafalgar Road & Collector D during both a.m. and p.m. peak hours
- Trafalgar Road & Collector E during both a.m. and p.m. peak hours

In comparison to without GO, implementation of the GO services helps to improvement internal road network operation within the Agerton Lands, reducing over capacity movements. Analysis for with GO operations, show that Agerton internal road network is generally anticipated to accommodate future development site generated traffic at satisfactory levels during the 2051 horizon.

5.3 Future Total Queueing Analysis

5.3.1 2031 Future Total Queues – Without GO

The 2031 future total – Without GO traffic conditions queueing results are provided in **Appendix I**. Individual critical movements that exceed storage lengths, during either peak hour, are listed in **Table 5-13**.

Table 5-13 2031 Future Total – Without GO Queueing Analysis: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour		Weekday PM Peak Hour	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	127	**166**	34	61
	WBL	130	68	**134**	99	**162**
	WBR	70	66	**180**	8	32
	SBR	85	5	26	**148**	**200**
Trafalgar Road & Hwy 401 WB On-Ramp/Hwy 401 WB Off-Ramp	WBL	90	-	**-**	70	**103**
	WBR	80	-	**-**	**209**	**290**
Trafalgar Road & Collector D	EBL	50	36	**56**	**-**	**-**

Under the 2031 future total without GO conditions, at the intersection of Trafalgar Road and Derry Road, the 95th percentile queue at the eastbound left, westbound left and right, and, the southbound right movements are anticipated to queue beyond the proposed storage under either the a.m. or p.m. peak hour.

At the Trafalgar Road and Highway 401 north terminal intersection, the westbound right-turn movement features dual right-turn lanes: the first with a storage length of 80 m and the second approximately 400 m, providing a total storage of 480 m and as such is anticipated to accommodate the anticipated queue length. The westbound left turn movement is anticipated to exceed the available storage however the 95th percentile queue is expected to be accommodated within the available taper.

The eastbound lane at the intersection of Trafalgar Road and Collector D is anticipated to be captured within the available taper length.

5.3.2 2041 Future Total Queues – Without GO

The 2041 future total – Without GO traffic conditions queueing results are provided in **Appendix I**. Individual critical movements that exceed storage lengths, during either peak hour, are listed in **Table 5-14**.

Table 5-14 2041 Future Total – Without GO Queueing Analysis: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	129	**163**	33	60
	WBR	70	**137**	**214**	14	56
	SBR	85	0	2	**127**	**159**
Eighth Line & Derry Road	NBL	50	37	**82**	31	48
Trafalgar Road & Britannia Road	EBL	125	104	**145**	**171**	**215**
	EBR	85	**98**	**141**	11	34
	SBR	140	**259**	**248**	**249**	**221**
Trafalgar Road & Lower Baseline	WBL	120	**128**	**196**	98	**142**
	WBR	70	0	18	**86**	**124**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	76	**92**	**133**	**189**
	WBR	80	11	28	**465**	**530**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	69	**139**	114	**183**
Trafalgar Road & Future Main Street	EBR	50	0	16	39	**58**
	SBR	75	6	19	63	**79**

Under the 2041 future total without GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 future total conditions. Critical movements not identified within the 2031 scenario or are not able to be accommodate within the existing tapers are as followed:

- At the intersection of Trafalgar Road and Derry Road, queues remain similar however the southbound right exceeds the available storage length.
- At the intersection of Eighth Line and Derry Road, the 95th percentile queue for the northbound left movement is anticipated to exceed the available storage for the a.m. peak hour.
- At the intersection of Trafalgar Road and Britannia Road the eastbound left and right turns as well as the southbound right turn are anticipated to extend past the available storage lengths.
- At the intersection of Trafalgar Road and Lower Baseline, the westbound left and right turns are anticipated to extend past the available storage lengths.
- At the intersection of Trafalgar Road and the Highway 401 eastbound off ramp the 95th percentile queue during the p.m. peak hour will not be able to be accommodated within the available storage or taper length.

5.3.3 2041 Future Total Queues – With GO

The 2041 future total – With GO traffic conditions queueing results are provided in **Appendix I**. Individual critical movements that exceed storage lengths, during either peak hour, are listed in **Table 5-15**.

Table 5-15 2041 Future Total – With GO Queueing Analysis: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour (Without Go)		Weekday PM Peak Hour (Without Go)	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	124	**160**	32	60
	WBR	70	**133**	**209**	16	54
	SBR	85	0	1	**126**	**169**
Eighth Line & Derry Road	NBL	50	36	**76**	31	48
Trafalgar Road & Britannia Road	EBL	125	91	125	**158**	**202**
	EBR	85	**96**	**139**	10	32
	SBR	140	**247**	**245**	**229**	**215**
Eighth Line & Britannia Road	EBL	70	26	48	56	**78**
Trafalgar Road & Lower Baseline	WBL	120	**127**	**195**	96	**139**
	WBR	70	0	17	**78**	**119**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	EBR	10	0	0	7	**16**
	WBL	90	8	**90**	**129**	**185**
	WBR	80	10	27	**455**	**522**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	59	123	111	**179**
Trafalgar Road & Future Main Street	EBR	50	0	16	36	**55**

Under the 2041 future total with GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2031 future total conditions with an overall lesser impact than the 2041 future total without GO scenario. Critical movements not identified within the 2031 scenario or are not able to be accommodate within the existing tapers are as followed:

- At the intersection of Trafalgar Road and Derry Road, queues remain similar however the southbound right no longer exceeds the available storage length.
- At the intersection of Trafalgar Road and Britannia Road the eastbound left and right turns as well as the southbound right turn are anticipated to extend past the available storage lengths.
- At the intersection of Trafalgar Road and Lower Baseline, the westbound left and right

turns are anticipated to extend past the available storage lengths.

- At the intersection of Trafalgar Road and the Highway 401 eastbound off ramp the 95th percentile queue during the p.m. peak hour will not be able to be accommodated within the available storage or taper length.

5.3.4 2051 Future Total Queues – Without GO

The 2051 future total – Without GO traffic conditions queueing results are provided in **Appendix I**. Individual critical movements that exceed storage lengths, during either peak hour, are listed in **Table 5-16**.

Table 5-16 2051 Future Total – Without GO Queueing Analysis: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour		Weekday PM Peak Hour	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	**162**	**204**	39	68
	WBR	70	**193**	**267**	28	57
	SBR	85	0	11	**172**	**146**
Eighth Line & Derry Road	EBL	90	11	21	2	10
	NBL	50	**57**	**115**	46	**65**
Trafalgar Road & Britannia Road	EBL	125	**143**	**183**	**174**	**219**
	EBR	85	**114**	**163**	17	43
	WBR	70	40	**71**	15	3
	SBR	140	**268**	**242**	**321**	**231**
Trafalgar Road & Lower Baseline	EBL	90	47	**92**	25	41
	WBL	120	**151**	**249**	**129**	**179**
	WBR	70	12	32	**111**	**145**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	**97**	**117**	**201**	**244**
	WBR	80	27	47	**639**	**683**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	**136**	**207**	**143**	**215**
Trafalgar Road & Future Main Street	EBL	60	31	49	44	**71**
	EBR	50	0	17	**59**	**93**
	WBL	90	26	42	**95**	**158**
	NBL	50	**66**	**83**	**89**	**124**
	SBR	50	18	40	**61**	**67**

Under the 2051 future total without GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2041 future total conditions. Critical movements not identified within the 2041 scenario or are not able to be accommodate within the existing tapers are as followed:

- The westbound right turn at the intersection of Trafalgar Road and Lower Baseline is anticipated to extend past the available storage for the 50th percentile and the 95th percentile in the p.m. peak hour with queues not being able to be accommodated within the available storage or taper.
- At the intersection of Trafalgar Road and the Future main Street the eastbound right, westbound left, northbound left all will have queues longer than the available storage and will not be able to be accommodated within the available taper during the p.m peak hour.

5.3.5 2051 Future Total Queues – With GO

The 2051 future total – With GO traffic conditions queueing results are provided in **Appendix I**. Individual critical movements that exceed storage lengths, during either peak hour, are listed in **Table 5-17**.

Table 5-17 2051 Future Total – With GO Queueing Analysis: Critical Movements

Intersection	Movement	Storage (m)	Weekday AM Peak Hour		Weekday PM Peak Hour	
			50th Percentile Queue (m)	95th Percentile Queue (m)	50th Percentile Queue (m)	95th Percentile Queue (m)
Trafalgar Road & Derry Road	EBL	130	**156**	**197**	38	66
	WBR	70	**185**	**258**	26	57
	SBR	85	0	10	**168**	**153**
Eighth Line & Derry Road	NBL	50	**51**	**111**	45	**64**
Trafalgar Road & Britannia Road	EBL	125	122	**162**	**162**	**206**
	EBR	85	**112**	**160**	16	42
	SBR	140	**256**	**241**	**287**	**228**
Trafalgar Road & Lower Baseline	WBL	120	**175**	**247**	**127**	**177**
	WBR	70	0	25	**107**	**141**
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	**95**	**114**	**196**	**238**
	WBR	80	26	45	**629**	**673**
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	121	**191**	**140**	**211**
Trafalgar Road & Collector D	EBL	70	**100**	**159**	**36**	**77**

Under the 2051 future total with GO conditions, select movements are expected to queue beyond the proposed storage length similar to the critical movements identified under 2041 future total conditions. Critical movements not identified within the 2041 scenario or are not able to be accommodate within the existing tapers are as followed:

- The westbound right turn at the intersection of Trafalgar Road and Lower Baseline is anticipated to extend past the available storage for the 50th percentile and the 95th

percentile in the p.m. peak hour with queues not being able to be accommodated within the available storage or taper.

- At the intersection of Trafalgar Road and collector D, the eastbound left turn has both 50th percentile and 90th percentile queues that extent past the available storage and will not be able to be accommodated within the available taper during the a.m. peak hour.

When the 2051 Future Total With GO scenario is compared to the future total without GO and the analysis indicates that the implementation of the GO reduces the overall impact of queueing with in overall road network.

Additional recommended mitigation measures are highlighted in the following section.

5.3.6 Queue Analysis Mitigation Summary

Based on queue analysis summary tables, improvements are required to existing turning lane storage to accommodate future queue lengths. Proposed queue mitigation measures have been summarized in **Table 5-18**.

Table 5-18 Future Total Queueing Mitigation Summary Table

Intersection	Movement	Original Storage (m)	Required Storage (m)	Proposed Storage (m)
Trafalgar Road & Derry Road	EBL	130	200	- [1]
	WBR	70	200	130
	SBR	85	175	175
Eighth Line & Derry Road	NBL	50	120	120
Trafalgar Road & Britannia Road	EBL	125	220	220
	EBR	85	165	165
	SBR	140	325	325
Trafalgar Road & Lower Baseline	WBL	120	250	250
	WBR	70	150	150
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	240	- [2]
	WBR	80	680	- [2]
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	220	- [2]
Trafalgar Road & Collector D	EBL	70	160	- [1]

Note 1 Storage limited by intersection spacing to upstream intersection; Existing storage to be maintained.
2 MTO intersection; no recommendation on geometric improvement or signal timing plan mitigation; to be reviewed, monitored and recommended by MTO

6 TRANSPORTATION CAPACITY LIMIT ASSESSMENT

The Agerton Secondary Plan establishes a target of 14,100 residents and 17,500 jobs within the Secondary Plan area, with the Milton Trafalgar Major Transit Station Area (MTSA) identified as the highest-density, transit-oriented node centered on the future Milton Trafalgar GO Station.

This Transportation Capacity Limit Assessment evaluates the population that can be supported prior to the commencement of GO Station operations, recognizing that development within the Agerton Secondary Plan Area will be guided by available transportation (including transit) capacity thresholds. While the plan targets 17,500 jobs, the current trip generation analysis calculates employment trips based on GFA rather than the full job total, reflecting the capacity of the area currently available for development.

Based on the analysis included in this study, growth beyond projected 2041 populations will be constrained in the absence of the Trafalgar GO Station. The transition from the 2031 to 2041 horizon demonstrates increasing frequency of capacity constraints, with a number of external arterial intersections operating near or above capacity, highlighting the importance of the GO station in supporting future growth. The 2041 intersection capacity analysis without GO scenario, presented in **Section 5.2.2**, reflects development conditions corresponding to approximately 90% of the Secondary Plan's projected population and 55% of its projected employment as summarized in **Table 4-1**. These constraints reflect the cumulative impacts of both regional background growth and traffic associated with the Agerton Secondary Plan. As the analysis is dependent on the background growth assumptions applied in the transportation model, changes in the timing, location, or magnitude of the forecast background growth could influence the amount of development that might be accommodated within the transportation network in the absence of the Trafalgar GO Station.

Future traffic demands and future capacity constraints along Trafalgar Road and other key major arterial intersection locations are the cumulative result of growth occurring across the broader transportation network. As such, transportation capacity thresholds should be evaluated in the context of all planned development and infrastructure delivery, recognizing that network conditions will evolve over time as growth is realized and transportation improvements are implemented.

The Agerton Secondary Plan is intended to support a complete community that balances population and employment growth in a manner consistent with broader municipal planning objectives. The transportation analysis completed for this study demonstrates that the 2041 without-GO scenario, corresponding to approximately 90% of the Secondary Plan population target and 55% of the employment target, represents where network reaches a constrained condition for the level of development. Beyond this level of development, increasing transportation constraints are anticipated in the absence of the Milton Trafalgar GO Station.

However, as transportation network performance is influenced by the timing and magnitude of background growth, future development potential should continue to be evaluated through ongoing transportation monitoring and updated analyses as development progresses.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Study Analysis

Analysis was undertaken for existing conditions using traffic data for a.m. and p.m. peak periods collected on Wednesday, May 28, 2025 to establish baseline operations. Future conditions analysis was undertaken for three future study horizon years of 2031, 2041, and 2051. Based on future planning for the study area analysis was also reviewed considering the implementation of the proposed Trafalgar GO Station. Future analysis thus examined background conditions (no Agerton development) with and without the GO Station and total conditions (with Agerton development) for the identified horizon years

Existing Scenario

Under existing conditions, all study area intersections operate with overall reserve capacity and acceptable delays during both the weekday a.m. and p.m. peak hours, with some exceptions. Although select movements experience level-of-service (LOS) F, all movements operate with volume-to-capacity (v/c) ratios below 1.0 during both peak hours, indicating reserve capacity.

Future 2031 Scenario

Background Conditions

At external boundary roads, capacity constraints begin to develop at some turning movements predominately in the p.m. peak. The majority of the network however, presents with good reserve capacity. Queuing deficiencies also begin to occur at some dedicated turning movements along Trafalgar Road that would require mitigation where possible. Network improvements are recommended for intersections along Trafalgar Road which are detailed in **Section 7.3**.

Total Conditions

Under total conditions the number of constrained movements increase in both the weekday a.m. and p.m. peak hours at external intersections. Overall intersection operation largely remains satisfactory at most locations. No additional improvements are deemed necessary beyond what has been identified for background conditions.

Future 2041 Scenario

Analysis for 2041 considered with and without the future GO Station implementation for both background and total conditions. Planned regional road improvements were also applied in undertaking analysis for these horizons including HOV/Bus lanes implementation and widening of Trafalgar Road and Derry Road to three lanes in each direction. Analysis also included the inclusion of the future Main Street Extension from Fifth Line to Trafalgar Road. At the time of this report, the

EA is currently underway with construction anticipated to begin as early as 2027 between Fifth Line and Sixth Line. As for the construction of Future Main Street from Sixth Line to Trafalgar Road, no construction timeline has been announced as it is currently in the post period. For the purposes of this analysis, it is assumed that the Future Main Street Extension from Sixth Line to Trafalgar Road will be constructed and operational under the 2041 horizon year.

Improvements are required under both background and total conditions to achieve the operating conditions summarized in this report under 2041 operating conditions. Improvements for both background and total conditions are detailed in **Section 7.3**.

Background Conditions

Analysis included signal optimization for the 2041 horizon for with and without GO scenarios. Without GO scenarios resulted in higher v/c ratios, delay and general capacity constraint across the network. Some intersections operate slightly over capacity with good reserve capacity generally available across the network.

With GO scenarios provide improved operational network characteristics in comparison to the with without GO assessment. Critical intersections remain the same in both with and without GO scenarios with the intersection of Trafalgar Road and Lower Baseline Road operating just above capacity in a.m. peak hour, the p.m. peak and other locations operating with capacity constraint i.e. v/c greater than 0.90 but not at 1.0.

Total Conditions

Similar to background conditions, With GO scenarios result in better operating conditions than Without GO scenarios. With the addition of Agerton site traffic volumes, movements that previously operated with capacity constraints continued to do so with further constraints occurring at movements across the network. Some intersections that were not at capacity experience v/c ratios at or above 1.0 under the Total Conditions scenario. Assessed collector road intersections predominantly provide substantial reserve capacity, although a few individual movements operate near capacity, indicating good operational characteristics for collector roads.

Future 2051 Scenario

For future 2051 conditions localized widening of Lower Base Line to four lanes (two lanes in each direction) is expected to be implemented within the 2051 horizon, as proposed by the Town of Milton in Figure 4 – Proposed Road Network (Town-wide) of the Milton TMP Update (February 2025).

Background Conditions

Two scenarios were again modelled for 2051 future conditions one without the Trafalgar GO Station, and one with the Trafalgar GO Station. Generally, the future total traffic conditions without the operation of the future GO Station is shown to operate at higher capacity, longer delays and have

larger queues when compared to the analysis with the GO Station developed. A large number of turning movements exhibit capacity deficiency with v/ ratios over 1.0. This lack of capacity presents during both a.m. and p.m. operations. A lack of available capacity is common at external intersections along Trafalgar Road.

Total Conditions

Network deficiencies are more widespread under total conditions, even under With GO scenarios which operates with better v/c ratios and delay than Without GO, intersections will exceed or operate at capacity. Collector road intersections with Trafalgar Road also mainly show deficiencies for operation.

Queue deficiencies are also present for multiple dedicated turning lanes under 2051 analysis. Proposed improvements have been provided in **Section 7.4.**

MTSA Collector-to-Collector Intersections

All internal collector-to-collector intersections are expected to operate with ample capacity and minimal levels of delay, with no critical movements identified under future total (2031, 2041 and 2051) conditions with or without the Trafalgar GO Station.

7.2 Threshold Capacity Limit

The Agerton Secondary Plan establishes a target of 14,100 residents and 17,500 jobs within the Secondary Plan area, with the Milton Trafalgar Major Transit Station Area (MTSA) identified as the highest-density, transit-oriented node centered on the future Milton Trafalgar GO Station.

Based on the analysis included in this study, growth beyond projected 2041 populations will be constrained in the absence of the Trafalgar GO Station. The transition from the 2031 to 2041 horizon demonstrates increasing frequency of capacity constraints, with a number of external arterial intersections operating near or above capacity, highlighting the importance of the GO station in supporting future growth. The 2041 without GO scenario reflects development conditions corresponding to approximately 90% of the Secondary Plan's projected population and 55% of its projected employment. These constraints reflect the cumulative impacts of both regional background growth and traffic associated with the Agerton Secondary Plan. As the analysis is dependent on the background growth assumptions applied in the transportation model, changes in the timing, location, or magnitude of the forecast background growth could influence the amount of development that might be accommodated within the transportation network in the absence of the Trafalgar GO Station.

Future traffic demands and future capacity constraints along Trafalgar Road and other key major arterial intersection locations are the cumulative result of growth occurring across the broader transportation network. As such, transportation capacity thresholds should be evaluated in the

context of all planned development and infrastructure delivery, recognizing that network conditions will evolve over time as growth is realized and transportation improvements are implemented.

The Agerton Secondary Plan is intended to support a complete community that balances population and employment growth in a manner consistent with broader municipal planning objectives. The transportation analysis completed for this study demonstrates that the 2041 without-GO scenario, corresponding to approximately 90% of the Secondary Plan population target and 55% of the employment target, represents where network reaches a constrained condition for the level of development. Beyond this level of development, increasing transportation constraints are anticipated in the absence of the Milton Trafalgar GO Station. However, as transportation network performance is influenced by the timing and magnitude of background growth, future development potential should continue to be evaluated through ongoing transportation monitoring and updated analyses as development progresses.

7.3 Study Recommendations

Based on the traffic operations analysis, intersection mitigation measures have been identified for critical movements to address operational deficiencies under future traffic conditions. The future improvements are categorized as Planned Improvements, Recommended Improvements, and Proposed Improvements.

Planned Improvements refer to improvements identified through other studies and planning initiatives within the study area. Recommended Improvements represent general network optimization measures and do not pertain to, nor are they triggered by, Agerton-generated trips. Both planned and recommended improvements are assumed to be implemented independently of the Agerton Secondary Plan development. Proposed Improvements are site-triggered measures required to mitigate traffic impacts associated with Agerton-generated traffic under future total traffic conditions.

The proposed queuing mitigation measures identified under the future total traffic conditions are summarized in **Table 7-1**. An overall summary of study intersection improvements under the future background and total traffic conditions across all forecast horizons is listed below in **Table 7-2**.

Table 7-1 Future Total Queueing Mitigation Summary Table

Intersection	Movement	Original Storage (m)	Required Storage (m)	Proposed Storage (m)
Trafalgar Road & Derry Road	EBL	130	200	- [1]
	WBR	70	200	130
	SBR	85	175	175
Eighth Line & Derry Road	NBL	50	120	120
Trafalgar Road & Britannia Road	EBL	125	220	220
	EBR	85	165	165
	SBR	140	325	325
Trafalgar Road & Lower Baseline	WBL	120	250	250
	WBR	70	150	150
Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp	WBL	90	240	- [2]
	WBR	80	680	- [2]
Trafalgar Road & Hwy 401 EB Off-ramp	EBR	125	220	- [2]
Trafalgar Road & Collector D	EBL	70	160	- [1]

Note 1 Storage limited by intersection spacing to upstream intersection; Existing storage to be maintained.
2 MTO intersection; no recommendation on geometric improvement or signal timing plan mitigation; to be reviewed, monitored and recommended by MTO

Table 7-2 Geometric Improvements Summary

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
External Intersections														
1	Derry Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches										
		Planned	Dedicated right turn lane	NBR WBR										
		Planned	Dual left turn lanes	NBL SBL EBL										
		Planned	Dual left turn lanes	WBL										
2	Derry Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT										
		Planned	Dedicated right turn lane	EBR WBR										
3	Britannia Road and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	All Approaches										
		Planned	Dedicated right turn lane	All Approaches										
		Planned	Dual left turn lanes	EBL WBL										
		Planned	Dual left turn lanes	NBL SBL										
4	Britannia Road and Eighth Line	**Planned**	Widening to 3 lanes per direction	EBT WBT										
		Planned	Dedicated right turn lane	WBR										
5	Lower Baseline and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
		Planned	Dedicated right turn lane	NBR SBR										
		Planned	Dedicated left turn lane	NBL SBL EBL										
		Planned	Dedicated right turn lane	EBR WBR										
		Recommended	Dual left turn lanes	SBL										
		Planned	Widening to 2 lanes per direction	EBT WBT										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
7	Commuter Lot/Highway 401 WB Off-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
8	Highway 401 EB Off-Ramp/On-Ramp and Trafalgar Road	**Planned**	Widening to 3 lanes per direction	NBT SBT										
115	Trafalgar Road and Future Main Street	**Planned**	Extension of Future Main Street with 2 lanes per direction	EBTWBT										
		Planned	Shared right movement on through lane	EBR WBR NBR										
		Recommended	Dedicated left turn lane with storage: NBL: 125m SBL: 50m EBL: 75m WBL: 160m	All Approaches										
		Recommended	Dedicated right turn lane with storage of 75m	SBR										
		Proposed	Dual right turn lanes with storage of 100m	EBR										
		Proposed	Dual left turn lanes	NBL										
		Proposed	Dedicated right turn lane with storage of 50m	NBR										
Arterial-to-Collector Intersections														
101	Derry Road and Collector K	**Planned**	Dedicated right turn lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										
		Proposed	3 lanes for left / through / right movements	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										
		Proposed	Dedicated right turn lane	WBR										
102	Derry Road and Collector G	**Planned**	Dedicated right turn lane	EBR										
		Planned	Right turn lane	NB										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
		Proposed	Right turn lane	SBR										
		Proposed	Shared right movement on through lane	WBR										
103	Derry Road and Collector H	**Planned**	Shared right movement on through lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										
		Proposed	Shared left / through / right lane	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										
104	Derry Road and Collector J	**Planned**	Shared right movement on through lane	EBR										
		Planned	Shared left / right lane	NB										
		Planned	Dedicated left turn lane	WBL										
		Proposed	Shared left / through / right lane	SB										
		Proposed	Shared right movement on through lane	WBR										
		Proposed	Dedicated left turn lane	EBL										
		Proposed	Shared through movement on Shared left / right lane	NB										
109	Derry Road and Collector A	**Proposed**	New Road intersecting Derry Road Right turn lane	SBR										
		Proposed	Dedicated right turn lane	WBR										
114	Collector F and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
		Proposed	Dedicated right turn lane	NBR										
116	Collector D and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										

LEGEND: - Not Required **- Planned / Recommended / Proposed**

ID	Intersection	Planned by Others Recommended for Future Background Proposed for Agerton Secondary Plan	Mitigation Measure	Movement	2031		2041				2051			
					FB	FT	FB		FT		FB		FT	
					w/o GO		with GO	w/o GO	with GO	w/o GO	with GO	w/o GO	with GO	w/o GO
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
		Proposed	Dedicated right turn lane	NBR SBR										
		Proposed	Dual left turn lanes	SBL										
		Proposed	Dual left turn lanes	NBL										
117	Collector E and Trafalgar Road	**Proposed**	Dedicated left turn lane	All Approaches										
		Proposed	Shared through / right lane	EB WB										
		Proposed	Shared right movement on through lane	NB SB										
Collector-to-Collector Intersections														
207	Collector D and Collector K	**Proposed**	Proposed 1 lane configuration with shared movements	All Approaches										
208	Collector D and Collector A	**Proposed**												
209	Collector D and Collector B / Z-13 Z-14 Access	**Proposed**												
210	Collector E and Collector K	**Proposed**												
211	Collector E and Collector A	**Proposed**												
212	Collector E and Collector B	**Proposed**												
213	Collector F / Z-5 Local and Collector K	**Proposed**												
214	Collector F and Collector A	**Proposed**												
215	Collector F and Collector B	**Proposed**												
217	Collector C and Collector A	**Proposed**												

LEGEND: - Not Required **- Planned / Recommended / Proposed**

Appendix A
Existing Traffic Data

Date: 7-May-2025
Intersection: Britannia Rd @ Trafalgar Rd

8 Phase Basic Timing Sheet

	1	2	3	4	5	6	7	8	2 Ped	4 Ped	6 Ped	8 Ped
Phases in use	X	X	X	X	X	X		X				
Direction	SBLT	NB	WBLT	EB	NBLT	SB		WB				
Min Green	7	20	7	20	7	20		20				
Veh Ext.	3.0	5.0	3.0	3.0	3.0	5.0		3.0				
Yellow	3	3.7	3	4.2	3	3.7		4.2				
Red	1	3.8	1	2.7	1	3.8		2.7				
Walk		7		7		7		7				
Don't Walk		34		26		34		26				
Max 1	12	59	16	43	12	59		59				
Max 2	12	65	12	41	30	47		53				
Max 3	12	64	12	42	15	61		54				
Max 4												
Veh Recall		x				x						
Ped Recall												

Notes:
Sync Reference 3:15
Max 1 6:00-9:00
Max 2 15:00-19:00
Max 3 9:00-15:00, 19:00-6:00

Pedestrian Re-service Active
Rest all Pedestrian Signals in Don't Walk
New Posted 70km/h Speed Zone

Date: 1-Aug-25
Intersection: Derry Rd & Trafalgar Rd

8 Phase Basic Timing Sheet												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**2 Ped**	**4 Ped**	**6 Ped**	**8 Ped**
Phases in use	X	X	X	X	X	X	X	X	X	X	X	X
Direction	WBL	EB	NBL	SB	EBL	WB	SBL	NB				
Min Green	7	20	7	20	7	20	7	20				
Veh Ext.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Yellow	3	4.6	3	4.2	3	4.6	3	4.2				
Red	1	2.3	1	2.6	1	2.3	1	2.6				
Walk		7		7		7		7				
Don't Walk		24		23		24		23				
Max 1	10	45	10	45	10	45	10	45				
Max 2												
Max 3												
Veh Recall		x				x						
Ped Recall												
Notes:	Sync Reference 3:15											

Pattern 1
Time: 6:00-9:00
Cycle Length: 140
Offset (%): 0%

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%	9	51	9	31
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%	30	30	9	31

Pattern 2
Time: 9:00 - 15:00 & 19:00 - 22:00
Cycle Length: 110
Offset (%): 0%

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%	11	40	10	39
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%	11	40	10	39

Pattern 3
Time: 15:00-19:00
Cycle Length: 140
Offset (%): 0%

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%	12	41	13	34
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%	12	41	13	34

Pattern 4
Time: 22:00-6:00
Cycle Length: Free
Offset (%):

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%				
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%				

Pattern 5
Time:
Cycle Length:
Offset (%):

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%				
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%				
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%				

Date: 3-Jun-17
Intersection: Trafalgar Road & Lowerbase Line

8 Phase Basic Timing Sheet												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**2 Ped**	**4 Ped**	**6 Ped**	**8 Ped**
Phases in use	X	X	X	X	X	X		X				
Direction	SBLT	NB	WBLT	EB	NBLT	SB	EBLT	WB				
Min Green	7	25	7	10	7	25		10				
Veh Ext.	-	5.0	-	5.0		5.0		5.0				
Yellow	3	4.6	3	4.2	3	4.6		4.2				
Red	1	2	1	2	1	2		2				
Walk	-	-	-	-		-		-				
Don't Walk	-	-	-	-		-		-				
Max 1	20	50	12	38	11	59		50				
Max 2	15	57	12	36	15	57		48				
Max 3	12	53	12	43	11	54		55				
Veh Recall		x				x						
Ped Recall												

Notes:
Use Max 1 during AM Peak (6:00am-9:00am)
Use Max 2 during PM Peak (3:00pm-7:00pm)
Use Max 3 during OFF Peak (9:00am-3:00pm, 7:00pm-6:00am)

Date: 23-Aug-24
Intersection: Trafalgar Rd @ 401 South Terminal

8 Phase Basic Timing Sheet												
	1	2	3	4	5	6	7	8	2 Ped	4 Ped	6 Ped	8 Ped
Phases in use		X		X		X						
Direction		NB		EB		SB						
Min Green		20		10		20						
Veh Ext.		3.0		3.0		3.0						
Yellow		5		4.5		5						
Red		2		2.5		2						
Walk						7						
Don't Walk						23						
Max 1		42		24		42						
Max 2												
Max 3												
Veh Recall		x				x						
Ped Recall												
Notes:	Sync Reference time 3:15											

Date: 10-Jan-25
Intersection: Trafalgar Rd @ 401 North Terminal

8 Phase Basic Timing Sheet

	1	2	3	4	5	6	7	8	2 Ped	4 Ped	6 Ped	8 Ped
Phases in use		X		X	X	X		X				
Direction		NB		EB	NBLT	SB		WB				
Min Green		20		10	7	20		10				
Veh Ext.		4.0		2.0	2.0	4.0		2.0				
Yellow		5.4		4.5	3	5.4		4.5				
Red		2.7		2.8	1	2.7		2.6				
Walk		7		7		7		7				
Don't Walk		28		31		28		31				
Max 1		63		10	7	51		40				
Max 2												
Max 3												
Veh Recall		x				x						
Ped Recall												

Notes: Sync Reference time 3:15
Phases 4 & 8 are Split Phases

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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: Milton
Site #: 2508500001
Intersection: Trafalgar Rd & HWY 401 WB Off R
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S

North Leg Total:	1810			
North Entering:	1134			
North Peds:	0			
Peds Cross:	⋈			
Heavys	28	44	0	72
Trucks	4	25	0	29
Cars	85	948	0	1033
Totals	117	1017	0	
Heavys	93			
Trucks	19			
Cars	564			
Totals	676			
East Leg Total:	453			
East Entering:	453			
East Peds:	0			
Peds Cross:	⧖			

Trafalgar Rd

Heavys	Trucks	Cars	Totals
28	4	101	133

Trafalgar & 401 Commuter lot

Cars	Trucks	Heavys	Totals
233	11	36	280
6	0	0	6
129	8	30	167
368	19	66	

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	0	0
0	0	0	0
0	0	4	4
0	0	4	

HWY 401 WB Off Ramp

Cars	Trucks	Heavys	Totals
0	0	0	0

Trafalgar Rd

Peds Cross:	⧖			
West Peds:	0			
West Entering:	4			
West Leg Total:	137			
Cars	1081			
Trucks	33			
Heavys	74			
Totals	1188			
Cars	10	331	0	341
Trucks	0	8	0	8
Heavys	0	57	0	57
Totals	10	396	0	
Peds Cross:	⋈			
South Peds:	0			
South Entering:	406			
South Leg Total:	1594			

Comments

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Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

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

Municipality: Milton
Site #: 2508500001
Intersection: Trafalgar Rd & HWY 401 WB Off R
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

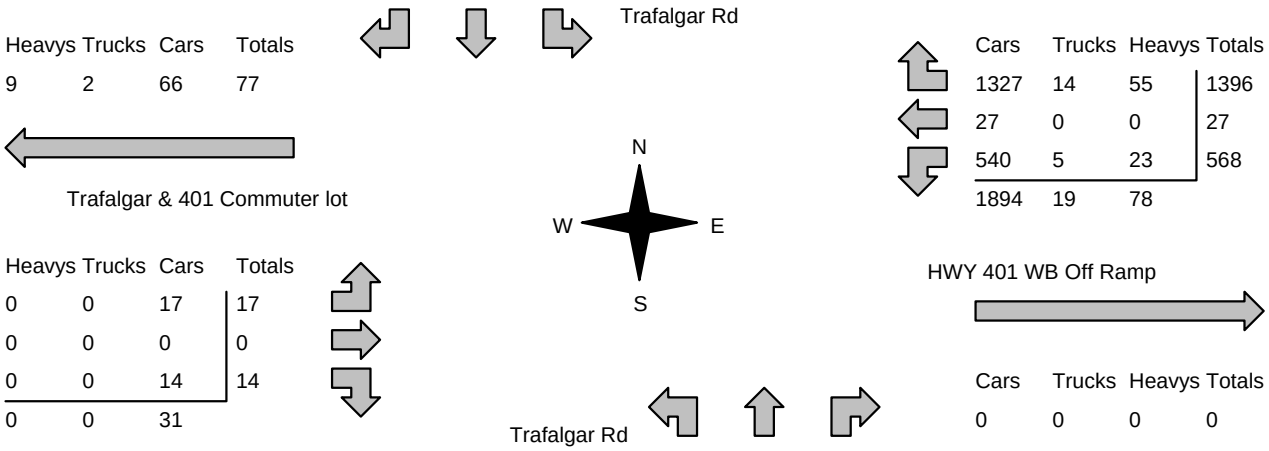
Major Road: Trafalgar Rd runs N/S

North Leg Total:	2905
North Entering:	701
North Peds:	0
Peds Cross:	⋈

Heavys	9	30	0	39
Trucks	2	6	0	8
Cars	34	620	0	654
Totals	45	656	0	

Heavys	96	
Trucks	21	
Cars	2087	
Totals	2204	

East Leg Total:	1991
East Entering:	1991
East Peds:	0
Peds Cross:	⧖



Peds Cross:	⧖
West Peds:	0
West Entering:	31
West Leg Total:	108

Cars	1174			
Trucks	11			
Heavys	53			
Totals	1238			

Cars	5	743	0	748
Trucks	0	7	0	7
Heavys	0	41	0	41
Totals	5	791	0	

Peds Cross:	⋈
South Peds:	0
South Entering:	796
South Leg Total:	2034

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

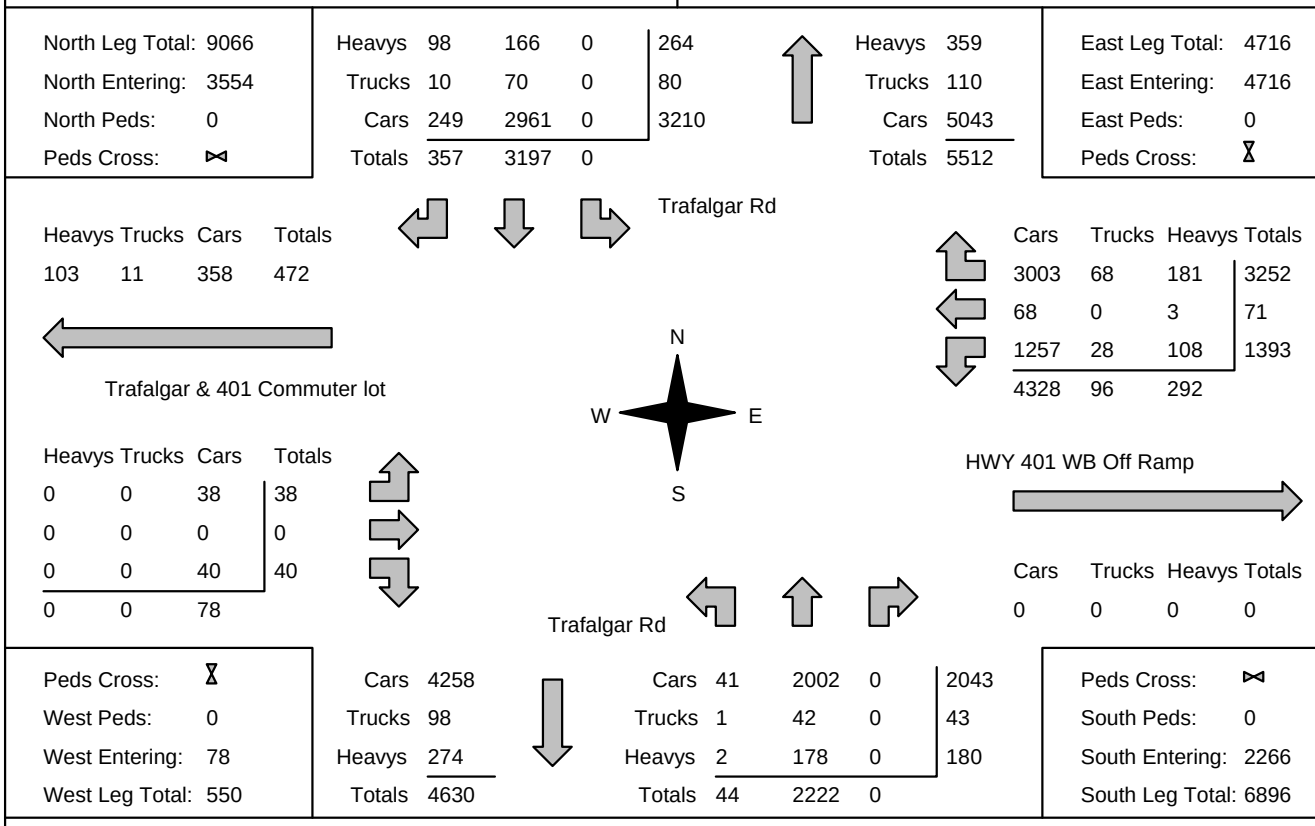
Municipality: Milton
Site #: 2508500001
Intersection: Trafalgar Rd & HWY 401 WB Off R
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Trafalgar Rd & HWY 401 WB Off | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*986*	*143*	*1129*	*0*	*1486*
9:00:00	*0*	*925*	*105*	*1030*	*0*	*1450*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*0*	*646*	*63*	*709*	*0*	*1440*
18:00:00	*0*	*640*	*46*	*686*	*0*	*1444*
Totals:	0	3197	357	3554	0	5820

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*6*	*351*	*0*	*357*	*0*
9:00:00	*26*	*394*	*0*	*420*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*6*	*725*	*0*	*731*	*0*
18:00:00	*6*	*752*	*0*	*758*	*0*
S Totals:	44	2222	0	2266	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*158*	*7*	*285*	*450*	*0*	*453*
9:00:00	*173*	*15*	*326*	*514*	*0*	*524*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*480*	*30*	*1303*	*1813*	*0*	*1850*
18:00:00	*582*	*19*	*1338*	*1939*	*0*	*1967*
Totals:	1393	71	3252	4716	0	4794

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*1*	*0*	*2*	*3*	*0*
9:00:00	*2*	*0*	*8*	*10*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*20*	*0*	*17*	*37*	*0*
18:00:00	*15*	*0*	*13*	*28*	*0*
W Totals:	38	0	40	78	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*166*	*190*	*0*	*530*	*616*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	190	190	25	25	0	0	5	5	2	2	0	0	15	15	14	14	0	0
7:30:00	0	0	422	232	51	26	0	0	14	9	3	1	0	0	25	10	25	11	0	0
7:45:00	0	0	690	268	75	24	0	0	23	9	4	1	0	0	33	8	34	9	0	0
8:00:00	0	0	919	229	97	22	0	0	29	6	5	1	0	0	38	5	41	7	0	0
8:15:00	0	0	1133	214	116	19	0	0	36	7	7	2	0	0	54	16	48	7	0	0
8:30:00	0	0	1370	237	136	20	0	0	39	3	7	0	0	0	69	15	53	5	0	0
8:45:00	0	0	1585	215	148	12	0	0	45	6	7	0	0	0	80	11	59	6	0	0
9:00:00	0	0	1764	179	165	17	0	0	50	5	7	0	0	0	97	17	76	17	0	0
9:15:00	0	0	1764	0	165	0	0	0	50	0	7	0	0	0	97	0	76	0	0	0
16:00:00	0	0	1764	0	165	0	0	0	50	0	7	0	0	0	97	0	76	0	0	0
16:15:00	0	0	1925	161	176	11	0	0	56	6	7	0	0	0	113	16	81	5	0	0
16:30:00	0	0	2071	146	195	19	0	0	59	3	8	1	0	0	123	10	83	2	0	0
16:45:00	0	0	2208	137	207	12	0	0	64	5	8	0	0	0	130	7	85	2	0	0
17:00:00	0	0	2354	146	216	9	0	0	66	2	9	1	0	0	137	7	86	1	0	0
17:15:00	0	0	2513	159	222	6	0	0	66	0	9	0	0	0	145	8	86	0	0	0
17:30:00	0	0	2695	182	230	8	0	0	69	3	9	0	0	0	157	12	91	5	0	0
17:45:00	0	0	2828	133	241	11	0	0	70	1	10	1	0	0	160	3	94	3	0	0
18:00:00	0	0	2961	133	249	8	0	0	70	0	10	0	0	0	166	6	98	4	0	0
18:15:00	0	0	2961	0	249	0	0	0	70	0	10	0	0	0	166	0	98	0	0	0
18:15:15	0	0	2961	0	249	0	0	0	70	0	10	0	0	0	166	0	98	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	29	29	2	2	66	66	1	1	0	0	7	7	4	4	0	0	10	10	0	0
7:30:00	63	34	3	1	116	50	4	3	0	0	11	4	8	4	0	0	21	11	0	0
7:45:00	91	28	4	1	166	50	6	2	0	0	14	3	17	9	0	0	31	10	0	0
8:00:00	125	34	7	3	229	63	8	2	0	0	18	4	25	8	0	0	38	7	0	0
8:15:00	161	36	8	1	284	55	10	2	0	0	20	2	31	6	0	0	48	10	0	0
8:30:00	192	31	9	1	349	65	12	2	0	0	22	2	38	7	0	0	57	9	0	0
8:45:00	228	36	14	5	415	66	15	3	0	0	23	1	41	3	0	0	66	9	0	0
9:00:00	263	35	21	7	513	98	18	3	0	0	26	3	50	9	1	1	72	6	0	0
9:15:00	263	0	21	0	513	0	18	0	0	0	26	0	50	0	1	0	72	0	0	0
16:00:00	263	0	21	0	513	0	18	0	0	0	26	0	50	0	1	0	72	0	0	0
16:15:00	364	101	25	4	829	316	20	2	0	0	35	9	62	12	1	0	89	17	0	0
16:30:00	479	115	33	8	1139	310	22	2	0	0	44	9	73	11	1	0	103	14	0	0
16:45:00	585	106	40	7	1433	294	23	1	0	0	50	6	79	6	2	1	114	11	0	0
17:00:00	702	117	50	10	1732	299	24	1	0	0	55	5	85	6	2	0	127	13	0	0
17:15:00	853	151	55	5	2090	358	27	3	0	0	58	3	93	8	2	0	140	13	0	0
17:30:00	990	137	61	6	2426	336	28	1	0	0	61	3	97	4	2	0	158	18	0	0
17:45:00	1125	135	67	6	2760	334	28	0	0	0	64	3	102	5	2	0	169	11	0	0
18:00:00	1257	132	68	1	3003	243	28	0	0	0	68	4	108	6	3	1	181	12	0	0
18:15:00	1257	0	68	0	3003	0	28	0	0	0	68	0	108	0	3	0	181	0	0	0
18:15:15	1257	0	68	0	3003	0	28	0	0	0	68	0	108	0	3	0	181	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	48	48	0	0	0	0	1	1	0	0	0	0	12	12	0	0	0	0
7:30:00	2	1	113	65	0	0	0	0	4	3	0	0	0	0	19	7	0	0	0	0
7:45:00	3	1	203	90	0	0	0	0	7	3	0	0	0	0	32	13	0	0	0	0
8:00:00	6	3	289	86	0	0	0	0	11	4	0	0	0	0	51	19	0	0	0	0
8:15:00	8	2	361	72	0	0	0	0	11	0	0	0	0	0	63	12	0	0	0	0
8:30:00	12	4	444	83	0	0	0	0	12	1	0	0	0	0	76	13	0	0	0	0
8:45:00	21	9	517	73	0	0	0	0	15	3	0	0	0	0	87	11	0	0	0	0
9:00:00	30	9	626	109	0	0	1	1	24	9	0	0	1	1	95	8	0	0	0	0
9:15:00	30	0	626	0	0	0	1	0	24	0	0	0	1	0	95	0	0	0	0	0
16:00:00	30	0	626	0	0	0	1	0	24	0	0	0	1	0	95	0	0	0	0	0
16:15:00	31	1	774	148	0	0	1	0	28	4	0	0	1	0	103	8	0	0	0	0
16:30:00	31	0	909	135	0	0	1	0	29	1	0	0	1	0	120	17	0	0	0	0
16:45:00	34	3	1089	180	0	0	1	0	34	5	0	0	1	0	133	13	0	0	0	0
17:00:00	36	2	1290	201	0	0	1	0	36	2	0	0	1	0	144	11	0	0	0	0
17:15:00	37	1	1462	172	0	0	1	0	39	3	0	0	1	0	155	11	0	0	0	0
17:30:00	38	1	1665	203	0	0	1	0	40	1	0	0	1	0	162	7	0	0	0	0
17:45:00	39	1	1832	167	0	0	1	0	41	1	0	0	1	0	174	12	0	0	0	0
18:00:00	41	2	2002	170	0	0	1	0	42	1	0	0	2	1	178	4	0	0	0	0
18:15:00	41	0	2002	0	0	0	1	0	42	0	0	0	2	0	178	0	0	0	0	0
18:15:15	41	0	2002	0	0	0	1	0	42	0	0	0	2	0	178	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	1	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	1	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	1	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	3	2	0	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	3	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	3	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	5	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	10	5	0	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	19	9	0	0	23	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	23	4	0	0	27	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	30	7	0	0	30	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	30	0	0	0	35	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	36	6	0	0	37	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	38	2	0	0	40	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	38	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:15	38	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Accu-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

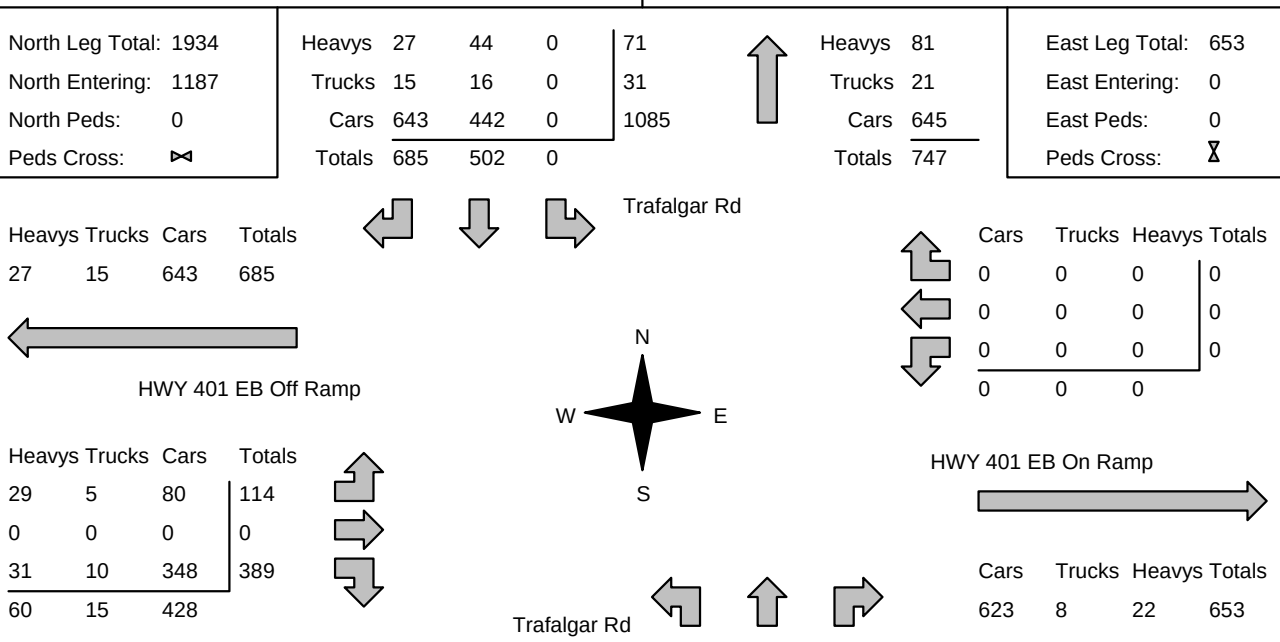
Municipality: Milton
Site #: 2508500002
Intersection: Trafalgar Rd & HWY 401 EB Off Ra
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Milton
Site #: 2508500002
Intersection: Trafalgar Rd & HWY 401 EB Off Ra
TFR File #: 1
Count date: 28-May-25

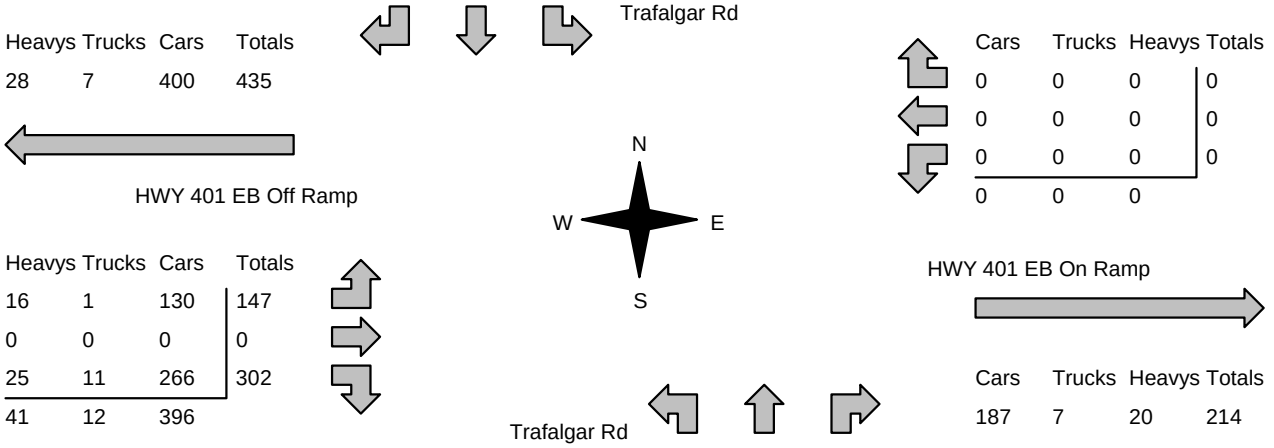
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S

North Leg Total:	2230			
North Entering:	1273			
North Peds:	0			
Peds Cross:	⋈			
Heavys	28	34	0	62
Trucks	7	8	0	15
Cars	400	796	0	1196
Totals	435	838	0	
Heavys	53			
Trucks	13			
Cars	891			
Totals	957			
East Leg Total:	214			
East Entering:	0			
East Peds:	0			
Peds Cross:	⧖			



Peds Cross:	⧖			
West Peds:	0			
West Entering:	449			
West Leg Total:	884			
Cars	1062			
Trucks	19			
Heavys	59			
Totals	1140			
Cars	0	761	187	948
Trucks	0	12	7	19
Heavys	0	37	20	57
Totals	0	810	214	
Peds Cross:	⋈			
South Peds:	0			
South Entering:	1024			
South Leg Total:	2164			

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

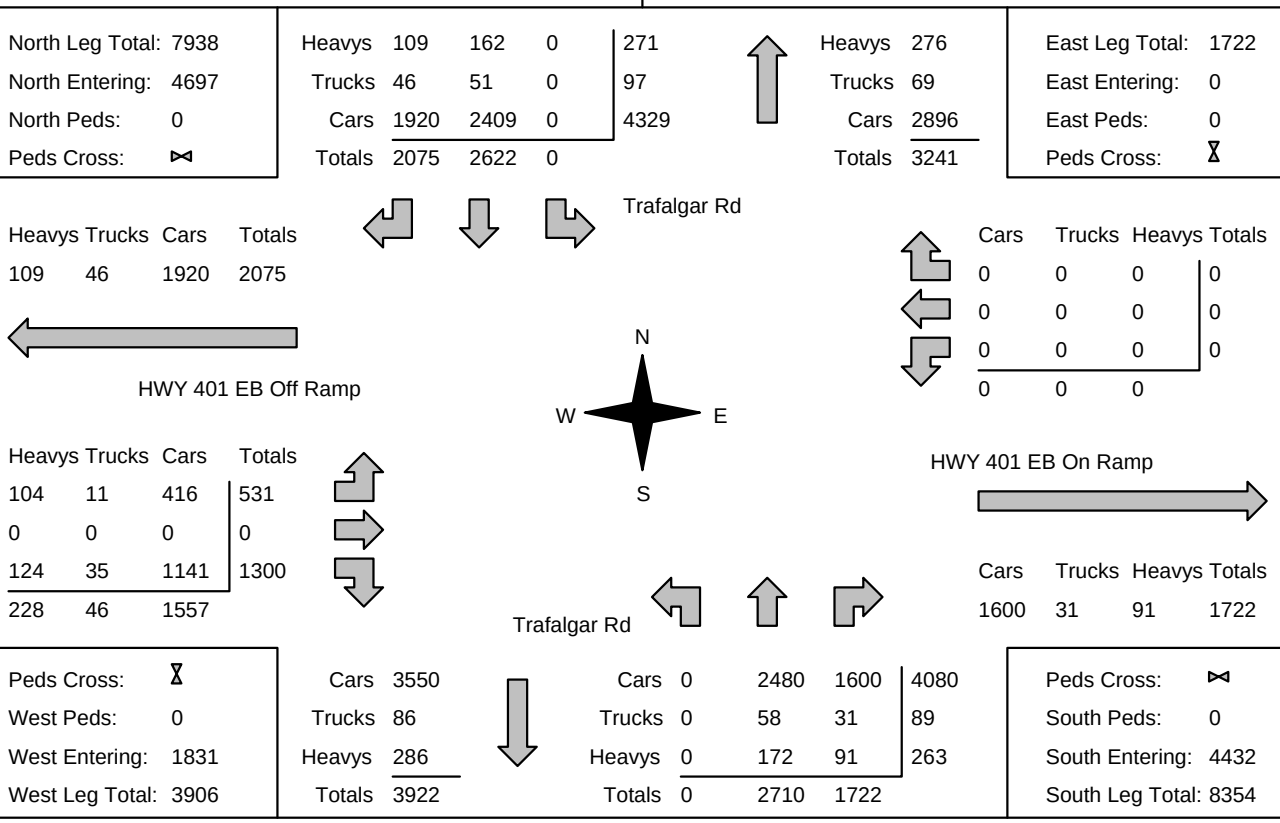
Municipality: Milton
Site #: 2508500002
Intersection: Trafalgar Rd & HWY 401 EB Off Ra
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Trafalgar Rd & HWY 401 EB Off R | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*481*	*659*	*1140*	*0*
9:00:00	*0*	*521*	*593*	*1114*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*0*	*737*	*428*	*1165*	*0*
18:00:00	*0*	*883*	*395*	*1278*	*0*
Totals:	0	2622	2075	4697	0

North/South Total Approaches: 9129

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*555*	*608*	*1163*	*0*
9:00:00	*0*	*607*	*669*	*1276*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*0*	*760*	*241*	*1001*	*0*
18:00:00	*0*	*788*	*204*	*992*	*0*
S Totals:	0	2710	1722	4432	0

East Approach Totals

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

East/West Total Approaches: 1831

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*109*	*0*	*381*	*490*	*0*
9:00:00	*107*	*0*	*356*	*463*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*168*	*0*	*250*	*418*	*0*
18:00:00	*147*	*0*	*313*	*460*	*0*
W Totals:	531	0	1300	1831	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*109*	*107*	*0*	*168*	*147*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	101	101	117	117	0	0	3	3	4	4	0	0	15	15	5	5	0	0
7:30:00	0	0	213	112	279	162	0	0	11	8	10	6	0	0	22	7	10	5	0	0
7:45:00	0	0	326	113	453	174	0	0	14	3	17	7	0	0	30	8	18	8	0	0
8:00:00	0	0	421	95	620	167	0	0	19	5	19	2	0	0	41	11	20	2	0	0
8:15:00	0	0	538	117	766	146	0	0	24	5	21	2	0	0	55	14	28	8	0	0
8:30:00	0	0	655	117	922	156	0	0	27	3	25	4	0	0	66	11	37	9	0	0
8:45:00	0	0	770	115	1062	140	0	0	30	3	31	6	0	0	72	6	44	7	0	0
9:00:00	0	0	882	112	1164	102	0	0	32	2	35	4	0	0	88	16	53	9	0	0
9:15:00	0	0	882	0	1164	0	0	0	32	0	35	0	0	0	88	0	53	0	0	0
16:00:00	0	0	882	0	1164	0	0	0	32	0	35	0	0	0	88	0	53	0	0	0
16:15:00	0	0	1038	156	1264	100	0	0	37	5	37	2	0	0	105	17	64	11	0	0
16:30:00	0	0	1212	174	1363	99	0	0	42	5	38	1	0	0	117	12	72	8	0	0
16:45:00	0	0	1376	164	1459	96	0	0	44	2	41	3	0	0	125	8	78	6	0	0
17:00:00	0	0	1561	185	1550	91	0	0	45	1	45	4	0	0	133	8	85	7	0	0
17:15:00	0	0	1772	211	1648	98	0	0	48	3	45	0	0	0	143	10	90	5	0	0
17:30:00	0	0	2008	236	1763	115	0	0	50	2	45	0	0	0	151	8	100	10	0	0
17:45:00	0	0	2187	179	1857	94	0	0	50	0	46	1	0	0	156	5	103	3	0	0
18:00:00	0	0	2409	222	1920	63	0	0	51	1	46	0	0	0	162	6	109	6	0	0
18:15:00	0	0	2409	0	1920	0	0	0	51	0	46	0	0	0	162	0	109	0	0	0
18:15:15	0	0	2409	0	1920	0	0	0	51	0	46	0	0	0	162	0	109	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500002

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

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	80	80	124	124	0	0	5	5	3	3	0	0	15	15	6	6	0	0
7:30:00	0	0	202	122	272	148	0	0	9	4	6	3	0	0	28	13	9	3	0	0
7:45:00	0	0	332	130	425	153	0	0	13	4	9	3	0	0	43	15	16	7	0	0
8:00:00	0	0	483	151	574	149	0	0	17	4	11	2	0	0	55	12	23	7	0	0
8:15:00	0	0	613	130	731	157	0	0	22	5	12	1	0	0	69	14	26	3	0	0
8:30:00	0	0	767	154	895	164	0	0	25	3	14	2	0	0	80	11	31	5	0	0
8:45:00	0	0	893	126	1068	173	0	0	29	4	15	1	0	0	92	12	35	4	0	0
9:00:00	0	0	1027	134	1220	152	0	0	37	8	16	1	0	0	98	6	41	6	0	0
9:15:00	0	0	1027	0	1220	0	0	0	37	0	16	0	0	0	98	0	41	0	0	0
16:00:00	0	0	1027	0	1220	0	0	0	37	0	16	0	0	0	98	0	41	0	0	0
16:15:00	0	0	1190	163	1271	51	0	0	42	5	19	3	0	0	109	11	50	9	0	0
16:30:00	0	0	1351	161	1318	47	0	0	44	2	21	2	0	0	121	12	62	12	0	0
16:45:00	0	0	1534	183	1366	48	0	0	50	6	25	4	0	0	134	13	70	8	0	0
17:00:00	0	0	1730	196	1417	51	0	0	52	2	26	1	0	0	140	6	75	5	0	0
17:15:00	0	0	1914	184	1464	47	0	0	55	3	26	0	0	0	149	9	79	4	0	0
17:30:00	0	0	2112	198	1505	41	0	0	56	1	28	2	0	0	158	9	82	3	0	0
17:45:00	0	0	2294	182	1555	50	0	0	57	1	30	2	0	0	167	9	88	6	0	0
18:00:00	0	0	2480	186	1600	45	0	0	58	1	31	1	0	0	172	5	91	3	0	0
18:15:00	0	0	2480	0	1600	0	0	0	58	0	31	0	0	0	172	0	91	0	0	0
18:15:15	0	0	2480	0	1600	0	0	0	58	0	31	0	0	0	172	0	91	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	18	18	0	0	68	68	0	0	0	0	2	2	5	5	0	0	11	11	0	0
7:30:00	42	24	0	0	166	98	0	0	0	0	4	2	9	4	0	0	18	7	0	0
7:45:00	64	22	0	0	248	82	2	2	0	0	7	3	13	4	0	0	28	10	0	0
8:00:00	80	16	0	0	338	90	4	2	0	0	8	1	25	12	0	0	35	7	0	0
8:15:00	100	20	0	0	432	94	4	0	0	0	11	3	30	5	0	0	44	9	0	0
8:30:00	122	22	0	0	514	82	5	1	0	0	14	3	38	8	0	0	49	5	0	0
8:45:00	137	15	0	0	591	77	7	2	0	0	15	1	46	8	0	0	54	5	0	0
9:00:00	155	18	0	0	656	65	8	1	0	0	17	2	53	7	0	0	64	10	0	0
9:15:00	155	0	0	0	656	0	8	0	0	0	17	0	53	0	0	0	64	0	0	0
16:00:00	155	0	0	0	656	0	8	0	0	0	17	0	53	0	0	0	64	0	0	0
16:15:00	183	28	0	0	701	45	10	2	0	0	19	2	59	6	0	0	75	11	0	0
16:30:00	219	36	0	0	751	50	10	0	0	0	22	3	74	15	0	0	80	5	0	0
16:45:00	263	44	0	0	813	62	11	1	0	0	25	3	77	3	0	0	86	6	0	0
17:00:00	291	28	0	0	867	54	11	0	0	0	28	3	82	5	0	0	92	6	0	0
17:15:00	318	27	0	0	939	72	11	0	0	0	32	4	87	5	0	0	100	8	0	0
17:30:00	349	31	0	0	1017	78	11	0	0	0	33	1	90	3	0	0	105	5	0	0
17:45:00	384	35	0	0	1081	64	11	0	0	0	34	1	99	9	0	0	116	11	0	0
18:00:00	416	32	0	0	1141	60	11	0	0	0	35	1	104	5	0	0	124	8	0	0
18:15:00	416	0	0	0	1141	0	11	0	0	0	35	0	104	0	0	0	124	0	0	0
18:15:15	416	0	0	0	1141	0	11	0	0	0	35	0	104	0	0	0	124	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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

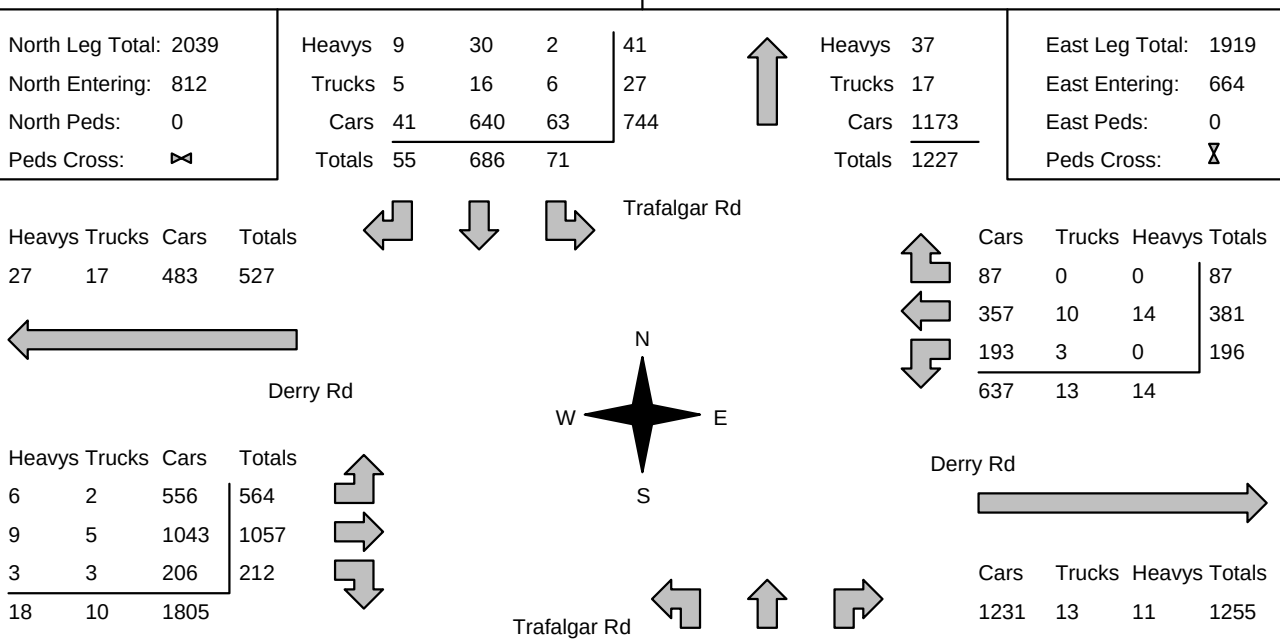
Municipality: Milton
Site #: 2508500003
Intersection: Derry Rd & Trafalgar Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

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

Municipality: Milton
Site #: 2508500003
Intersection: Derry Rd & Trafalgar Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E

North Leg Total:	1988
North Entering:	1084
North Peds:	0
Peds Cross:	⋈

Heavys	5	25	0	30
Trucks	1	11	1	13
Cars	395	573	73	1041
Totals	401	609	74	

Heavys	34
Trucks	12
Cars	858
Totals	904

East Leg Total:	2262
East Entering:	1531
East Peds:	0
Peds Cross:	⧖

Trafalgar Rd

Heavys	Trucks	Cars	Totals
14	7	1899	1920

Derry Rd

Cars	Trucks	Heavys	Totals
56	0	1	57
1261	4	5	1270
203	1	0	204
1520	5	6	

N
W E
S

Heavys	Trucks	Cars	Totals
4	2	119	125
5	7	536	548
3	2	131	136
12	11	786	

Derry Rd

Cars	Trucks	Heavys	Totals
716	10	5	731

Trafalgar Rd

Peds Cross:	⧖
West Peds:	0
West Entering:	809
West Leg Total:	2729

Cars	907
Trucks	14
Heavys	28
Totals	949

Cars	243	683	107	1033
Trucks	2	10	2	14
Heavys	4	29	0	33
Totals	249	722	109	

Peds Cross:	⋈
South Peds:	0
South Entering:	1080
South Leg Total:	2029

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

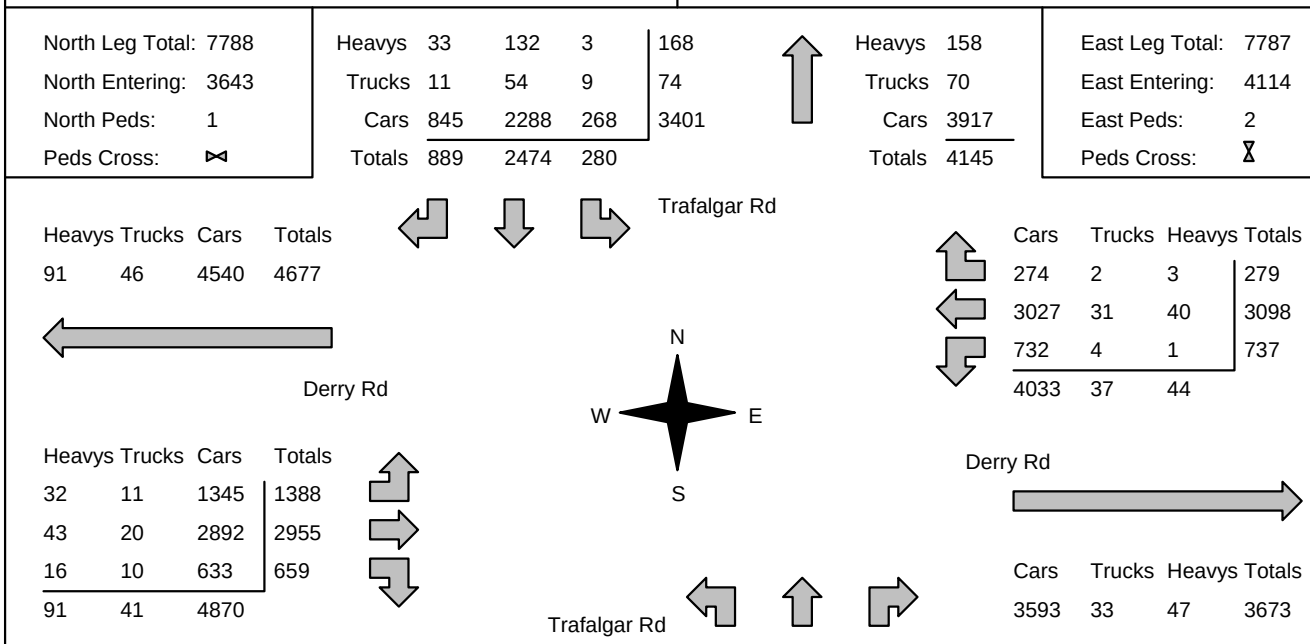
Municipality: Milton
Site #: 2508500003
Intersection: Derry Rd & Trafalgar Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Derry Rd & Trafalgar Rd | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*68*	*657*	*76*	*801*	*0*
9:00:00	*54*	*656*	*43*	*753*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*82*	*521*	*342*	*945*	*1*
18:00:00	*76*	*640*	*428*	*1144*	*0*
Totals:	280	2474	889	3643	1

North/South Total Approaches: 7249

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*81*	*516*	*85*	*682*	*0*
9:00:00	*107*	*556*	*133*	*796*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*262*	*680*	*102*	*1044*	*0*
18:00:00	*240*	*726*	*118*	*1084*	*0*
S Totals:	690	2478	438	3606	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*126*	*345*	*91*	*562*	*0*
9:00:00	*211*	*386*	*79*	*676*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*200*	*1182*	*53*	*1435*	*2*
18:00:00	*200*	*1185*	*56*	*1441*	*0*
Totals:	737	3098	279	4114	2

East/West Total Approaches: 9116

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*518*	*910*	*192*	*1620*	*0*
9:00:00	*573*	*1000*	*218*	*1791*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*163*	*516*	*118*	*797*	*0*
18:00:00	*134*	*529*	*131*	*794*	*0*
W Totals:	1388	2955	659	5002	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*806*	*817*	*0*	*1026*	*1042*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	13	13	130	130	16	16	0	0	4	4	0	0	1	1	16	16	1	1	0	0
7:30:00	21	8	277	147	32	16	0	0	8	4	0	0	1	0	27	11	6	5	0	0
7:45:00	40	19	432	155	47	15	2	2	10	2	1	1	1	0	35	8	8	2	0	0
8:00:00	62	22	598	166	63	16	4	2	18	8	2	1	2	1	41	6	11	3	0	0
8:15:00	72	10	756	158	71	8	4	0	22	4	2	0	3	1	53	12	13	2	0	0
8:30:00	86	14	919	163	79	8	6	2	25	3	5	3	3	0	59	6	16	3	0	0
8:45:00	103	17	1072	153	88	9	8	2	26	1	6	1	3	0	65	6	17	1	0	0
9:00:00	111	8	1207	135	95	7	8	0	28	2	6	0	3	0	78	13	18	1	0	0
9:15:00	111	0	1207	0	95	0	8	0	28	0	6	0	3	0	78	0	18	0	0	0
16:00:00	111	0	1207	0	95	0	8	0	28	0	6	0	3	0	78	0	18	0	0	0
16:15:00	131	20	1335	128	165	70	8	0	32	4	9	3	3	0	87	9	22	4	0	0
16:30:00	150	19	1450	115	248	83	8	0	37	5	10	1	3	0	97	10	23	1	1	1
16:45:00	171	21	1565	115	343	95	8	0	41	4	10	0	3	0	99	2	24	1	1	0
17:00:00	193	22	1684	119	426	83	8	0	45	4	10	0	3	0	105	6	25	1	1	0
17:15:00	211	18	1833	149	541	115	9	1	49	4	10	0	3	0	112	7	27	2	1	0
17:30:00	227	16	1991	158	652	111	9	0	51	2	11	1	3	0	118	6	28	1	1	0
17:45:00	244	17	2138	147	738	86	9	0	52	1	11	0	3	0	124	6	29	1	1	0
18:00:00	268	24	2288	150	845	107	9	0	54	2	11	0	3	0	132	8	33	4	1	0
18:15:00	268	0	2288	0	845	0	9	0	54	0	11	0	3	0	132	0	33	0	1	0
18:15:15	268	0	2288	0	845	0	9	0	54	0	11	0	3	0	132	0	33	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	37	37	68	68	22	22	0	0	1	1	0	0	1	1	4	4	0	0	0	0
7:30:00	55	18	140	72	41	19	0	0	2	1	0	0	1	0	6	2	1	1	0	0
7:45:00	95	40	247	107	66	25	0	0	4	2	1	1	1	0	8	2	1	0	0	0
8:00:00	125	30	325	78	89	23	0	0	8	4	1	0	1	0	12	4	1	0	0	0
8:15:00	170	45	420	95	115	26	1	1	9	1	1	0	1	0	16	4	1	0	0	0
8:30:00	234	64	512	92	137	22	2	1	11	2	1	0	1	0	19	3	1	0	0	0
8:45:00	288	54	604	92	153	16	3	1	14	3	1	0	1	0	22	3	1	0	0	0
9:00:00	333	45	688	84	168	15	3	0	18	4	1	0	1	0	25	3	1	0	0	0
9:15:00	333	0	688	0	168	0	3	0	18	0	1	0	1	0	25	0	1	0	0	0
16:00:00	333	0	688	0	168	0	3	0	18	0	1	0	1	0	25	0	1	0	0	0
16:15:00	375	42	937	249	177	9	3	0	22	4	2	1	1	0	28	3	1	0	0	0
16:30:00	425	50	1228	291	188	11	3	0	24	2	2	0	1	0	31	3	1	0	1	1
16:45:00	477	52	1504	276	201	13	3	0	27	3	2	0	1	0	33	2	1	0	2	1
17:00:00	532	55	1849	345	220	19	4	1	28	1	2	0	1	0	36	3	1	0	2	0
17:15:00	570	38	2148	299	231	11	4	0	29	1	2	0	1	0	36	0	1	0	2	0
17:30:00	622	52	2468	320	243	12	4	0	29	0	2	0	1	0	38	2	2	1	2	0
17:45:00	680	58	2765	297	257	14	4	0	31	2	2	0	1	0	38	0	2	0	2	0
18:00:00	732	52	3027	262	274	17	4	0	31	0	2	0	1	0	40	2	3	1	2	0
18:15:00	732	0	3027	0	274	0	4	0	31	0	2	0	1	0	40	0	3	0	2	0
18:15:15	732	0	3027	0	274	0	4	0	31	0	2	0	1	0	40	0	3	0	2	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	15	15	61	61	15	15	0	0	3	3	0	0	2	2	9	9	0	0	0	0
7:30:00	39	24	199	138	36	21	0	0	8	5	0	0	2	0	17	8	0	0	0	0
7:45:00	64	25	312	113	63	27	0	0	13	5	0	0	2	0	27	10	0	0	0	0
8:00:00	78	14	462	150	84	21	0	0	18	5	1	1	3	1	36	9	0	0	0	0
8:15:00	98	20	579	117	106	22	0	0	19	1	1	0	3	0	43	7	0	0	0	0
8:30:00	125	27	710	131	153	47	0	0	24	5	2	1	5	2	50	7	0	0	0	0
8:45:00	149	24	842	132	188	35	2	2	28	4	2	0	6	1	58	8	0	0	0	0
9:00:00	177	28	977	135	216	28	2	0	35	7	2	0	9	3	60	2	0	0	0	0
9:15:00	177	0	977	0	216	0	2	0	35	0	2	0	9	0	60	0	0	0	0	0
16:00:00	177	0	977	0	216	0	2	0	35	0	2	0	9	0	60	0	0	0	0	0
16:15:00	237	60	1129	152	239	23	2	0	38	3	2	0	12	3	70	10	0	0	0	0
16:30:00	299	62	1271	142	260	21	2	0	40	2	2	0	12	0	78	8	1	1	0	0
16:45:00	368	69	1438	167	287	27	2	0	45	5	2	0	13	1	91	13	1	0	0	0
17:00:00	435	67	1608	170	317	30	2	0	47	2	2	0	13	0	97	6	1	0	0	0
17:15:00	498	63	1782	174	342	25	4	2	49	2	3	1	14	1	105	8	1	0	0	0
17:30:00	557	59	1957	175	373	31	4	0	52	3	4	1	15	1	114	9	1	0	0	0
17:45:00	611	54	2121	164	394	21	4	0	55	3	4	0	17	2	120	6	1	0	0	0
18:00:00	668	57	2298	177	433	39	4	0	57	2	4	0	18	1	123	3	1	0	0	0
18:15:00	668	0	2298	0	433	0	4	0	57	0	4	0	18	0	123	0	1	0	0	0
18:15:15	668	0	2298	0	433	0	4	0	57	0	4	0	18	0	123	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	104	104	158	158	37	37	0	0	1	1	2	2	3	3	5	5	1	1	0	0
7:30:00	255	151	368	210	83	46	0	0	2	1	2	0	4	1	8	3	3	2	0	0
7:45:00	387	132	631	263	138	55	0	0	2	0	2	0	6	2	10	2	5	2	0	0
8:00:00	508	121	894	263	184	46	0	0	3	1	2	0	10	4	13	3	6	1	0	0
8:15:00	652	144	1168	274	238	54	0	0	4	1	3	1	10	0	17	4	7	1	0	0
8:30:00	784	132	1429	261	282	44	1	1	4	0	4	1	11	1	18	1	8	1	0	0
8:45:00	943	159	1674	245	344	62	2	1	7	3	5	1	12	1	19	1	8	0	0	0
9:00:00	1076	133	1881	207	393	49	2	0	8	1	7	2	13	1	21	2	10	2	0	0
9:15:00	1076	0	1881	0	393	0	2	0	8	0	7	0	13	0	21	0	10	0	0	0
16:00:00	1076	0	1881	0	393	0	2	0	8	0	7	0	13	0	21	0	10	0	0	0
16:15:00	1111	35	2017	136	411	18	5	3	12	4	7	0	18	5	23	2	10	0	0	0
16:30:00	1152	41	2136	119	431	20	7	2	13	1	7	0	23	5	32	9	12	2	0	0
16:45:00	1195	43	2245	109	465	34	9	2	13	0	8	1	25	2	35	3	13	1	0	0
17:00:00	1216	21	2374	129	504	39	10	1	15	2	9	1	28	3	37	2	15	2	0	0
17:15:00	1247	31	2505	131	535	31	10	0	18	3	9	0	28	0	38	1	15	0	0	0
17:30:00	1278	31	2658	153	570	35	11	1	20	2	9	0	29	1	39	1	16	1	0	0
17:45:00	1314	36	2781	123	596	26	11	0	20	0	10	1	29	0	40	1	16	0	0	0
18:00:00	1345	31	2892	111	633	37	11	0	20	0	10	0	32	3	43	3	16	0	0	0
18:15:00	1345	0	2892	0	633	0	11	0	20	0	10	0	32	0	43	0	16	0	0	0
18:15:15	1345	0	2892	0	633	0	11	0	20	0	10	0	32	0	43	0	16	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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: Milton
Site #: 2508500004
Intersection: Trafalgar Rd & Britannia Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S

North Leg Total:	1881			
North Entering:	1055			
North Peds:	0			
Peds Cross:	⋈			
Heavys	9	31	2	42
Trucks	2	14	2	18
Cars	54	913	28	995
Totals	65	958	32	
Heavys	27			
Trucks	16			
Cars	783			
Totals	826			
East Leg Total:	1186			
East Entering:	449			
East Peds:	0			
Peds Cross:	⧖			

Trafalgar Rd

Heavys	Trucks	Cars	Totals
30	7	402	439

Britannia Rd

Cars	Trucks	Heavys	Totals
62	0	0	62
239	2	7	248
138	0	1	139
439	2	8	

N
W E
S

Heavys	Trucks	Cars	Totals
3	2	114	119
7	7	536	550
12	1	268	281
22	10	918	

Britannia Rd

Cars	Trucks	Heavys	Totals
717	11	9	737

Trafalgar Rd

Peds Cross:	⧖			
West Peds:	0			
West Entering:	950			
West Leg Total:	1389			
Cars	1319			
Trucks	15			
Heavys	44			
Totals	1378			
Cars	109	607	153	869
Trucks	3	14	2	19
Heavys	14	24	0	38
Totals	126	645	155	
Peds Cross:	⋈			
South Peds:	0			
South Entering:	926			
South Leg Total:	2304			

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

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

Municipality: Milton
Site #: 2508500004
Intersection: Trafalgar Rd & Britannia Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S

North Leg Total: 2005
North Entering: 942
North Peds: 0
Peds Cross: ⋈

Heavys	5	19	2	26
Trucks	2	14	1	17
Cars	175	667	57	899
Totals	182	700	60	

Heavys	34
Trucks	14
Cars	1015
Totals	1063

East Leg Total: 1396
East Entering: 796
East Peds: 0
Peds Cross: ⧖

Trafalgar Rd

Heavys	Trucks	Cars	Totals
10	6	1100	1116

Britannia Rd

Cars	Trucks	Heavys	Totals
71	2	2	75
602	3	2	607
114	0	0	114
787	5	4	

N
W E
S

Heavys	Trucks	Cars	Totals
10	3	71	84
6	4	405	415
4	0	142	146
20	7	618	

Britannia Rd

Cars	Trucks	Heavys	Totals
585	7	8	600

Trafalgar Rd

Peds Cross: ⧖
West Peds: 0
West Entering: 645
West Leg Total: 1761

Cars	923
Trucks	14
Heavys	23
Totals	960

Cars	323	873	123	1319
Trucks	1	9	2	12
Heavys	3	22	0	25
Totals	327	904	125	

Peds Cross: ⋈
South Peds: 0
South Entering: 1356
South Leg Total: 2316

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

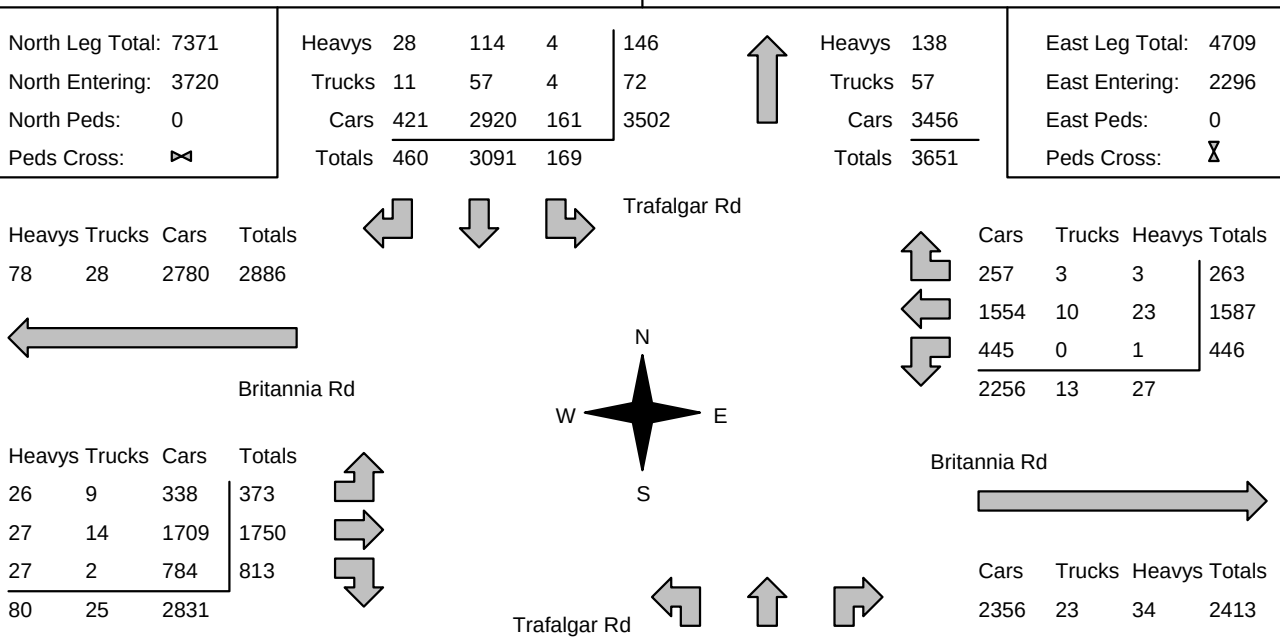
Municipality: Milton
Site #: 2508500004
Intersection: Trafalgar Rd & Britannia Rd
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Trafalgar Rd & Britannia Rd | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*34*	*831*	*50*	*915*	*0*	*1639*
9:00:00	*32*	*958*	*65*	*1055*	*0*	*1981*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*38*	*599*	*158*	*795*	*0*	*2116*
18:00:00	*65*	*703*	*187*	*955*	*0*	*2332*
Totals:	169	3091	460	3720	0	8068

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*97*	*560*	*67*	*724*	*0*
9:00:00	*126*	*645*	*155*	*926*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*305*	*887*	*129*	*1321*	*0*
18:00:00	*311*	*923*	*143*	*1377*	*0*
S Totals:	839	3015	494	4348	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*87*	*199*	*58*	*344*	*0*	*1105*
9:00:00	*139*	*248*	*62*	*449*	*0*	*1399*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*102*	*545*	*70*	*717*	*0*	*1330*
18:00:00	*118*	*595*	*73*	*786*	*0*	*1398*
Totals:	446	1587	263	2296	0	5232

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*86*	*397*	*278*	*761*	*0*
9:00:00	*119*	*550*	*281*	*950*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*93*	*385*	*135*	*613*	*0*
18:00:00	*75*	*418*	*119*	*612*	*0*
W Totals:	373	1750	813	2936	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*570*	*808*	*0*	*740*	*788*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	159	159	12	12	0	0	6	6	0	0	0	0	13	13	4	4	0	0
7:30:00	16	11	340	181	23	11	0	0	9	3	3	3	0	0	28	15	5	1	0	0
7:45:00	22	6	562	222	33	10	0	0	10	1	3	0	0	0	35	7	6	1	0	0
8:00:00	34	12	775	213	38	5	0	0	16	6	5	2	0	0	40	5	7	1	0	0
8:15:00	44	10	997	222	52	14	0	0	21	5	6	1	1	1	50	10	9	2	0	0
8:30:00	51	7	1221	224	65	13	1	1	23	2	7	1	1	0	57	7	10	1	0	0
8:45:00	55	4	1464	243	72	7	1	0	27	4	7	0	2	1	59	2	13	3	0	0
9:00:00	62	7	1688	224	92	20	2	1	30	3	7	0	2	0	71	12	16	3	0	0
9:15:00	62	0	1688	0	92	0	2	0	30	0	7	0	2	0	71	0	16	0	0	0
16:00:00	62	0	1688	0	92	0	2	0	30	0	7	0	2	0	71	0	16	0	0	0
16:15:00	68	6	1836	148	127	35	3	1	34	4	7	0	2	0	75	4	21	5	0	0
16:30:00	82	14	1971	135	173	46	3	0	38	4	8	1	2	0	86	11	23	2	0	0
16:45:00	88	6	2092	121	205	32	3	0	41	3	9	1	2	0	89	3	23	0	0	0
17:00:00	98	10	2250	158	239	34	3	0	47	6	10	1	3	1	91	2	24	1	0	0
17:15:00	115	17	2412	162	285	46	3	0	50	3	11	1	3	0	97	6	25	1	0	0
17:30:00	132	17	2592	180	332	47	4	1	53	3	11	0	3	0	104	7	27	2	0	0
17:45:00	145	13	2759	167	380	48	4	0	55	2	11	0	4	1	108	4	28	1	0	0
18:00:00	161	16	2920	161	421	41	4	0	57	2	11	0	4	0	114	6	28	0	0	0
18:15:00	161	0	2920	0	421	0	4	0	57	0	11	0	4	0	114	0	28	0	0	0
18:15:15	161	0	2920	0	421	0	4	0	57	0	11	0	4	0	114	0	28	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	17	17	37	37	10	10	0	0	1	1	0	0	0	0	6	6	0	0	0	0
7:30:00	36	19	84	47	25	15	0	0	1	0	0	0	0	0	6	0	0	0	0	0
7:45:00	61	25	136	52	41	16	0	0	2	1	1	1	0	0	6	0	0	0	0	0
8:00:00	87	26	188	52	57	16	0	0	4	2	1	0	0	0	7	1	0	0	0	0
8:15:00	122	35	246	58	73	16	0	0	4	0	1	0	0	0	9	2	0	0	0	0
8:30:00	155	33	300	54	86	13	0	0	4	0	1	0	0	0	12	3	0	0	0	0
8:45:00	195	40	362	62	98	12	0	0	6	2	1	0	1	1	13	1	0	0	0	0
9:00:00	225	30	427	65	119	21	0	0	6	0	1	0	1	0	14	1	0	0	0	0
9:15:00	225	0	427	0	119	0	0	0	6	0	1	0	1	0	14	0	0	0	0	0
16:00:00	225	0	427	0	119	0	0	0	6	0	1	0	1	0	14	0	0	0	0	0
16:15:00	248	23	551	124	135	16	0	0	6	0	1	0	1	0	16	2	1	1	0	0
16:30:00	270	22	662	111	152	17	0	0	6	0	1	0	1	0	19	3	1	0	0	0
16:45:00	300	30	808	146	168	16	0	0	7	1	1	0	1	0	21	2	1	0	0	0
17:00:00	327	27	962	154	184	16	0	0	8	1	3	2	1	0	22	1	3	2	0	0
17:15:00	358	31	1116	154	204	20	0	0	10	2	3	0	1	0	22	0	3	0	0	0
17:30:00	388	30	1269	153	226	22	0	0	10	0	3	0	1	0	23	1	3	0	0	0
17:45:00	414	26	1410	141	239	13	0	0	10	0	3	0	1	0	23	0	3	0	0	0
18:00:00	445	31	1554	144	257	18	0	0	10	0	3	0	1	0	23	0	3	0	0	0
18:15:00	445	0	1554	0	257	0	0	0	10	0	3	0	1	0	23	0	3	0	0	0
18:15:15	445	0	1554	0	257	0	0	0	10	0	3	0	1	0	23	0	3	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	14	14	88	88	9	9	0	0	3	3	0	0	1	1	8	8	0	0	0	0
7:30:00	37	23	250	162	24	15	0	0	6	3	0	0	4	3	16	8	0	0	0	0
7:45:00	59	22	378	128	41	17	2	2	10	4	1	1	7	3	22	6	0	0	0	0
8:00:00	87	28	515	137	66	25	3	1	14	4	1	0	7	0	31	9	0	0	0	0
8:15:00	108	21	666	151	105	39	3	0	15	1	1	0	9	2	37	6	0	0	0	0
8:30:00	136	28	830	164	147	42	5	2	19	4	1	0	13	4	46	9	0	0	0	0
8:45:00	157	21	977	147	179	32	5	0	22	3	2	1	18	5	49	3	0	0	0	0
9:00:00	196	39	1122	145	219	40	6	1	28	6	3	1	21	3	55	6	0	0	0	0
9:15:00	196	0	1122	0	219	0	6	0	28	0	3	0	21	0	55	0	0	0	0	0
16:00:00	196	0	1122	0	219	0	6	0	28	0	3	0	21	0	55	0	0	0	0	0
16:15:00	278	82	1314	192	252	33	6	0	29	1	3	0	22	1	65	10	0	0	0	0
16:30:00	335	57	1512	198	281	29	6	0	31	2	3	0	22	0	72	7	2	2	0	0
16:45:00	414	79	1750	238	317	36	6	0	34	3	3	0	24	2	84	12	3	1	0	0
17:00:00	498	84	1969	219	344	27	6	0	35	1	4	1	24	0	88	4	3	0	0	0
17:15:00	583	85	2187	218	375	31	7	1	37	2	4	0	26	2	94	6	3	0	0	0
17:30:00	660	77	2413	226	403	28	7	0	40	3	5	1	27	1	100	6	3	0	0	0
17:45:00	737	77	2623	210	440	37	7	0	43	3	5	0	27	0	106	6	3	0	0	0
18:00:00	805	68	2861	238	486	46	7	0	45	2	5	0	27	0	109	3	3	0	0	0
18:15:00	805	0	2861	0	486	0	7	0	45	0	5	0	27	0	109	0	3	0	0	0
18:15:15	805	0	2861	0	486	0	7	0	45	0	5	0	27	0	109	0	3	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500004

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	17	17	68	68	55	55	0	0	0	0	0	0	0	0	1	1	1	1	0	0
7:30:00	31	14	140	72	121	66	0	0	0	0	0	0	1	1	5	4	1	0	0	0
7:45:00	56	25	238	98	202	81	0	0	0	0	0	0	2	1	8	3	1	0	0	0
8:00:00	81	25	387	149	272	70	0	0	0	0	0	0	5	3	10	2	6	5	0	0
8:15:00	105	24	530	143	342	70	0	0	0	0	0	0	6	1	13	3	9	3	0	0
8:30:00	139	34	668	138	404	62	2	2	2	2	0	0	6	0	14	1	12	3	0	0
8:45:00	167	28	802	134	481	77	2	0	3	1	1	1	8	2	15	1	13	1	0	0
9:00:00	195	28	923	121	540	59	2	0	7	4	1	0	8	0	17	2	18	5	0	0
9:15:00	195	0	923	0	540	0	2	0	7	0	1	0	8	0	17	0	18	0	0	0
16:00:00	195	0	923	0	540	0	2	0	7	0	1	0	8	0	17	0	18	0	0	0
16:15:00	210	15	1002	79	570	30	4	2	7	0	1	0	10	2	18	1	20	2	0	0
16:30:00	227	17	1088	86	604	34	4	0	8	1	1	0	12	2	20	2	22	2	0	0
16:45:00	253	26	1180	92	631	27	6	2	10	2	1	0	15	3	20	0	23	1	0	0
17:00:00	275	22	1299	119	670	39	6	0	10	0	1	0	17	2	23	3	23	0	0	0
17:15:00	288	13	1386	87	704	34	6	0	13	3	1	0	20	3	23	0	27	4	0	0
17:30:00	305	17	1501	115	732	28	9	3	14	1	1	0	25	5	25	2	27	0	0	0
17:45:00	324	19	1585	84	773	41	9	0	14	0	1	0	25	0	26	1	27	0	0	0
18:00:00	338	14	1709	124	784	11	9	0	14	0	2	1	26	1	27	1	27	0	0	0
18:15:00	338	0	1709	0	784	0	9	0	14	0	2	0	26	0	27	0	27	0	0	0
18:15:15	338	0	1709	0	784	0	9	0	14	0	2	0	26	0	27	0	27	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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: Milton
Site #: 2508500005
Intersection: Trafalgar Rd & Lower Base Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

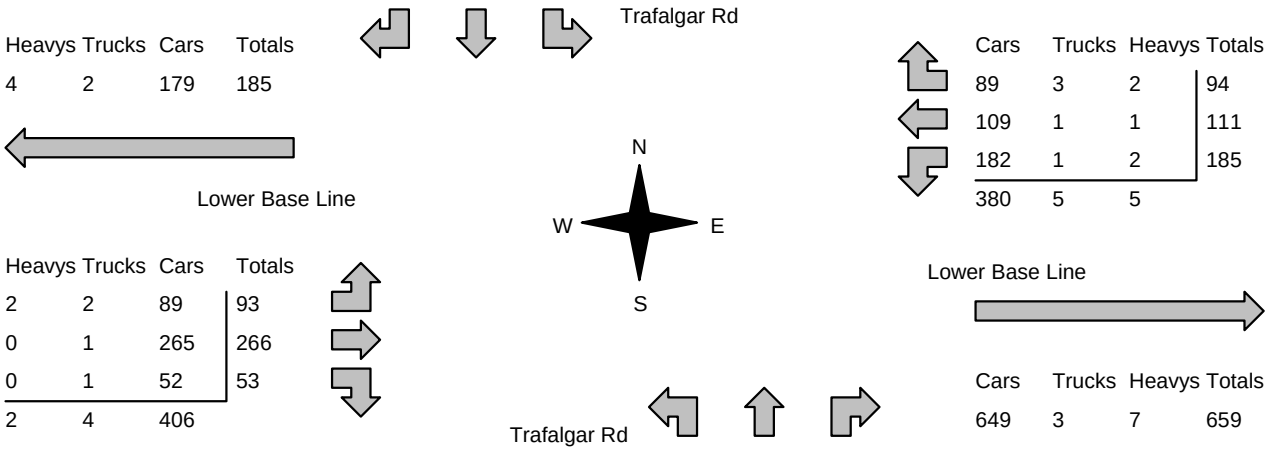
Major Road: Trafalgar Rd runs N/S

North Leg Total: 2367
North Entering: 1415
North Peds: 0
Peds Cross: ⋈

Heavys	1	33	4	38
Trucks	1	15	1	17
Cars	43	1067	250	1360
Totals	45	1115	255	

Heavys	40
Trucks	18
Cars	894
Totals	952

East Leg Total: 1049
East Entering: 390
East Peds: 0
Peds Cross: ⧗



Peds Cross: ⧗
West Peds: 0
West Entering: 412
West Leg Total: 597

Cars	1301			
Trucks	17			
Heavys	35			
Totals	1353			

Cars	27	716	134	877
Trucks	0	13	1	14
Heavys	2	36	3	41
Totals	29	765	138	

Peds Cross: ⋈
South Peds: 1
South Entering: 932
South Leg Total: 2285

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

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

Municipality: Milton
Site #: 2508500005
Intersection: Trafalgar Rd & Lower Base Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

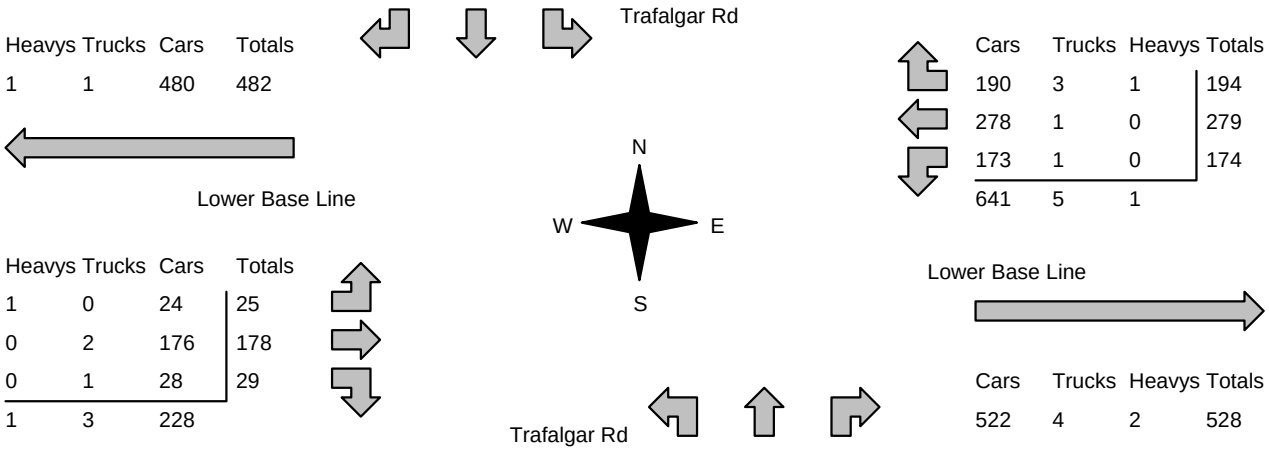
Major Road: Trafalgar Rd runs N/S

North Leg Total: 2377
North Entering: 991
North Peds: 0
Peds Cross: ⋈

Heavys	1	22	2	25
Trucks	0	13	0	13
Cars	38	774	141	953
Totals	39	809	143	

Heavys	24
Trucks	14
Cars	1348
Totals	1386

East Leg Total: 1175
East Entering: 647
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 232
West Leg Total: 714

Cars	975			
Trucks	15			
Heavys	22			
Totals	1012			

Cars	164	1134	205	1503
Trucks	0	11	2	13
Heavys	0	22	0	22
Totals	164	1167	207	

Peds Cross: ⋈
South Peds: 0
South Entering: 1538
South Leg Total: 2550

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

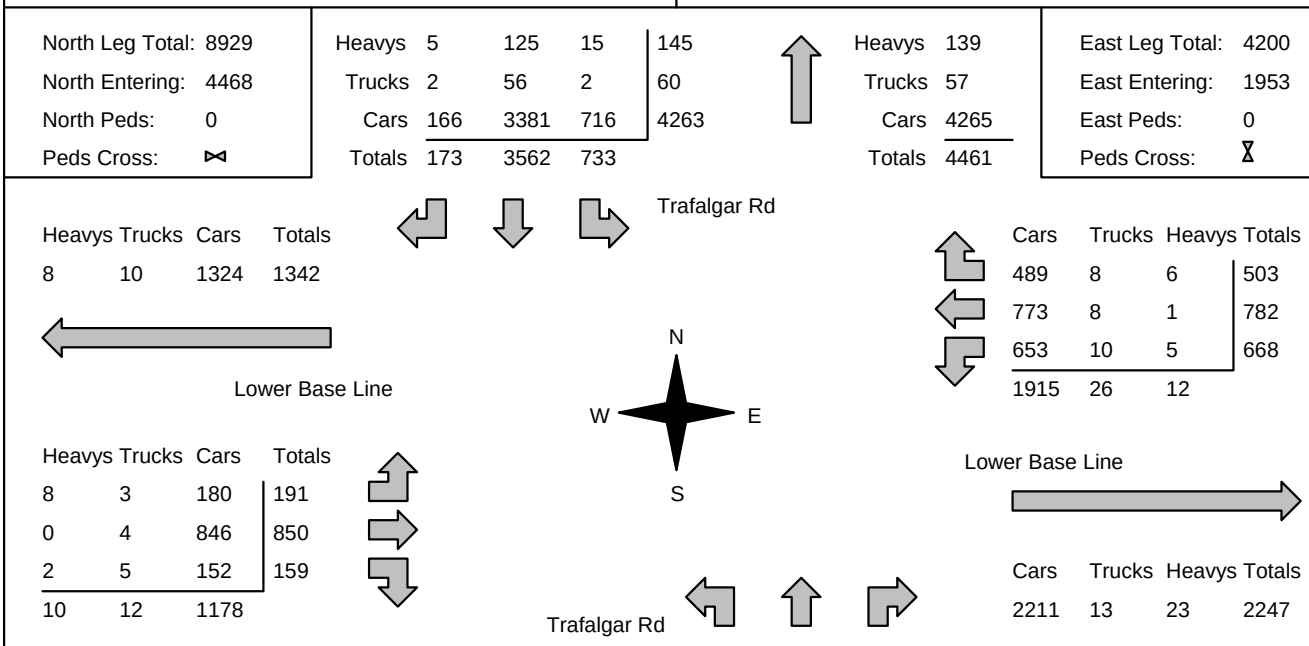
Municipality: Milton
Site #: 2508500005
Intersection: Trafalgar Rd & Lower Base Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Trafalgar Rd & Lower Base Line | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*212*	*935*	*44*	*1191*	*0*
9:00:00	*255*	*1115*	*45*	*1415*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*126*	*709*	*41*	*876*	*0*
18:00:00	*140*	*803*	*43*	*986*	*0*
Totals:	733	3562	173	4468	0

North/South Total Approaches: *9286*

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*26*	*642*	*132*	*800*	*0*
9:00:00	*29*	*765*	*138*	*932*	*1*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*178*	*1160*	*169*	*1507*	*0*
18:00:00	*154*	*1200*	*225*	*1579*	*0*
S Totals:	387	3767	664	4818	1

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*118*	*112*	*71*	*301*	*0*
9:00:00	*185*	*111*	*94*	*390*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*202*	*299*	*167*	*668*	*0*
18:00:00	*163*	*260*	*171*	*594*	*0*
Totals:	668	782	503	1953	0

East/West Total Approaches: *3153*

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*42*	*204*	*53*	*299*	*0*
9:00:00	*93*	*266*	*53*	*412*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*25*	*215*	*30*	*270*	*0*
18:00:00	*31*	*165*	*23*	*219*	*0*
W Totals:	191	850	159	1200	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*364*	*545*	*0*	*526*	*454*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500005

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	40	40	196	196	10	10	0	0	4	4	1	1	2	2	11	11	0	0	0	0
7:30:00	82	42	392	196	19	9	0	0	10	6	1	0	3	1	27	16	1	1	0	0
7:45:00	152	70	628	236	30	11	0	0	11	1	1	0	4	1	30	3	1	0	0	0
8:00:00	206	54	880	252	42	12	0	0	15	4	1	0	6	2	40	10	1	0	0	0
8:15:00	268	62	1125	245	57	15	0	0	20	5	1	0	7	1	50	10	1	0	0	0
8:30:00	332	64	1397	272	67	10	1	1	21	1	1	0	9	2	59	9	2	1	0	0
8:45:00	393	61	1681	284	79	12	1	0	26	5	2	1	9	0	63	4	2	0	0	0
9:00:00	456	63	1947	266	85	6	1	0	30	4	2	0	10	1	73	10	2	0	0	0
9:15:00	456	0	1947	0	85	0	1	0	30	0	2	0	10	0	73	0	2	0	0	0
16:00:00	456	0	1947	0	85	0	1	0	30	0	2	0	10	0	73	0	2	0	0	0
16:15:00	483	27	2115	168	95	10	2	1	33	3	2	0	11	1	82	9	3	1	0	0
16:30:00	511	28	2267	152	104	9	2	0	37	4	2	0	13	2	94	12	4	1	0	0
16:45:00	547	36	2443	176	118	14	2	0	40	3	2	0	13	0	97	3	4	0	0	0
17:00:00	578	31	2614	171	124	6	2	0	45	5	2	0	13	0	100	3	4	0	0	0
17:15:00	620	42	2787	173	135	11	2	0	48	3	2	0	13	0	108	8	4	0	0	0
17:30:00	659	39	2982	195	140	5	2	0	50	2	2	0	15	2	113	5	4	0	0	0
17:45:00	688	29	3217	235	156	16	2	0	53	3	2	0	15	0	119	6	5	1	0	0
18:00:00	716	28	3381	164	166	10	2	0	56	3	2	0	15	0	125	6	5	0	0	0
18:15:00	716	0	3381	0	166	0	2	0	56	0	2	0	15	0	125	0	5	0	0	0
18:15:15	716	0	3381	0	166	0	2	0	56	0	2	0	15	0	125	0	5	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500005

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	17	17	26	26	10	10	2	2	2	2	1	1	0	0	0	0	2	2	0	0
7:30:00	42	25	52	26	28	18	4	2	3	1	1	0	2	2	0	0	2	0	0	0
7:45:00	77	35	85	33	49	21	5	1	5	2	2	1	3	1	0	0	2	0	0	0
8:00:00	109	32	106	21	67	18	6	1	6	1	2	0	3	0	0	0	2	0	0	0
8:15:00	149	40	142	36	89	22	6	0	6	0	2	0	3	0	0	0	2	0	0	0
8:30:00	191	42	169	27	110	21	6	0	6	0	3	1	5	2	1	1	3	1	0	0
8:45:00	250	59	199	30	138	28	6	0	7	1	4	1	5	0	1	0	4	1	0	0
9:00:00	291	41	215	16	156	18	7	1	7	0	5	1	5	0	1	0	4	0	0	0
9:15:00	291	0	215	0	156	0	7	0	7	0	5	0	5	0	1	0	4	0	0	0
16:00:00	291	0	215	0	156	0	7	0	7	0	5	0	5	0	1	0	4	0	0	0
16:15:00	347	56	283	68	187	31	7	0	7	0	5	0	5	0	1	0	4	0	0	0
16:30:00	391	44	357	74	226	39	8	1	7	0	5	0	5	0	1	0	4	0	0	0
16:45:00	439	48	426	69	268	42	9	1	7	0	5	0	5	0	1	0	5	1	0	0
17:00:00	490	51	513	87	321	53	10	1	8	1	6	1	5	0	1	0	5	0	0	0
17:15:00	539	49	590	77	378	57	10	0	8	0	8	2	5	0	1	0	6	1	0	0
17:30:00	583	44	650	60	420	42	10	0	8	0	8	0	5	0	1	0	6	0	0	0
17:45:00	612	29	704	54	458	38	10	0	8	0	8	0	5	0	1	0	6	0	0	0
18:00:00	653	41	773	69	489	31	10	0	8	0	8	0	5	0	1	0	6	0	0	0
18:15:00	653	0	773	0	489	0	10	0	8	0	8	0	5	0	1	0	6	0	0	0
18:15:15	653	0	773	0	489	0	10	0	8	0	8	0	5	0	1	0	6	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500005

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	111	111	24	24	0	0	4	4	0	0	0	0	7	7	0	0	0	0
7:30:00	5	4	277	166	38	14	0	0	5	1	1	1	0	0	15	8	0	0	0	0
7:45:00	18	13	439	162	79	41	0	0	11	6	2	1	0	0	25	10	0	0	0	0
8:00:00	26	8	594	155	130	51	0	0	14	3	2	0	0	0	34	9	0	0	0	0
8:15:00	30	4	790	196	163	33	0	0	16	2	2	0	1	1	42	8	0	0	0	0
8:30:00	37	7	962	172	193	30	0	0	20	4	2	0	1	0	55	13	2	2	0	0
8:45:00	48	11	1124	162	234	41	0	0	23	3	2	0	2	1	64	9	3	1	0	0
9:00:00	53	5	1310	186	264	30	0	0	27	4	3	1	2	0	70	6	3	0	1	1
9:15:00	53	0	1310	0	264	0	0	0	27	0	3	0	2	0	70	0	3	0	1	0
16:00:00	53	0	1310	0	264	0	0	0	27	0	3	0	2	0	70	0	3	0	1	0
16:15:00	95	42	1565	255	305	41	0	0	29	2	4	1	2	0	79	9	5	2	1	0
16:30:00	130	35	1852	287	350	45	0	0	31	2	5	1	2	0	89	10	8	3	1	0
16:45:00	179	49	2151	299	384	34	0	0	33	2	5	0	2	0	100	11	8	0	1	0
17:00:00	231	52	2429	278	426	42	0	0	36	3	5	0	2	0	102	2	8	0	1	0
17:15:00	270	39	2697	268	472	46	0	0	37	1	5	0	2	0	109	7	8	0	1	0
17:30:00	304	34	2957	260	534	62	0	0	41	4	6	1	2	0	117	8	8	0	1	0
17:45:00	343	39	3285	328	589	55	0	0	44	3	7	1	2	0	122	5	8	0	1	0
18:00:00	385	42	3596	311	649	60	0	0	46	2	7	0	2	0	125	3	8	0	1	0
18:15:00	385	0	3596	0	649	0	0	0	46	0	7	0	2	0	125	0	8	0	1	0
18:15:15	385	0	3596	0	649	0	0	0	46	0	7	0	2	0	125	0	8	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500005

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	28	28	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	14	13	79	51	9	5	0	0	0	0	0	0	2	2	0	0	0	0	0	0
7:45:00	28	14	138	59	30	21	1	1	0	0	1	1	2	0	0	0	1	1	0	0
8:00:00	39	11	204	66	48	18	1	0	0	0	3	2	2	0	0	0	2	1	0	0
8:15:00	59	20	260	56	73	25	1	0	1	1	3	0	2	0	0	0	2	0	0	0
8:30:00	84	25	346	86	85	12	1	0	1	0	3	0	3	1	0	0	2	0	0	0
8:45:00	108	24	417	71	92	7	1	0	1	0	3	0	4	1	0	0	2	0	0	0
9:00:00	128	20	469	52	100	8	3	2	1	0	4	1	4	0	0	0	2	0	0	0
9:15:00	128	0	469	0	100	0	3	0	1	0	4	0	4	0	0	0	2	0	0	0
16:00:00	128	0	469	0	100	0	3	0	1	0	4	0	4	0	0	0	2	0	0	0
16:15:00	130	2	508	39	110	10	3	0	1	0	4	0	4	0	0	0	2	0	0	0
16:30:00	134	4	566	58	113	3	3	0	2	1	4	0	5	1	0	0	2	0	0	0
16:45:00	142	8	626	60	120	7	3	0	2	0	4	0	7	2	0	0	2	0	0	0
17:00:00	149	7	683	57	130	10	3	0	2	0	4	0	8	1	0	0	2	0	0	0
17:15:00	157	8	724	41	136	6	3	0	3	1	4	0	8	0	0	0	2	0	0	0
17:30:00	162	5	761	37	140	4	3	0	3	0	4	0	8	0	0	0	2	0	0	0
17:45:00	166	4	802	41	148	8	3	0	4	1	5	1	8	0	0	0	2	0	0	0
18:00:00	180	14	846	44	152	4	3	0	4	0	5	0	8	0	0	0	2	0	0	0
18:15:00	180	0	846	0	152	0	3	0	4	0	5	0	8	0	0	0	2	0	0	0
18:15:15	180	0	846	0	152	0	3	0	4	0	5	0	8	0	0	0	2	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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

Municipality: Milton
Site #: 2508500006
Intersection: Derry Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E

North Leg Total:	26
North Entering:	9
North Peds:	0
Peds Cross:	⋈

Heavys	0	0	1	1
Trucks	1	0	0	1
Cars	6	0	1	7
Totals	7	0	2	

Heavys	2
Trucks	3
Cars	12
Totals	17

East Leg Total:	1956
East Entering:	728
East Peds:	1
Peds Cross:	⧖

Eighth Line

Heavys	Trucks	Cars	Totals
14	14	655	683

Derry Rd

Cars	Trucks	Heavys	Totals
5	0	0	5
634	13	14	661
62	0	0	62
701	13	14	

N
W E
S

Heavys	Trucks	Cars	Totals
2	3	7	12
8	10	1168	1186
1	0	61	62
11	13	1236	

Derry Rd

Cars	Trucks	Heavys	Totals
1207	11	10	1228

Eighth Line

Peds Cross:	⧖
West Peds:	0
West Entering:	1260
West Leg Total:	1943

Cars	123			
Trucks	0			
Heavys	1			
Totals	124			

Cars	15	0	38	53
Trucks	0	0	1	1
Heavys	0	0	1	1
Totals	15	0	40	

Peds Cross:	⋈
South Peds:	0
South Entering:	55
South Leg Total:	179

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

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

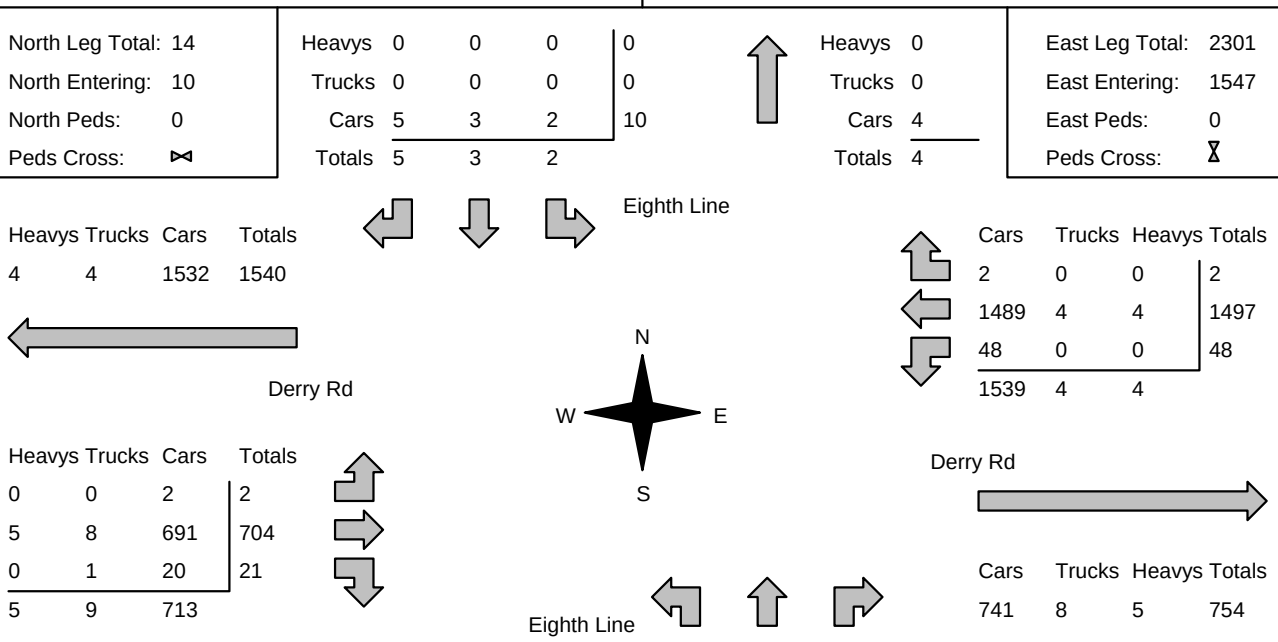
Municipality: Milton
Site #: 2508500006
Intersection: Derry Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

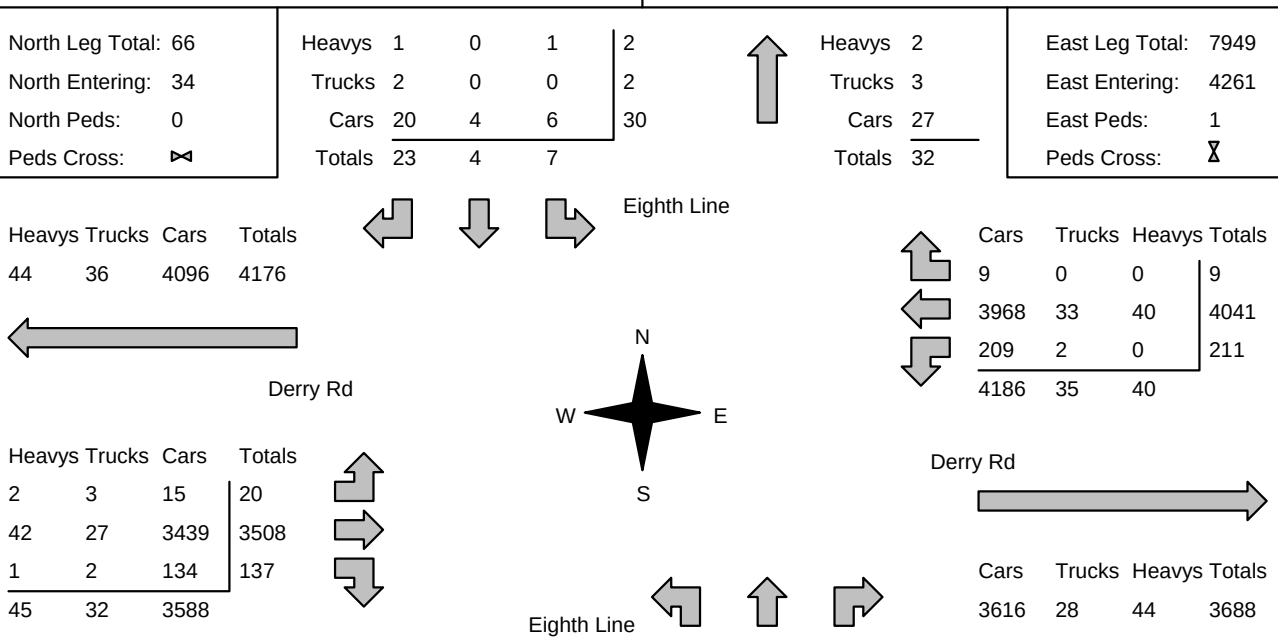
Municipality: Milton
Site #: 2508500006
Intersection: Derry Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Derry Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Derry Rd & Eighth Line | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*2*	*0*	*11*	*13*	*0*
9:00:00	*3*	*0*	*5*	*8*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*0*	*2*	*2*	*4*	*0*
18:00:00	*2*	*2*	*5*	*9*	*0*
Totals:	7	4	23	34	0

North/South Total Approaches: 322

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*13*	*0*	*27*	*40*	*0*
9:00:00	*19*	*1*	*43*	*63*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*41*	*2*	*56*	*99*	*0*
18:00:00	*39*	*0*	*47*	*86*	*0*
S Totals:	112	3	173	288	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*57*	*550*	*2*	*609*	*0*
9:00:00	*59*	*639*	*5*	*703*	*1*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*52*	*1397*	*0*	*1449*	*0*
18:00:00	*43*	*1455*	*2*	*1500*	*0*
Totals:	211	4041	9	4261	1

East/West Total Approaches: 7926

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*6*	*1009*	*53*	*1068*	*0*
9:00:00	*9*	*1125*	*41*	*1175*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*3*	*667*	*21*	*691*	*0*
18:00:00	*2*	*707*	*22*	*731*	*0*
W Totals:	20	3508	137	3665	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*15*	*24*	*0*	*43*	*43*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500006

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	4	4	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:30:00	2	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:45:00	2	0	0	0	7	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0
8:00:00	2	0	0	0	8	1	0	0	0	0	2	1	0	0	0	0	1	0	0	0
8:15:00	2	0	0	0	10	2	0	0	0	0	2	0	1	1	0	0	1	0	0	0
8:30:00	2	0	0	0	11	1	0	0	0	0	2	0	1	0	0	0	1	0	0	0
8:45:00	3	1	0	0	13	2	0	0	0	0	2	0	1	0	0	0	1	0	0	0
9:00:00	4	1	0	0	13	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
9:15:00	4	0	0	0	13	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
16:00:00	4	0	0	0	13	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
16:15:00	4	0	1	1	15	2	0	0	0	0	2	0	1	0	0	0	1	0	0	0
16:30:00	4	0	1	0	15	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
16:45:00	4	0	1	0	15	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
17:00:00	4	0	2	1	15	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
17:15:00	5	1	4	2	17	2	0	0	0	0	2	0	1	0	0	0	1	0	0	0
17:30:00	5	0	4	0	17	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
17:45:00	6	1	4	0	20	3	0	0	0	0	2	0	1	0	0	0	1	0	0	0
18:00:00	6	0	4	0	20	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
18:15:00	6	0	4	0	20	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0
18:15:15	6	0	4	0	20	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500006

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	11	11	110	110	0	0	1	1	1	1	0	0	0	0	4	4	0	0	0	0
7:30:00	25	14	237	127	0	0	1	0	2	1	0	0	0	0	7	3	0	0	0	0
7:45:00	40	15	383	146	1	1	2	1	3	1	0	0	0	0	9	2	0	0	0	0
8:00:00	55	15	529	146	2	1	2	0	8	5	0	0	0	0	13	4	0	0	0	0
8:15:00	68	13	690	161	4	2	2	0	9	1	0	0	0	0	17	4	0	0	0	0
8:30:00	81	13	851	161	6	2	2	0	12	3	0	0	0	0	20	3	0	0	1	1
8:45:00	102	21	1017	166	6	0	2	0	16	4	0	0	0	0	23	3	0	0	1	0
9:00:00	114	12	1144	127	7	1	2	0	20	4	0	0	0	0	25	2	0	0	1	0
9:15:00	114	0	1144	0	7	0	2	0	20	0	0	0	0	0	25	0	0	0	1	0
16:00:00	114	0	1144	0	7	0	2	0	20	0	0	0	0	0	25	0	0	0	1	0
16:15:00	125	11	1433	289	7	0	2	0	24	4	0	0	0	0	29	4	0	0	1	0
16:30:00	139	14	1787	354	7	0	2	0	26	2	0	0	0	0	30	1	0	0	1	0
16:45:00	148	9	2157	370	7	0	2	0	29	3	0	0	0	0	33	3	0	0	1	0
17:00:00	166	18	2521	364	7	0	2	0	31	2	0	0	0	0	34	1	0	0	1	0
17:15:00	180	14	2876	355	7	0	2	0	31	0	0	0	0	0	36	2	0	0	1	0
17:30:00	187	7	3263	387	7	0	2	0	32	1	0	0	0	0	37	1	0	0	1	0
17:45:00	196	9	3646	383	9	2	2	0	33	1	0	0	0	0	37	0	0	0	1	0
18:00:00	209	13	3968	322	9	0	2	0	33	0	0	0	0	0	40	3	0	0	1	0
18:15:00	209	0	3968	0	9	0	2	0	33	0	0	0	0	0	40	0	0	0	1	0
18:15:15	209	0	3968	0	9	0	2	0	33	0	0	0	0	0	40	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500006

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	6	2	0	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	11	5	0	0	18	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	13	2	0	0	27	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	15	2	0	0	34	7	0	0	0	0	0	0	0	0	0	0	1	1	0	0
8:30:00	17	2	0	0	43	9	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:45:00	26	9	0	0	56	13	0	0	0	0	1	1	0	0	0	0	1	0	0	0
9:00:00	30	4	1	1	68	12	1	1	0	0	1	0	1	1	0	0	1	0	0	0
9:15:00	30	0	1	0	68	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0
16:00:00	30	0	1	0	68	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0
16:15:00	39	9	3	2	79	11	1	0	0	0	1	0	1	0	0	0	1	0	0	0
16:30:00	45	6	3	0	94	15	1	0	0	0	1	0	3	2	0	0	1	0	0	0
16:45:00	61	16	3	0	105	11	1	0	0	0	1	0	3	0	0	0	1	0	0	0
17:00:00	69	8	3	0	124	19	1	0	0	0	1	0	3	0	0	0	1	0	0	0
17:15:00	80	11	3	0	133	9	1	0	0	0	1	0	3	0	0	0	1	0	0	0
17:30:00	89	9	3	0	141	8	1	0	0	0	1	0	3	0	0	0	1	0	0	0
17:45:00	99	10	3	0	153	12	1	0	0	0	1	0	3	0	0	0	1	0	0	0
18:00:00	108	9	3	0	171	18	1	0	0	0	1	0	3	0	0	0	1	0	0	0
18:15:00	108	0	3	0	171	0	1	0	0	0	1	0	3	0	0	0	1	0	0	0
18:15:15	108	0	3	0	171	0	1	0	0	0	1	0	3	0	0	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500006

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	201	201	3	3	0	0	1	1	1	1	0	0	4	4	0	0	0	0
7:30:00	2	1	413	212	11	8	0	0	2	1	1	0	0	0	7	3	0	0	0	0
7:45:00	3	1	685	272	29	18	0	0	4	2	1	0	0	0	9	2	0	0	0	0
8:00:00	5	2	990	305	52	23	0	0	7	3	1	0	1	1	12	3	0	0	0	0
8:15:00	7	2	1253	263	68	16	0	0	9	2	1	0	2	1	14	2	1	1	0	0
8:30:00	8	1	1577	324	80	12	2	2	10	1	1	0	2	0	16	2	1	0	0	0
8:45:00	10	2	1853	276	90	10	3	1	14	4	1	0	2	0	17	1	1	0	0	0
9:00:00	10	0	2101	248	92	2	3	0	14	0	1	0	2	0	19	2	1	0	0	0
9:15:00	10	0	2101	0	92	0	3	0	14	0	1	0	2	0	19	0	1	0	0	0
16:00:00	10	0	2101	0	92	0	3	0	14	0	1	0	2	0	19	0	1	0	0	0
16:15:00	11	1	2277	176	98	6	3	0	18	4	1	0	2	0	21	2	1	0	0	0
16:30:00	12	1	2417	140	103	5	3	0	19	1	1	0	2	0	29	8	1	0	0	0
16:45:00	13	1	2584	167	108	5	3	0	19	0	1	0	2	0	34	5	1	0	0	0
17:00:00	13	0	2745	161	113	5	3	0	20	1	1	0	2	0	36	2	1	0	0	0
17:15:00	14	1	2929	184	115	2	3	0	24	4	2	1	2	0	37	1	1	0	0	0
17:30:00	14	0	3106	177	122	7	3	0	27	3	2	0	2	0	38	1	1	0	0	0
17:45:00	15	1	3275	169	128	6	3	0	27	0	2	0	2	0	39	1	1	0	0	0
18:00:00	15	0	3439	164	134	6	3	0	27	0	2	0	2	0	42	3	1	0	0	0
18:15:00	15	0	3439	0	134	0	3	0	27	0	2	0	2	0	42	0	1	0	0	0
18:15:15	15	0	3439	0	134	0	3	0	27	0	2	0	2	0	42	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-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

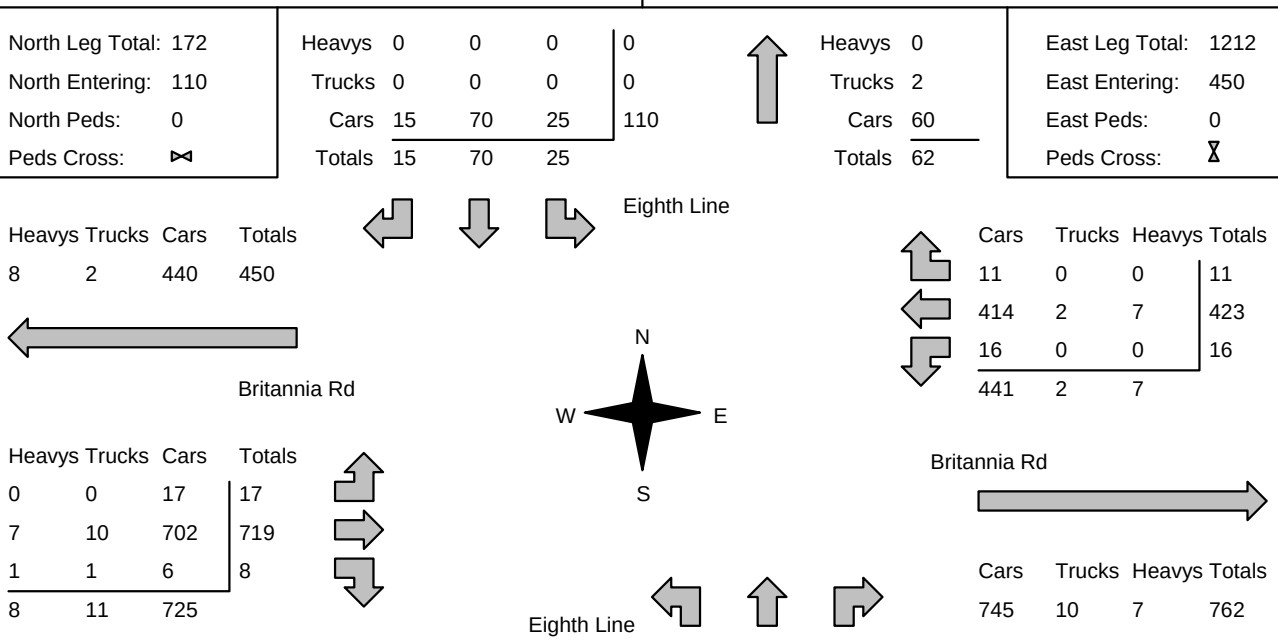
Municipality: Milton
Site #: 2508500007
Intersection: Britannia Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Britannia Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

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

One Hour Peak
From: 16:30:00
To: 17:30:00

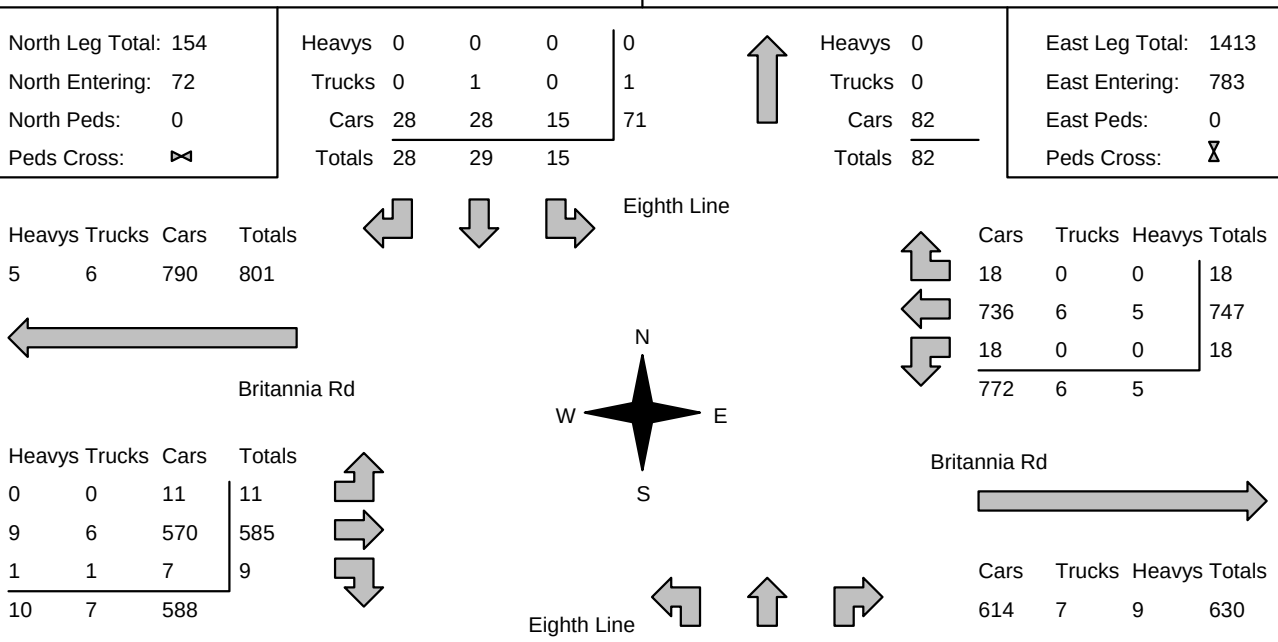
Municipality: Milton
Site #: 2508500007
Intersection: Britannia Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Britannia Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

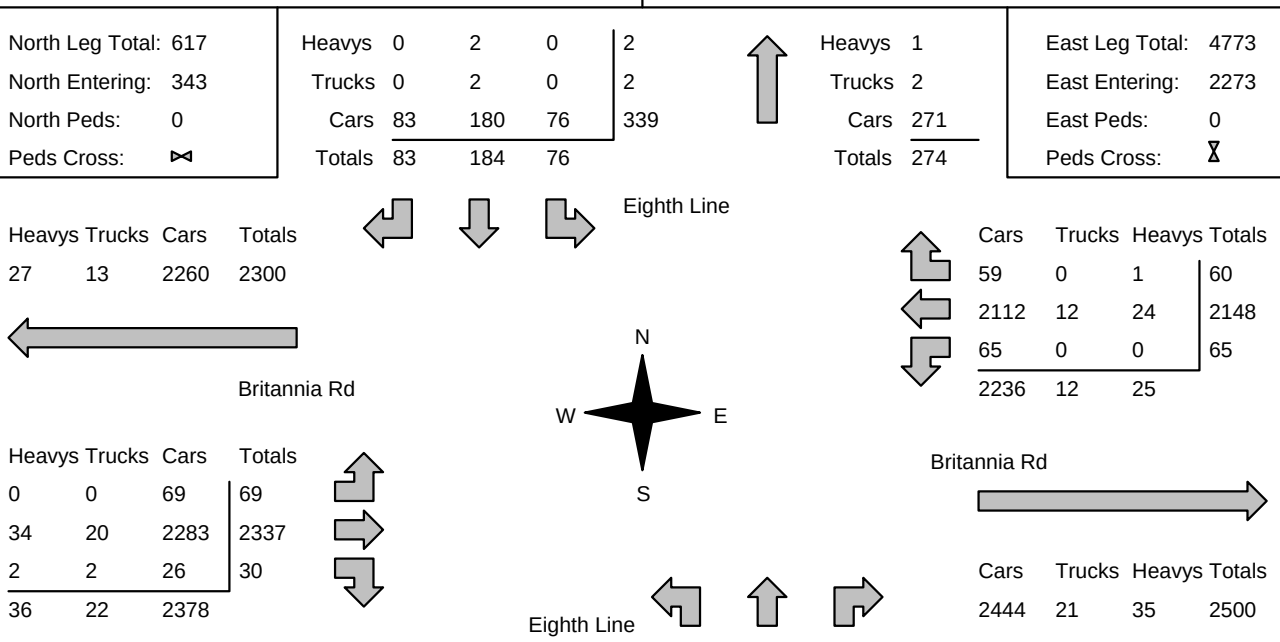
Municipality: Milton
Site #: 2508500007
Intersection: Britannia Rd & Eighth Line
TFR File #: 1
Count date: 28-May-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Britannia Rd runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Britannia Rd & Eighth Line | **Count Date:** 28-May-25 | **Municipality:** Milton

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*17*	*60*	*18*	*95*	*0*
9:00:00	*25*	*70*	*15*	*110*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*16*	*32*	*26*	*74*	*0*
18:00:00	*18*	*22*	*24*	*64*	*0*
Totals:	76	184	83	343	0

North/South Total Approaches: 644

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*5*	*16*	*16*	*37*	*0*
9:00:00	*12*	*34*	*18*	*64*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*16*	*49*	*21*	*86*	*0*
18:00:00	*36*	*46*	*32*	*114*	*0*
S Totals:	69	145	87	301	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*12*	*334*	*11*	*357*	*0*
9:00:00	*16*	*423*	*11*	*450*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*19*	*687*	*19*	*725*	*0*
18:00:00	*18*	*704*	*19*	*741*	*0*
Totals:	65	2148	60	2273	0

East/West Total Approaches: 4709

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*10*	*489*	*9*	*508*	*0*
9:00:00	*17*	*719*	*8*	*744*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*22*	*516*	*7*	*545*	*0*
18:00:00	*20*	*613*	*6*	*639*	*0*
W Totals:	69	2337	30	2436	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*82*	*107*	*0*	*81*	*100*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500007

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	7	7	5	5	0	0	1	1	0	0	0	0	1	1	0	0	0	0
7:30:00	3	3	21	14	11	6	0	0	1	0	0	0	0	0	2	1	0	0	0	0
7:45:00	10	7	36	15	14	3	0	0	1	0	0	0	0	0	2	0	0	0	0	0
8:00:00	17	7	57	21	18	4	0	0	1	0	0	0	0	0	2	0	0	0	0	0
8:15:00	29	12	73	16	26	8	0	0	1	0	0	0	0	0	2	0	0	0	0	0
8:30:00	36	7	92	19	28	2	0	0	1	0	0	0	0	0	2	0	0	0	0	0
8:45:00	42	6	113	21	30	2	0	0	1	0	0	0	0	0	2	0	0	0	0	0
9:00:00	42	0	127	14	33	3	0	0	1	0	0	0	0	0	2	0	0	0	0	0
9:15:00	42	0	127	0	33	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0
16:00:00	42	0	127	0	33	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0
16:15:00	45	3	134	7	37	4	0	0	1	0	0	0	0	0	2	0	0	0	0	0
16:30:00	49	4	139	5	46	9	0	0	1	0	0	0	0	0	2	0	0	0	0	0
16:45:00	53	4	146	7	51	5	0	0	1	0	0	0	0	0	2	0	0	0	0	0
17:00:00	58	5	159	13	59	8	0	0	1	0	0	0	0	0	2	0	0	0	0	0
17:15:00	59	1	164	5	68	9	0	0	1	0	0	0	0	0	2	0	0	0	0	0
17:30:00	64	5	167	3	74	6	0	0	2	1	0	0	0	0	2	0	0	0	0	0
17:45:00	72	8	172	5	76	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0
18:00:00	76	4	180	8	83	7	0	0	2	0	0	0	0	0	2	0	0	0	0	0
18:15:00	76	0	180	0	83	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
18:15:15	76	0	180	0	83	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500007

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	3	3	64	64	4	4	0	0	1	1	0	0	0	0	5	5	0	0	0	0
7:30:00	5	2	136	72	6	2	0	0	1	0	0	0	0	0	5	0	0	0	0	0
7:45:00	8	3	225	89	10	4	0	0	2	1	0	0	0	0	5	0	0	0	0	0
8:00:00	12	4	324	99	11	1	0	0	4	2	0	0	0	0	6	1	0	0	0	0
8:15:00	18	6	416	92	12	1	0	0	4	0	0	0	0	0	8	2	0	0	0	0
8:30:00	19	1	513	97	16	4	0	0	5	1	0	0	0	0	11	3	0	0	0	0
8:45:00	25	6	613	100	21	5	0	0	6	1	0	0	0	0	12	1	0	0	0	0
9:00:00	28	3	738	125	22	1	0	0	6	0	0	0	0	0	13	1	0	0	0	0
9:15:00	28	0	738	0	22	0	0	0	6	0	0	0	0	0	13	0	0	0	0	0
16:00:00	28	0	738	0	22	0	0	0	6	0	0	0	0	0	13	0	0	0	0	0
16:15:00	28	0	897	159	29	7	0	0	6	0	0	0	0	0	16	3	0	0	0	0
16:30:00	34	6	1040	143	32	3	0	0	6	0	0	0	0	0	19	3	1	1	0	0
16:45:00	42	8	1231	191	35	3	0	0	7	1	0	0	0	0	21	2	1	0	0	0
17:00:00	47	5	1410	179	40	5	0	0	11	4	0	0	0	0	23	2	1	0	0	0
17:15:00	50	3	1593	183	45	5	0	0	12	1	0	0	0	0	23	0	1	0	0	0
17:30:00	52	2	1776	183	50	5	0	0	12	0	0	0	0	0	24	1	1	0	0	0
17:45:00	59	7	1945	169	57	7	0	0	12	0	0	0	0	0	24	0	1	0	0	0
18:00:00	65	6	2112	167	59	2	0	0	12	0	0	0	0	0	24	0	1	0	0	0
18:15:00	65	0	2112	0	59	0	0	0	12	0	0	0	0	0	24	0	1	0	0	0
18:15:15	65	0	2112	0	59	0	0	0	12	0	0	0	0	0	24	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500007

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	6	6	4	4	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7:30:00	2	0	9	3	6	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:45:00	2	0	10	1	9	3	1	1	0	0	0	0	1	0	0	0	0	0	0	0
8:00:00	3	1	16	6	16	7	1	0	0	0	0	0	1	0	0	0	0	0	0	0
8:15:00	6	3	19	3	19	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0
8:30:00	8	2	23	4	24	5	1	0	0	0	0	0	1	0	0	0	0	0	0	0
8:45:00	10	2	36	13	32	8	1	0	1	1	0	0	2	1	0	0	0	0	0	0
9:00:00	14	4	48	12	34	2	1	0	2	1	0	0	2	0	0	0	0	0	0	0
9:15:00	14	0	48	0	34	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0
16:00:00	14	0	48	0	34	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0
16:15:00	17	3	56	8	40	6	1	0	2	0	0	0	2	0	0	0	0	0	0	0
16:30:00	24	7	66	10	42	2	1	0	2	0	0	0	3	1	0	0	1	1	0	0
16:45:00	25	1	83	17	46	4	1	0	2	0	1	1	3	0	0	0	1	0	0	0
17:00:00	29	4	97	14	53	7	1	0	2	0	1	0	3	0	0	0	1	0	0	0
17:15:00	41	12	108	11	63	10	1	0	2	0	1	0	3	0	0	0	1	0	0	0
17:30:00	50	9	119	11	71	8	1	0	2	0	1	0	3	0	0	0	1	0	0	0
17:45:00	55	5	133	14	79	8	1	0	2	0	1	0	3	0	0	0	1	0	0	0
18:00:00	65	10	143	10	85	6	1	0	2	0	1	0	3	0	0	0	1	0	0	0
18:15:00	65	0	143	0	85	0	1	0	2	0	1	0	3	0	0	0	1	0	0	0
18:15:15	65	0	143	0	85	0	1	0	2	0	1	0	3	0	0	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 28-May-25 Site #: 2508500007

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	3	3	74	74	2	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0
7:30:00	6	3	184	110	4	2	0	0	0	0	0	0	0	0	5	4	0	0	0	0
7:45:00	8	2	302	118	5	1	0	0	2	2	0	0	0	0	8	3	0	0	0	0
8:00:00	10	2	477	175	9	4	0	0	2	0	0	0	0	0	10	2	0	0	0	0
8:15:00	15	5	662	185	11	2	0	0	2	0	0	0	0	0	13	3	1	1	0	0
8:30:00	19	4	839	177	12	1	0	0	4	2	0	0	0	0	14	1	1	0	0	0
8:45:00	24	5	996	157	13	1	0	0	7	3	0	0	0	0	15	1	1	0	0	0
9:00:00	27	3	1179	183	15	2	0	0	12	5	1	1	0	0	17	2	1	0	0	0
9:15:00	27	0	1179	0	15	0	0	0	12	0	1	0	0	0	17	0	1	0	0	0
16:00:00	27	0	1179	0	15	0	0	0	12	0	1	0	0	0	17	0	1	0	0	0
16:15:00	32	5	1287	108	15	0	0	0	14	2	1	0	0	0	19	2	1	0	0	0
16:30:00	40	8	1410	123	17	2	0	0	14	0	1	0	0	0	21	2	1	0	0	0
16:45:00	43	3	1552	142	19	2	0	0	16	2	1	0	0	0	22	1	2	1	0	0
17:00:00	49	6	1681	129	21	2	0	0	16	0	1	0	0	0	27	5	2	0	0	0
17:15:00	49	0	1832	151	22	1	0	0	19	3	1	0	0	0	28	1	2	0	0	0
17:30:00	51	2	1980	148	24	2	0	0	20	1	2	1	0	0	30	2	2	0	0	0
17:45:00	59	8	2104	124	26	2	0	0	20	0	2	0	0	0	32	2	2	0	0	0
18:00:00	69	10	2283	179	26	0	0	0	20	0	2	0	0	0	34	2	2	0	0	0
18:15:00	69	0	2283	0	26	0	0	0	20	0	2	0	0	0	34	0	2	0	0	0
18:15:15	69	0	2283	0	26	0	0	0	20	0	2	0	0	0	34	0	2	0	0	0

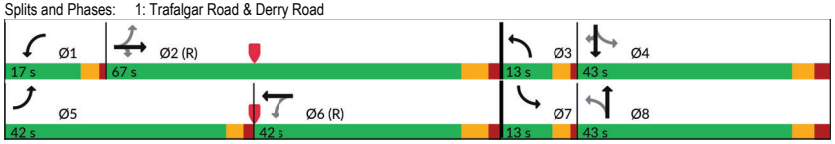
Appendix B
Existing SYNCHRO Capacity and Queuing Analysis Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	564	1057	212	196	381	87	91	576	127	71	686	55
Future Volume (vph)	564	1057	212	196	381	87	91	576	127	71	686	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	110.0		100.0	300.0		0.0	65.0		0.0	70.0		70.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	100.0			100.0			100.0			100.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.972			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1585	1789	3357	0	1706	3322	0	1630	3411	1296
Flt Permitted	0.307			0.201			0.146			0.172		
Satd. Flow (perm)	578	3579	1585	379	3357	0	262	3322	0	295	3411	1296
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216		19			19				125
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		1512.3			1378.7			3096.6			2119.2	
Travel Time (s)		68.1			62.0			185.8			127.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	576	1079	216	200	389	89	93	588	130	72	700	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	576	1079	216	200	478	0	93	718	0	72	700	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0		2.0	10.0		6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6		2.0	0.6		6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6			8			4		4
Detector Phase	5	2	2	1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0		7.0	20.0		7.0	20.0	20.0
Minimum Split (s)	11.5	39.6	39.6	11.0	39.6		11.0	37.4		11.0	37.4	37.4
Total Split (s)	42.0	67.0	67.0	17.0	42.0		13.0	43.0		13.0	43.0	43.0
Total Split (%)	30.0%	47.9%	47.9%	12.1%	30.0%		9.3%	30.7%		9.3%	30.7%	30.7%
Maximum Green (s)	37.5	60.4	60.4	13.0	35.4		9.0	36.6		9.0	36.6	36.6
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6		3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.5	2.0	2.0	1.0	2.0		1.0	2.7		1.0	2.7	2.7
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.6	4.6	3.0	4.6		3.0	4.4		3.0	4.4	4.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	7.0
Flash Don't Walk (s)		26.0	26.0		26.0			24.0			24.0	24.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	81.0	62.7	62.7	56.3	40.6		50.5	39.9		49.0	36.9	36.9
Actuated g/C Ratio	0.58	0.45	0.45	0.40	0.29		0.36	0.29		0.35	0.26	0.26
v/c Ratio	0.89	0.67	0.26	0.68	0.49		0.44	0.75		0.35	0.78	0.13
Control Delay (s/veh)	38.9	33.6	3.6	35.5	42.7		35.3	50.3		33.0	54.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	38.9	33.6	3.6	35.5	42.7		35.3	50.3		33.0	54.5	0.6
LOS	D	C	A	D	D		D	D		C	D	A
Approach Delay (s/veh)		31.8			40.6			48.6			49.0	
Approach LOS		C			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 39.9		Intersection LOS: D	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	576	1079	216	200	478	93	718	72	700	56
v/c Ratio	0.89	0.67	0.26	0.68	0.49	0.44	0.75	0.35	0.78	0.13
Control Delay (s/veh)	38.9	33.6	3.6	35.5	42.7	35.3	50.3	33.0	54.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.9	33.6	3.6	35.5	42.7	35.3	50.3	33.0	54.5	0.6
Queue Length 50th (m)	105.3	135.5	0.0	27.7	64.3	16.8	98.3	13.4	97.7	0.0
Queue Length 95th (m)	#161.4	149.2	14.6	#49.4	79.0	31.0	125.4	26.3	122.6	0.0
Internal Link Dist (m)		1488.3			1354.7		3072.6		2095.2	
Turn Bay Length (m)	110.0		100.0	300.0		65.0		70.0		70.0
Base Capacity (vph)	670	1641	844	300	1017	210	967	206	944	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.66	0.26	0.67	0.47	0.44	0.74	0.35	0.74	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	564	1057	212	196	381	87	91	576	127	71	686	55
Future Volume (vph)	564	1057	212	196	381	87	91	576	127	71	686	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.6	4.6	3.0	4.6		3.0	4.4		3.0	4.4	4.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3579	1585	1789	3357		1706	3321		1630	3411	1296
Flt Permitted	0.31	1.00	1.00	0.20	1.00		0.15	1.00		0.17	1.00	1.00
Satd. Flow (perm)	578	3579	1585	379	3357		263	3321		296	3411	1296
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	576	1079	216	200	389	89	93	588	130	72	700	56
RTOR Reduction (vph)	0	0	120	0	14	0	0	14	0	0	0	41
Lane Group Flow (vph)	576	1079	96	200	464	0	93	704	0	72	700	15
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	77.1	59.9	59.9	51.0	37.8		48.1	37.9		43.7	35.7	35.7
Effective Green, g (s)	78.1	61.9	61.9	53.0	39.8		50.1	39.9		45.7	37.7	37.7
Actuated g/C Ratio	0.56	0.44	0.44	0.38	0.28		0.36	0.28		0.33	0.27	0.27
Clearance Time (s)	4.5	6.6	6.6	4.0	6.6		4.0	6.4		4.0	6.4	6.4
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)	632	1582	700	286	954		209	946		182	918	348
v/s Ratio Prot	c0.23	0.30		0.07	0.14		c0.04	c0.21		0.03	0.21	
v/s Ratio Perm	c0.28		0.06	0.19			0.12			0.10		0.01
v/c Ratio	0.91	0.68	0.14	0.70	0.49		0.44	0.74		0.40	0.76	0.04
Uniform Delay, d1	22.5	31.2	23.2	30.9	41.6		32.9	45.4		34.8	47.0	37.8
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	18.3	2.4	0.4	9.2	1.8		3.1	3.9		2.9	4.5	0.1
Delay (s)	40.7	33.6	23.6	40.1	43.4		36.1	49.3		37.8	51.5	37.9
Level of Service	D	C	C	D	D		D	D		D	D	D
Approach Delay (s/veh)		34.6			42.4			47.8			49.4	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	1186	62	62	661	5	15	0	40	2	0	7
Future Volume (vph)	12	1186	62	62	661	5	15	0	40	2	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	90.0			90.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.999			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	3550	0	1825	3474	0	1825	1555	0	1217	1420	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1285	3550	0	1825	3474	0	1825	1555	0	1217	1420	0
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		1378.7			1167.6			3084.0			998.7	
Travel Time (s)		62.0			52.5			158.6			51.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	0%	5%	50%	0%	15%
Adj. Flow (vph)	13	1235	65	65	689	5	16	0	42	2	0	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	1300	0	65	694	0	16	42	0	2	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1186	62	62	661	5	15	0	40	2	0	7
Future Volume (Veh/h)	12	1186	62	62	661	5	15	0	40	2	0	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	12	1235	65	65	689	5	16	0	42	2	0	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	694			1300			1773	2116	650	1505	2146	347
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	694			1300			1773	2116	650	1505	2146	347
tC, single (s)	4.9			4.1			7.5	6.5	7.0	8.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.6			2.2			3.5	4.0	3.4	4.0	4.0	3.4
p0 queue free %	98			88			66	100	90	95	100	99
cM capacity (veh/h)	675			540			48	44	405	43	42	613

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	12	823	477	65	459	235	16	42	2	7
Volume Left	12	0	0	65	0	0	16	0	2	0
Volume Right	0	0	65	0	0	5	0	42	0	7
cSH	675	1700	1700	540	1700	1700	48	405	43	613
Volume to Capacity	0.02	0.48	0.28	0.12	0.27	0.14	0.34	0.10	0.05	0.01
Queue Length 95th (m)	0.4	0.0	0.0	3.1	0.0	0.0	8.9	2.6	1.1	0.3
Control Delay (s/veh)	10.4	0.0	0.0	12.6	0.0	0.0	115.2	14.9	93.7	10.9
Lane LOS	B			B			F	B	F	B
Approach Delay (s/veh)	0.1			1.1			42.6		29.3	
Approach LOS							E		D	

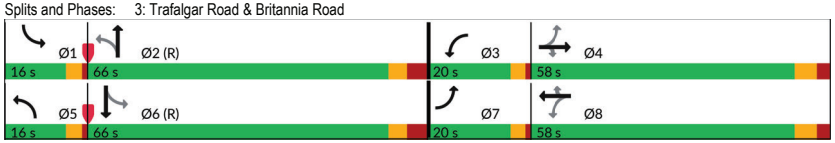
Intersection Summary				
Average Delay		1.7		
Intersection Capacity Utilization		55.7%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	550	281	139	248	62	126	645	155	32	958	65
Future Volume (vph)	119	550	281	139	248	62	126	645	155	32	958	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		45.0	70.0		35.0	100.0		0.0	100.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			95.0			50.0			50.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.971			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5092	1555	1807	5043	1633	1601	3368	0	1615	3417	0
Flt Permitted	0.546			0.221			0.196			0.309		
Satd. Flow (perm)	999	5092	1555	420	5043	1633	330	3368	0	525	3417	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			251			85		21			5	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3112.8			3096.6	
Travel Time (s)		83.9			81.7			186.8			185.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	120	556	284	140	251	63	127	652	157	32	968	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	556	284	140	251	63	127	809	0	32	1034	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0		6.1	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6		6.1	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0		7.0	20.0	
Minimum Split (s)	11.5	42.9	42.9	11.0	42.9	42.9	11.0	48.5		11.0	48.5	
Total Split (s)	20.0	58.0	58.0	20.0	58.0	58.0	16.0	66.0		16.0	66.0	
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	10.0%	41.3%		10.0%	41.3%	
Maximum Green (s)	16.0	51.1	51.1	16.0	51.1	51.1	12.0	58.5		12.0	58.5	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.8		1.0	3.8	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0		-1.0	-2.0	
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	5.5		3.0	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		26.0	26.0		26.0	26.0		34.0			34.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	42.5	26.2	26.2	43.3	26.6	26.6	107.8	96.6		101.9	91.2	
Actuated g/C Ratio	0.27	0.16	0.16	0.27	0.17	0.17	0.67	0.60		0.64	0.57	
v/c Ratio	0.36	0.67	0.61	0.58	0.30	0.18	0.41	0.40		0.08	0.53	
Control Delay (s/veh)	45.7	66.7	15.8	52.9	58.9	5.5	14.0	17.9		10.7	23.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	45.7	66.7	15.8	52.9	58.9	5.5	14.0	17.9		10.7	23.6	
LOS	D	E	B	D	E	A	B	B		B	C	
Approach Delay (s/veh)		49.0			49.7			17.4			23.2	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 12 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 32.4		Intersection LOS: C	
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	556	284	140	251	63	127	809	32	1034
v/c Ratio	0.36	0.67	0.61	0.58	0.30	0.18	0.41	0.40	0.08	0.53
Control Delay (s/veh)	45.7	66.7	15.8	52.9	58.9	5.5	14.0	17.9	10.7	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	66.7	15.8	52.9	58.9	5.5	14.0	17.9	10.7	23.6
Queue Length 50th (m)	30.6	63.3	9.5	34.9	26.9	0.0	14.9	71.6	3.5	106.3
Queue Length 95th (m)	45.8	74.4	39.3	50.7	35.4	7.4	27.6	98.4	8.8	150.8
Internal Link Dist (m)		1374.7			1337.0			3088.8		3072.6
Turn Bay Length (m)	75.0		45.0	70.0		35.0	100.0		100.0	
Base Capacity (vph)	355	1689	683	265	1673	598	331	2042	436	1949
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.33	0.42	0.53	0.15	0.11	0.38	0.40	0.07	0.53

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	550	281	139	248	62	126	645	155	32	958	65
Future Volume (vph)	119	550	281	139	248	62	126	645	155	32	958	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	5.5		3.0	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5092	1555	1807	5043	1633	1601	3368		1615	3418	
Flt Permitted	0.55	1.00	1.00	0.22	1.00	1.00	0.20	1.00		0.31	1.00	
Satd. Flow (perm)	999	5092	1555	419	5043	1633	330	3368		525	3418	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	120	556	284	140	251	63	127	652	157	32	968	66
RTOR Reduction (vph)	0	0	210	0	0	53	0	8	0	0	2	0
Lane Group Flow (vph)	120	556	74	140	251	10	127	801	0	32	1032	0
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	37.6	24.2	24.2	38.4	24.6	24.6	103.6	93.8		94.9	89.1	
Effective Green, g (s)	39.6	26.2	26.2	40.4	26.6	26.6	104.6	95.8		96.9	91.1	
Actuated g/C Ratio	0.25	0.16	0.16	0.25	0.17	0.17	0.65	0.60		0.61	0.57	
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	313	833	254	234	838	271	307	2016		364	1946	
v/s Ratio Prot	0.03	c0.11		c0.06	0.05		c0.03	0.24		0.00	c0.30	
v/s Ratio Perm	0.06		0.05	0.10		0.01	0.24			0.05		
v/c Ratio	0.38	0.67	0.29	0.60	0.30	0.04	0.41	0.40		0.09	0.53	
Uniform Delay, d1	48.7	62.8	58.8	49.0	58.5	56.0	13.6	16.9		13.0	21.3	
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	0.8	2.0	0.6	4.1	0.2	0.1	0.9	0.6		0.1	1.0	
Delay (s)	49.5	64.8	59.4	53.1	58.7	56.0	14.5	17.5		13.1	22.3	
Level of Service	D	E	E	D	E	E	B	B		B	C	
Approach Delay (s/veh)		61.3			56.6			17.1			22.0	
Approach LOS		E			E			B			C	

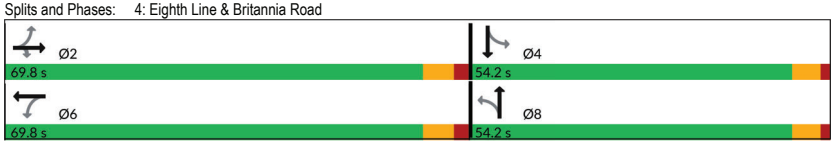
Intersection Summary				
HCM 2000 Control Delay (s/veh)	36.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.4	
Intersection Capacity Utilization	75.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	719	8	16	423	11	12	34	18	25	70	15
Future Volume (vph)	17	719	8	16	423	11	12	34	18	25	70	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		40.0	45.0		120.0	40.0		0.0	30.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	70.0			60.0			35.0			50.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.948			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1306	1825	5075	0	1674	1752	0	1825	1869	0
Flt Permitted	0.477			0.350			0.784			0.784		
Satd. Flow (perm)	916	5092	1306	672	5075	0	1382	1752	0	1506	1869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			24		5			19			10	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3091.5			3084.0	
Travel Time (s)		81.7			84.5			159.0			158.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	18	765	9	17	450	12	13	36	19	27	74	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	765	9	17	462	0	13	55	0	27	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	33.8	33.8	33.8	33.8	33.8		44.7	44.7		44.7	44.7	
Total Split (s)	69.8	69.8	69.8	69.8	69.8		54.2	54.2		54.2	54.2	
Total Split (%)	56.3%	56.3%	56.3%	56.3%	56.3%		43.7%	43.7%		43.7%	43.7%	
Maximum Green (s)	63.0	63.0	63.0	63.0	63.0		48.5	48.5		48.5	48.5	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8	6.8	6.8	6.8		5.7	5.7		5.7	5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	20.0	20.0	20.0	20.0	20.0		32.0	32.0		32.0	32.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)	24.7	24.7	24.7	24.7	24.7		10.5	10.5		10.5	10.5	
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68		0.29	0.29		0.29	0.29	
v/c Ratio	0.03	0.22	0.01	0.04	0.13		0.03	0.11		0.06	0.16	
Control Delay (s/veh)	6.4	5.4	1.6	6.6	5.1		13.0	10.3		13.2	12.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	6.4	5.4	1.6	6.6	5.1		13.0	10.3		13.2	12.4	
LOS	A	A	A	A	A		B	B		B	B	
Approach Delay (s/veh)		5.4			5.2			10.8			12.6	
Approach LOS		A			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 36.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.22			
Intersection Signal Delay (s/veh): 6.2		Intersection LOS: A	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	765	9	17	462	13	55	27	90
v/c Ratio	0.03	0.22	0.01	0.04	0.13	0.03	0.11	0.06	0.16
Control Delay (s/veh)	6.4	5.4	1.6	6.6	5.1	13.0	10.3	13.2	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.4	5.4	1.6	6.6	5.1	13.0	10.3	13.2	12.4
Queue Length 50th (m)	0.7	11.7	0.0	0.6	6.5	0.8	2.2	1.5	4.7
Queue Length 95th (m)	2.8	17.6	1.1	2.8	10.6	3.8	8.3	5.7	12.6
Internal Link Dist (m)		1337.0			1384.0		3067.5		3060.0
Turn Bay Length (m)	35.0		40.0	45.0		40.0		30.0	
Base Capacity (vph)	916	5092	1306	672	5075	1382	1752	1506	1869
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.15	0.01	0.03	0.09	0.01	0.03	0.02	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	719	8	16	423	11	12	34	18	25	70	15
Future Volume (vph)	17	719	8	16	423	11	12	34	18	25	70	15
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		5.7	5.7		5.7	5.7	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5092	1306	1825	5076		1674	1753		1825	1870	
Flt Permitted	0.48	1.00	1.00	0.35	1.00		0.78	1.00		0.78	1.00	
Satd. Flow (perm)	916	5092	1306	672	5076		1382	1753		1507	1870	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	18	765	9	17	450	12	13	36	19	27	74	16
RTOR Reduction (vph)	0	0	4	0	2	0	0	16	0	0	9	0
Lane Group Flow (vph)	18	765	5	17	460	0	13	39	0	27	81	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	21.0	21.0	21.0	21.0	21.0		5.1	5.1		5.1	5.1	
Effective Green, g (s)	21.0	21.0	21.0	21.0	21.0		5.1	5.1		5.1	5.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54		0.13	0.13		0.13	0.13	
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8		5.7	5.7		5.7	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	498	2770	710	365	2761		182	231		199	247	
v/s Ratio Prot		c0.15			0.09			0.02			c0.04	
v/s Ratio Perm	0.02		0.00	0.03			0.01			0.02		
v/c Ratio	0.04	0.28	0.01	0.05	0.17		0.07	0.17		0.14	0.33	
Uniform Delay, d1	4.1	4.7	4.0	4.1	4.4		14.7	14.9		14.8	15.2	
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	0.1	0.0	0.1	0.0		0.2	0.3		0.3	0.8	
Delay (s)	4.1	4.8	4.0	4.2	4.4		14.8	15.2		15.1	16.0	
Level of Service	A	A	A	A	A		B	B		B	B	
Approach Delay (s/veh)		4.8			4.4			15.1			15.8	
Approach LOS		A			A			B			B	

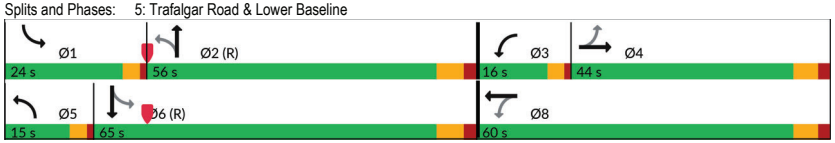
Intersection Summary				
HCM 2000 Control Delay (s/veh)	6.0	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.29			
Actuated Cycle Length (s)	38.6	Sum of lost time (s)	12.5	
Intersection Capacity Utilization	57.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	266	53	185	111	94	29	765	138	255	1115	45
Future Volume (vph)	93	266	53	185	111	94	29	765	138	255	1115	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	110.0		0.0	90.0		0.0	90.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	100.0			100.0			100.0			100.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.931			0.977			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1852	0	1789	1723	0	1706	3352	0	1789	3455	0
Flt Permitted	0.624			0.195			0.159			0.159		
Satd. Flow (perm)	1142	1852	0	367	1723	0	285	3352	0	299	3455	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			36			17			4	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1436.5			913.5			3112.8	
Travel Time (s)		79.0			86.2			54.8			186.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	97	277	55	193	116	98	30	797	144	266	1161	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	332	0	193	214	0	30	941	0	266	1208	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		7.0	25.0		7.0	25.0	
Minimum Split (s)	16.2	16.2		11.0	24.2		11.0	31.6		11.0	31.6	
Total Split (s)	44.0	44.0		16.0	60.0		15.0	56.0		24.0	65.0	
Total Split (%)	31.4%	31.4%		11.4%	42.9%		10.7%	40.0%		17.1%	46.4%	
Maximum Green (s)	37.8	37.8		12.0	53.8		11.0	49.4		20.0	58.4	
Yellow Time (s)	4.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	
Total Lost Time (s)	5.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	32.2	33.2		51.3	50.1		68.8	59.0		82.7	74.3	
Actuated g/C Ratio	0.23	0.24		0.37	0.36		0.49	0.42		0.59	0.53	
v/c Ratio	0.37	0.75		0.70	0.33		0.13	0.66		0.70	0.66	
Control Delay (s/veh)	48.2	58.8		45.1	27.5		16.1	36.2		28.0	27.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	48.2	58.8		45.1	27.5		16.1	36.2		28.0	27.9	
LOS	D	E		D	C		B	D		C	C	
Approach Delay (s/veh)		56.4			35.9			35.6			27.9	
Approach LOS		E			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 20 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 34.9		Intersection LOS: C	
Intersection Capacity Utilization 81.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	97	332	193	214	30	941	266	1208
v/c Ratio	0.37	0.75	0.70	0.33	0.13	0.66	0.70	0.66
Control Delay (s/veh)	48.2	58.8	45.1	27.5	16.1	36.2	28.0	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	58.8	45.1	27.5	16.1	36.2	28.0	27.9
Queue Length 50th (m)	23.6	84.6	36.9	34.7	3.7	118.9	36.6	143.7
Queue Length 95th (m)	39.2	112.4	54.4	53.6	9.0	151.2	65.0	179.8
Internal Link Dist (m)		1293.1		1412.5		889.5		3088.8
Turn Bay Length (m)	45.0		110.0		90.0		90.0	
Base Capacity (vph)	316	531	277	708	269	1423	403	1834
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.63	0.70	0.30	0.11	0.66	0.66	0.66

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	266	53	185	111	94	29	765	138	255	1115	45
Future Volume (vph)	93	266	53	185	111	94	29	765	138	255	1115	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.93		1.00	0.98		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)	1738	1852		1789	1723		1706	3352		1789	3456	
Flt Permitted	0.62	1.00		0.19	1.00		0.16	1.00		0.16	1.00	
Satd. Flow (perm)	1142	1852		367	1723		285	3352		299	3456	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	277	55	193	116	98	30	797	144	266	1161	47
RTOR Reduction (vph)	0	5	0	0	23	0	0	10	0	0	2	0
Lane Group Flow (vph)	97	327	0	193	191	0	30	931	0	266	1206	0
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.2	31.2		48.1	48.1		61.4	57.0		79.1	70.7	
Effective Green, g (s)	32.2	33.2		49.1	50.1		63.4	59.0		80.1	72.7	
Actuated g/C Ratio	0.23	0.24		0.35	0.36		0.45	0.42		0.57	0.52	
Clearance Time (s)	6.2	6.2		4.0	6.2		4.0	6.6		4.0	6.6	
Vehicle Extension (s)	5.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	262	439		269	616		183	1412		374	1794	
v/s Ratio Prot		0.18		c0.07	0.11		0.01	0.28		c0.10	0.35	
v/s Ratio Perm	0.08			c0.18			0.07			c0.31		
v/c Ratio	0.37	0.74		0.72	0.31		0.16	0.66		0.71	0.67	
Uniform Delay, d1	45.4	49.5		35.4	32.5		22.6	32.5		20.7	24.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	8.0		8.8	0.6		0.4	2.4		6.3	2.0	
Delay (s)	47.2	57.5		44.2	33.1		23.1	34.9		27.0	26.9	
Level of Service	D	E		D	C		C	C		C	C	
Approach Delay (s/veh)		55.2			38.3			34.5			26.9	
Approach LOS		E			D			C			C	

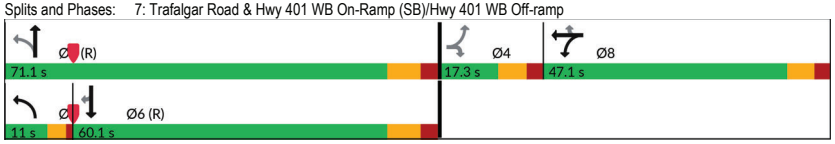
Intersection Summary					
HCM 2000 Control Delay (s/veh)	34.3	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.73				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		14.8	
Intersection Capacity Utilization	81.1%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	167	6	280	10	396	0	0	1017	117
Future Volume (vph)	0	0	4	167	6	280	10	396	0	0	1017	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1281	0	1633	2879	1921	2456	1825	3120	0	0	3411	1276
Flt Permitted				0.950			0.218					
Satd. Flow (perm)	1281	0	1633	2879	1921	2456	419	3120	0	0	3411	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			292			298						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			465.4			196.9			254.2	
Travel Time (s)		69.9			27.9			11.8			13.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	50%	0%	0%	23%	0%	17%	0%	17%	0%	0%	7%	28%
Adj. Flow (vph)	0	0	4	178	6	298	11	421	0	0	1082	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	178	6	298	11	421	0	0	1082	124
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			60.1	60.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			44.4%	44.4%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			52.0	52.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	13.1	13.1	13.1	107.9	103.8			99.4	99.4
Actuated g/C Ratio			0.07	0.10	0.10	0.10	0.80	0.77			0.73	0.73
v/c Ratio			0.01	0.64	0.03	0.59	0.03	0.18			0.43	0.13
Control Delay (s/veh)			0.0	69.4	53.8	10.9	5.1	5.5			9.8	2.3
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.0	69.4	53.8	10.9	5.1	5.5			9.8	2.3
LOS			A	E	D	B	A	A			A	A
Approach Delay (s/veh)					33.1			5.4			9.0	
Approach LOS					C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 13.7		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	4	178	6	298	11	421	1082	124
v/c Ratio	0.01	0.64	0.03	0.59	0.03	0.18	0.43	0.13
Control Delay (s/veh)	0.0	69.4	53.8	10.9	5.1	5.5	9.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	69.4	53.8	10.9	5.1	5.5	9.8	2.3
Queue Length 50th (m)	0.0	28.5	1.5	0.0	0.4	13.5	40.9	0.0
Queue Length 95th (m)	0.0	41.8	5.8	16.3	3.0	35.5	122.4	10.8
Internal Link Dist (m)			441.4			172.9	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	390	849	567	935	406	2389	2501	968
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.21	0.01	0.32	0.03	0.18	0.43	0.13

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	167	6	280	10	396	0	0	1017	117
Future Volume (vph)	0	0	4	167	6	280	10	396	0	0	1017	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	0.95			0.95	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3120			3411	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.22	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	420	3120			3411	1276
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	178	6	298	11	421	0	0	1082	124
RTOR Reduction (vph)	0	0	4	0	0	269	0	0	0	0	0	41
Lane Group Flow (vph)	0	0	0	178	6	29	11	421	0	0	1082	83
Heavy Vehicles (%)	50%	0%	0%	23%	0%	17%	0%	17%	0%	0%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	13.1	13.1	13.1	97.9	97.9			91.1	91.1
Effective Green, g (s)			2.0	13.1	13.1	13.1	97.9	97.9			91.1	91.1
Actuated g/C Ratio			0.01	0.10	0.10	0.10	0.72	0.72			0.67	0.67
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	278	185	237	332	2254			2293	857
v/s Ratio Prot				c0.06	0.00		0.00	c0.13			c0.32	
v/s Ratio Perm			c0.00			0.01	0.02					0.07
v/c Ratio			0.00	0.64	0.03	0.12	0.03	0.19			0.47	0.10
Uniform Delay, d1			65.8	58.9	55.5	55.9	6.3	6.0			10.7	7.8
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.0	3.7	0.0	0.1	0.0	0.2			0.7	0.2
Delay (s)			65.8	62.7	55.5	56.0	6.3	6.2			11.4	8.0
Level of Service			E	E	E	E	A	A			B	A
Approach Delay (s/veh)		65.8			58.5			6.2			11.0	
Approach LOS		E			E			A			B	

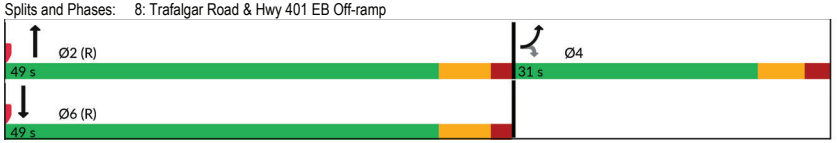
Intersection Summary				
HCM 2000 Control Delay (s/veh)	20.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	26.5	
Intersection Capacity Utilization	63.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	389	0	633	502	0
Future Volume (vph)	114	389	0	633	502	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.95	0.95	1.00
Frt	0.905	0.850				
Flt Protected	0.982					
Satd. Flow (prot)	2926	1339	0	3288	3259	0
Flt Permitted	0.982					
Satd. Flow (perm)	2926	1339	0	3288	3259	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	197	196				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	202.7	
Travel Time (s)	31.9			4.6	10.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	17%	11%	0%	11%	12%	0%
Adj. Flow (vph)	115	393	0	639	507	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	312	196	0	639	507	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	10.8	10.8		55.2	55.2	
Actuated g/C Ratio	0.14	0.14		0.69	0.69	
v/c Ratio	0.55	0.56		0.28	0.23	
Control Delay (s/veh)	16.1	11.7		5.3	5.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	16.1	11.7		5.3	5.0	
LOS	B	B		A	A	
Approach Delay (s/veh)	14.4			5.3	5.0	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 8.0		Intersection LOS: A	
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	312	196	639	507
v/c Ratio	0.55	0.56	0.28	0.23
Control Delay (s/veh)	16.1	11.7	5.3	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.1	11.7	5.3	5.0
Queue Length 50th (m)	9.4	0.0	17.2	13.2
Queue Length 95th (m)	21.1	19.8	28.9	22.7
Internal Link Dist (m)	507.7		52.4	178.7
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1015	538	2267	2247
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.36	0.28	0.23

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	389	0	633	502	0
Future Volume (vph)	114	389	0	633	502	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2926	1339		3288	3259	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2926	1339		3288	3259	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	115	393	0	639	507	0
RTOR Reduction (vph)	170	170	0	0	0	0
Lane Group Flow (vph)	142	26	0	639	507	0
Heavy Vehicles (%)	17%	11%	0%	11%	12%	0%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.8	10.8		55.2	55.2	
Effective Green, g (s)	10.8	10.8		55.2	55.2	
Actuated g/C Ratio	0.14	0.14		0.69	0.69	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	395	180		2268	2248	
v/s Ratio Prot	c0.05			c0.19	0.16	
v/s Ratio Perm		0.02				
v/c Ratio	0.36	0.15		0.28	0.23	
Uniform Delay, d1	31.5	30.5		4.8	4.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.4		0.3	0.2	
Delay (s)	32.0	30.9		5.1	4.8	
Level of Service	C	C		A	A	
Approach Delay (s/veh)	31.6			5.1	4.8	
Approach LOS	C			A	A	

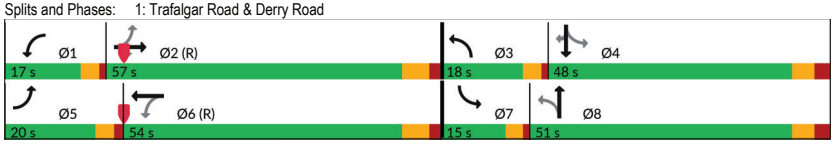
Intersection Summary				
HCM 2000 Control Delay (s/veh)	13.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.29			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	548	136	204	1270	57	249	722	109	74	609	401
Future Volume (vph)	125	548	136	204	1270	57	249	722	109	74	609	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	110.0		100.0	300.0		0.0	65.0		0.0	70.0		70.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	100.0			100.0			100.0			100.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.994			0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3544	1570	1807	3591	0	1772	3391	0	1789	3444	1601
Flt Permitted	0.074			0.337			0.202			0.121		
Satd. Flow (perm)	135	3544	1570	641	3591	0	377	3391	0	228	3444	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143		4			13				227
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		1512.3			1378.7			3096.6			2119.2	
Travel Time (s)		68.1			62.0			185.8			127.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	132	577	143	215	1337	60	262	760	115	78	641	422
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	577	143	215	1397	0	262	875	0	78	641	422
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0		2.0	10.0		6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6		2.0	0.6		6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6			8			4		4
Detector Phase	5	2	2	1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0		7.0	20.0		7.0	20.0	20.0
Minimum Split (s)	11.5	39.6	39.6	11.0	39.6		11.0	37.4		11.0	37.4	37.4
Total Split (s)	20.0	57.0	57.0	17.0	54.0		18.0	51.0		15.0	48.0	48.0
Total Split (%)	14.3%	40.7%	40.7%	12.1%	38.6%		12.9%	36.4%		10.7%	34.3%	34.3%
Maximum Green (s)	15.5	50.4	50.4	13.0	47.4		14.0	44.6		11.0	41.6	41.6
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6		3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.5	2.0	2.0	1.0	2.0		1.0	2.7		1.0	2.7	2.7
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.6	4.6	3.0	4.6		3.0	4.4		3.0	4.4	4.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	7.0
Flash Don't Walk (s)		26.0	26.0		26.0			24.0			24.0	24.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	70.5	55.3	55.3	70.4	54.8		60.0	44.3		53.4	40.6	40.6
Actuated g/C Ratio	0.50	0.40	0.40	0.50	0.39		0.43	0.32		0.38	0.29	0.29
v/c Ratio	0.58	0.41	0.20	0.49	0.99		0.84	0.81		0.37	0.64	0.68
Control Delay (s/veh)	35.2	32.4	5.1	22.7	64.4		51.2	49.8		28.1	46.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	35.2	32.4	5.1	22.7	64.4		51.2	49.8		28.1	46.2	24.8
LOS	D	C	A	C	E		D	D		C	D	C
Approach Delay (s/veh)		28.2			58.9			50.1			37.1	
Approach LOS		C			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 46.0		Intersection LOS: D	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	132	577	143	215	1397	262	875	78	641	422
v/c Ratio	0.58	0.41	0.20	0.49	0.99	0.84	0.81	0.37	0.64	0.68
Control Delay (s/veh)	35.2	32.4	5.1	22.7	64.4	51.2	49.8	28.1	46.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.2	32.4	5.1	22.7	64.4	51.2	49.8	28.1	46.2	24.8
Queue Length 50th (m)	20.4	64.0	0.0	32.7	~223.6	47.2	118.0	12.4	83.0	47.4
Queue Length 95th (m)	42.0	80.8	14.2	48.9	#276.0	#77.0	144.5	22.6	103.9	85.0
Internal Link Dist (m)		1488.3			1354.7		3072.6		2095.2	
Turn Bay Length (m)	110.0		100.0	300.0		65.0		70.0		70.0
Base Capacity (vph)	259	1400	707	442	1408	311	1137	221	1072	654
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.41	0.20	0.49	0.99	0.84	0.77	0.35	0.60	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	548	136	204	1270	57	249	722	109	74	609	401
Future Volume (vph)	125	548	136	204	1270	57	249	722	109	74	609	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.6	4.6	3.0	4.6		3.0	4.4		3.0	4.4	4.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1738	3544	1570	1807	3589		1772	3392		1789	3444	1601
Flt Permitted	0.07	1.00	1.00	0.34	1.00		0.20	1.00		0.12	1.00	1.00
Satd. Flow (perm)	135	3544	1570	642	3589		377	3392		228	3444	1601
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	577	143	215	1337	60	262	760	115	78	641	422
RTOR Reduction (vph)	0	0	86	0	2	0	0	9	0	0	0	161
Lane Group Flow (vph)	132	577	57	215	1395	0	262	866	0	78	641	261
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	66.4	53.4	53.4	65.9	52.9		56.3	42.3		48.9	38.6	38.6
Effective Green, g (s)	68.4	55.4	55.4	67.9	54.9		57.6	44.3		50.9	40.6	40.6
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.39		0.41	0.32		0.36	0.29	0.29
Clearance Time (s)	4.5	6.6	6.6	4.0	6.6		4.0	6.4		4.0	6.4	6.4
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)	226	1402	621	427	1407		304	1073		208	998	464
v/s Ratio Prot	c0.06	0.16		0.05	c0.39		c0.09	0.26		0.03	0.19	
v/s Ratio Perm	0.23		0.04	0.19			c0.26			0.11		0.16
v/c Ratio	0.58	0.41	0.09	0.50	0.99		0.86	0.81		0.38	0.64	0.56
Uniform Delay, d1	29.6	30.5	26.5	21.8	42.3		31.0	43.9		32.2	43.4	42.2
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	5.9	0.9	0.3	1.9	22.0		23.0	5.2		2.4	1.9	2.6
Delay (s)	35.4	31.4	26.8	23.7	64.3		54.0	49.1		34.5	45.3	44.7
Level of Service	D	C	C	C	E		D	D		C	D	D
Approach Delay (s/veh)		31.3			58.9			50.2			44.4	
Approach LOS		C			E			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	704	21	48	1497	2	38	0	48	2	3	5
Future Volume (vph)	2	704	21	48	1497	2	38	0	48	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	90.0			90.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996						0.850			0.906	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3561	0	1825	3614	0	1825	1633	0	1825	1741	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1825	3561	0	1825	3614	0	1825	1633	0	1825	1741	0
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		1378.7			1167.6			3084.0			998.7	
Travel Time (s)		62.0			52.5			158.6			51.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	711	21	48	1512	2	38	0	48	2	3	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	732	0	48	1514	0	38	48	0	2	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	704	21	48	1497	2	38	0	48	2	3	5
Future Volume (Veh/h)	2	704	21	48	1497	2	38	0	48	2	3	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	2	711	21	48	1512	2	38	0	48	2	3	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1514			732			1584	2336	366	2017	2345	757
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1514			732			1584	2336	366	2017	2345	757
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			42	100	92	94	91	99
cM capacity (veh/h)	447			882			65	35	637	31	35	355

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	2	474	258	48	1008	506	38	48	2	8
Volume Left	2	0	0	48	0	0	38	0	2	0
Volume Right	0	0	21	0	0	2	0	48	0	5
cSH	447	1700	1700	882	1700	1700	65	637	31	79
Volume to Capacity	0.00*	0.28	0.15	0.05	0.59	0.30	0.58	0.08	0.06	0.10
Queue Length 95th (m)	0.1	0.0	0.0	1.3	0.0	0.0	18.5	1.9	1.5	2.5
Control Delay (s/veh)	13.1	0.0	0.0	9.3	0.0	0.0	118.3	11.1	128.8	55.5
Lane LOS	B			A			F	B	F	F
Approach Delay (s/veh)	0.0			0.3			58.5		70.1	
Approach LOS							F		F	

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

* Value less than 0.01.

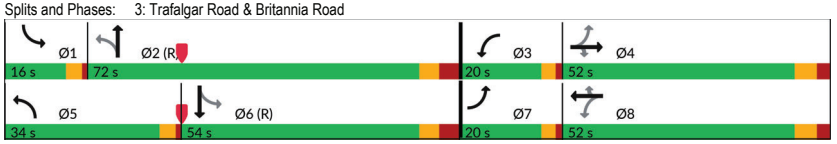
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	415	146	114	607	75	327	904	125	60	700	182
Future Volume (vph)	84	415	146	114	607	75	327	904	125	60	700	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		45.0	70.0		35.0	100.0		0.0	100.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			95.0			50.0			50.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.982			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1573	5092	1585	1825	5193	1541	1789	3455	0	1738	3375	0
Flt Permitted	0.186			0.330			0.186			0.263		
Satd. Flow (perm)	308	5092	1585	634	5193	1541	350	3455	0	481	3375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			112		12			21	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3112.8			3096.6	
Travel Time (s)		83.9			81.7			186.8			185.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	88	432	152	119	632	78	341	942	130	63	729	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	432	152	119	632	78	341	1072	0	63	919	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0		6.1	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6		6.1	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0		7.0	20.0	
Minimum Split (s)	11.5	42.9	42.9	11.0	42.9	42.9	11.0	48.5		11.0	48.5	
Total Split (s)	20.0	52.0	52.0	20.0	52.0	52.0	34.0	72.0		16.0	54.0	
Total Split (%)	12.5%	32.5%	32.5%	12.5%	32.5%	32.5%	21.3%	45.0%		10.0%	33.8%	
Maximum Green (s)	16.0	45.1	45.1	16.0	45.1	45.1	30.0	64.5		12.0	46.5	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.8		1.0	3.8	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0		-1.0	-2.0	
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	5.5		3.0	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		26.0	26.0		26.0	26.0		34.0			34.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	41.9	26.8	26.8	43.6	27.6	27.6	108.3	96.1		83.6	72.2	
Actuated g/C Ratio	0.26	0.17	0.17	0.27	0.17	0.17	0.68	0.60		0.52	0.45	
v/c Ratio	0.48	0.51	0.39	0.43	0.71	0.22	0.67	0.52		0.20	0.60	
Control Delay (s/veh)	50.3	62.3	10.4	47.1	66.8	4.0	21.6	20.9		14.5	36.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	50.3	62.3	10.4	47.1	66.8	4.0	21.6	20.9		14.5	36.8	
LOS	D	E	B	D	E	A	C	C		B	D	
Approach Delay (s/veh)		49.0			58.0			21.1			35.4	
Approach LOS		D			E			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay (s/veh): 37.4 Intersection LOS: D
Intersection Capacity Utilization 81.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	432	152	119	632	78	341	1072	63	919
v/c Ratio	0.48	0.51	0.39	0.43	0.71	0.22	0.67	0.52	0.20	0.60
Control Delay (s/veh)	50.3	62.3	10.4	47.1	66.8	4.0	21.6	20.9	14.5	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.3	62.3	10.4	47.1	66.8	4.0	21.6	20.9	14.5	36.8
Queue Length 50th (m)	24.0	47.6	0.0	29.0	70.8	0.0	41.7	105.8	6.6	117.8
Queue Length 95th (m)	37.9	57.5	19.6	43.0	82.3	5.5	82.1	145.9	14.5	170.5
Internal Link Dist (m)		1374.7			1337.0			3088.8		3072.6
Turn Bay Length (m)	75.0		45.0	70.0		35.0	100.0		100.0	
Base Capacity (vph)	220	1498	573	304	1528	532	540	2079	366	1535
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.29	0.27	0.39	0.41	0.15	0.63	0.52	0.17	0.60

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	415	146	114	607	75	327	904	125	60	700	182
Future Volume (vph)	84	415	146	114	607	75	327	904	125	60	700	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	5.5		3.0	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1573	5092	1585	1825	5193	1541	1789	3454		1738	3375	
Flt Permitted	0.19	1.00	1.00	0.33	1.00	1.00	0.19	1.00		0.26	1.00	
Satd. Flow (perm)	308	5092	1585	634	5193	1541	350	3454		481	3375	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	88	432	152	119	632	78	341	942	130	63	729	190
RTOR Reduction (vph)	0	0	127	0	0	65	0	5	0	0	12	0
Lane Group Flow (vph)	88	432	25	119	632	13	341	1067	0	63	907	0
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	37.1	24.8	24.8	38.7	25.6	25.6	103.7	93.2		76.7	70.2	
Effective Green, g (s)	39.1	26.8	26.8	40.7	27.6	27.6	104.7	95.2		78.7	72.2	
Actuated g/C Ratio	0.24	0.17	0.17	0.25	0.17	0.17	0.65	0.60		0.49	0.45	
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	180	852	265	266	895	265	503	2055		295	1522	
v/s Ratio Prot	c0.04	0.08		c0.04	c0.12		c0.13	0.31		0.01	0.27	
v/s Ratio Perm	0.08		0.02	0.07		0.01	c0.31			0.09		
v/c Ratio	0.49	0.51	0.10	0.45	0.71	0.05	0.68	0.52		0.21	0.60	
Uniform Delay, d1	49.1	60.6	56.4	47.9	62.4	55.3	18.4	19.0		21.4	33.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.5	0.2	1.2	2.6	0.1	3.6	0.9		0.4	1.7	
Delay (s)	51.2	61.1	56.5	49.1	64.9	55.3	22.1	19.9		21.8	34.7	
Level of Service	D	E	E	D	E	E	C	B		C	C	
Approach Delay (s/veh)		58.7			61.8			20.4			33.9	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	39.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.4	
Intersection Capacity Utilization	81.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

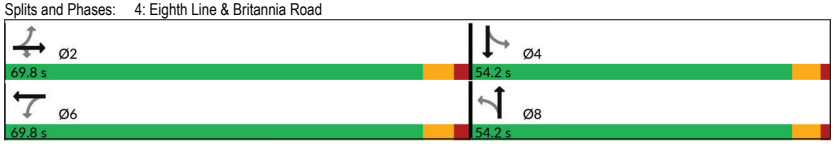
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	585	9	18	747	18	26	53	30	15	29	28
Future Volume (vph)	11	585	9	18	747	18	26	53	30	15	29	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		40.0	45.0		120.0	40.0		0.0	30.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	70.0			60.0			35.0			50.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997			0.946			0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1328	1825	5129	0	1825	1792	0	1825	1743	0
Flt Permitted	0.347			0.418			0.784			0.784		
Satd. Flow (perm)	667	5092	1328	803	5129	0	1506	1792	0	1506	1743	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			24		4			26			28	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3091.5			3084.0	
Travel Time (s)		81.7			84.5			159.0			158.6	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	11	591	9	18	755	18	26	54	30	15	29	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	591	9	18	773	0	26	84	0	15	57	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	33.8	33.8	33.8	33.8	33.8		44.7	44.7		44.7	44.7	
Total Split (s)	69.8	69.8	69.8	69.8	69.8		54.2	54.2		54.2	54.2	
Total Split (%)	56.3%	56.3%	56.3%	56.3%	56.3%		43.7%	43.7%		43.7%	43.7%	
Maximum Green (s)	63.0	63.0	63.0	63.0	63.0		48.5	48.5		48.5	48.5	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6		4.2	4.2		4.2	4.2	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8	6.8	6.8	6.8		5.7	5.7		5.7	5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	20.0	20.0	20.0	20.0	20.0		32.0	32.0		32.0	32.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)	24.7	24.7	24.7	24.7	24.7		10.5	10.5		10.5	10.5	
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68		0.29	0.29		0.29	0.29	
v/c Ratio	0.02	0.17	0.01	0.03	0.22		0.06	0.16		0.03	0.11	
Control Delay (s/veh)	6.4	5.3	1.7	6.4	5.4		13.2	10.6		12.9	9.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	6.4	5.3	1.7	6.4	5.4		13.2	10.6		12.9	9.2	
LOS	A	A	A	A	A		B	B		B	A	
Approach Delay (s/veh)		5.2			5.4			11.2			10.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 124
Actuated Cycle Length: 36.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.22
Intersection Signal Delay (s/veh): 6.0 Intersection LOS: A
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	591	9	18	773	26	84	15	57
v/c Ratio	0.02	0.17	0.01	0.03	0.22	0.06	0.16	0.03	0.11
Control Delay (s/veh)	6.4	5.3	1.7	6.4	5.4	13.2	10.6	12.9	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.4	5.3	1.7	6.4	5.4	13.2	10.6	12.9	9.2
Queue Length 50th (m)	0.4	8.7	0.0	0.7	11.7	1.5	3.4	0.8	1.7
Queue Length 95th (m)	2.1	13.5	1.1	2.8	17.5	5.5	10.9	3.9	7.8
Internal Link Dist (m)		1337.0			1384.0		3067.5		3060.0
Turn Bay Length (m)	35.0		40.0	45.0		40.0		30.0	
Base Capacity (vph)	667	5092	1328	803	5129	1506	1792	1506	1743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.12	0.01	0.02	0.15	0.02	0.05	0.01	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	585	9	18	747	18	26	53	30	15	29	28
Future Volume (vph)	11	585	9	18	747	18	26	53	30	15	29	28
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		5.7	5.7		5.7	5.7	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5092	1328	1825	5126		1825	1793		1825	1744	
Flt Permitted	0.35	1.00	1.00	0.42	1.00		0.78	1.00		0.78	1.00	
Satd. Flow (perm)	667	5092	1328	803	5126		1507	1793		1507	1744	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	11	591	9	18	755	18	26	54	30	15	29	28
RTOR Reduction (vph)	0	0	4	0	2	0	0	23	0	0	24	0
Lane Group Flow (vph)	11	591	5	18	771	0	26	61	0	15	33	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	21.0	21.0	21.0	21.0	21.0		5.1	5.1		5.1	5.1	
Effective Green, g (s)	21.0	21.0	21.0	21.0	21.0		5.1	5.1		5.1	5.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54		0.13	0.13		0.13	0.13	
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8		5.7	5.7		5.7	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	2770	722	436	2788		199	236		199	230	
v/s Ratio Prot		0.12			c0.15			c0.03			0.02	
v/s Ratio Perm	0.02		0.00	0.02			0.02			0.01		
v/c Ratio	0.03	0.21	0.01	0.04	0.28		0.13	0.26		0.08	0.14	
Uniform Delay, d1	4.1	4.5	4.0	4.1	4.7		14.8	15.1		14.7	14.8	
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	0.0	0.0	0.0	0.1		0.3	0.6		0.2	0.3	
Delay (s)	4.1	4.6	4.0	4.1	4.8		15.1	15.6		14.8	15.1	
Level of Service	A	A	A	A	A		B	B		B	B	
Approach Delay (s/veh)		4.6			4.8			15.5			15.0	
Approach LOS		A			A			B			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	5.9	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.27			
Actuated Cycle Length (s)	38.6	Sum of lost time (s)	12.5	
Intersection Capacity Utilization	57.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	178	29	174	279	194	164	1167	207	143	809	39
Future Volume (vph)	25	178	29	174	279	194	164	1167	207	143	809	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	110.0		0.0	90.0		0.0	90.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	100.0			100.0			100.0			100.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.979			0.939			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1839	0	1807	1772	0	1825	3472	0	1789	3455	0
Flt Permitted	0.222			0.354			0.227			0.058		
Satd. Flow (perm)	410	1839	0	673	1772	0	436	3472	0	109	3455	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			29			18			4	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1436.5			913.5			3112.8	
Travel Time (s)		79.0			86.2			54.8			186.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	26	187	31	183	294	204	173	1228	218	151	852	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	218	0	183	498	0	173	1446	0	151	893	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		7.0	25.0		7.0	25.0	
Minimum Split (s)	16.2	16.2		11.0	24.2		11.0	31.6		11.0	31.6	
Total Split (s)	42.0	42.0		16.0	58.0		19.0	63.0		19.0	63.0	
Total Split (%)	30.0%	30.0%		11.4%	41.4%		13.6%	45.0%		13.6%	45.0%	
Maximum Green (s)	35.8	35.8		12.0	51.8		15.0	56.4		15.0	56.4	
Yellow Time (s)	4.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	
Total Lost Time (s)	5.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	29.3	30.3		47.3	46.1		82.9	69.1		84.4	69.8	
Actuated g/C Ratio	0.21	0.22		0.34	0.33		0.59	0.49		0.60	0.50	
v/c Ratio	0.31	0.54		0.55	0.83		0.46	0.84		0.68	0.52	
Control Delay (s/veh)	53.9	51.4		39.5	52.3		16.6	37.3		44.8	26.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	53.9	51.4		39.5	52.3		16.6	37.3		44.8	26.6	
LOS	D	D		D	D		B	D		D	C	
Approach Delay (s/veh)		51.7			48.9			35.1			29.2	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 19 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 37.1		Intersection LOS: D	
Intersection Capacity Utilization 96.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	218	183	498	173	1446	151	893
v/c Ratio	0.31	0.54	0.55	0.83	0.46	0.84	0.68	0.52
Control Delay (s/veh)	53.9	51.4	39.5	52.3	16.6	37.3	44.8	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	51.4	39.5	52.3	16.6	37.3	44.8	26.6
Queue Length 50th (m)	6.3	52.8	36.9	119.6	19.7	186.0	24.7	90.7
Queue Length 95th (m)	15.5	74.5	52.5	153.0	34.4	#264.4	50.4	127.4
Internal Link Dist (m)		1293.1		1412.5		889.5		3088.8
Turn Bay Length (m)	45.0		110.0		90.0		90.0	
Base Capacity (vph)	107	500	332	698	424	1721	259	1724
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.44	0.55	0.71	0.41	0.84	0.58	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	178	29	174	279	194	164	1167	207	143	809	39
Future Volume (vph)	25	178	29	174	279	194	164	1167	207	143	809	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.2		3.0	4.2		3.0	4.6		3.0	4.6	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.94		1.00	0.98		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)	1755	1838		1807	1771		1825	3474		1789	3455	
Flt Permitted	0.22	1.00		0.35	1.00		0.23	1.00		0.06	1.00	
Satd. Flow (perm)	410	1838		673	1771		436	3474		110	3455	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	187	31	183	294	204	173	1228	218	151	852	41
RTOR Reduction (vph)	0	5	0	0	19	0	0	9	0	0	2	0
Lane Group Flow (vph)	26	213	0	183	479	0	173	1437	0	151	891	0
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.3	28.3		44.2	44.2		78.3	67.0		79.7	67.7	
Effective Green, g (s)	29.3	30.3		45.2	46.2		80.3	69.0		81.7	69.7	
Actuated g/C Ratio	0.21	0.22		0.32	0.33		0.57	0.49		0.58	0.50	
Clearance Time (s)	6.2	6.2		4.0	6.2		4.0	6.6		4.0	6.6	
Vehicle Extension (s)	5.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	85	397		321	584		372	1712		220	1720	
v/s Ratio Prot		0.12		0.05	c0.27		0.04	c0.41		c0.06	0.26	
v/s Ratio Perm	0.06			0.13			0.23			0.34		
v/c Ratio	0.31	0.54		0.57	0.82		0.47	0.84		0.69	0.52	
Uniform Delay, d1	46.8	48.6		36.5	43.1		16.0	30.7		35.1	23.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	2.5		2.4	9.9		0.9	5.1		8.6	1.1	
Delay (s)	51.0	51.2		39.0	52.9		16.9	35.8		43.7	24.9	
Level of Service	D	D		D	D		B	D		D	C	
Approach Delay (s/veh)		51.2			49.2			33.8			27.6	
Approach LOS		D			D			C			C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

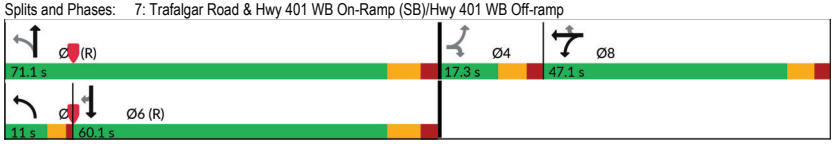
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	14	568	27	1396	5	791	0	0	656	45
Future Volume (vph)	17	0	14	568	27	1396	5	791	0	0	656	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	3411	0	0	3444	1306
Flt Permitted	0.588			0.950			0.179					
Satd. Flow (perm)	1130	0	1633	3372	1921	2737	344	3411	0	0	3444	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			353						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			465.4			196.9			254.2	
Travel Time (s)		69.9			27.9			11.8			13.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	5%	0%	5%	0%	7%	0%	0%	6%	25%
Adj. Flow (vph)	18	0	15	604	29	1485	5	841	0	0	698	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	0	15	604	29	1485	5	841	0	0	698	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			60.1	60.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			44.4%	44.4%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			52.0	52.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.8		10.8	64.9	64.9	64.9	48.3	44.2			42.0	42.0
Actuated g/C Ratio	0.08		0.08	0.48	0.48	0.48	0.36	0.33			0.31	0.31
v/c Ratio	0.20		0.06	0.37	0.03	0.99	0.03	0.76			0.65	0.10
Control Delay (s/veh)	63.2		0.4	26.2	25.4	49.3	24.8	45.1			43.5	0.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	63.2		0.4	26.2	25.4	49.3	24.8	45.1			43.5	0.4
LOS	E		A	C	C	D	C	D			D	A
Approach Delay (s/veh)		34.7			42.4			45.0			40.7	
Approach LOS		C			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 42.6		Intersection LOS: D	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	18	15	604	29	1485	5	841	698	48
v/c Ratio	0.20	0.06	0.37	0.03	0.99	0.03	0.76	0.65	0.10
Control Delay (s/veh)	63.2	0.4	26.2	25.4	49.3	24.8	45.1	43.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.2	0.4	26.2	25.4	49.3	24.8	45.1	43.5	0.4
Queue Length 50th (m)	4.6	0.0	58.1	4.3	~224.1	0.9	112.9	87.8	0.0
Queue Length 95th (m)	12.6	0.0	88.9	12.5	#309.0	3.4	121.1	109.9	0.0
Internal Link Dist (m)				441.4			172.9	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	89	249	1616	920	1495	199	1585	1321	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.06	0.37	0.03	0.99	0.03	0.53	0.53	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	14	568	27	1396	5	791	0	0	656	45
Future Volume (vph)	17	0	14	568	27	1396	5	791	0	0	656	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	0.95			0.95	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	3411			3444	1306
Flt Permitted	0.59		1.00	0.95	1.00	1.00	0.18	1.00			1.00	1.00
Satd. Flow (perm)	1130		1633	3372	1921	2737	343	3411			3444	1306
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	18	0	15	604	29	1485	5	841	0	0	698	48
RTOR Reduction (vph)	0	0	14	0	0	184	0	0	0	0	0	35
Lane Group Flow (vph)	18	0	1	604	29	1301	5	841	0	0	698	13
Heavy Vehicles (%)	0%	0%	0%	5%	0%	5%	0%	7%	0%	0%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	6.8		6.8	64.9	64.9	64.9	41.3	41.3			35.9	35.9
Effective Green, g (s)	6.8		6.8	64.9	64.9	64.9	41.3	41.3			35.9	35.9
Actuated g/C Ratio	0.05		0.05	0.48	0.48	0.48	0.30	0.30			0.26	0.26
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		81	1615	920	1310	119	1039			912	346
v/s Ratio Prot				0.18	0.02		0.00	c0.25			0.20	
v/s Ratio Perm	c0.02		0.00			c0.48	0.01					0.01
v/c Ratio	0.32		0.01	0.37	0.03	0.99	0.04	0.81			0.77	0.04
Uniform Delay, d1	62.1		61.1	22.4	18.7	35.1	34.5	43.5			45.9	37.0
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	3.3		0.0	0.1	0.0	23.1	0.1	6.8			6.1	0.2
Delay (s)	65.4		61.2	22.5	18.7	58.2	34.6	50.3			52.0	37.2
Level of Service	E		E	C	B	E	C	D			D	D
Approach Delay (s/veh)		63.5			47.4			50.2			51.0	
Approach LOS		E			D			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	48.9	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.92				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	90.0%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

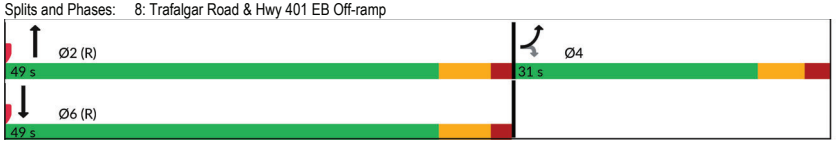
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	147	302	0	810	838	0
Future Volume (vph)	147	302	0	810	838	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.95	0.95	1.00
Frt	0.924	0.850				
Flt Protected	0.976					
Satd. Flow (prot)	2949	1327	0	3411	3444	0
Flt Permitted	0.976					
Satd. Flow (perm)	2949	1327	0	3411	3444	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	107	107				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	202.7	
Travel Time (s)	31.9			4.6	10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	16%	12%	0%	7%	6%	0%
Adj. Flow (vph)	162	332	0	890	921	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	328	166	0	890	921	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	12.2	12.2		53.8	53.8	
Actuated g/C Ratio	0.15	0.15		0.67	0.67	
v/c Ratio	0.61	0.57		0.39	0.40	
Control Delay (s/veh)	25.7	20.2		6.8	6.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.7	20.2		6.8	6.8	
LOS	C	C		A	A	
Approach Delay (s/veh)	23.8			6.8	6.8	
Approach LOS	C			A	A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay (s/veh): 10.4 Intersection LOS: B
Intersection Capacity Utilization 47.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	328	166	890	921
v/c Ratio	0.61	0.57	0.39	0.40
Control Delay (s/veh)	25.7	20.2	6.8	6.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.7	20.2	6.8	6.8
Queue Length 50th (m)	18.3	9.7	27.6	28.5
Queue Length 95th (m)	30.1	29.4	46.4	47.8
Internal Link Dist (m)	507.7		52.4	178.7
Turn Bay Length (m)		125.0		
Base Capacity (vph)	959	473	2291	2314
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.35	0.39	0.40

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	147	302	0	810	838	0
Future Volume (vph)	147	302	0	810	838	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.92	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2949	1327		3411	3444	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2949	1327		3411	3444	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	162	332	0	890	921	0
RTOR Reduction (vph)	91	91	0	0	0	0
Lane Group Flow (vph)	237	75	0	890	921	0
Heavy Vehicles (%)	16%	12%	0%	7%	6%	0%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	12.2	12.2		53.8	53.8	
Effective Green, g (s)	12.2	12.2		53.8	53.8	
Actuated g/C Ratio	0.15	0.15		0.67	0.67	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	449	202		2293	2316	
v/s Ratio Prot	c0.08			0.26	c0.27	
v/s Ratio Perm		0.06				
v/c Ratio	0.53	0.37		0.39	0.40	
Uniform Delay, d1	31.2	30.5		5.8	5.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.2		0.5	0.5	
Delay (s)	32.4	31.6		6.3	6.4	
Level of Service	C	C		A	A	
Approach Delay (s/veh)	32.1			6.3	6.4	
Approach LOS	C			A	A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	11.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.42			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	47.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Appendix C
Background Traffic Forecast Methodology

TABLE 1: Annual Growth Rates provided by the Region through Terms of Refernce

Corridor Segment	[redacted]	Growth Rates 2031 to 2041	Growth Rates 2041 to 2051
Trafalgar Rd between Derry Rd and Highway 401		1.0%	1.0%
Trafalgar Rd south of Britannia Rd		1.0%	2.0%
Trafalgar Rd between Derry Rd and Britannia Rd		**1.0%**	**2.0%**
Derry Rd west of Trafalgar Rd		3.0%	1.0%
Derry Rd east of Trafalgar Rd		2.0%	1.0%
Britannia Rd west of Trafalgar Rd		3.0%	1.0%
Britannia Rd east of Trafalgar Rd		2.0%	1.0%

NOTE: The Region's screenline forecasts did not directly account for the corridor segment of Trafalgar Road between Derry Road and Britannia Road. The Region recommended that the Trafalgar Road growth rates south of Britannia Road be also be applied between Dery Road and Britannia Road.

TABLE 2: Annual Growth Rates for Town Road Segments

Road Segment	[redacted]	Growth Rates 2031 to 2041	Growth Rates 2041 to 2051
Eighth Line south of Derry Rd		1.5%	1.0%
Eighth Line north of Derry Rd		1.5%	1.0%
Lower Base Line west of Trafalgar Rd		1.5%	1.0%
Lower Base Line east of Trafalgar Rd		1.5%	1.0%

As growth rates for Town Roads were not directly supplied through the TOR process, TYLin utilized data and methodologies applied in the Aguust 2025 MP4 Trafalgar RNA report.

To grow existing traffic to the 2031 horizon year, a growth rate of 2.65% was applied, as originally applied in Scenario A of the 2022 Trafalgar and Agerton TMP Addendum.

The 2031 to 2041 and 2041 to 2051 annual growth rates in Table 2 were provided to TYLin by Town Staff for the Trafalgar RNA. It is TYLin's understanding that the **Town's** growth rates (Table 2) did not account for the Agerton and Trafalgar Secondary Plan areas as background traffic. In the RNA, the Town's growth rates were increased to account for background traffic through the use of the Region's growth rates.

For example, The Region's growth rate for Trafalgar Road between Derry Road and Britannia Road was added to the Town's Eighth Line, south of Derry Road growth rate. (As highlighted in same color)

The resultant calculations for the purpose of the enclosed Agerton TMP Update are summarized in Table 3 (Table 1 ad Table 2 values added together, as applicable).

TABLE 3: Final Annual Growth Rates Applied to Town Road Segments

Road Segment	[redacted]	Growth Rates 2031 to 2041	Growth Rates 2041 to 2051
Eighth Line south of Derry Rd		2.5%	3.0%
Eighth Line north of Derry Rd		2.5%	2.0%
Lower Base Line west of Trafalgar Rd		4.5%	2.0%
Lower Base Line east of Trafalgar Rd		3.5%	2.0%

NOTE: The annual growth percentages in Table 1 and Table 3 of this appendix combine to create the summary background growth rate table in the main report body.

Alex Cheng

From: Loro, Darren <Darren.Loro@halton.ca>
Sent: Thursday, April 30, 2026 4:50 PM
To: Kassel Prince
Cc: Alex Cheng; Kyle Sant; Leonardo Gentile
Subject: RE: Agerton Traffic Model Meeting

Hi Kassel,

Per our discussion, here is a summary of the methodology we agreed upon. The green highlights indicate the changes from our previous comments, with the changes reflecting what we've discussed/agreed upon recently as well as adding clarification on certain items and processes.

Row Reference #	Scenario	Background Forecasting Methodology
---	**Existing**	---
1	**2031 Future Background Conditions**	1. Apply 2.65% compounded annually to all existing mov 2. Add Trafalgar Tertiary Plan 2031 (Phase 1) site traffic Plan RNA) to future background volume forecasts sin Agerton lands
2	**2031 Future Total Conditions (with GO Station)**	1. Add 2031 Agerton site generated traffic to 2031 future
4	**2031 Future Total Conditions (without GO Station)**	1. Follow exact same methodology under *2031 Future B* growth rate with 2.83% compounded annually as that 2. Add 2031 Agerton site generated traffic to modified 20
5	**2041 & 2051 Future Background Conditions**	1. Apply provided growth rates from IMP model (as deta Item #1 in Row #1 (i.e. the "base" 2031 future backgr 2031 (Phase 1) site traffic added) to forecast 2041/20 account for the Trafalgar lands already so this approa 2051 future conditions. 2. Use the provided EMME OD matrix data to isolate ba heavy trucks) associated with Agerton subject lands s 3. Subtract the Agerton "background volumes" from the 2041/2051
6	**2041 & 2051 Future Total Conditions (with GO Station)**	1. Add 2041/2051 Agerton site generated traffic to 2041/
7	**2041 & 2051 Future Total Conditions (without GO Station)**	1. Follow exact same methodology under *2041 & 2051 F* 2.65% growth rate with 2.83% compounded annually volumes in this scenario as that growth rate does not 2. Add 2041/2051 Agerton site generated traffic to modi this scenario

Hope this helps!

Row Reference #	Scenario	Background Forecasting Methodology
---	**Existing**	---
1	**2031 Future Background Conditions**	1. Apply 2.65% compounded annually to all existing movements (this growth rate accounts for GO station) 2. Add Trafalgar Tertiary Plan 2031 (Phase 1) site traffic volumes (Figures 5-6 and 5-7 from the Trafalgar Tertiary Plan RNA) to future background volume forecasts since the 2.65% growth rate does not account for Trafalgar or Agerton lands
2	**2031 Future Total Conditions (with GO Station)**	1. Add 2031 Agerton site generated traffic to 2031 future background conditions
4	**2031 Future Total Conditions (without GO Station)**	1. Follow exact same methodology under *2031 Future Background Conditions* (Row #1), except replace the 2.65% growth rate with 2.83% compounded annually as that growth rate does not account for GO Station 2. Add 2031 Agerton site generated traffic to modified 2031 future background volumes in this scenario
5	**2041 & 2051 Future Background Conditions**	1. Apply provided growth rates from IMP model (as detailed in Terms of Reference) to the forecasted volumes from Item #1 in Row #1 (i.e. the "base" 2031 future background volume forecasts without the Trafalgar Tertiary Plan 2031 (Phase 1) site traffic added) to forecast 2041/2051 future background traffic volumes. The IMP growth rates account for the Trafalgar lands already so this approach ensures that they are not double counted under 2041 & 2051 future conditions. 2. Use the provided EMME OD matrix data to isolate background volumes (auto, light trucks, medium trucks and heavy trucks) associated with Agerton subject lands since IMP growth rates account for Agerton lands 3. Subtract the Agerton "background volumes" from the road network so that Agerton is not reflected under 2041/2051
6	**2041 & 2051 Future Total Conditions (with GO Station)**	1. Add 2041/2051 Agerton site generated traffic to 2041/2051 future background conditions, respectively
7	**2041 & 2051 Future Total Conditions (without GO Station)**	1. Follow exact same methodology under *2041 & 2051 Future Background Conditions* (Row #5), except replace the 2.65% growth rate with 2.83% compounded annually in forecasting the modified 2031 future background "base" volumes in this scenario as that growth rate does not account for GO Station 2. Add 2041/2051 Agerton site generated traffic to modified 2041/2051 future background volumes, respectively, in this scenario

Cheers,
Darren

Darren Loro, C.E.T.
Project Manager I – Transportation Development Review
Development Services
Public Works
Halton Region
905-825-6000, ext. 2694 | 1-866-442-5866



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From: Loro, Darren
Sent: Friday, April 24, 2026 12:06 PM
To: 'Alex Cheng' <alex.cheng@tylin.com>
Cc: 'Kassel Prince' <kassel.prince@tylin.com>; 'Kyle Sant' <kyle.sant@tylin.com>; 'Leonardo Gentile' <leonardo.gentile@tylin.com>
Subject: RE: Agerton Traffic Model Meeting

Hi team,

Happy Friday!

We received the PCU equivalent factors from our modelling consultant and I've inserted them into the table in the e-mail chain below.

I think this addresses all of the inquires at this time. Happy to answer any further questions!

Cheers,
Darren

From: Loro, Darren
Sent: Tuesday, April 21, 2026 11:59 AM
To: 'Alex Cheng' <alex.cheng@tylin.com>
Cc: Kassel Prince <kassel.prince@tylin.com>; Kyle Sant <kyle.sant@tylin.com>; Leonardo Gentile <leonardo.gentile@tylin.com>
Subject: RE: Agerton Traffic Model Meeting

Hi team,

Following our meeting on Friday, I can provide the following information. The PCU equivalents for light/medium/heavy trucks is still being looked into by our modeling team (which we should have an answer to shortly), but I want to provide the information we do have confirmed as to keep things moving on your end.

To recap the overall forecasting methodology approach we agreed upon…

> ***The Region's requested forecasting methodology woill be adapted, with the exception being how the "background trips" associated with the Agerton Secondary Plan area are to be estimated and subtracted from the future background volumes*** *since the IMP growth rates accounted for the Agerton Secondary Plan (hence avoiding double counting in the report). Instead of using the Region's provided Joint Best Planning Estimate data to estimate these Agerton "background" trips to be subtracted, the Agerton-specific trips accounted for in the model will be isolated through the OD matrix data and subtracted from the road network. This methodology will be applied in lieu of using the Joint Best Planning Estimates, to which we acknowledged that those would only provide "rough" background trip estimates since ITE data would have to be used to estimate trips and then a trip distribution/assignment would have to be assumed to reflect these background trips on the road network – especially when the OD matrix data has been provided for this study.*

I updated John at the Town/LOG meeting yesterday that we reached this agreed-upon [kind-of-a-hybrid] approach for the forecasting and that there were a couple of minor details to be confirmed. John was very happy to hear this.

Cheers,
Darren

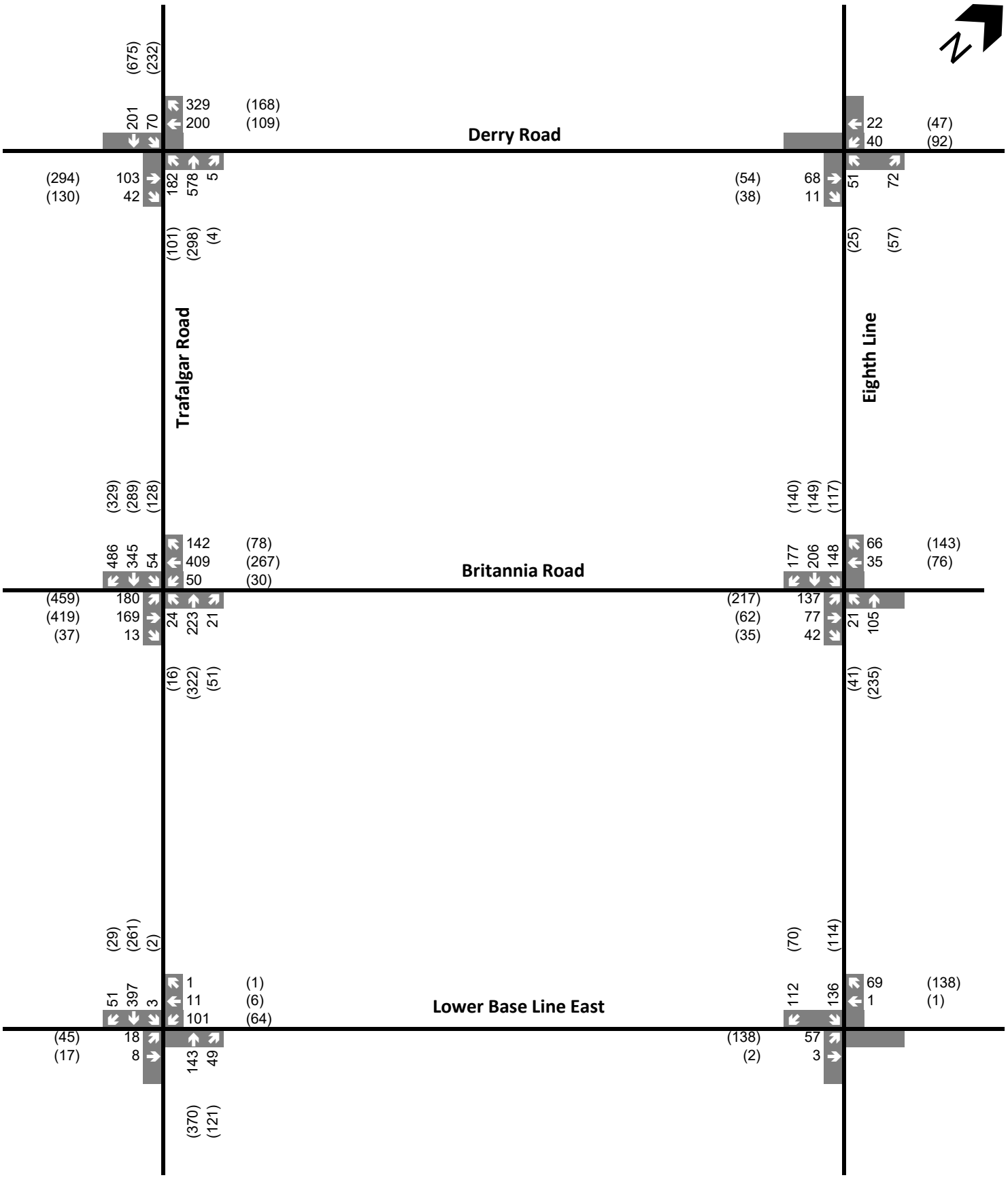
From: Alex Cheng <alex.cheng@tylin.com>
Sent: Friday, April 17, 2026 4:03 PM
To: Loro, Darren <Darren.Loro@halton.ca>
Cc: Kassel Prince <kassel.prince@tylin.com>; Kyle Sant <kyle.sant@tylin.com>; Leonardo Gentile <leonardo.gentile@tylin.com>
Subject: RE: Agerton Traffic Model Meeting

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hi Darren,

Following up our meeting, please see the sketches below for our queries for confirmation on

1. Considering 4701, 4704 and 4812 as external centroids, which fall out of Agerton Secondary Plan Yes, these three zones are "external" to the Agerton Secondary Plan area.	**Region's model shape files:**



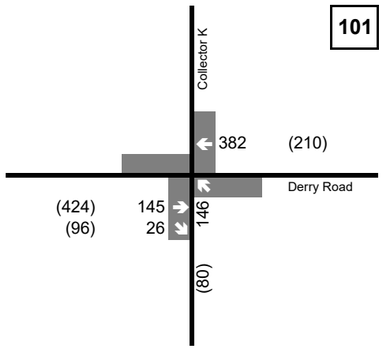
Legend

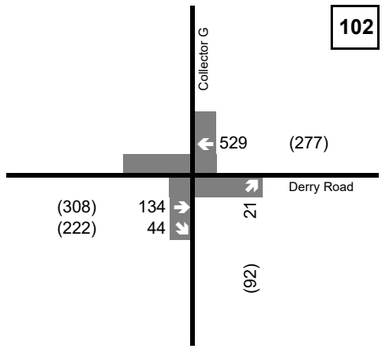
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

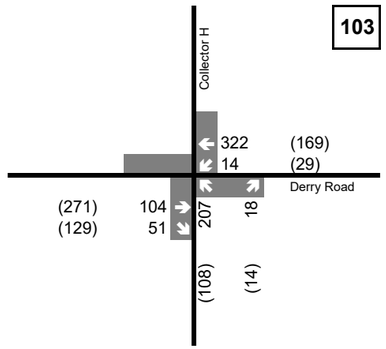
TYLin

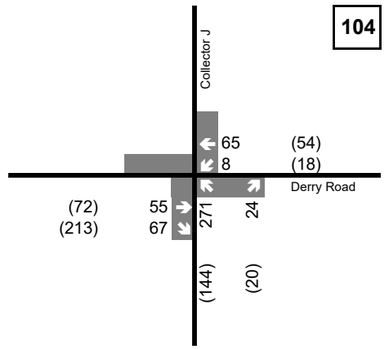
Figure 5-6
Trafalgar Phase 1 Site
Traffic Volumes: Existing Intersections

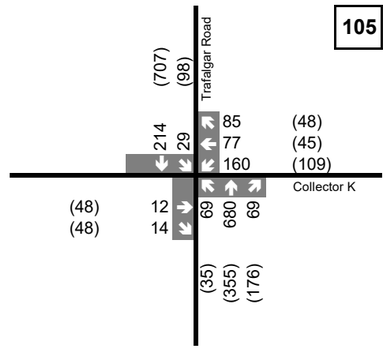
FUTURE ARTERIAL-COLLECTOR INTERSECTIONS

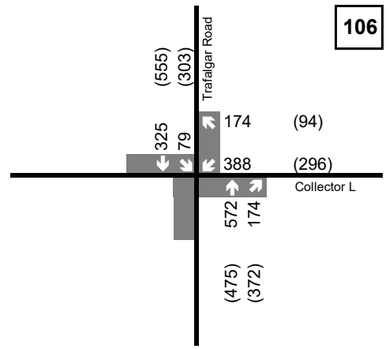


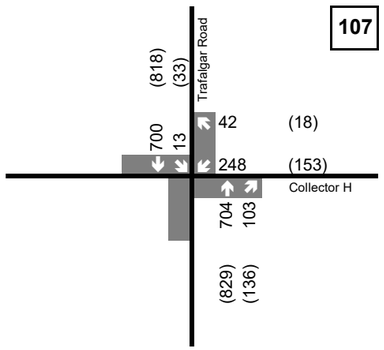


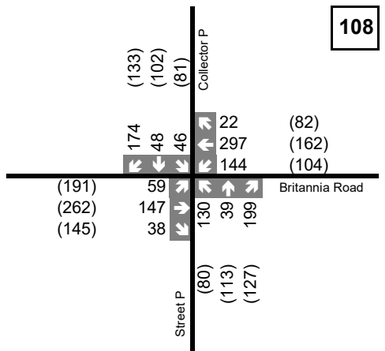


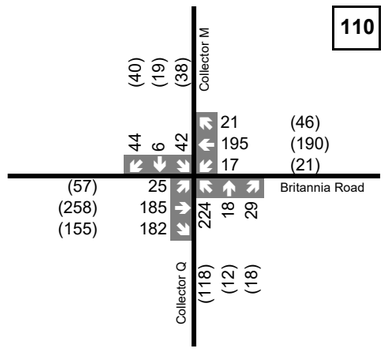


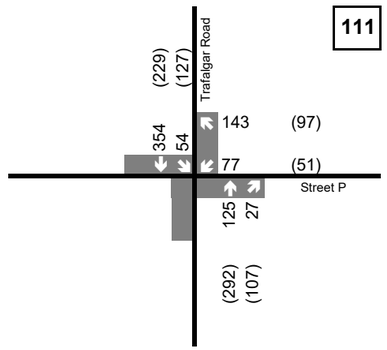


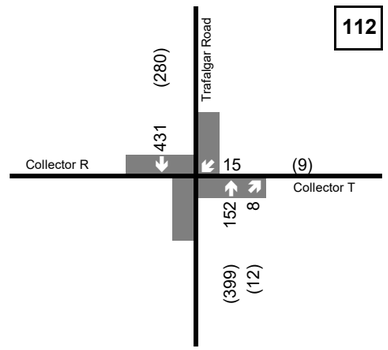


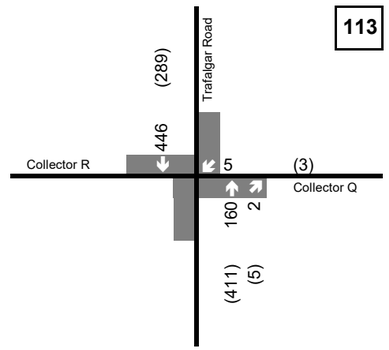


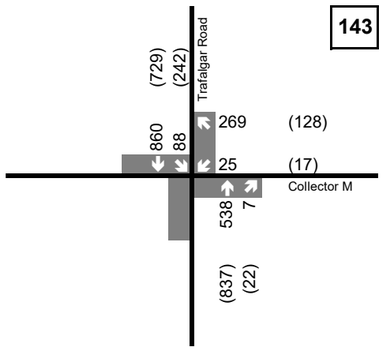












Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Figure 5-7

Trafalgar Phase 1 Site Traffic Volumes: Arterial-Collector Intersections

Appendix D
Future Background SYNCHRO Capacity and Queuing Analysis Reports

2031 Future Background

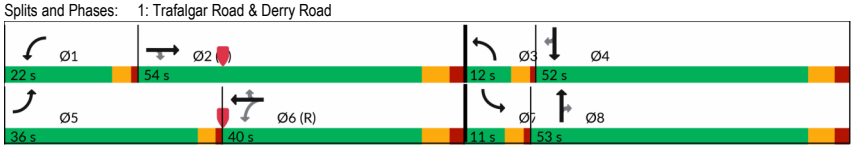
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	667	1353	293	232	651	432	290	1259	156	154	1013	66
Future Volume (vph)	667	1353	293	232	651	432	290	1259	156	154	1013	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3437	5142	1570	1825	5043	1633	3054	4706	1597	3268	4539	923
Flt Permitted	0.950			0.116			0.950			0.950		
Satd. Flow (perm)	3437	5142	1570	223	5043	1633	3054	4706	1597	3268	4539	923
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			123			135			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	2%	4%	0%	4%	0%	7%	9%	0%	0%	13%	73%
Adj. Flow (vph)	681	1381	299	237	664	441	296	1285	159	157	1034	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	1381	299	237	664	441	296	1285	159	157	1034	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	36.0	54.0	54.0	22.0	40.0	40.0	12.0	53.0	53.0	11.0	52.0	52.0
Total Split (%)	25.7%	38.6%	38.6%	15.7%	28.6%	28.6%	8.6%	37.9%	37.9%	7.9%	37.1%	37.1%
Maximum Green (s)	32.0	47.1	47.1	18.0	33.1	33.1	8.0	46.2	46.2	7.0	45.2	45.2
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	32.4	49.6	49.6	55.6	35.4	35.4	9.9	47.6	47.6	8.9	46.6	46.6
Actuated g/C Ratio	0.23	0.35	0.35	0.40	0.25	0.25	0.07	0.34	0.34	0.06	0.33	0.33
v/c Ratio	0.86	0.76	0.45	0.80	0.52	0.87	1.38	0.80	0.25	0.76	0.68	0.17
Control Delay (s/veh)	81.7	28.1	9.9	53.9	44.7	53.1	245.3	51.6	12.2	85.7	41.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.7	28.1	9.9	53.9	44.7	53.1	245.3	51.6	12.2	85.7	41.5	2.0
LOS	F	C	A	D	D	D	F	D	B	F	D	A
Approach Delay (s/veh)		41.3			49.1			80.9			44.9	
Approach LOS		D			D			F			D	
Queue Length 50th (m)	88.9	68.3	12.6	44.5	60.9	86.6	~60.2	135.1	8.4	22.5	99.1	0.7
Queue Length 95th (m)	109.6	105.7	m28.7	#77.9	62.8	#151.6	#95.9	162.6	m11.6	#42.6	89.8	0.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	810	1821	661	307	1276	505	215	1620	638	206	1530	393
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.76	0.45	0.77	0.52	0.87	1.38	0.79	0.25	0.76	0.68	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay (s/veh): 53.8		Intersection LOS: D	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	

Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	1381	299	237	664	441	296	1285	159	157	1034	67
v/c Ratio	0.86	0.76	0.45	0.80	0.52	0.87	1.38	0.80	0.25	0.76	0.68	0.17
Control Delay (s/veh)	81.7	28.1	9.9	53.9	44.7	53.1	245.3	51.6	12.2	85.7	41.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.7	28.1	9.9	53.9	44.7	53.1	245.3	51.6	12.2	85.7	41.5	2.0
Queue Length 50th (m)	88.9	68.3	12.6	44.5	60.9	86.6	~60.2	135.1	8.4	22.5	99.1	0.7
Queue Length 95th (m)	109.6	105.7	m28.7	#77.9	62.8	#151.6	#95.9	162.6	m11.6	#42.6	89.8	0.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	810	1821	661	307	1276	505	215	1620	638	206	1530	393
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.76	0.45	0.77	0.52	0.87	1.38	0.79	0.25	0.76	0.68	0.17

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	667	1353	293	232	651	432	290	1259	156	154	1013	66
Future Volume (vph)	667	1353	293	232	651	432	290	1259	156	154	1013	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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	1570	1825	5043	1633	3054	4706	1597	3268	4539	923
Flt Permitted	0.95	1.00	1.00	0.12	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3437	5142	1570	223	5043	1633	3054	4706	1597	3268	4539	923
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	681	1381	299	237	664	441	296	1285	159	157	1034	67
RTOR Reduction (vph)	0	0	105	0	0	92	0	0	89	0	0	45
Lane Group Flow (vph)	681	1381	194	237	664	349	296	1285	70	157	1034	22
Heavy Vehicles (%)	3%	2%	4%	0%	4%	0%	7%	9%	0%	0%	13%	73%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Actuated Green, G (s)	31.4	47.6	47.6	50.6	33.4	33.4	8.9	45.6	45.6	7.9	44.6	44.6
Effective Green, g (s)	32.4	49.6	49.6	52.6	35.4	35.4	9.9	47.6	47.6	8.9	46.6	46.6
Actuated g/C Ratio	0.23	0.35	0.35	0.38	0.25	0.25	0.07	0.34	0.34	0.06	0.33	0.33
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	6.8
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)	795	1821	556	292	1275	412	215	1600	542	207	1510	307
v/s Ratio Prot	c0.20	0.27		0.11	0.13		c0.10	c0.27		0.05	0.23	
v/s Ratio Perm			0.12	0.20		c0.21			0.04			0.02
v/c Ratio	0.86	0.76	0.35	0.81	0.52	0.85	1.38	0.80	0.13	0.76	0.68	0.07
Uniform Delay, d1	51.6	39.9	33.3	34.9	45.0	49.7	65.1	41.9	31.9	64.5	40.4	31.9
Progression Factor	1.45	0.65	0.56	0.97	0.96	0.97	1.16	1.13	1.50	0.98	0.96	1.00
Incremental Delay, d2	5.9	1.7	1.0	16.7	1.4	18.2	194.2	3.2	0.2	16.9	1.6	0.2
Delay (s)	80.8	27.8	19.6	50.5	44.5	66.3	269.5	50.5	48.0	79.9	40.5	32.1
Level of Service	F	C	B	D	D	E	F	D	D	E	D	C
Approach Delay (s/veh)		42.1			52.7			87.5			45.0	
Approach LOS		D			D			F			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	56.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	83.9%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

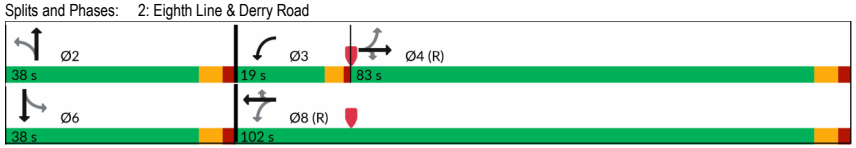
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1471	85	114	804	6	69	0	120	3	0	9
Future Volume (vph)	15	1471	85	114	804	6	69	0	120	3	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1825	5142	1633	1825	1633	0	1825	1633	0
Flt Permitted	0.324			0.134			0.752			0.494		
Satd. Flow (perm)	610	5142	1601	257	5142	1633	1445	1633	0	949	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89			23		199			221	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	16	1532	89	119	838	6	72	0	125	3	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	1532	89	119	838	6	72	125	0	3	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		36.0	36.0	
Total Split (s)	83.0	83.0	83.0	19.0	102.0	102.0	38.0	38.0		38.0	38.0	
Total Split (%)	59.3%	59.3%	59.3%	13.6%	72.9%	72.9%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	77.0	77.0	77.0	15.0	96.0	96.0	32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0		23.0	23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	
Act Effct Green (s)	101.4	101.4	101.4	117.1	115.1	115.1	12.9	12.9		12.9	12.9	
Actuated g/C Ratio	0.72	0.72	0.72	0.84	0.82	0.82	0.09	0.09		0.09	0.09	
v/c Ratio	0.04	0.41	0.08	0.37	0.20	0.00	0.54	0.38		0.03	0.03	
Control Delay (s/veh)	8.4	22.8	5.6	5.5	2.9	0.0	52.1	7.8		56.3	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.4	22.8	5.6	5.5	2.9	0.0	52.1	7.8		56.3	0.1	
LOS	A	C	A	A	A	A	D	A		E	A	
Approach Delay (s/veh)		21.7			3.2			24.0			14.2	
Approach LOS		C			A			C			B	
Queue Length 50th (m)	2.8	161.6	10.4	4.4	14.3	0.0	16.9	4.9		0.8	0.0	
Queue Length 95th (m)	m3.3	143.6	m13.4	9.6	22.1	0.0	27.2	10.4		3.7	0.0	
Internal Link Dist (m)		339.9			1143.6			359.1			414.8	
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0			35.0		
Base Capacity (vph)	442	3725	1184	383	4227	1346	330	526		216	543	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.04	0.41	0.08	0.31	0.20	0.00	0.22	0.24		0.01	0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	1532	89	119	838	6	72	125	3	9
v/c Ratio	0.04	0.41	0.08	0.37	0.20	0.00	0.54	0.38	0.03	0.03
Control Delay (s/veh)	8.4	22.8	5.6	5.5	2.9	0.0	52.1	7.8	56.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.4	22.8	5.6	5.5	2.9	0.0	52.1	7.8	56.3	0.1
Queue Length 50th (m)	2.8	161.6	10.4	4.4	14.3	0.0	16.9	4.9	0.8	0.0
Queue Length 95th (m)	m3.3	143.6	m13.4	9.6	22.1	0.0	27.2	10.4	3.7	0.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	442	3725	1184	383	4227	1346	330	526	216	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.41	0.08	0.31	0.20	0.00	0.22	0.24	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1471	85	114	804	6	69	0	120	3	0	9
Future Volume (vph)	15	1471	85	114	804	6	69	0	120	3	0	9
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1789	5142	1601	1825	5142	1633	1825	1633		1825	1633	
Flt Permitted	0.32	1.00	1.00	0.13	1.00	1.00	0.75	1.00		0.49	1.00	
Satd. Flow (perm)	611	5142	1601	257	5142	1633	1444	1633		949	1633	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	1532	89	119	838	6	72	0	125	3	0	9
RTOR Reduction (vph)	0	0	25	0	0	1	0	113	0	0	8	0
Lane Group Flow (vph)	16	1532	64	119	838	5	72	12	0	3	1	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	101.4	101.4	101.4	115.1	115.1	115.1	12.9	12.9		12.9	12.9	
Effective Green, g (s)	101.4	101.4	101.4	115.1	115.1	115.1	12.9	12.9		12.9	12.9	
Actuated g/C Ratio	0.72	0.72	0.72	0.82	0.82	0.82	0.09	0.09		0.09	0.09	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	442	3724	1159	319	4227	1342	133	150		87	150	
v/s Ratio Prot		c0.30		c0.03	0.16			0.01			0.00	
v/s Ratio Perm	0.03		0.04	0.28		0.00	c0.05			0.00		
v/c Ratio	0.04	0.41	0.06	0.37	0.20	0.00	0.54	0.08		0.03	0.01	
Uniform Delay, d1	5.5	7.6	5.5	3.8	2.6	2.2	60.7	58.1		57.9	57.7	
Progression Factor	1.16	2.76	3.62	1.00	1.00	1.00	0.62	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3	0.1	0.7	0.1	0.0	4.4	0.2		0.2	0.0	
Delay (s)	6.5	21.2	20.1	4.5	2.8	2.2	42.0	58.3		58.0	57.7	
Level of Service	A	C	C	A	A	A	D	E		E	E	
Approach Delay (s/veh)		21.0			3.0			52.4			57.8	
Approach LOS		C			A			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	17.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.42			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.8%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	321	820	346	215	703	216	173	986	205	92	1478	563
Future Volume (vph)	321	820	346	215	703	216	173	986	205	92	1478	563
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3309	5142	1601	3541	4995	1633	1636	4839	1597	1652	4839	1597
Flt Permitted	0.950			0.950			0.085			0.243		
Satd. Flow (perm)	3309	5142	1601	3541	4995	1633	146	4839	1597	422	4839	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			156			207			321
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	7%	2%	2%	0%	5%	0%	3%	6%	0%	2%	6%	0%
Adj. Flow (vph)	324	828	349	217	710	218	175	996	207	93	1493	569
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	828	349	217	710	218	175	996	207	93	1493	569
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	41.0
Total Split (s)	22.0	46.0	46.0	16.0	40.0	40.0	20.0	67.0	67.0	11.0	58.0	58.0
Total Split (%)	15.7%	32.9%	32.9%	11.4%	28.6%	28.6%	14.3%	47.9%	47.9%	7.9%	41.4%	41.4%
Maximum Green (s)	18.0	40.0	40.0	12.0	34.0	34.0	16.0	60.0	60.0	7.0	51.0	51.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	18.0	33.6	33.6	12.6	28.3	28.3	83.4	69.2	69.2	75.0	63.5	63.5
Actuated g/C Ratio	0.13	0.24	0.24	0.09	0.20	0.20	0.60	0.49	0.49	0.54	0.45	0.45
v/c Ratio	0.76	0.67	0.66	0.68	0.70	0.48	0.71	0.42	0.23	0.30	0.68	0.63
Control Delay (s/veh)	71.3	50.6	27.7	66.4	52.8	16.7	56.5	29.9	11.8	12.1	28.7	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.3	50.6	27.7	66.4	52.8	16.7	56.5	29.9	11.8	12.1	28.7	11.3
LOS	E	D	C	E	D	B	E	C	B	B	C	B
Approach Delay (s/veh)		49.8			48.5			30.6			23.4	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	47.4	77.5	42.0	31.0	72.7	18.4	40.5	54.3	0.3	6.1	142.0	75.4
Queue Length 95th (m)	64.7	87.1	72.7	34.7	86.1	43.8	69.7	105.2	34.6	m10.8	169.1	114.1
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	449	1542	609	328	1284	535	277	2393	894	309	2196	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.54	0.57	0.66	0.55	0.41	0.63	0.42	0.23	0.30	0.68	0.63

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 36.1		Intersection LOS: D	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	324	828	349	217	710	218	175	996	207	93	1493	569
v/c Ratio	0.76	0.67	0.66	0.68	0.70	0.48	0.71	0.42	0.23	0.30	0.68	0.63
Control Delay (s/veh)	71.3	50.6	27.7	66.4	52.8	16.7	56.5	29.9	11.8	12.1	28.7	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.3	50.6	27.7	66.4	52.8	16.7	56.5	29.9	11.8	12.1	28.7	11.3
Queue Length 50th (m)	47.4	77.5	42.0	31.0	72.7	18.4	40.5	54.3	0.3	6.1	142.0	75.4
Queue Length 95th (m)	64.7	87.1	72.7	34.7	86.1	43.8	69.7	105.2	34.6	m10.8	169.1	114.1
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	449	1542	609	328	1284	535	277	2393	894	309	2196	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.54	0.57	0.66	0.55	0.41	0.63	0.42	0.23	0.30	0.68	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	321	820	346	215	703	216	173	986	205	92	1478	563
Future Volume (vph)	321	820	346	215	703	216	173	986	205	92	1478	563
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	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
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)	3309	5142	1601	3541	4995	1633	1636	4839	1597	1652	4839	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	3309	5142	1601	3541	4995	1633	146	4839	1597	423	4839	1597
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	324	828	349	217	710	218	175	996	207	93	1493	569
RTOR Reduction (vph)	0	0	140	0	0	124	0	0	105	0	0	175
Lane Group Flow (vph)	324	828	209	217	710	94	175	996	102	93	1493	394
Heavy Vehicles (%)	7%	2%	2%	0%	5%	0%	3%	6%	0%	2%	6%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	17.0	31.7	31.7	11.6	26.3	26.3	79.7	67.2	67.2	70.0	61.5	61.5
Effective Green, g (s)	18.0	33.7	33.7	12.6	28.3	28.3	80.7	69.2	69.2	72.0	63.5	63.5
Actuated g/C Ratio	0.13	0.24	0.24	0.09	0.20	0.20	0.58	0.49	0.49	0.51	0.45	0.45
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	425	1237	385	318	1009	330	245	2391	789	300	2194	724
v/s Ratio Prot	c0.10	c0.16		0.06	0.14		c0.08	0.21		0.02	0.31	
v/s Ratio Perm			0.13			0.06	c0.33		0.06	0.14		0.25
v/c Ratio	0.76	0.67	0.54	0.68	0.70	0.28	0.71	0.42	0.13	0.31	0.68	0.54
Uniform Delay, d1	58.9	48.1	46.4	61.8	51.9	47.3	27.8	22.5	19.1	17.7	30.2	27.7
Progression Factor	1.00	1.00	1.00	0.89	0.95	0.91	1.74	1.25	3.90	0.71	0.85	0.62
Incremental Delay, d2	7.9	1.4	1.6	5.9	2.2	0.5	8.6	0.5	0.3	0.5	1.5	2.6
Delay (s)	66.8	49.5	48.0	61.0	51.3	43.6	57.0	28.7	75.0	13.2	27.2	19.7
Level of Service	E	D	D	E	D	D	E	C	E	B	C	B
Approach Delay (s/veh)		52.9			51.7			39.2			24.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	39.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

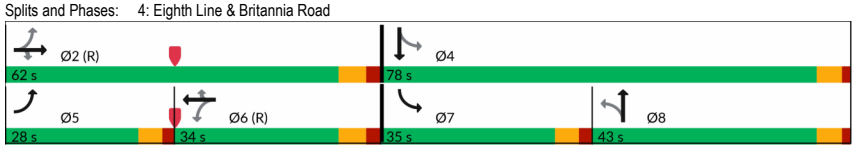
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	928	52	19	536	80	36	146	22	178	289	195
Future Volume (vph)	158	928	52	19	536	80	36	146	22	178	289	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.981			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5142	1633	1825	5043	1633	1362	1880	0	1825	1781	0
Flt Permitted	0.385			0.290			0.285			0.367		
Satd. Flow (perm)	740	5142	1633	557	5043	1633	409	1880	0	705	1781	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			115		5			37	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	34%	0%	2%	0%	2%	0%
Adj. Flow (vph)	161	947	53	19	547	82	37	149	22	182	295	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	161	947	53	19	547	82	37	171	0	182	502	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	28.0	62.0	62.0	34.0	34.0	34.0	43.0	43.0		35.0	78.0	
Total Split (%)	20.0%	44.3%	44.3%	24.3%	24.3%	24.3%	30.7%	30.7%		25.0%	55.7%	
Maximum Green (s)	22.0	55.2	55.2	27.2	27.2	27.2	37.3	37.3		29.0	72.3	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	83.5	82.7	82.7	65.4	65.4	65.4	22.9	22.9		44.5	44.8	
Actuated g/C Ratio	0.60	0.59	0.59	0.47	0.47	0.47	0.16	0.16		0.32	0.32	
v/c Ratio	0.30	0.31	0.05	0.07	0.23	0.10	0.55	0.55		0.52	0.85	
Control Delay (s/veh)	27.1	25.1	11.9	27.9	24.7	2.2	75.0	52.2		38.4	52.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.1	25.1	11.9	27.9	24.7	2.2	75.0	52.2		38.4	52.7	
LOS	C	C	B	C	C	A	E	D		D	D	
Approach Delay (s/veh)		24.8			22.0			56.3			48.9	
Approach LOS		C			C			E			D	
Queue Length 50th (m)	21.3	49.4	1.2	2.8	33.3	0.0	11.3	40.3		40.4	126.6	
Queue Length 95th (m)	46.5	73.8	m8.8	10.1	53.2	5.0	m19.7	m52.5		50.0	144.5	
Internal Link Dist (m)		1337.0			1384.0			3065.7			2676.9	
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0			120.0		
Base Capacity (vph)	611	3037	992	260	2356	824	108	504		455	937	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.26	0.31	0.05	0.07	0.23	0.10	0.34	0.34		0.40	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 32.6		Intersection LOS: C	
Intersection Capacity Utilization 95.0%		ICU Level of Service F	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	161	947	53	19	547	82	37	171	182	502
v/c Ratio	0.30	0.31	0.05	0.07	0.23	0.10	0.55	0.55	0.52	0.85
Control Delay (s/veh)	27.1	25.1	11.9	27.9	24.7	2.2	75.0	52.2	38.4	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.1	25.1	11.9	27.9	24.7	2.2	75.0	52.2	38.4	52.7
Queue Length 50th (m)	21.3	49.4	1.2	2.8	33.3	0.0	11.3	40.3	40.4	126.6
Queue Length 95th (m)	46.5	73.8	m8.8	10.1	53.2	5.0	m19.7	m52.5	50.0	144.5
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	611	3037	992	260	2356	824	108	504	455	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.31	0.05	0.07	0.23	0.10	0.34	0.34	0.40	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	928	52	19	536	80	36	146	22	178	289	195
Future Volume (vph)	158	928	52	19	536	80	36	146	22	178	289	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5142	1633	1825	5043	1633	1362	1879		1825	1781	
Flt Permitted	0.38	1.00	1.00	0.29	1.00	1.00	0.29	1.00		0.37	1.00	
Satd. Flow (perm)	740	5142	1633	557	5043	1633	409	1879		706	1781	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	161	947	53	19	547	82	37	149	22	182	295	207
RTOR Reduction (vph)	0	0	22	0	0	44	0	4	0	0	25	0
Lane Group Flow (vph)	161	947	31	19	547	38	37	167	0	182	477	0
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	34%	0%	2%	0%	2%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	82.7	82.7	82.7	65.4	65.4	65.4	23.0	23.0		44.8	44.8	
Effective Green, g (s)	82.7	82.7	82.7	65.4	65.4	65.4	23.0	23.0		44.8	44.8	
Actuated g/C Ratio	0.59	0.59	0.59	0.47	0.47	0.47	0.16	0.16		0.32	0.32	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	524	3037	964	260	2355	762	67	308		352	569	
v/s Ratio Prot	0.02	c0.18			0.11			0.09		0.06	c0.27	
v/s Ratio Perm	0.16		0.02	0.03		0.02	0.09			0.11		
v/c Ratio	0.31	0.31	0.03	0.07	0.23	0.05	0.55	0.54		0.52	0.84	
Uniform Delay, d1	13.2	14.4	12.0	20.6	22.3	20.4	53.8	53.7		36.6	44.2	
Progression Factor	1.78	1.59	4.93	1.00	1.00	1.00	0.90	0.90		0.96	0.97	
Incremental Delay, d2	0.3	0.2	0.1	0.5	0.2	0.1	8.9	1.8		1.3	10.4	
Delay (s)	23.8	23.2	59.0	21.1	22.5	20.5	57.2	50.2		36.3	53.5	
Level of Service	C	C	E	C	C	C	E	D		D	D	
Approach Delay (s/veh)		24.9			22.2			51.5			48.9	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	32.4	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.55				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		24.5	
Intersection Capacity Utilization	95.0%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	323	63	320	143	113	35	1048	213	305	1716	105
Future Volume (vph)	128	323	63	320	143	113	35	1048	213	305	1716	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	45.0		70.0	110.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.975			0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1858	0	1807	1670	0	1678	4839	1551	1662	4885	1597
Flt Permitted	0.444			0.128			0.085			0.182		
Satd. Flow (perm)	853	1858	0	243	1670	0	150	4839	1551	318	4885	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			27				213			130
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	1%	3%	13%	4%	6%	3%	5%	5%	0%
Adj. Flow (vph)	133	336	66	333	149	118	35	1048	213	318	1788	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	402	0	333	267	0	35	1048	213	318	1788	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2		11.5	24.2		9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	10.7	33.0		17.6	39.9		9.6	56.4	56.4	33.0	79.8	79.8
Total Split (%)	7.6%	23.6%		12.6%	28.5%		6.9%	40.3%	40.3%	23.6%	57.0%	57.0%
Maximum Green (s)	6.2	26.8		13.1	33.7		5.1	49.8	49.8	29.0	73.2	73.2
Yellow Time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0							
Flash Don't Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	36.7	28.8		47.1	35.7		69.3	62.2	62.2	86.4	77.2	77.2
Actuated g/C Ratio	0.26	0.21		0.34	0.26		0.50	0.44	0.44	0.62	0.55	0.55
v/c Ratio	0.49	1.04		1.39	0.60		0.25	0.49	0.26	0.83	0.66	0.12
Control Delay (s/veh)	42.2	109.3		231.2	47.5		18.1	29.6	4.4	49.4	35.2	11.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.2	109.3		231.2	47.5		18.1	29.6	4.4	49.4	35.2	11.0
LOS	D	F		F	D		B	C	A	D	D	B
Approach Delay (s/veh)		92.6			149.5			25.2			36.1	
Approach LOS		F			F			C			D	
Queue Length 50th (m)	26.3	~119.5		~107.3	60.3		3.7	77.1	0.0	73.5	141.3	4.6
Queue Length 95th (m)	42.7	#184.1		#168.4	90.9		8.3	104.7	16.8	109.9	191.4	m17.7
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	45.0			110.0			100.0		70.0	170.0		70.0
Base Capacity (vph)	273	386		239	445		140	2149	807	484	2692	938
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.49	1.04		1.39	0.60		0.25	0.49	0.26	0.66	0.66	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 54.2		Intersection LOS: D	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	

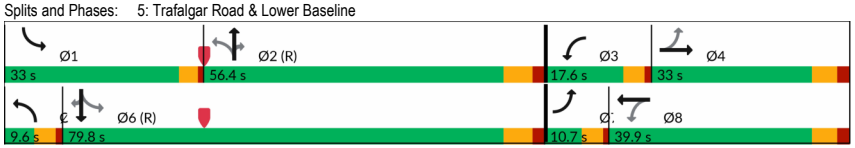
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	133	402	333	267	35	1048	213	318	1788	109
v/c Ratio	0.49	1.04	1.39	0.60	0.25	0.49	0.26	0.83	0.66	0.12
Control Delay (s/veh)	42.2	109.3	231.2	47.5	18.1	29.6	4.4	49.4	35.2	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.2	109.3	231.2	47.5	18.1	29.6	4.4	49.4	35.2	11.0
Queue Length 50th (m)	26.3	~119.5	~107.3	60.3	3.7	77.1	0.0	73.5	141.3	4.6
Queue Length 95th (m)	42.7	#184.1	#168.4	90.9	8.3	104.7	16.8	109.9	191.4	m17.7
Internal Link Dist (m)		1293.1		1410.4		889.5			3062.5	
Turn Bay Length (m)	45.0		110.0		100.0		70.0	170.0		70.0
Base Capacity (vph)	273	386	239	445	140	2149	807	484	2692	938
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	1.04	1.39	0.60	0.25	0.49	0.26	0.66	0.66	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	323	63	320	143	113	35	1048	213	305	1716	105
Future Volume (vph)	128	323	63	320	143	113	35	1048	213	305	1716	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.93		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	1858		1807	1670		1678	4839	1551	1662	4885	1597
Flt Permitted	0.44	1.00		0.13	1.00		0.08	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	852	1858		243	1670		149	4839	1551	318	4885	1597
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	133	336	66	333	149	118	35	1048	213	318	1788	109
RTOR Reduction (vph)	0	5	0	0	20	0	0	0	118	0	0	50
Lane Group Flow (vph)	133	397	0	333	247	0	35	1048	95	318	1788	59
Heavy Vehicles (%)	0%	1%	0%	1%	3%	13%	4%	6%	3%	5%	5%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	33.0	26.8		44.4	33.7		64.2	60.2	60.2	82.8	74.3	74.3
Effective Green, g (s)	35.0	28.8		45.4	35.7		66.2	62.2	62.2	83.8	76.3	76.3
Actuated g/C Ratio	0.25	0.21		0.32	0.26		0.47	0.44	0.44	0.60	0.54	0.54
Clearance Time (s)	4.5	6.2		4.5	6.2		4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Lane Grp Cap (vph)	263	382		236	425		125	2149	689	378	2662	870
v/s Ratio Prot	0.03	0.21		c0.14	0.15		0.01	0.22		c0.12	0.37	
v/s Ratio Perm	0.10			c0.31			0.12		0.06	c0.39		0.04
v/c Ratio	0.51	1.04		1.41	0.58		0.28	0.49	0.14	0.84	0.67	0.07
Uniform Delay, d1	43.5	55.6		40.0	45.6		21.2	27.6	23.0	18.4	22.9	15.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.99	1.50	7.09
Incremental Delay, d2	1.5	56.8		208.2	3.1		0.4	0.8	0.4	12.1	1.1	0.1
Delay (s)	45.0	112.4		248.2	48.7		21.7	28.4	23.4	48.9	35.3	106.8
Level of Service	D	F		F	D		C	C	C	D	D	F
Approach Delay (s/veh)		95.6			159.4			27.4			40.8	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	58.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

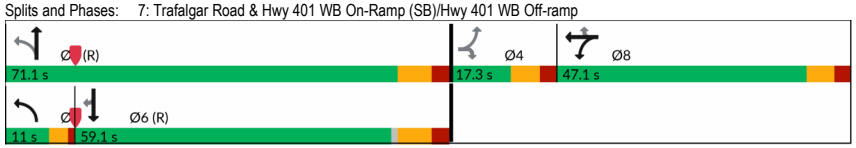
c Critical Lane Group

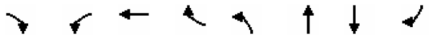
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Future Volume (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1601	3471	1883	2818	1789	5142	0	0	5142	1601
Flt Permitted				0.950			0.177					
Satd. Flow (perm)	1883	0	1601	3471	1883	2818	333	5142	0	0	5142	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223			332						139
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Adj. Flow (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	14.7	14.7	14.7	106.3	102.2			97.8	97.8
Actuated g/C Ratio			0.07	0.11	0.11	0.11	0.78	0.75			0.72	0.72
v/c Ratio			0.02	0.70	0.04	0.55	0.04	0.22			0.35	0.12
Control Delay (s/veh)			0.0	68.0	52.4	9.0	5.7	5.9			9.1	2.2
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.0	68.0	52.4	9.0	5.7	5.9			9.1	2.2
LOS			A	E	D	A	A	A			A	A
Approach Delay (s/veh)					35.2			5.9			8.5	
Approach LOS					D			A			A	
Queue Length 50th (m)			0.0	35.8	2.0	0.0	0.5	19.1			32.1	0.0
Queue Length 95th (m)			0.0	48.8	7.0	14.7	3.4	43.6			87.8	9.7
Internal Link Dist (m)		558.9			384.0			211.1			230.2	
Turn Bay Length (m)			10.0	90.0		80.0	60.0					85.0
Base Capacity (vph)			324	1024	555	1065	336	3877			3710	1193
Starvation Cap Reductn			0	0	0	0	0	0			0	0
Spillback Cap Reductn			0	0	0	0	0	0			0	0
Storage Cap Reductn			0	0	0	0	0	0			0	0
Reduced v/c Ratio			0.02	0.25	0.01	0.31	0.04	0.22			0.35	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 13.3		Intersection LOS: B	
Intersection Capacity Utilization 60.3%		ICU Level of Service B	
Analysis Period (min) 15			

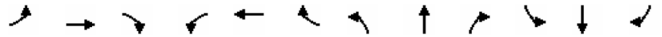
Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp





Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	261	8	332	12	851	1286	139
v/c Ratio	0.02	0.70	0.04	0.55	0.04	0.22	0.35	0.12
Control Delay (s/veh)	0.0	68.0	52.4	9.0	5.7	5.9	9.1	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	68.0	52.4	9.0	5.7	5.9	9.1	2.2
Queue Length 50th (m)	0.0	35.8	2.0	0.0	0.5	19.1	32.1	0.0
Queue Length 95th (m)	0.0	48.8	7.0	14.7	3.4	43.6	87.8	9.7
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	324	1024	555	1065	336	3877	3710	1193
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.25	0.01	0.31	0.04	0.22	0.35	0.12

Intersection Summary



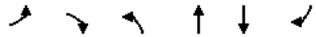
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Future Volume (vph)	0	0	5	261	8	332	12	851	0	0	1286	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	0.91			0.91	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1601	3471	1883	2818	1789	5142			5142	1601
Flt Permitted			1.00	0.95	1.00	1.00	0.18	1.00			1.00	1.00
Satd. Flow (perm)			1601	3471	1883	2818	333	5142			5142	1601
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	5	261	8	332	12	851	0	0	1286	139
RTOR Reduction (vph)	0	0	5	0	0	296	0	0	0	0	0	47
Lane Group Flow (vph)	0	0	0	261	8	36	12	851	0	0	1286	92
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	14.7	14.7	14.7	96.3	96.3			89.5	89.5
Effective Green, g (s)			2.0	14.7	14.7	14.7	96.3	96.3			89.5	89.5
Actuated g/C Ratio			0.01	0.11	0.11	0.11	0.71	0.71			0.66	0.66
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			23	376	204	305	266	3654			3396	1057
v/s Ratio Prot				c0.08	0.00		0.00	c0.17			c0.25	
v/s Ratio Perm			c0.00			0.01	0.03					0.06
v/c Ratio			0.00	0.69	0.04	0.12	0.05	0.23			0.38	0.09
Uniform Delay, d1			65.8	58.2	54.1	54.5	6.3	6.8			10.4	8.3
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	4.4	0.0	0.1	0.0	0.1			0.3	0.2
Delay (s)			65.8	62.7	54.1	54.6	6.3	6.9			10.7	8.4
Level of Service			E	E	D	D	A	A			B	A
Approach Delay (s/veh)		65.8			58.1			6.9			10.5	
Approach LOS		E			E			A			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	19.4	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.41				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	60.3%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group



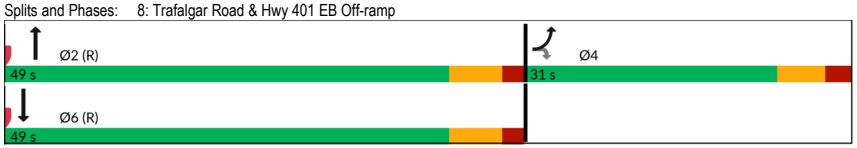
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	585	0	1483	740	0
Future Volume (vph)	135	585	0	1483	740	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.91	0.91	1.00
Frt	0.897	0.850				
Flt Protected	0.984					
Satd. Flow (prot)	3225	1457	0	5142	5142	0
Flt Permitted	0.984					
Satd. Flow (perm)	3225	1457	0	5142	5142	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	171	171				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	585	0	1483	740	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	428	292	0	1483	740	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	14.5	14.5		51.5	51.5	
Actuated g/C Ratio	0.18	0.18		0.64	0.64	
v/c Ratio	0.59	0.72		0.45	0.22	
Control Delay (s/veh)	20.3	23.0		8.4	6.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.3	23.0		8.4	6.8	
LOS	C	C		A	A	
Approach Delay (s/veh)	21.4			8.4	6.8	
Approach LOS	C			A	A	
Queue Length 50th (m)	18.8	19.0		34.1	14.1	
Queue Length 95th (m)	27.8	41.9		61.5	27.3	
Internal Link Dist (m)	507.7			52.4	180.2	
Turn Bay Length (m)		125.0				
Base Capacity (vph)	1087	556		3308	3308	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.39	0.53		0.45	0.22	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 11.2		Intersection LOS: B	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	428	292	1483	740
v/c Ratio	0.59	0.72	0.45	0.22
Control Delay (s/veh)	20.3	23.0	8.4	6.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.3	23.0	8.4	6.8
Queue Length 50th (m)	18.8	19.0	34.1	14.1
Queue Length 95th (m)	27.8	41.9	61.5	27.3
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1087	556	3308	3308
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.53	0.45	0.22

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	585	0	1483	740	0
Future Volume (vph)	135	585	0	1483	740	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.91	0.91	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	3228	1457		5142	5142	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	3228	1457		5142	5142	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	585	0	1483	740	0
RTOR Reduction (vph)	140	140	0	0	0	0
Lane Group Flow (vph)	288	152	0	1483	740	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	14.5	14.5		51.5	51.5	
Effective Green, g (s)	14.5	14.5		51.5	51.5	
Actuated g/C Ratio	0.18	0.18		0.64	0.64	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	585	264		3310	3310	
v/s Ratio Prot	0.09			c0.29	0.14	
v/s Ratio Perm		c0.10				
v/c Ratio	0.49	0.58		0.45	0.22	
Uniform Delay, d1	29.4	29.9		7.1	5.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	3.0		0.4	0.2	
Delay (s)	30.1	33.0		7.6	6.1	
Level of Service	C	C		A	A	
Approach Delay (s/veh)	31.3			7.6	6.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Future Volume (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3437	5142	1570	1825	5043	1633	3054	4706	1597	3268	4539	923
Flt Permitted	0.950			0.135			0.950			0.950		
Satd. Flow (perm)	3437	5142	1570	259	5043	1633	3054	4706	1597	3268	4539	923
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			139			133			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	3%	2%	4%	0%	4%	0%	7%	9%	0%	0%	13%	73%
Adj. Flow (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	11.0	42.0	42.0	24.0	55.0	55.0	18.0	63.0	63.0	11.0	56.0	56.0
Total Split (%)	7.9%	30.0%	30.0%	17.1%	39.3%	39.3%	12.9%	45.0%	45.0%	7.9%	40.0%	40.0%
Maximum Green (s)	7.0	35.1	35.1	20.0	48.1	48.1	14.0	56.2	56.2	7.0	49.2	49.2
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.0	39.1	39.1	63.0	50.1	50.1	15.0	58.2	58.2	8.0	51.2	51.2
Actuated g/C Ratio	0.06	0.28	0.28	0.45	0.36	0.36	0.11	0.42	0.42	0.06	0.37	0.37
v/c Ratio	0.76	0.66	0.51	0.74	0.89	0.35	1.21	0.59	0.18	1.72	0.84	1.09
Control Delay (s/veh)	122.0	32.7	9.4	43.4	45.8	14.6	146.4	24.1	8.3	379.5	43.1	95.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	122.0	32.7	9.4	43.4	45.8	14.6	146.4	24.1	8.3	379.5	43.1	95.0
LOS	F	C	A	D	D	B	F	C	A	F	D	F
Approach Delay (s/veh)		37.4			42.0			51.7			103.5	
Approach LOS		D			D			D			F	
Queue Length 50th (m)	23.0	87.2	30.5	53.7	139.5	23.6	~74.4	93.8	13.5	~67.6	142.6	~188.4
Queue Length 95th (m)	#39.3	103.9	55.5	64.8	173.2	39.3	m#80.5	m88.2	m16.8	#98.2	164.3	#292.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	196	1434	576	351	1804	673	327	1956	741	186	1659	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.66	0.51	0.69	0.89	0.35	1.21	0.59	0.18	1.72	0.84	1.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.72			
Intersection Signal Delay (s/veh): 61.7		Intersection LOS: E	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	

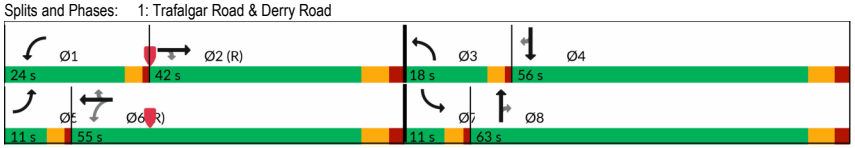
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
v/c Ratio	0.76	0.66	0.51	0.74	0.89	0.35	1.21	0.59	0.18	1.72	0.84	1.09
Control Delay (s/veh)	122.0	32.7	9.4	43.4	45.8	14.6	146.4	24.1	8.3	379.5	43.1	95.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	122.0	32.7	9.4	43.4	45.8	14.6	146.4	24.1	8.3	379.5	43.1	95.0
Queue Length 50th (m)	23.0	87.2	30.5	53.7	139.5	23.6	~74.4	93.8	13.5	~67.6	142.6	~188.4
Queue Length 95th (m)	#39.3	103.9	55.5	64.8	173.2	39.3	m#80.5	m88.2	m16.8	#98.2	164.3	#292.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	196	1434	576	351	1804	673	327	1956	741	186	1659	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.66	0.51	0.69	0.89	0.35	1.21	0.59	0.18	1.72	0.84	1.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Future Volume (vph)	148	942	291	242	1611	236	396	1152	133	320	1396	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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	1570	1825	5043	1633	3054	4706	1597	3268	4539	923
Flt Permitted	0.95	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3437	5142	1570	260	5043	1633	3054	4706	1597	3268	4539	923
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)	148	942	291	242	1611	236	396	1152	133	320	1396	475
RTOR Reduction (vph)	0	0	139	0	0	89	0	0	78	0	0	98
Lane Group Flow (vph)	148	942	152	242	1611	147	396	1152	55	320	1396	377
Heavy Vehicles (%)	3%	2%	4%	0%	4%	0%	7%	9%	0%	0%	13%	73%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Actuated Green, G (s)	7.0	37.1	37.1	59.1	48.1	48.1	14.0	56.2	56.2	7.0	49.2	49.2
Effective Green, g (s)	8.0	39.1	39.1	60.1	50.1	50.1	15.0	58.2	58.2	8.0	51.2	51.2
Actuated g/C Ratio	0.06	0.28	0.28	0.43	0.36	0.36	0.11	0.42	0.42	0.06	0.37	0.37
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	6.8
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)	196	1436	438	324	1804	584	327	1956	663	186	1659	337
v/s Ratio Prot	0.04	0.18		c0.10	c0.32		c0.13	0.24		c0.10	0.31	
v/s Ratio Perm			0.10	0.22		0.09			0.03			c0.41
v/c Ratio	0.76	0.66	0.35	0.75	0.89	0.25	1.21	0.59	0.08	1.72	0.84	1.12
Uniform Delay, d1	65.0	44.5	40.3	29.3	42.4	31.7	62.5	31.6	24.8	66.0	40.7	44.4
Progression Factor	1.57	0.68	0.45	1.12	0.92	1.00	0.77	0.74	2.04	0.96	0.94	0.93
Incremental Delay, d2	16.2	2.1	1.9	9.7	6.6	0.9	104.9	0.2	0.0	343.4	4.0	81.9
Delay (s)	118.5	32.3	20.1	42.5	45.5	32.8	152.9	23.7	50.5	407.1	42.0	123.4
Level of Service	F	C	C	D	D	C	F	C	D	F	D	F
Approach Delay (s/veh)		38.9			43.7			56.3			113.0	
Approach LOS		D			D			E			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	66.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	90.0%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

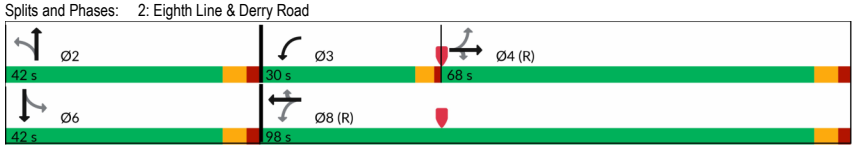
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	887	63	149	1817	3	70	0	114	3	4	6
Future Volume (vph)	3	887	63	149	1817	3	70	0	114	3	4	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.850			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1825	5142	1633	1825	1633	0	1825	1734	0
Flt Permitted	0.115			0.291			0.751			0.545		
Satd. Flow (perm)	217	5142	1601	559	5142	1633	1443	1633	0	1047	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			23		376			6	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	3	887	63	149	1817	3	70	0	114	3	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	887	63	149	1817	3	70	114	0	3	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		36.0	36.0	
Total Split (s)	68.0	68.0	68.0	30.0	98.0	98.0	42.0	42.0		42.0	42.0	
Total Split (%)	48.6%	48.6%	48.6%	21.4%	70.0%	70.0%	30.0%	30.0%		30.0%	30.0%	
Maximum Green (s)	62.0	62.0	62.0	26.0	92.0	92.0	36.0	36.0		36.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0		23.0	23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	
Act Effct Green (s)	103.5	103.5	103.5	117.2	115.2	115.2	12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.74	0.74	0.74	0.84	0.82	0.82	0.09	0.09		0.09	0.09	
v/c Ratio	0.02	0.23	0.05	0.28	0.43	0.00	0.53	0.23		0.03	0.06	
Control Delay (s/veh)	11.3	19.0	8.1	3.5	3.9	0.0	82.4	0.9		56.3	38.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.3	19.0	8.1	3.5	3.9	0.0	82.4	0.9		56.3	38.0	
LOS	B	B	A	A	A	A	F	A		E	D	
Approach Delay (s/veh)		18.3			3.9			31.9			42.2	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.7	87.9	10.4	5.6	40.1	0.0	16.8	0.0		0.8	1.1	
Queue Length 95th (m)	m1.5	103.0	13.1	11.7	58.1	0.0	m26.1	m0.0		3.7	6.6	
Internal Link Dist (m)		339.9			1143.6			359.1			414.8	
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0			35.0		
Base Capacity (vph)	160	3801	1200	703	4231	1348	371	699		269	450	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.02	0.23	0.05	0.21	0.43	0.00	0.19	0.16		0.01	0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay (s/veh): 10.1		Intersection LOS: B	
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	3	887	63	149	1817	3	70	114	3	10
v/c Ratio	0.02	0.23	0.05	0.28	0.43	0.00	0.53	0.23	0.03	0.06
Control Delay (s/veh)	11.3	19.0	8.1	3.5	3.9	0.0	82.4	0.9	56.3	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.3	19.0	8.1	3.5	3.9	0.0	82.4	0.9	56.3	38.0
Queue Length 50th (m)	0.7	87.9	10.4	5.6	40.1	0.0	16.8	0.0	0.8	1.1
Queue Length 95th (m)	m1.5	103.0	13.1	11.7	58.1	0.0	m26.1	m0.0	3.7	6.6
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	160	3801	1200	703	4231	1348	371	699	269	450
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.23	0.05	0.21	0.43	0.00	0.19	0.16	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	887	63	149	1817	3	70	0	114	3	4	6
Future Volume (vph)	3	887	63	149	1817	3	70	0	114	3	4	6
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.85		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1789	5142	1601	1825	5142	1633	1825	1633		1825	1734	
Flt Permitted	0.12	1.00	1.00	0.29	1.00	1.00	0.75	1.00		0.54	1.00	
Satd. Flow (perm)	218	5142	1601	559	5142	1633	1443	1633		1046	1734	
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	887	63	149	1817	3	70	0	114	3	4	6
RTOR Reduction (vph)	0	0	16	0	0	1	0	104	0	0	5	0
Lane Group Flow (vph)	3	887	47	149	1817	2	70	10	0	3	5	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	103.5	103.5	103.5	115.2	115.2	115.2	12.8	12.8		12.8	12.8	
Effective Green, g (s)	103.5	103.5	103.5	115.2	115.2	115.2	12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.74	0.74	0.74	0.82	0.82	0.82	0.09	0.09		0.09	0.09	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	161	3801	1183	529	4231	1343	131	149		95	158	
v/s Ratio Prot		0.17		0.02	c0.35			0.01			0.00	
v/s Ratio Perm	0.01		0.03	0.22		0.00	c0.05			0.00		
v/c Ratio	0.02	0.23	0.04	0.28	0.43	0.00	0.53	0.07		0.03	0.03	
Uniform Delay, d1	4.8	5.8	4.9	2.6	3.4	2.2	60.8	58.2		58.0	57.9	
Progression Factor	1.74	3.10	5.33	1.00	1.00	1.00	1.16	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.1	0.1	0.3	0.3	0.0	3.5	0.2		0.1	0.1	
Delay (s)	8.6	18.0	26.2	2.9	3.7	2.2	74.1	58.3		58.1	58.0	
Level of Service	A	B	C	A	A	A	E	E		E	E	
Approach Delay (s/veh)		18.5			3.6			64.3			58.0	
Approach LOS		B			A			E			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Future Volume (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3309	5142	1601	3541	4995	1633	1636	4839	1597	1652	4839	1597
Flt Permitted	0.950			0.950			0.121			0.166		
Satd. Flow (perm)	3309	5142	1601	3541	4995	1633	208	4839	1597	289	4839	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			139			196			216
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	7%	2%	2%	0%	5%	0%	3%	6%	0%	2%	6%	0%
Adj. Flow (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Shared Lane Traffic (%)												
Lane Group Flow (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	41.0
Total Split (s)	15.0	41.0	41.0	14.0	40.0	40.0	35.0	72.0	72.0	13.0	50.0	50.0
Total Split (%)	10.7%	29.3%	29.3%	10.0%	28.6%	28.6%	25.0%	51.4%	51.4%	9.3%	35.7%	35.7%
Maximum Green (s)	11.0	35.0	35.0	10.0	34.0	34.0	31.0	65.0	65.0	9.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	12.0	35.6	35.6	10.7	34.4	34.4	83.6	67.6	67.6	61.1	48.0	48.0
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.25	0.25	0.60	0.48	0.48	0.44	0.34	0.34
v/c Ratio	1.98	0.70	0.37	0.61	0.80	0.33	0.92	0.60	0.23	0.85	0.67	0.79
Control Delay (s/veh)	482.8	50.3	7.0	91.3	45.1	11.1	61.5	53.4	21.4	69.3	26.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	482.8	50.3	7.0	91.3	45.1	11.1	61.5	53.4	21.4	69.3	26.7	18.6
LOS	F	D	A	F	D	B	E	D	C	E	C	B
Approach Delay (s/veh)		188.9			46.5			51.8			28.9	
Approach LOS		F			D			D			C	
Queue Length 50th (m)	~130.4	84.2	0.0	25.0	47.4	0.0	108.8	145.6	24.9	31.8	112.6	107.7
Queue Length 95th (m)	#168.2	100.1	19.4	37.0	75.8	17.2	m#135.3	m160.6	m33.9	m#56.4	134.2	m141.0
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	283	1358	577	278	1284	523	451	2335	872	234	1659	689
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.98	0.67	0.36	0.59	0.77	0.32	0.89	0.60	0.23	0.85	0.67	0.79

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.98			
Intersection Signal Delay (s/veh): 78.2		Intersection LOS: E	
Intersection Capacity Utilization 93.1%		ICU Level of Service F	

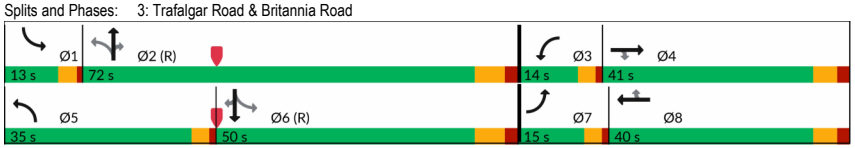
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
v/c Ratio	1.98	0.70	0.37	0.61	0.80	0.33	0.92	0.60	0.23	0.85	0.67	0.79
Control Delay (s/veh)	482.8	50.3	7.0	91.3	45.1	11.1	61.5	53.4	21.4	69.3	26.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	482.8	50.3	7.0	91.3	45.1	11.1	61.5	53.4	21.4	69.3	26.7	18.6
Queue Length 50th (m)	~130.4	84.2	0.0	25.0	47.4	0.0	108.8	145.6	24.9	31.8	112.6	107.7
Queue Length 95th (m)	#168.2	100.1	19.4	37.0	75.8	17.2	m#135.3	m160.6	m33.9	m#56.4	134.2	m141.0
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	283	1358	577	278	1284	523	451	2335	872	234	1659	689
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.98	0.67	0.36	0.59	0.77	0.32	0.89	0.60	0.23	0.85	0.67	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Future Volume (vph)	559	910	210	165	985	167	403	1391	199	199	1117	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	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
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)	3309	5142	1601	3541	4995	1633	1636	4839	1597	1652	4839	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	3309	5142	1601	3541	4995	1633	208	4839	1597	289	4839	1597
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)	559	910	210	165	985	167	403	1391	199	199	1117	545
RTOR Reduction (vph)	0	0	156	0	0	105	0	0	102	0	0	142
Lane Group Flow (vph)	559	910	54	165	985	62	403	1391	98	199	1117	403
Heavy Vehicles (%)	7%	2%	2%	0%	5%	0%	3%	6%	0%	2%	6%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	11.0	33.7	33.7	9.7	32.4	32.4	79.6	65.5	65.5	56.1	46.0	46.0
Effective Green, g (s)	12.0	35.7	35.7	10.7	34.4	34.4	80.6	67.5	67.5	58.1	48.0	48.0
Actuated g/C Ratio	0.09	0.26	0.26	0.08	0.25	0.25	0.58	0.48	0.48	0.42	0.34	0.34
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	283	1311	408	270	1227	401	431	2333	769	228	1659	547
v/s Ratio Prot	c0.17	0.18		0.05	c0.20		c0.20	0.29		0.07	0.23	
v/s Ratio Perm			0.03			0.04	c0.33		0.06	0.29		0.25
v/c Ratio	1.98	0.69	0.13	0.61	0.80	0.15	0.94	0.60	0.13	0.87	0.67	0.74
Uniform Delay, d1	64.0	47.2	40.2	62.6	49.6	41.4	37.6	26.3	20.0	27.5	39.3	40.4
Progression Factor	1.00	1.00	1.00	1.31	0.80	0.96	1.30	1.99	7.50	2.17	0.63	0.49
Incremental Delay, d2	451.4	1.6	0.1	3.7	3.6	0.2	17.8	0.6	0.2	19.6	1.4	5.4
Delay (s)	515.4	48.8	40.3	85.8	43.4	39.9	66.8	52.9	150.1	79.2	26.1	25.1
Level of Service	F	D	D	F	D	D	E	D	F	E	C	C
Approach Delay (s/veh)		203.1			48.3			65.4			31.5	
Approach LOS		F			D			E			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	86.6	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	93.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	754	46	22	960	165	72	298	36	135	184	174
Future Volume (vph)	231	754	46	22	960	165	72	298	36	135	184	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1633	1825	4433	1633	1362	1886	0	1825	1763	0
Flt Permitted	0.175			0.318			0.547			0.162		
Satd. Flow (perm)	336	4520	1633	611	4433	1633	784	1886	0	311	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			165		4			41	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	34%	0%	2%	0%	2%	0%
Adj. Flow (vph)	231	754	46	22	960	165	72	298	36	135	184	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	231	754	46	22	960	165	72	334	0	135	358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

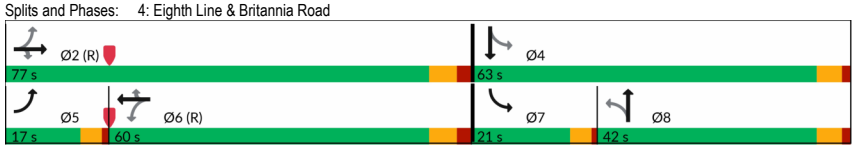
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	17.0	77.0	77.0	60.0	60.0	60.0	42.0	42.0		21.0	63.0	
Total Split (%)	12.1%	55.0%	55.0%	42.9%	42.9%	42.9%	30.0%	30.0%		15.0%	45.0%	
Maximum Green (s)	12.5	70.2	70.2	53.2	53.2	53.2	36.3	36.3		16.5	57.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	82.2	79.9	79.9	62.3	62.3	62.3	29.3	29.3		48.8	47.6	
Actuated g/C Ratio	0.59	0.57	0.57	0.45	0.45	0.45	0.21	0.21		0.35	0.34	
v/c Ratio	0.69	0.29	0.05	0.08	0.49	0.20	0.44	0.84		0.53	0.57	
Control Delay (s/veh)	49.2	6.2	0.2	27.9	30.1	4.6	46.9	61.3		41.6	39.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	49.2	6.2	0.2	27.9	30.1	4.6	46.9	61.3		41.6	39.8	
LOS	D	A	A	C	C	A	D	E		D	D	
Approach Delay (s/veh)		15.6			26.4			58.7			40.3	
Approach LOS		B			C			E			D	
Queue Length 50th (m)	29.7	13.2	0.0	3.6	82.9	0.0	19.7	83.7		27.6	75.6	
Queue Length 95th (m)	m#58.7	20.6	m0.2	10.3	106.8	14.4	m35.8	m109.5		41.9	102.3	
Internal Link Dist (m)		1337.0			1384.0			3065.7			2676.9	
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0			120.0		
Base Capacity (vph)	342	2578	955	271	1972	817	203	491		286	745	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.68	0.29	0.05	0.08	0.49	0.20	0.35	0.68		0.47	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay (s/veh): 29.3 Intersection LOS: C
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15

* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	231	754	46	22	960	165	72	334	135	358
v/c Ratio	0.69	0.29	0.05	0.08	0.49	0.20	0.44	0.84	0.53	0.57
Control Delay (s/veh)	49.2	6.2	0.2	27.9	30.1	4.6	46.9	61.3	41.6	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.2	6.2	0.2	27.9	30.1	4.6	46.9	61.3	41.6	39.8
Queue Length 50th (m)	29.7	13.2	0.0	3.6	82.9	0.0	19.7	83.7	27.6	75.6
Queue Length 95th (m)	m#58.7	20.6	m0.2	10.3	106.8	14.4	m35.8	m109.5	41.9	102.3
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	342	2578	955	271	1972	817	203	491	286	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.29	0.05	0.08	0.49	0.20	0.35	0.68	0.47	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	754	46	22	960	165	72	298	36	135	184	174
Future Volume (vph)	231	754	46	22	960	165	72	298	36	135	184	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1633	1825	4433	1633	1362	1886		1825	1763	
Flt Permitted	0.17	1.00	1.00	0.32	1.00	1.00	0.55	1.00		0.16	1.00	
Satd. Flow (perm)	336	4520	1633	611	4433	1633	784	1886		311	1763	
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)	231	754	46	22	960	165	72	298	36	135	184	174
RTOR Reduction (vph)	0	0	20	0	0	92	0	3	0	0	27	0
Lane Group Flow (vph)	231	754	26	22	960	73	72	331	0	135	331	0
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	34%	0%	2%	0%	2%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	79.9	79.9	79.9	62.3	62.3	62.3	29.3	29.3		47.6	47.6	
Effective Green, g (s)	79.9	79.9	79.9	62.3	62.3	62.3	29.3	29.3		47.6	47.6	
Actuated g/C Ratio	0.57	0.57	0.57	0.45	0.45	0.45	0.21	0.21		0.34	0.34	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	331	2579	931	271	1972	726	164	394		254	599	
v/s Ratio Prot	c0.07	0.17			0.22			c0.18		0.05	c0.19	
v/s Ratio Perm	c0.33		0.02	0.04		0.04	0.09			0.13		
v/c Ratio	0.70	0.29	0.03	0.08	0.49	0.10	0.44	0.84		0.53	0.55	
Uniform Delay, d1	17.5	15.5	13.1	22.4	27.5	22.6	48.2	53.1		35.3	37.5	
Progression Factor	2.60	0.36	0.05	1.00	1.00	1.00	0.82	0.83		1.12	1.12	
Incremental Delay, d2	4.9	0.2	0.0	0.6	0.9	0.3	1.8	14.1		2.1	1.1	
Delay (s)	50.4	5.8	0.7	23.0	28.4	22.9	41.6	58.2		41.8	43.3	
Level of Service	D	A	A	C	C	C	D	E		D	D	
Approach Delay (s/veh)		15.6			27.5			55.2			42.9	
Approach LOS		B			C			E			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	228	35	270	336	231	194	1750	366	172	1218	76
Future Volume (vph)	75	228	35	270	336	231	194	1750	366	172	1218	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	45.0		70.0	110.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.980			0.939				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1867	0	1807	1685	0	1678	4839	1551	1662	4885	1597
Flt Permitted	0.123			0.305			0.145			0.065		
Satd. Flow (perm)	236	1867	0	580	1685	0	256	4839	1551	114	4885	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			26				265			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	0%	1%	0%	1%	3%	13%	4%	6%	3%	5%	5%	0%
Adj. Flow (vph)	75	228	35	270	336	231	194	1750	366	172	1218	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	263	0	270	567	0	194	1750	366	172	1218	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2		11.5	24.2		11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	9.5	36.1		21.4	48.0		19.8	65.5	65.5	17.0	62.7	62.7
Total Split (%)	6.8%	25.8%		15.3%	34.3%		14.1%	46.8%	46.8%	12.1%	44.8%	44.8%
Maximum Green (s)	5.0	29.9		16.9	41.8		15.8	58.9	58.9	13.0	56.1	56.1
Yellow Time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0							
Flash Don't Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	40.1	33.4		54.0	43.8		76.4	62.6	62.6	76.6	62.7	62.7
Actuated g/C Ratio	0.29	0.24		0.39	0.31		0.55	0.45	0.45	0.55	0.45	0.45
v/c Ratio	0.56	0.59		0.74	1.04		0.74	0.81	0.44	0.87	0.56	0.10
Control Delay (s/veh)	45.4	52.9		44.4	93.7		33.5	37.6	9.0	82.0	41.8	11.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.4	52.9		44.4	93.7		33.5	37.6	9.0	82.0	41.8	11.1
LOS	D	D		D	F		C	D	A	F	D	B
Approach Delay (s/veh)		51.3			77.8			32.7			45.0	
Approach LOS		D			E			C			D	
Queue Length 50th (m)	13.2	65.2		54.0	~168.0		26.1	162.6	17.1	46.2	89.8	3.2
Queue Length 95th (m)	24.0	94.8		78.2	#240.8		43.7	183.6	42.4	#74.5	110.9	m9.1
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	45.0			110.0			100.0		70.0	170.0		70.0
Base Capacity (vph)	135	449		380	545		315	2162	839	217	2188	784
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.59		0.71	1.04		0.62	0.81	0.44	0.79	0.56	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay (s/veh): 45.2		Intersection LOS: D	
Intersection Capacity Utilization 93.3%		ICU Level of Service F	

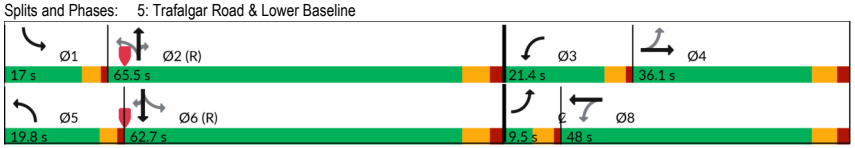
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	263	270	567	194	1750	366	172	1218	76
v/c Ratio	0.56	0.59	0.74	1.04	0.74	0.81	0.44	0.87	0.56	0.10
Control Delay (s/veh)	45.4	52.9	44.4	93.7	33.5	37.6	9.0	82.0	41.8	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.4	52.9	44.4	93.7	33.5	37.6	9.0	82.0	41.8	11.1
Queue Length 50th (m)	13.2	65.2	54.0	~168.0	26.1	162.6	17.1	46.2	89.8	3.2
Queue Length 95th (m)	24.0	94.8	78.2	#240.8	43.7	183.6	42.4	#74.5	110.9	m9.1
Internal Link Dist (m)		1293.1		1410.4		889.5			3062.5	
Turn Bay Length (m)	45.0		110.0		100.0		70.0	170.0		70.0
Base Capacity (vph)	135	449	380	545	315	2162	839	217	2188	784
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.59	0.71	1.04	0.62	0.81	0.44	0.79	0.56	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	228	35	270	336	231	194	1750	366	172	1218	76
Future Volume (vph)	75	228	35	270	336	231	194	1750	366	172	1218	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.94		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	1867		1807	1685		1678	4839	1551	1662	4885	1597
Flt Permitted	0.12	1.00		0.31	1.00		0.14	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	237	1867		581	1685		256	4839	1551	113	4885	1597
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)	75	228	35	270	336	231	194	1750	366	172	1218	76
RTOR Reduction (vph)	0	4	0	0	18	0	0	0	147	0	0	42
Lane Group Flow (vph)	75	259	0	270	549	0	194	1750	219	172	1218	34
Heavy Vehicles (%)	0%	1%	0%	1%	3%	13%	4%	6%	3%	5%	5%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	36.4	31.4		51.3	41.8		71.8	60.6	60.6	72.0	60.7	60.7
Effective Green, g (s)	38.4	33.4		52.3	43.8		73.8	62.6	62.6	74.0	62.7	62.7
Actuated g/C Ratio	0.27	0.24		0.37	0.31		0.53	0.45	0.45	0.53	0.45	0.45
Clearance Time (s)	4.5	6.2		4.5	6.2		4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Lane Grp Cap (vph)	133	445		360	527		258	2163	693	195	2187	715
v/s Ratio Prot	0.02	0.14		c0.09	c0.33		0.07	0.36		c0.08	0.25	
v/s Ratio Perm	0.13			0.19			0.33		0.14	c0.39		0.02
v/c Ratio	0.56	0.58		0.75	1.04		0.75	0.81	0.32	0.88	0.56	0.05
Uniform Delay, d1	41.4	47.1		33.7	48.1		20.8	33.5	24.9	38.8	28.4	21.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.56	1.41	24.71
Incremental Delay, d2	5.4	3.0		7.6	50.6		10.4	3.4	1.2	27.8	0.8	0.1
Delay (s)	46.8	50.1		41.3	98.7		31.2	36.9	26.1	88.3	41.0	539.0
Level of Service	D	D		D	F		C	D	C	F	D	F
Approach Delay (s/veh)		49.4			80.2			34.7			72.3	
Approach LOS		D			F			C			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	54.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Future Volume (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1789	0	1601	3471	1883	2818	1789	5142	0	0	5142	1601
Flt Permitted	0.563			0.950			0.104					
Satd. Flow (perm)	1060	0	1601	3471	1883	2818	196	5142	0	0	5142	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			265						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Adj. Flow (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6

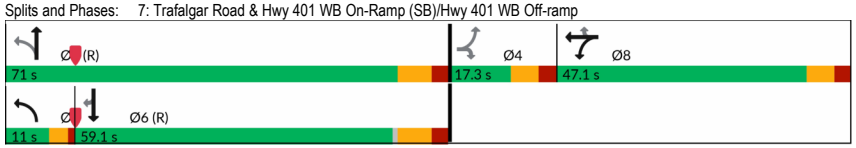
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	11.1		11.1	59.4	59.4	59.4	53.3	49.2			47.0	47.0
Actuated g/C Ratio	0.08		0.08	0.44	0.44	0.44	0.39	0.36			0.35	0.35
v/c Ratio	0.24		0.07	0.55	0.04	1.19	0.04	0.58			0.65	0.08
Control Delay (s/veh)	64.4		0.5	33.1	28.7	122.8	22.3	35.7			39.0	0.3
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	64.4		0.5	33.1	28.7	122.8	22.3	35.7			39.0	0.3
LOS	E		A	C	C	F	C	D			D	A
Approach Delay (s/veh)		35.8			91.6			35.6			37.2	
Approach LOS		D			F			D			D	
Queue Length 50th (m)	5.5		0.0	92.7	5.3	~298.0	1.0	87.4			94.5	0.0
Queue Length 95th (m)	14.0		0.0	135.3	14.3	#384.8	3.5	90.0			111.9	0.0
Internal Link Dist (m)		558.9			384.0			211.1			230.2	
Turn Bay Length (m)			10.0	90.0		80.0	60.0					85.0
Base Capacity (vph)	87		251	1523	826	1385	159	2388			1970	690
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.24		0.07	0.55	0.04	1.19	0.04	0.45			0.59	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay (s/veh): 65.1		Intersection LOS: E	
Intersection Capacity Utilization 98.1%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	21	17	845	32	1651	6	1086	1154	54
v/c Ratio	0.24	0.07	0.55	0.04	1.19	0.04	0.58	0.65	0.08
Control Delay (s/veh)	64.4	0.5	33.1	28.7	122.8	22.3	35.7	39.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.4	0.5	33.1	28.7	122.8	22.3	35.7	39.0	0.3
Queue Length 50th (m)	5.5	0.0	92.7	5.3	~298.0	1.0	87.4	94.5	0.0
Queue Length 95th (m)	14.0	0.0	135.3	14.3	#384.8	3.5	90.0	111.9	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	87	251	1523	826	1385	159	2388	1970	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.07	0.55	0.04	1.19	0.04	0.45	0.59	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Future Volume (vph)	21	0	17	845	32	1651	6	1086	0	0	1154	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1789		1601	3471	1883	2818	1789	5142			5142	1601
Flt Permitted	0.56		1.00	0.95	1.00	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)	1061		1601	3471	1883	2818	197	5142			5142	1601
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	0	17	845	32	1651	6	1086	0	0	1154	54
RTOR Reduction (vph)	0	0	16	0	0	149	0	0	0	0	0	38
Lane Group Flow (vph)	21	0	1	845	32	1502	6	1086	0	0	1154	16
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	7.1		7.1	59.4	59.4	59.4	46.4	46.4			41.0	41.0
Effective Green, g (s)	7.1		7.1	59.4	59.4	59.4	46.4	46.4			41.0	41.0
Actuated g/C Ratio	0.05		0.05	0.44	0.44	0.44	0.34	0.34			0.30	0.30
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	55		83	1522	826	1236	83	1762			1557	484
v/s Ratio Prot				0.24	0.02		0.00	c0.21			c0.22	
v/s Ratio Perm	c0.02		0.00			c0.53	0.02					0.01
v/c Ratio	0.38		0.01	0.56	0.04	1.22	0.07	0.62			0.74	0.03
Uniform Delay, d1	62.0		60.8	28.2	21.7	38.0	31.7	37.1			42.4	33.2
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	4.4		0.1	0.3	0.0	104.6	0.1	1.6			3.2	0.1
Delay (s)	66.4		60.9	28.4	21.7	142.6	31.8	38.7			45.7	33.4
Level of Service	E		E	C	C	F	C	D			D	C
Approach Delay (s/veh)		63.9			102.9			38.7			45.1	
Approach LOS		E			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	73.8	HCM 2000 Level of Service		E	
HCM 2000 Volume to Capacity ratio	0.98				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	98.1%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	713	0	1315	1543	0
Future Volume (vph)	174	713	0	1315	1543	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.91	0.91	1.00
Frt	0.899	0.850				
Flt Protected	0.984					
Satd. Flow (prot)	3232	1457	0	5142	5142	0
Flt Permitted	0.984					
Satd. Flow (perm)	3232	1457	0	5142	5142	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	20	20				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	174	713	0	1315	1543	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	531	356	0	1315	1543	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				

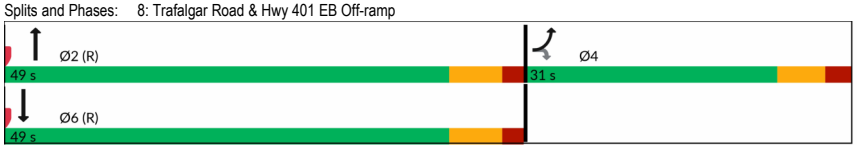
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	23.3	23.3		42.7	42.7	
Actuated g/C Ratio	0.29	0.29		0.53	0.53	
v/c Ratio	0.56	0.81		0.48	0.56	
Control Delay (s/veh)	24.8	39.9		13.1	14.1	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.8	39.9		13.1	14.1	
LOS	C	D		B	B	
Approach Delay (s/veh)	30.8			13.1	14.1	
Approach LOS	C			B	B	
Queue Length 50th (m)	32.8	50.8		46.0	57.3	
Queue Length 95th (m)	45.9	#86.2		60.0	73.9	
Internal Link Dist (m)	507.7			52.4	180.2	
Turn Bay Length (m)		125.0				
Base Capacity (vph)	1044	478		2842	2842	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.51	0.74		0.46	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 17.7		Intersection LOS: B	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

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

Queue shown is maximum after two cycles.

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	531	356	1315	1543
v/c Ratio	0.56	0.81	0.48	0.56
Control Delay (s/veh)	24.8	39.9	13.1	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.8	39.9	13.1	14.1
Queue Length 50th (m)	32.8	50.8	46.0	57.3
Queue Length 95th (m)	45.9	#86.2	60.0	73.9
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1044	478	2842	2842
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.74	0.46	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	713	0	1315	1543	0
Future Volume (vph)	174	713	0	1315	1543	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.91	0.91	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	3232	1457		5142	5142	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	3232	1457		5142	5142	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	174	713	0	1315	1543	0
RTOR Reduction (vph)	14	14	0	0	0	0
Lane Group Flow (vph)	517	342	0	1315	1543	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	23.3	23.3		42.7	42.7	
Effective Green, g (s)	23.3	23.3		42.7	42.7	
Actuated g/C Ratio	0.29	0.29		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	941	424		2744	2744	
v/s Ratio Prot	0.16			0.26	c0.30	
v/s Ratio Perm		c0.23				
v/c Ratio	0.55	0.81		0.48	0.56	
Uniform Delay, d1	23.9	26.3		11.7	12.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	10.7		0.6	0.8	
Delay (s)	24.6	37.0		12.3	13.3	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	29.5			12.3	13.3	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

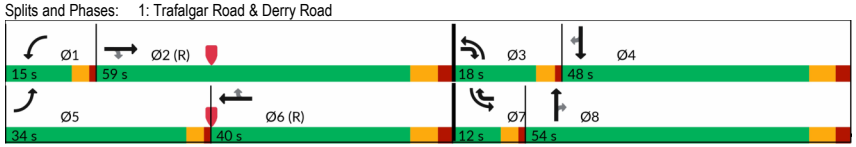
2041 Future Background

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	697	1547	331	278	693	454	290	1190	146	163	1055	25
Future Volume (vph)	697	1547	331	278	693	454	290	1190	146	163	1055	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			123			124			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	711	1579	338	284	707	463	296	1214	149	166	1077	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	711	1579	338	284	707	463	296	1214	149	166	1077	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	34.0	59.0	18.0	15.0	40.0	12.0	18.0	54.0	54.0	12.0	48.0	48.0
Total Split (%)	24.3%	42.1%	12.9%	10.7%	28.6%	8.6%	12.9%	38.6%	38.6%	8.6%	34.3%	34.3%
Maximum Green (s)	30.0	52.1	14.0	11.0	33.1	8.0	14.0	47.2	47.2	8.0	41.2	41.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	31.2	54.1	75.0	12.5	35.5	50.4	15.0	48.7	48.7	9.0	42.7	42.7
Actuated g/C Ratio	0.22	0.39	0.54	0.09	0.25	0.36	0.11	0.35	0.35	0.06	0.31	0.31
v/c Ratio	0.92	0.90	0.39	0.92	0.65	0.70	0.91	0.84	0.24	0.89	0.84	0.05
Control Delay (s/veh)	84.6	46.7	14.8	96.1	50.1	34.0	109.2	42.1	7.1	122.7	44.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	84.6	46.7	14.8	96.1	50.1	34.0	109.2	42.1	7.1	122.7	44.1	0.2
LOS	F	D	B	F	D	C	F	D	A	F	D	A
Approach Delay (s/veh)		52.9			53.9			50.9			53.5	
Approach LOS		D			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 110		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.92		
Intersection Signal Delay (s/veh): 52.7	Intersection LOS: D	
Intersection Capacity Utilization 81.7%	ICU Level of Service D	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	711	1579	338	284	707	463	296	1214	149	166	1077	26
v/c Ratio	0.92	0.90	0.39	0.92	0.65	0.70	0.91	0.84	0.24	0.89	0.84	0.05
Control Delay (s/veh)	84.6	46.7	14.8	96.1	50.1	34.0	109.2	42.1	7.1	122.7	44.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	84.6	46.7	14.8	96.1	50.1	34.0	109.2	42.1	7.1	122.7	44.1	0.2
Queue Length 50th (m)	110.0	139.3	28.6	41.7	77.6	82.0	47.2	143.9	4.6	27.1	122.7	0.0
Queue Length 95th (m)	#141.0	181.8	m44.7	#70.4	95.3	122.6	#74.5	166.6	m9.3	#51.0	145.3	0.2
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	772	1746	877	310	1091	666	327	1467	630	187	1300	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.90	0.39	0.92	0.65	0.70	0.91	0.83	0.24	0.89	0.83	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	697	1547	331	278	693	454	290	1190	146	163	1055	25
Future Volume (vph)	697	1547	331	278	693	454	290	1190	146	163	1055	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	711	1579	338	284	707	463	296	1214	149	166	1077	26
RTOR Reduction (vph)	0	0	30	0	0	83	0	0	81	0	0	18
Lane Group Flow (vph)	711	1579	308	284	707	380	296	1214	68	166	1077	8
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	30.2	52.1	66.1	11.5	33.4	41.4	14.0	46.7	46.7	8.0	40.7	40.7
Effective Green, g (s)	31.2	54.1	70.1	12.5	35.4	45.4	15.0	48.7	48.7	9.0	42.7	42.7
Actuated g/C Ratio	0.22	0.39	0.50	0.09	0.25	0.32	0.11	0.35	0.35	0.06	0.31	0.31
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	773	1746	793	309	1089	529	327	1452	544	187	1285	386
v/s Ratio Prot	c0.20	c0.35	0.04	0.08	0.16	0.05	c0.10	c0.29		0.06	0.26	
v/s Ratio Perm			0.15			0.18			0.04			0.01
v/c Ratio	0.92	0.90	0.39	0.92	0.65	0.72	0.91	0.84	0.13	0.89	0.84	0.02
Uniform Delay, d1	53.2	40.5	21.7	63.2	46.8	41.7	61.8	42.0	31.1	65.0	45.4	34.0
Progression Factor	1.40	1.03	0.92	1.00	1.00	1.00	1.34	0.87	0.81	1.30	0.82	1.00
Incremental Delay, d2	10.2	4.7	0.4	32.0	3.0	5.7	26.1	4.3	0.2	36.9	5.3	0.0
Delay (s)	84.5	46.5	20.2	95.3	49.8	47.4	108.9	40.9	25.5	121.5	42.7	34.1
Level of Service	F	D	C	F	D	D	F	D	C	F	D	C
Approach Delay (s/veh)		53.4			57.9			51.6			52.9	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	53.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	81.7%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

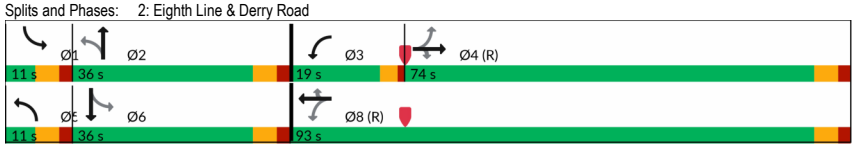
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1690	100	129	866	8	75	0	133	4	0	12
Future Volume (vph)	19	1690	100	129	866	8	75	0	133	4	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555	0	1217	1420	0
Flt Permitted	0.267			0.062			0.357			0.769		
Satd. Flow (perm)	361	4520	1601	119	4391	1633	686	1555	0	985	1420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		252			179	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	20	1760	104	134	902	8	78	0	139	4	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	1760	104	134	902	8	78	139	0	4	13	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	74.0	74.0	74.0	19.0	93.0	93.0	11.0	36.0		11.0	36.0	
Total Split (%)	52.9%	52.9%	52.9%	13.6%	66.4%	66.4%	7.9%	25.7%		7.9%	25.7%	
Maximum Green (s)	68.0	68.0	68.0	15.0	87.0	87.0	5.0	30.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	94.6	94.6	94.6	112.5	110.5	110.5	17.2	14.9		10.0	10.0	
Actuated g/C Ratio	0.68	0.68	0.68	0.80	0.79	0.79	0.12	0.11		0.07	0.07	
v/c Ratio	0.08	0.58	0.09	0.56	0.26	0.01	0.45	0.36		0.05	0.05	
Control Delay (s/veh)	12.6	14.8	2.7	25.3	4.8	0.0	61.5	2.5		49.5	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.6	14.8	2.7	25.3	4.8	0.0	61.5	2.5		49.5	0.3	
LOS	B	B	A	C	A	A	E	A		D	A	
Approach Delay (s/veh)		14.1			7.4			23.7			11.9	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay (s/veh): 12.5		Intersection LOS: B	
Intersection Capacity Utilization 64.0%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	1760	104	134	902	8	78	139	4	13
v/c Ratio	0.08	0.58	0.09	0.56	0.26	0.01	0.45	0.36	0.05	0.05
Control Delay (s/veh)	12.6	14.8	2.7	25.3	4.8	0.0	61.5	2.5	49.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.6	14.8	2.7	25.3	4.8	0.0	61.5	2.5	49.5	0.3
Queue Length 50th (m)	2.0	86.5	0.3	8.3	18.0	0.0	21.1	0.0	1.5	0.0
Queue Length 95th (m)	9.0	156.7	8.3	33.8	41.3	0.0	33.4	0.0	6.1	0.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	243	3053	1114	281	3464	1303	174	531	80	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.58	0.09	0.48	0.26	0.01	0.45	0.26	0.05	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1690	100	129	866	8	75	0	133	4	0	12
Future Volume (vph)	19	1690	100	129	866	8	75	0	133	4	0	12
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555		1217	1420	
Flt Permitted	0.27	1.00	1.00	0.06	1.00	1.00	0.36	1.00		0.77	1.00	
Satd. Flow (perm)	361	4520	1601	119	4391	1633	686	1555		985	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	1760	104	134	902	8	78	0	139	4	0	12
RTOR Reduction (vph)	0	0	36	0	0	2	0	124	0	0	13	0
Lane Group Flow (vph)	20	1760	68	134	902	6	78	15	0	4	0	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	89.8	89.8	89.8	105.7	105.7	105.7	22.3	14.9		6.6	5.2	
Effective Green, g (s)	89.8	89.8	89.8	105.7	105.7	105.7	22.3	14.9		6.6	5.2	
Actuated g/C Ratio	0.64	0.64	0.64	0.76	0.76	0.76	0.16	0.11		0.05	0.04	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	2899	1026	234	3315	1232	199	165		48	52	
v/s Ratio Prot		c0.39		c0.05	0.21		c0.03	0.01		0.00	0.00	
v/s Ratio Perm	0.06		0.04	0.38		0.00	c0.03			0.00		
v/c Ratio	0.09	0.61	0.07	0.57	0.27	0.00	0.39	0.09		0.08	0.01	
Uniform Delay, d1	9.5	14.7	9.4	20.6	5.3	4.2	51.8	56.4		63.8	64.9	
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	0.7	1.0	0.1	3.4	0.2	0.0	1.3	0.2		0.7	0.1	
Delay (s)	10.3	15.7	9.5	24.0	5.5	4.2	53.1	56.7		64.5	65.0	
Level of Service	B	B	A	C	A	A	D	E		E	E	
Approach Delay (s/veh)		15.3			7.9			55.4			64.9	
Approach LOS		B			A			E			E	

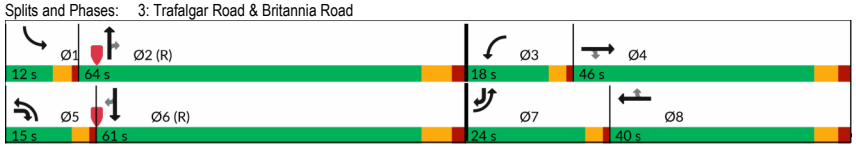
Intersection Summary				
HCM 2000 Control Delay (s/veh)	15.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	64.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	369	1035	456	249	764	231	188	889	223	96	1501	572
Future Volume (vph)	369	1035	456	249	764	231	188	889	223	96	1501	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			163			225			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	373	1045	461	252	772	233	190	898	225	97	1516	578
Shared Lane Traffic (%)												
Lane Group Flow (vph)	373	1045	461	252	772	233	190	898	225	97	1516	578
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	24.0	46.0	15.0	18.0	40.0	40.0	15.0	64.0	64.0	12.0	61.0	24.0
Total Split (%)	17.1%	32.9%	10.7%	12.9%	28.6%	28.6%	10.7%	45.7%	45.7%	8.6%	43.6%	17.1%
Maximum Green (s)	20.0	40.0	11.0	14.0	34.0	34.0	11.0	57.0	57.0	8.0	54.0	20.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	20.0	39.6	57.2	14.4	34.0	34.0	12.6	61.9	61.9	9.1	58.4	84.4
Actuated g/C Ratio	0.14	0.28	0.41	0.10	0.24	0.24	0.09	0.44	0.44	0.07	0.42	0.60
v/c Ratio	0.78	0.83	0.69	0.70	0.72	0.45	0.74	0.48	0.28	0.52	0.85	0.68
Control Delay (s/veh)	69.6	53.1	34.9	71.6	52.6	16.6	79.7	29.3	3.9	81.3	31.0	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.6	53.1	34.9	71.6	52.6	16.6	79.7	29.3	3.9	81.3	31.0	22.7
LOS	E	D	C	E	D	B	E	C	A	F	C	C
Approach Delay (s/veh)		51.9			49.8			32.2			31.0	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 40.7		Intersection LOS: D	
Intersection Capacity Utilization 76.1%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	373	1045	461	252	772	233	190	898	225	97	1516	578
v/c Ratio	0.78	0.83	0.69	0.70	0.72	0.45	0.74	0.48	0.28	0.52	0.85	0.68
Control Delay (s/veh)	69.6	53.1	34.9	71.6	52.6	16.6	79.7	29.3	3.9	81.3	31.0	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.6	53.1	34.9	71.6	52.6	16.6	79.7	29.3	3.9	81.3	31.0	22.7
Queue Length 50th (m)	53.6	114.1	92.3	35.4	83.9	15.3	29.8	78.7	0.0	13.2	181.6	159.1
Queue Length 95th (m)	71.7	133.5	133.2	50.1	101.0	38.9	#50.1	94.3	15.4	m19.6	199.4	m206.1
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	505	1342	672	375	1139	541	258	1879	817	192	1793	854
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.78	0.69	0.67	0.68	0.43	0.74	0.48	0.28	0.51	0.85	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	369	1035	456	249	764	231	188	889	223	96	1501	572
Future Volume (vph)	369	1035	456	249	764	231	188	889	223	96	1501	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	373	1045	461	252	772	233	190	898	225	97	1516	578
RTOR Reduction (vph)	0	0	38	0	0	123	0	0	126	0	0	24
Lane Group Flow (vph)	373	1045	423	252	772	110	190	898	99	97	1516	554
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	19.0	37.6	49.2	13.4	32.0	32.0	11.6	59.9	59.9	8.1	56.4	75.4
Effective Green, g (s)	20.0	39.6	53.2	14.4	34.0	34.0	12.6	61.9	61.9	9.1	58.4	79.4
Actuated g/C Ratio	0.14	0.28	0.38	0.10	0.24	0.24	0.09	0.44	0.44	0.07	0.42	0.57
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	481	1266	590	360	1076	396	258	1880	692	187	1791	774
v/s Ratio Prot	c0.11	c0.23	c0.07	0.07	0.17		c0.07	0.21		0.03	c0.35	c0.11
v/s Ratio Perm			0.20			0.07			0.06			0.30
v/c Ratio	0.78	0.83	0.72	0.70	0.72	0.28	0.74	0.48	0.14	0.52	0.85	0.72
Uniform Delay, d1	57.8	47.0	37.0	60.7	48.6	43.0	62.1	27.6	23.3	63.3	36.8	22.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.71	1.07
Incremental Delay, d2	7.7	4.5	4.1	6.0	2.3	0.4	10.4	0.9	0.4	2.0	4.3	2.6
Delay (s)	65.5	51.5	41.1	66.7	50.9	43.4	72.5	28.5	23.7	74.9	30.2	26.2
Level of Service	E	D	D	E	D	D	E	C	C	E	C	C
Approach Delay (s/veh)		51.7			52.7			34.0			31.2	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	41.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	76.1%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

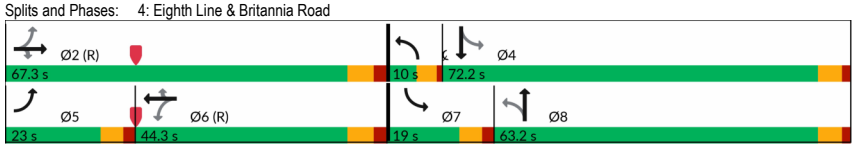
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	1104	55	24	639	82	41	157	29	187	311	201
Future Volume (vph)	162	1104	55	24	639	82	41	157	29	187	311	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.976			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1785	0	1825	1806	0
Flt Permitted	0.276			0.204			0.155			0.451		
Satd. Flow (perm)	530	4476	1306	392	4476	1633	273	1785	0	866	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		7			29	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	165	1127	56	24	652	84	42	160	30	191	317	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	1127	56	24	652	84	42	190	0	191	531	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

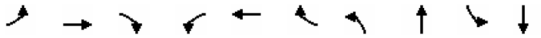
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	23.0	67.3	67.3	44.3	44.3	44.3	10.0	63.2		19.0	72.2	
Total Split (%)	15.4%	45.0%	45.0%	29.6%	29.6%	29.6%	6.7%	42.3%		12.7%	48.3%	
Maximum Green (s)	17.0	60.5	60.5	37.5	37.5	37.5	5.5	57.5		13.0	66.5	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	80.5	79.7	79.7	60.8	60.8	60.8	45.2	38.5		57.0	49.3	
Actuated g/C Ratio	0.54	0.53	0.53	0.41	0.41	0.41	0.30	0.26		0.38	0.33	
v/c Ratio	0.42	0.47	0.08	0.15	0.36	0.11	0.32	0.41		0.46	0.86	
Control Delay (s/veh)	23.5	24.5	0.8	39.8	34.5	0.5	31.0	44.7		33.7	58.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	23.5	24.5	0.8	39.8	34.5	0.5	31.0	44.7		33.7	58.3	
LOS	C	C	A	D	C	A	C	D		C	E	
Approach Delay (s/veh)		23.4			30.9			42.2			51.8	
Approach LOS		C			C			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay (s/veh): 33.4	Intersection LOS: C	
Intersection Capacity Utilization 90.6%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

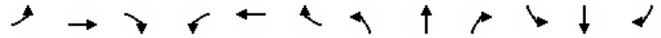
Splits and Phases: 4: Eighth Line & Britannia Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	165	1127	56	24	652	84	42	190	191	531
v/c Ratio	0.42	0.47	0.08	0.15	0.36	0.11	0.32	0.41	0.46	0.86
Control Delay (s/veh)	23.5	24.5	0.8	39.8	34.5	0.5	31.0	44.7	33.7	58.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.5	24.5	0.8	39.8	34.5	0.5	31.0	44.7	33.7	58.3
Queue Length 50th (m)	25.1	90.1	0.0	4.6	58.4	0.0	8.0	46.4	37.8	140.0
Queue Length 95th (m)	45.4	122.6	1.6	14.7	85.9	0.4	14.4	62.7	49.2	165.7
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	434	2385	740	159	1821	747	133	690	413	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.47	0.08	0.15	0.36	0.11	0.32	0.28	0.46	0.65

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	1104	55	24	639	82	41	157	29	187	311	201
Future Volume (vph)	162	1104	55	24	639	82	41	157	29	187	311	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1785		1825	1805	
Flt Permitted	0.28	1.00	1.00	0.20	1.00	1.00	0.16	1.00		0.45	1.00	
Satd. Flow (perm)	531	4476	1306	392	4476	1633	274	1785		866	1805	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	165	1127	56	24	652	84	42	160	30	191	317	214
RTOR Reduction (vph)	0	0	26	0	0	50	0	5	0	0	19	0
Lane Group Flow (vph)	165	1127	30	24	652	34	42	185	0	191	512	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	78.8	78.8	78.8	60.0	60.0	60.0	43.7	39.3		58.2	49.3	
Effective Green, g (s)	78.8	78.8	78.8	60.0	60.0	60.0	43.7	39.3		58.2	49.3	
Actuated g/C Ratio	0.53	0.53	0.53	0.40	0.40	0.40	0.29	0.26		0.39	0.33	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	390	2359	688	157	1796	655	121	469		419	595	
v/s Ratio Prot	0.04	c0.25			0.15		0.01	0.10		c0.04	c0.28	
v/s Ratio Perm	0.19		0.02	0.06		0.02	0.09			0.14		
v/c Ratio	0.42	0.48	0.04	0.15	0.36	0.05	0.35	0.39		0.46	0.86	
Uniform Delay, d1	19.4	22.3	17.1	28.5	31.4	27.4	40.8	45.3		31.8	46.9	
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	0.7	0.7	0.1	2.1	0.6	0.1	1.7	0.5		0.8	11.9	
Delay (s)	20.1	23.0	17.2	30.6	31.9	27.5	42.6	45.9		32.6	58.7	
Level of Service	C	C	B	C	C	C	D	D		C	E	
Approach Delay (s/veh)		22.4			31.4			45.3			51.8	
Approach LOS		C			C			D			D	

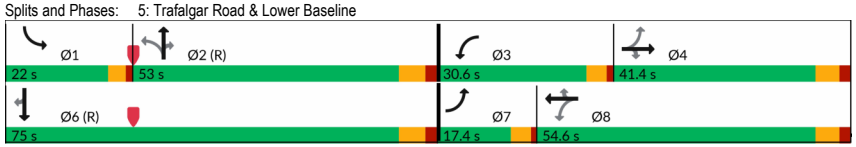
Intersection Summary					
HCM 2000 Control Delay (s/veh)	33.3	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.66				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5		
Intersection Capacity Utilization	90.6%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	493	98	408	195	157	38	964	228	334	1756	110
Future Volume (vph)	188	493	98	408	195	157	38	964	228	334	1756	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.630			0.101			0.084			0.950		
Satd. Flow (perm)	1153	1902	1601	190	1883	1541	144	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			164			211			91
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	196	514	102	425	203	164	38	964	228	348	1829	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	196	514	102	425	203	164	38	964	228	348	1829	115
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	25.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	9.5	24.2	24.2	31.6	31.6	31.6	11.0	31.6	31.6
Total Split (s)	17.4	41.4	41.4	30.6	54.6	54.6	53.0	53.0	53.0	22.0	75.0	75.0
Total Split (%)	11.8%	28.2%	28.2%	20.8%	37.1%	37.1%	36.1%	36.1%	36.1%	15.0%	51.0%	51.0%
Maximum Green (s)	12.9	35.2	35.2	26.1	48.4	48.4	46.4	46.4	46.4	18.0	68.4	68.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	4.6	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	51.3	37.2	37.2	68.5	50.9	50.9	47.8	48.8	48.8	18.6	70.4	70.4
Actuated g/C Ratio	0.35	0.25	0.25	0.47	0.35	0.35	0.33	0.33	0.33	0.13	0.48	0.48
v/c Ratio	0.43	1.07	0.21	1.11	0.31	0.26	0.83	0.69	0.35	0.83	0.89	0.15
Control Delay (s/veh)	28.4	111.8	4.9	119.8	37.1	5.6	135.4	45.7	7.2	79.9	41.4	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.4	111.8	4.9	119.8	37.1	5.6	135.4	45.7	7.2	79.9	41.4	6.5
LOS	C	F	A	F	D	A	F	D	A	E	D	A
Approach Delay (s/veh)		78.2			75.0			41.3			45.5	
Approach LOS		E			E			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 147		
Actuated Cycle Length: 147		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.11		
Intersection Signal Delay (s/veh): 54.2		Intersection LOS: D
Intersection Capacity Utilization 117.8%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	514	102	425	203	164	38	964	228	348	1829	115
v/c Ratio	0.43	1.07	0.21	1.11	0.31	0.26	0.83	0.69	0.35	0.83	0.89	0.15
Control Delay (s/veh)	28.4	111.8	4.9	119.8	37.1	5.6	135.4	45.7	7.2	79.9	41.4	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.4	111.8	4.9	119.8	37.1	5.6	135.4	45.7	7.2	79.9	41.4	6.5
Queue Length 50th (m)	35.2	~166.4	0.0	~126.7	44.2	0.0	10.8	107.5	3.5	52.4	205.9	3.8
Queue Length 95th (m)	53.0	#236.4	9.8	#194.5	65.8	16.3	#35.6	127.3	23.0	#74.4	232.7	15.0
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	461	481	497	383	651	640	46	1399	656	428	2056	775
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.07	0.21	1.11	0.31	0.26	0.83	0.69	0.35	0.81	0.89	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	493	98	408	195	157	38	964	228	334	1756	110
Future Volume (vph)	188	493	98	408	195	157	38	964	228	334	1756	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.63	1.00	1.00	0.10	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1154	1902	1601	190	1883	1541	144	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	196	514	102	425	203	164	38	964	228	348	1829	115
RTOR Reduction (vph)	0	0	76	0	0	107	0	0	141	0	0	47
Lane Group Flow (vph)	196	514	26	425	203	57	38	964	87	348	1829	68
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	47.6	35.2	35.2	65.8	48.9	48.9	46.8	46.8	46.8	17.6	68.4	68.4
Effective Green, g (s)	49.6	37.2	37.2	66.8	50.9	50.9	47.8	48.8	48.8	18.6	70.4	70.4
Actuated g/C Ratio	0.34	0.25	0.25	0.45	0.35	0.35	0.33	0.33	0.33	0.13	0.48	0.48
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	6.6	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	442	481	405	381	652	533	46	1398	514	419	2056	728
v/s Ratio Prot	0.04	0.27		c0.21	0.11			0.23		0.10	c0.43	
v/s Ratio Perm	0.11		0.02	c0.30		0.04	0.26		0.06			0.04
v/c Ratio	0.44	1.07	0.06	1.12	0.31	0.11	0.83	0.69	0.17	0.83	0.89	0.09
Uniform Delay, d1	36.4	54.9	41.7	47.1	35.2	32.6	45.8	42.5	34.8	62.7	34.8	20.9
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	0.7	60.6	0.1	81.2	0.6	0.2	87.7	2.8	0.7	13.1	6.3	0.3
Delay (s)	37.1	115.5	41.8	128.2	35.8	32.8	133.4	45.3	35.5	75.7	41.0	21.1
Level of Service	D	F	D	F	D	C	F	D	D	E	D	C
Approach Delay (s/veh)		87.3			84.8			46.2			45.3	
Approach LOS		F			F			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	58.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.03			
Actuated Cycle Length (s)	147.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	117.8%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

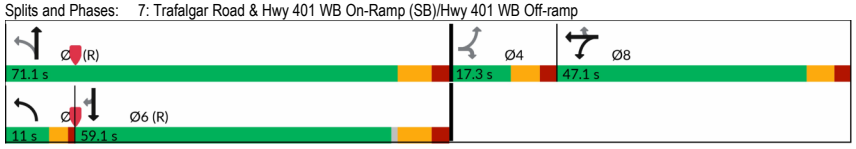
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Future Volume (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.130					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	250	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199			397						161
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	18.9	18.9	18.9	102.0	97.9			93.5	93.5
Actuated g/C Ratio			0.07	0.14	0.14	0.14	0.75	0.72			0.69	0.69
v/c Ratio			0.02	0.75	0.04	0.58	0.06	0.32			0.44	0.18
Control Delay (s/veh)			0.1	67.6	47.8	8.4	7.4	8.4			12.4	3.0
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.1	67.6	47.8	8.4	7.4	8.4			12.4	3.0
LOS			A	E	D	A	A	A			B	A
Approach Delay (s/veh)		0.1			34.1			8.4			11.3	
Approach LOS		A			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 15.6		Intersection LOS: B	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	7	302	10	400	15	918	1318	168
v/c Ratio	0.02	0.75	0.04	0.58	0.06	0.32	0.44	0.18
Control Delay (s/veh)	0.1	67.6	47.8	8.4	7.4	8.4	12.4	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.1	67.6	47.8	8.4	7.4	8.4	12.4	3.0
Queue Length 50th (m)	0.0	48.1	2.4	0.4	0.8	33.5	49.4	0.5
Queue Length 95th (m)	0.0	63.2	7.4	17.3	4.4	74.6	128.7	15.5
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	304	849	567	1004	269	2847	2973	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.02	0.40	0.06	0.32	0.44	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Future Volume (vph)	0	0	7	302	10	400	15	918	0	0	1318	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.13	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	249	3941			4309	1276
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	7	302	10	400	15	918	0	0	1318	168
RTOR Reduction (vph)	0	0	7	0	0	342	0	0	0	0	0	60
Lane Group Flow (vph)	0	0	0	302	10	58	15	918	0	0	1318	108
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	18.9	18.9	18.9	92.1	92.1			85.3	85.3
Effective Green, g (s)			2.0	18.9	18.9	18.9	92.1	92.1			85.3	85.3
Actuated g/C Ratio			0.01	0.14	0.14	0.14	0.68	0.68			0.63	0.63
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	401	267	342	201	2678			2712	803
v/s Ratio Prot				c0.10	0.01		0.00	c0.23			c0.31	
v/s Ratio Perm			c0.00			0.02	0.05					0.08
v/c Ratio			0.00	0.75	0.04	0.17	0.07	0.34			0.49	0.13
Uniform Delay, d1			65.8	56.1	50.4	51.4	8.3	9.1			13.4	10.2
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	7.0	0.0	0.1	0.1	0.4			0.6	0.3
Delay (s)			65.8	63.0	50.5	51.5	8.3	9.4			14.0	10.5
Level of Service			E	E	D	D	A	A			B	B
Approach Delay (s/veh)		65.8			56.4			9.4			13.6	
Approach LOS		E			E			A			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	22.2	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	61.2%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

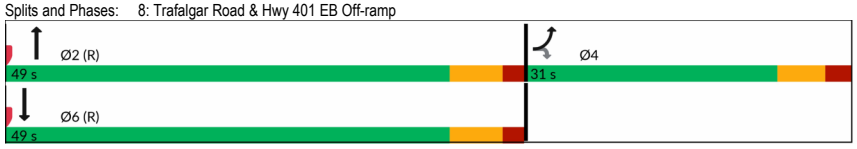
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	164	536	0	1600	647	0
Future Volume (vph)	164	536	0	1600	647	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.907	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2805	1339	0	4154	4117	0
Flt Permitted	0.981					
Satd. Flow (perm)	2805	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	218	218				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	164	536	0	1600	647	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	432	268	0	1600	647	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	13.3	13.3		52.7	52.7	
Actuated g/C Ratio	0.17	0.17		0.66	0.66	
v/c Ratio	0.67	0.66		0.58	0.24	
Control Delay (s/veh)	20.0	15.7		9.3	6.3	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.0	15.7		9.3	6.3	
LOS	B	B		A	A	
Approach Delay (s/veh)	18.3			9.3	6.3	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 10.8		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	432	268	1600	647
v/c Ratio	0.67	0.66	0.58	0.24
Control Delay (s/veh)	20.0	15.7	9.3	6.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.0	15.7	9.3	6.3
Queue Length 50th (m)	19.4	8.1	49.5	14.7
Queue Length 95th (m)	32.9	31.8	87.1	27.9
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	994	554	2736	2711
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.48	0.58	0.24

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	164	536	0	1600	647	0
Future Volume (vph)	164	536	0	1600	647	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2806	1339		4154	4117	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2806	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	164	536	0	1600	647	0
RTOR Reduction (vph)	182	182	0	0	0	0
Lane Group Flow (vph)	250	86	0	1600	647	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	13.3	13.3		52.7	52.7	
Effective Green, g (s)	13.3	13.3		52.7	52.7	
Actuated g/C Ratio	0.17	0.17		0.66	0.66	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	466	222		2736	2712	
v/s Ratio Prot	c0.09			c0.39	0.16	
v/s Ratio Perm		0.06				
v/c Ratio	0.54	0.39		0.58	0.24	
Uniform Delay, d1	30.5	29.7		7.6	5.5	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.1		0.9	0.2	
Delay (s)	31.7	30.9		8.5	5.7	
Level of Service	C	C		A	A	
Approach Delay (s/veh)	31.4			8.5	5.7	
Approach LOS	C			A	A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

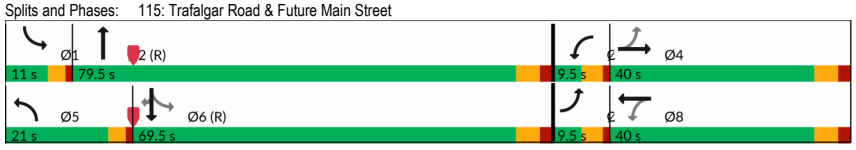
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2171	27	50	1072	74
Future Volume (vph)	70	36	200	5	105	28	42	2171	27	50	1072	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt		0.873			0.969			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3124	0	1789	3468	0	1711	4412	0	1711	4421	1566
Flt Permitted	0.500			0.604			0.950			0.043		
Satd. Flow (perm)	942	3124	0	1138	3468	0	1711	4412	0	77	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		202			22			2				121
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2193	27	51	1083	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	238	0	5	134	0	42	2220	0	51	1083	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8						6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0		9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0		9.5	40.0		21.0	79.5		11.0	69.5	69.5
Total Split (%)	6.8%	28.6%		6.8%	28.6%		15.0%	56.8%		7.9%	49.6%	49.6%
Maximum Green (s)	5.0	34.0		5.0	34.0		17.0	73.5		7.0	63.5	63.5
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0			27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	21.1	18.6		16.7	10.8		9.0	98.3		104.5	96.6	96.6
Actuated g/C Ratio	0.15	0.13		0.12	0.08		0.06	0.70		0.75	0.69	0.69
v/c Ratio	0.38	0.40		0.03	0.47		0.38	0.72		0.36	0.36	0.07
Control Delay (s/veh)	57.7	13.7		49.0	56.7		59.0	13.4		27.2	9.1	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	57.7	13.7		49.0	56.7		59.0	13.4		27.2	9.1	0.7
LOS	E	B		D	E		E	B		C	A	A
Approach Delay (s/veh)		23.8			56.5			14.2			9.3	
Approach LOS		C			E			B			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B
Intersection Capacity Utilization 68.8%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	238	5	134	42	2220	51	1083	75
v/c Ratio	0.38	0.40	0.03	0.47	0.38	0.72	0.36	0.36	0.07
Control Delay (s/veh)	57.7	13.7	49.0	56.7	59.0	13.4	27.2	9.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.7	13.7	49.0	56.7	59.0	13.4	27.2	9.1	0.7
Queue Length 50th (m)	17.0	4.4	1.2	16.2	0.0	129.4	1.3	56.5	0.2
Queue Length 95th (m)	32.3	18.2	5.3	26.8	m14.6	129.8	14.1	67.4	1.7
Internal Link Dist (m)		882.8		603.0		688.8		212.3	
Turn Bay Length (m)	75.0		160.0		125.0		50.0		75.0
Base Capacity (vph)	186	911	160	858	207	3099	143	3049	1117
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.26	0.03	0.16	0.20	0.72	0.36	0.36	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2171	27	50	1072	74
Future Volume (vph)	70	36	200	5	105	28	42	2171	27	50	1072	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	0.87		1.00	0.97		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)	1789	3123		1789	3466		1711	4413		1711	4421	1566
Flt Permitted	0.50	1.00		0.60	1.00		0.95	1.00		0.04	1.00	1.00
Satd. Flow (perm)	942	3123		1137	3466		1711	4413		78	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2193	27	51	1083	75
RTOR Reduction (vph)	0	175	0	0	20	0	0	1	0	0	0	26
Lane Group Flow (vph)	71	63	0	5	114	0	42	2219	0	51	1083	49
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8						6		6
Actuated Green, G (s)	24.1	18.6		14.5	13.5		7.7	93.9		98.2	92.2	92.2
Effective Green, g (s)	24.1	18.6		14.5	13.5		7.7	93.9		98.2	92.2	92.2
Actuated g/C Ratio	0.17	0.13		0.10	0.10		0.06	0.67		0.70	0.66	0.66
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	199	414		122	334		94	2959		124	2911	1031
v/s Ratio Prot	c0.02	0.02		0.00	0.03		c0.02	c0.50		0.02	0.24	
v/s Ratio Perm	c0.05			0.00						0.27		0.03
v/c Ratio	0.36	0.15		0.04	0.34		0.45	0.75		0.41	0.37	0.05
Uniform Delay, d1	50.0	53.7		56.4	59.1		64.1	15.3		15.9	10.8	8.4
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.90		1.80	0.87	2.26
Incremental Delay, d2	1.1	0.2		0.1	0.6		1.8	1.0		2.2	0.4	0.1
Delay (s)	51.1	53.9		56.5	59.7		57.2	14.7		30.8	9.8	19.1
Level of Service	D	D		E	E		E	B		C	A	B
Approach Delay (s/veh)		53.3			59.6			15.5			11.3	
Approach LOS		D			E			B			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	18.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.69				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	68.8%	ICU Level of Service		C	
Analysis Period (min)	15				

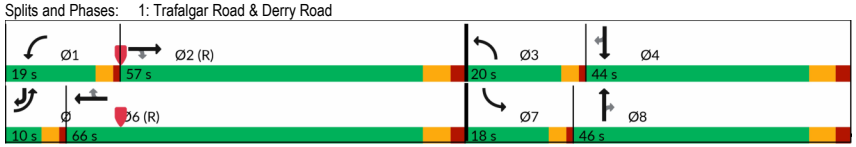
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Future Volume (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			258			152			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	10.0	57.0	57.0	19.0	66.0	66.0	20.0	46.0	46.0	18.0	44.0	10.0
Total Split (%)	7.1%	40.7%	40.7%	13.6%	47.1%	47.1%	14.3%	32.9%	32.9%	12.9%	31.4%	7.1%
Maximum Green (s)	6.0	50.1	50.1	15.0	59.1	59.1	16.0	39.2	39.2	14.0	37.2	6.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	7.0	52.5	52.5	15.6	61.1	61.1	17.0	41.2	41.2	15.0	39.2	52.0
Actuated g/C Ratio	0.05	0.38	0.38	0.11	0.44	0.44	0.12	0.29	0.29	0.11	0.28	0.37
v/c Ratio	0.84	0.50	0.44	0.63	0.92	0.32	1.06	0.84	0.22	0.90	1.02	0.68
Control Delay (s/veh)	116.5	29.4	6.4	63.5	41.7	10.0	110.5	37.0	4.0	103.7	59.9	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	116.5	29.4	6.4	63.5	41.7	10.0	110.5	37.0	4.0	103.7	59.9	16.6
LOS	F	C	A	E	D	A	F	D	A	F	E	B
Approach Delay (s/veh)		32.9			40.6			53.5			57.3	
Approach LOS		C			D			D			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.06		
Intersection Signal Delay (s/veh): 46.6	Intersection LOS: D	
Intersection Capacity Utilization 91.2%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
v/c Ratio	0.84	0.50	0.44	0.63	0.92	0.32	1.06	0.84	0.22	0.90	1.02	0.68
Control Delay (s/veh)	116.5	29.4	6.4	63.5	41.7	10.0	110.5	37.0	4.0	103.7	59.9	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	116.5	29.4	6.4	63.5	41.7	10.0	110.5	37.0	4.0	103.7	59.9	16.6
Queue Length 50th (m)	22.3	76.7	8.8	34.1	199.7	22.5	~63.6	117.8	5.8	41.5	~156.3	56.8
Queue Length 95th (m)	#41.9	92.2	22.1	45.6	226.0	23.9	m#82.7	m131.7	m5.9	#73.0	#187.1	53.4
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	168	1678	750	400	1992	784	385	1251	548	343	1191	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.50	0.44	0.61	0.92	0.32	1.06	0.84	0.22	0.90	1.02	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Future Volume (vph)	141	844	333	245	1836	250	409	1053	120	310	1215	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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	844	333	245	1836	250	409	1053	120	310	1215	432
RTOR Reduction (vph)	0	0	161	0	0	86	0	0	85	0	0	62
Lane Group Flow (vph)	141	844	172	245	1836	164	409	1053	35	310	1215	370
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	6.0	50.5	50.5	14.6	59.1	59.1	16.0	39.2	39.2	14.0	37.2	43.2
Effective Green, g (s)	7.0	52.5	52.5	15.6	61.1	61.1	17.0	41.2	41.2	15.0	39.2	47.2
Actuated g/C Ratio	0.05	0.38	0.38	0.11	0.44	0.44	0.12	0.29	0.29	0.11	0.28	0.34
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	168	1678	588	390	1992	698	385	1251	460	343	1191	527
v/s Ratio Prot	c0.04	0.19		0.07	c0.40		c0.13	0.25		0.10	c0.29	0.04
v/s Ratio Perm			0.11			0.10			0.02			0.20
v/c Ratio	0.84	0.50	0.29	0.63	0.92	0.24	1.06	0.84	0.08	0.90	1.02	0.70
Uniform Delay, d1	65.9	33.7	30.7	59.4	37.2	24.8	61.5	46.3	35.7	61.8	50.4	40.3
Progression Factor	1.26	0.83	0.59	0.96	0.92	0.93	1.05	0.71	0.64	1.32	0.62	0.43
Incremental Delay, d2	30.4	1.0	1.2	3.6	7.1	0.6	51.0	3.2	0.1	21.9	27.7	4.0
Delay (s)	113.2	29.1	19.2	60.9	41.4	23.7	115.3	36.1	22.9	103.5	59.2	21.2
Level of Service	F	C	B	E	D	C	F	D	C	F	E	C
Approach Delay (s/veh)		35.6			41.6			55.6			57.8	
Approach LOS		D			D			E			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	48.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

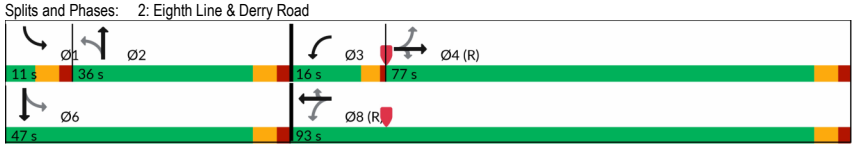
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	971	69	162	2114	4	83	0	130	4	6	8
Future Volume (vph)	4	971	69	162	2114	4	83	0	130	4	6	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633	0	1825	1756	0
Flt Permitted	0.053			0.217			0.748			0.341		
Satd. Flow (perm)	102	4520	1555	417	4565	1633	1437	1633	0	655	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		277			8	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	4	971	69	162	2114	4	83	0	130	4	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	971	69	162	2114	4	83	130	0	4	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	98.1	98.1	98.1	113.7	111.7	111.7	13.9	13.9		16.3	16.3	
Actuated g/C Ratio	0.70	0.70	0.70	0.81	0.80	0.80	0.10	0.10		0.12	0.12	
v/c Ratio	0.06	0.31	0.06	0.37	0.58	0.00	0.58	0.32		0.03	0.07	
Control Delay (s/veh)	13.0	9.4	0.9	6.1	7.1	0.0	65.2	3.2		48.8	32.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.0	9.4	0.9	6.1	7.1	0.0	65.2	3.2		48.8	32.1	
LOS	B	A	A	A	A	A	E	A		D	C	
Approach Delay (s/veh)		8.8			7.0			27.4			35.8	
Approach LOS		A			A			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.58		
Intersection Signal Delay (s/veh): 8.9	Intersection LOS: A	
Intersection Capacity Utilization 83.8%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	971	69	162	2114	4	83	130	4	14
v/c Ratio	0.06	0.31	0.06	0.37	0.58	0.00	0.58	0.32	0.03	0.07
Control Delay (s/veh)	13.0	9.4	0.9	6.1	7.1	0.0	65.2	3.2	48.8	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.0	9.4	0.9	6.1	7.1	0.0	65.2	3.2	48.8	32.1
Queue Length 50th (m)	0.3	37.1	0.0	6.5	67.9	0.0	19.0	1.0	1.0	1.5
Queue Length 95th (m)	2.6	70.0	2.8	20.8	147.6	0.0	m35.7	m5.4	4.2	7.3
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	71	3167	1119	459	3640	1316	307	567	124	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.31	0.06	0.35	0.58	0.00	0.27	0.23	0.03	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	971	69	162	2114	4	83	0	130	4	6	8
Future Volume (vph)	4	971	69	162	2114	4	83	0	130	4	6	8
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633		1825	1756	
Flt Permitted	0.05	1.00	1.00	0.22	1.00	1.00	0.75	1.00		0.34	1.00	
Satd. Flow (perm)	102	4520	1555	416	4565	1633	1438	1633		656	1756	
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)	4	971	69	162	2114	4	83	0	130	4	6	8
RTOR Reduction (vph)	0	0	23	0	0	1	0	117	0	0	7	0
Lane Group Flow (vph)	4	971	46	162	2114	3	83	13	0	4	7	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	93.2	93.2	93.2	106.8	106.8	106.8	13.9	13.9		21.2	21.2	
Effective Green, g (s)	93.2	93.2	93.2	106.8	106.8	106.8	13.9	13.9		21.2	21.2	
Actuated g/C Ratio	0.67	0.67	0.67	0.76	0.76	0.76	0.10	0.10		0.15	0.15	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	67	3009	1035	413	3482	1245	142	162		110	265	
v/s Ratio Prot		0.21		0.03	c0.46			0.01		0.00	c0.00	
v/s Ratio Perm	0.04		0.03	0.27		0.00	c0.06			0.01		
v/c Ratio	0.06	0.32	0.04	0.39	0.61	0.00	0.58	0.08		0.04	0.03	
Uniform Delay, d1	8.1	10.0	8.1	5.0	7.3	3.9	60.3	57.2		50.9	50.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.3	0.1	0.6	0.8	0.0	5.1	0.2		0.1	0.0	
Delay (s)	9.8	10.2	8.1	5.7	8.1	3.9	56.7	57.4		51.0	50.7	
Level of Service	A	B	A	A	A	A	E	E		D	D	
Approach Delay (s/veh)		10.1			7.9			57.2			50.7	
Approach LOS		B			A			E			D	

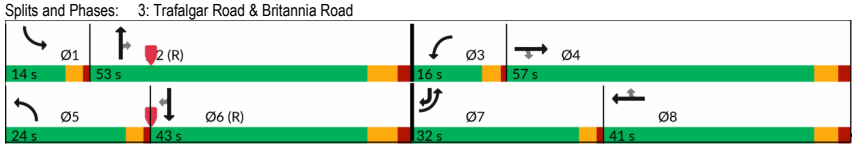
Intersection Summary				
HCM 2000 Control Delay (s/veh)	11.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	83.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Future Volume (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			267			156			161			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Shared Lane Traffic (%)												
Lane Group Flow (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	32.0	57.0	57.0	16.0	41.0	41.0	24.0	53.0	53.0	14.0	43.0	32.0
Total Split (%)	22.9%	40.7%	40.7%	11.4%	29.3%	29.3%	17.1%	37.9%	37.9%	10.0%	30.7%	22.9%
Maximum Green (s)	28.0	51.0	51.0	12.0	35.0	35.0	20.0	46.0	46.0	10.0	36.0	28.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	29.0	53.6	53.6	12.4	37.0	37.0	21.0	48.0	48.0	11.0	38.0	73.0
Actuated g/C Ratio	0.21	0.38	0.38	0.09	0.26	0.26	0.15	0.34	0.34	0.08	0.27	0.52
v/c Ratio	0.94	0.63	0.35	0.62	0.94	0.36	0.92	0.86	0.33	0.85	0.76	0.67
Control Delay (s/veh)	78.0	37.2	4.5	89.1	48.3	6.0	76.3	72.8	32.3	105.5	27.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.0	37.2	4.5	89.1	48.3	6.0	76.3	72.8	32.3	105.5	27.3	5.2
LOS	E	D	A	F	D	A	E	E	C	F	C	A
Approach Delay (s/veh)		45.2			48.3			69.1			29.5	
Approach LOS		D			D			E			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 125		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.94		
Intersection Signal Delay (s/veh): 48.7	Intersection LOS: D	
Intersection Capacity Utilization 86.4%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
v/c Ratio	0.94	0.63	0.35	0.62	0.94	0.36	0.92	0.86	0.33	0.85	0.76	0.67
Control Delay (s/veh)	78.0	37.2	4.5	89.1	48.3	6.0	76.3	72.8	32.3	105.5	27.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.0	37.2	4.5	89.1	48.3	6.0	76.3	72.8	32.3	105.5	27.3	5.2
Queue Length 50th (m)	94.9	103.0	0.0	29.3	132.2	0.3	67.7	146.5	28.8	32.5	50.7	1.4
Queue Length 95th (m)	#133.6	121.1	17.9	42.3	#155.0	12.6	m#84.3	165.5	m39.2	m36.5	m57.0	m3.8
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	632	1714	771	328	1206	522	480	1486	642	244	1165	842
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.63	0.35	0.59	0.94	0.36	0.92	0.86	0.33	0.85	0.76	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Future Volume (vph)	593	1073	267	194	1134	186	440	1271	214	207	886	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	593	1073	267	194	1134	186	440	1271	214	207	886	565
RTOR Reduction (vph)	0	0	165	0	0	115	0	0	106	0	0	44
Lane Group Flow (vph)	593	1073	102	194	1134	71	440	1271	108	207	886	521
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	51.6	51.6	11.4	35.0	35.0	20.0	46.0	46.0	10.0	36.0	64.0
Effective Green, g (s)	29.0	53.6	53.6	12.4	37.0	37.0	21.0	48.0	48.0	11.0	38.0	68.0
Actuated g/C Ratio	0.21	0.38	0.38	0.09	0.26	0.26	0.15	0.34	0.34	0.08	0.27	0.49
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	632	1713	606	313	1206	407	480	1486	536	244	1165	746
v/s Ratio Prot	c0.19	0.24		0.05	c0.25		c0.14	c0.29		0.07	0.21	0.15
v/s Ratio Perm			0.06			0.05			0.07			0.19
v/c Ratio	0.94	0.63	0.17	0.62	0.94	0.18	0.92	0.86	0.20	0.85	0.76	0.70
Uniform Delay, d1	54.6	35.1	28.5	61.5	50.4	39.7	58.6	42.8	32.5	63.7	46.8	28.0
Progression Factor	1.00	1.00	1.00	1.32	0.68	0.47	1.02	1.60	3.34	1.43	0.53	0.15
Incremental Delay, d2	21.6	0.7	0.1	3.1	12.5	0.2	14.9	4.0	0.5	12.6	2.3	1.4
Delay (s)	76.2	35.8	28.6	84.3	46.7	18.8	74.7	72.3	109.1	103.7	27.1	5.5
Level of Service	E	D	C	F	D	B	E	E	F	F	C	A
Approach Delay (s/veh)		47.2			48.1			76.9			29.3	
Approach LOS		D			D			E			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	51.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	86.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

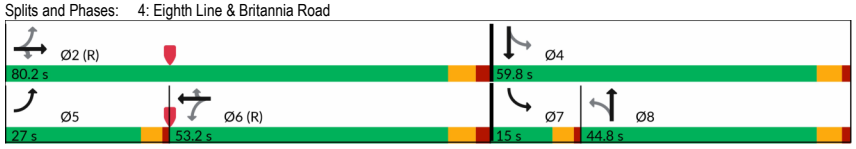
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	898	49	27	1142	170	81	316	47	141	193	183
Future Volume (vph)	233	898	49	27	1142	170	81	316	47	141	193	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.981			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1875	0	1825	1745	0
Flt Permitted	0.118			0.268			0.467			0.151		
Satd. Flow (perm)	227	4476	1328	515	4520	1633	897	1875	0	290	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			140		5			40	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	233	898	49	27	1142	170	81	316	47	141	193	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	898	49	27	1142	170	81	363	0	141	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	27.0	80.2	80.2	53.2	53.2	53.2	44.8	44.8		15.0	59.8	
Total Split (%)	19.3%	57.3%	57.3%	38.0%	38.0%	38.0%	32.0%	32.0%		10.7%	42.7%	
Maximum Green (s)	22.5	73.4	73.4	46.4	46.4	46.4	39.1	39.1		10.5	54.1	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	83.3	81.0	81.0	59.8	59.8	59.8	31.6	31.6		47.7	46.5	
Actuated g/C Ratio	0.60	0.58	0.58	0.43	0.43	0.43	0.23	0.23		0.34	0.33	
v/c Ratio	0.72	0.35	0.06	0.12	0.59	0.22	0.40	0.85		0.67	0.62	
Control Delay (s/veh)	62.2	12.1	2.3	31.8	34.3	8.3	44.1	60.8		46.5	38.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	62.2	12.1	2.3	31.8	34.3	8.3	44.1	60.8		46.5	38.0	
LOS	E	B	A	C	C	A	D	E		D	D	
Approach Delay (s/veh)		21.6			30.9			57.7			40.3	
Approach LOS		C			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 32.6		Intersection LOS: C	
Intersection Capacity Utilization 88.7%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	233	898	49	27	1142	170	81	363	141	376
v/c Ratio	0.72	0.35	0.06	0.12	0.59	0.22	0.40	0.85	0.67	0.62
Control Delay (s/veh)	62.2	12.1	2.3	31.8	34.3	8.3	44.1	60.8	46.5	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.2	12.1	2.3	31.8	34.3	8.3	44.1	60.8	46.5	38.0
Queue Length 50th (m)	43.9	28.8	0.5	4.6	103.0	4.9	17.5	91.5	27.6	80.9
Queue Length 95th (m)	m70.1	36.0	m1.3	13.3	140.2	22.2	32.6	123.0	40.7	107.4
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	391	2590	792	219	1930	777	250	527	213	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.35	0.06	0.12	0.59	0.22	0.32	0.69	0.66	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	898	49	27	1142	170	81	316	47	141	193	183
Future Volume (vph)	233	898	49	27	1142	170	81	316	47	141	193	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1874		1825	1745	
Flt Permitted	0.12	1.00	1.00	0.27	1.00	1.00	0.47	1.00		0.15	1.00	
Satd. Flow (perm)	226	4476	1328	515	4520	1633	897	1874		290	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)	233	898	49	27	1142	170	81	316	47	141	193	183
RTOR Reduction (vph)	0	0	21	0	0	80	0	4	0	0	27	0
Lane Group Flow (vph)	233	898	28	27	1142	90	81	359	0	141	349	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	81.0	81.0	81.0	59.8	59.8	59.8	31.7	31.7		46.5	46.5	
Effective Green, g (s)	81.0	81.0	81.0	59.8	59.8	59.8	31.7	31.7		46.5	46.5	
Actuated g/C Ratio	0.58	0.58	0.58	0.43	0.43	0.43	0.23	0.23		0.33	0.33	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	321	2589	768	219	1930	697	203	424		209	579	
v/s Ratio Prot	c0.09	0.20			0.25			c0.19		0.05	c0.20	
v/s Ratio Perm	c0.33		0.02	0.05		0.05	0.09			0.17		
v/c Ratio	0.73	0.35	0.04	0.12	0.59	0.13	0.40	0.85		0.67	0.60	
Uniform Delay, d1	21.5	15.6	12.7	24.2	30.7	24.3	46.0	51.8		36.7	39.0	
Progression Factor	2.60	0.72	0.65	1.00	1.00	1.00	0.86	0.85		0.97	0.97	
Incremental Delay, d2	6.3	0.3	0.1	1.2	1.3	0.4	1.2	13.7		8.3	1.8	
Delay (s)	62.2	11.5	8.3	25.4	32.1	24.7	40.8	57.8		43.9	39.8	
Level of Service	E	B	A	C	C	C	D	E		D	D	
Approach Delay (s/veh)		21.4			31.0			54.7			40.9	
Approach LOS		C			C			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	32.2	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5		
Intersection Capacity Utilization	88.7%	ICU Level of Service	E		
Analysis Period (min)	15				

c Critical Lane Group

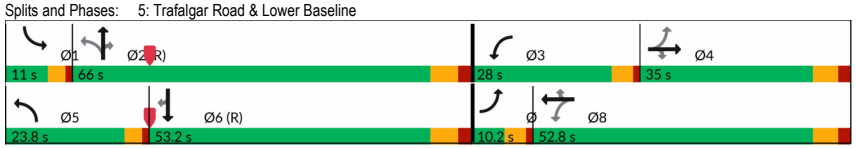
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Future Volume (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.309			0.125			0.136			0.950		
Satd. Flow (perm)	571	1883	1570	238	1902	1585	250	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			151			264			157
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	10.2	35.0	35.0	28.0	52.8	52.8	23.8	66.0	66.0	11.0	53.2	53.2
Total Split (%)	7.3%	25.0%	25.0%	20.0%	37.7%	37.7%	17.0%	47.1%	47.1%	7.9%	38.0%	38.0%
Maximum Green (s)	5.7	28.8	28.8	23.5	46.6	46.6	19.8	59.4	59.4	7.0	46.6	46.6
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	37.3	29.9	29.9	58.3	47.4	47.4	74.0	61.4	61.4	9.2	54.6	54.6
Actuated g/C Ratio	0.27	0.21	0.21	0.42	0.34	0.34	0.53	0.44	0.44	0.07	0.39	0.39
v/c Ratio	0.44	0.85	0.11	0.95	0.73	0.51	0.70	0.86	0.46	0.87	0.60	0.11
Control Delay (s/veh)	34.4	72.8	0.5	90.6	67.9	41.4	32.8	41.4	10.2	82.7	67.1	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	72.8	0.5	90.6	67.9	41.4	32.8	41.4	10.2	82.7	67.1	13.3
LOS	C	E	A	F	E	D	C	D	B	F	E	B
Approach Delay (s/veh)		57.7			67.4			35.2			66.0	
Approach LOS		E			E			D			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.95		
Intersection Signal Delay (s/veh): 52.0	Intersection LOS: D	
Intersection Capacity Utilization 89.4%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
v/c Ratio	0.44	0.85	0.11	0.95	0.73	0.51	0.70	0.86	0.46	0.87	0.60	0.11
Control Delay (s/veh)	34.4	72.8	0.5	90.6	67.9	41.4	32.8	41.4	10.2	82.7	67.1	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	72.8	0.5	90.6	67.9	41.4	32.8	41.4	10.2	82.7	67.1	13.3
Queue Length 50th (m)	15.8	92.6	0.0	99.8	124.6	56.6	30.8	174.6	21.4	28.8	112.5	2.7
Queue Length 95th (m)	27.6	#139.4	0.0	#139.9	172.5	99.7	53.4	199.7	48.5	m#49.6	133.7	m10.5
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	208	414	470	373	660	648	356	1920	841	217	1674	700
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.83	0.11	0.94	0.71	0.50	0.60	0.86	0.46	0.87	0.60	0.11

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Future Volume (vph)	92	342	53	352	468	322	213	1659	390	188	1000	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.31	1.00	1.00	0.12	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	571	1883	1570	237	1902	1585	250	4378	1581	3319	4295	1551
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	342	53	352	468	322	213	1659	390	188	1000	80
RTOR Reduction (vph)	0	0	42	0	0	100	0	0	148	0	0	49
Lane Group Flow (vph)	92	342	11	352	468	222	213	1659	242	188	1000	31
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	33.6	27.9	27.9	55.6	45.4	45.4	71.6	59.4	59.4	8.2	52.6	52.6
Effective Green, g (s)	35.6	29.9	29.9	56.6	47.4	47.4	72.6	61.4	61.4	9.2	54.6	54.6
Actuated g/C Ratio	0.25	0.21	0.21	0.40	0.34	0.34	0.52	0.44	0.44	0.07	0.39	0.39
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	201	402	335	367	643	536	300	1920	693	218	1675	604
v/s Ratio Prot	0.02	0.18		c0.17	0.25		c0.08	c0.38		c0.06	0.23	
v/s Ratio Perm	0.09		0.01	c0.22		0.14	0.29		0.15			0.02
v/c Ratio	0.46	0.85	0.03	0.96	0.73	0.41	0.71	0.86	0.35	0.86	0.60	0.05
Uniform Delay, d1	41.5	52.9	43.6	42.0	40.6	35.6	22.5	35.5	26.1	64.8	34.0	26.6
Progression Factor	1.00	1.00	1.00	1.48	1.50	2.06	1.00	1.00	1.00	0.84	1.88	1.00
Incremental Delay, d2	1.7	17.1	0.1	34.6	4.8	1.0	7.7	5.5	1.4	22.2	1.2	0.1
Delay (s)	43.2	70.0	43.7	96.9	65.5	74.5	30.2	41.0	27.4	76.6	64.9	26.7
Level of Service	D	E	D	F	E	E	C	D	C	E	E	C
Approach Delay (s/veh)		62.1			77.7			37.6			64.2	
Approach LOS		E			E			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	55.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	89.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

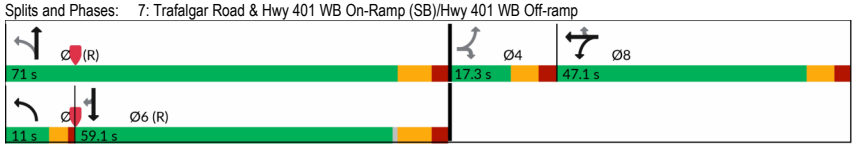
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Future Volume (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.440			0.950			0.107					
Satd. Flow (perm)	845	0	1633	3372	1921	2737	206	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			259						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	11.1		11.1	55.2	55.2	55.2	54.2	50.1			47.9	47.9
Actuated g/C Ratio	0.08		0.08	0.41	0.41	0.41	0.40	0.37			0.35	0.35
v/c Ratio	0.36		0.08	0.62	0.05	1.57	0.05	0.66			0.68	0.12
Control Delay (s/veh)	73.5		0.7	36.8	30.1	286.3	21.9	37.3			39.5	0.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	73.5		0.7	36.8	30.1	286.3	21.9	37.3			39.5	0.4
LOS	E		A	D	C	F	C	D			D	A
Approach Delay (s/veh)		40.3			208.9			37.2			37.2	
Approach LOS		D			F			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.57			
Intersection Signal Delay (s/veh): 134.5		Intersection LOS: F	
Intersection Capacity Utilization 109.4%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



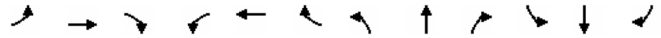


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	21	854	40	1992	8	1053	1038	65
v/c Ratio	0.36	0.08	0.62	0.05	1.57	0.05	0.66	0.68	0.12
Control Delay (s/veh)	73.5	0.7	36.8	30.1	286.3	21.9	37.3	39.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.5	0.7	36.8	30.1	286.3	21.9	37.3	39.5	0.4
Queue Length 50th (m)	6.5	0.0	98.2	6.6	~427.6	1.3	103.6	100.6	0.0
Queue Length 95th (m)	15.9	0.0	142.2	16.8	#512.2	4.1	106.7	120.1	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	69	253	1375	783	1270	166	2001	1668	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.08	0.62	0.05	1.57	0.05	0.53	0.62	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Future Volume (vph)	25	0	21	854	40	1992	8	1053	0	0	1038	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.44		1.00	0.95	1.00	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)	844		1633	3372	1921	2737	205	4309			4350	1306
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	0	21	854	40	1992	8	1053	0	0	1038	65
RTOR Reduction (vph)	0	0	20	0	0	153	0	0	0	0	0	44
Lane Group Flow (vph)	25	0	1	854	40	1839	8	1053	0	0	1038	21
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	9.1		9.1	55.2	55.2	55.2	48.6	48.6			43.2	43.2
Effective Green, g (s)	9.1		9.1	55.2	55.2	55.2	48.6	48.6			43.2	43.2
Actuated g/C Ratio	0.07		0.07	0.41	0.41	0.41	0.36	0.36			0.32	0.32
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		109	1374	783	1115	90	1546			1387	416
v/s Ratio Prot				0.25	0.02		0.00	c0.24			c0.24	
v/s Ratio Perm	c0.03		0.00			c0.67	0.03					0.02
v/c Ratio	0.45		0.01	0.62	0.05	1.65	0.09	0.68			0.75	0.05
Uniform Delay, d1	60.7		59.0	31.8	24.3	40.1	30.3	36.8			41.2	31.9
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	5.6		0.0	0.6	0.0	296.1	0.2	2.4			3.7	0.2
Delay (s)	66.3		59.0	32.4	24.3	336.2	30.5	39.3			45.0	32.1
Level of Service	E		E	C	C	F	C	D			D	C
Approach Delay (s/veh)		63.0			242.0			39.2			44.2	
Approach LOS		E			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	155.3	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.19				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	109.4%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

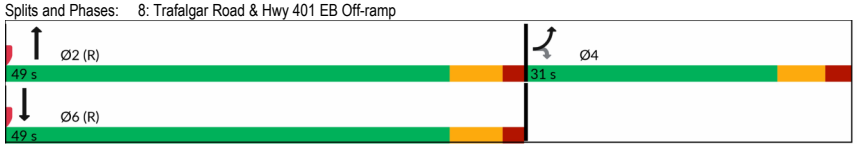
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	732	0	1278	1341	0
Future Volume (vph)	210	732	0	1278	1341	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.905	0.850				
Flt Protected	0.982					
Satd. Flow (prot)	2957	1327	0	4309	4350	0
Flt Permitted	0.982					
Satd. Flow (perm)	2957	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	35	35				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	210	732	0	1278	1341	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	576	366	0	1278	1341	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	25.2	25.2		40.8	40.8	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
v/c Ratio	0.60	0.83		0.58	0.61	
Control Delay (s/veh)	24.1	39.8		15.7	16.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.1	39.8		15.7	16.0	
LOS	C	D		B	B	
Approach Delay (s/veh)	30.2			15.7	16.0	
Approach LOS	C			B	B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay (s/veh): 19.6		Intersection LOS: B
Intersection Capacity Utilization 67.8%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	576	366	1278	1341
v/c Ratio	0.60	0.83	0.58	0.61
Control Delay (s/veh)	24.1	39.8	15.7	16.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.1	39.8	15.7	16.0
Queue Length 50th (m)	36.7	52.8	60.6	64.2
Queue Length 95th (m)	54.6	#107.0	74.1	78.2
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1002	462	2330	2352
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.79	0.55	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	732	0	1278	1341	0
Future Volume (vph)	210	732	0	1278	1341	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2957	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2957	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	210	732	0	1278	1341	0
RTOR Reduction (vph)	24	24	0	0	0	0
Lane Group Flow (vph)	552	342	0	1278	1341	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	25.2	25.2		40.8	40.8	
Effective Green, g (s)	25.2	25.2		40.8	40.8	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	931	418		2197	2218	
v/s Ratio Prot	0.19			0.30	c0.31	
v/s Ratio Perm		c0.26				
v/c Ratio	0.59	0.82		0.58	0.60	
Uniform Delay, d1	23.1	25.3		13.7	13.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	11.8		1.1	1.2	
Delay (s)	24.1	37.1		14.8	15.1	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	29.1			14.8	15.1	
Approach LOS	C			B	B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

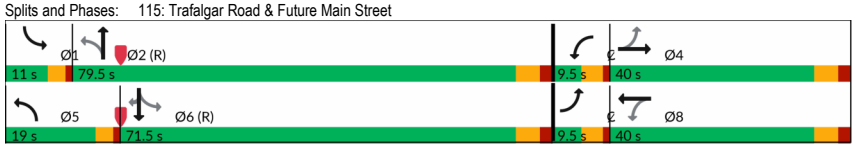
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1300	45	72	1890	383
Future Volume (vph)	54	46	207	15	115	8	227	1300	45	72	1890	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt		0.877			0.990			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3138	0	1789	3543	0	1711	4399	0	1711	4421	1566
Flt Permitted	0.555			0.535			0.047			0.157		
Satd. Flow (perm)	1045	3138	0	1008	3543	0	85	4399	0	283	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		207			5			5				255
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	54	46	207	15	115	8	227	1300	45	72	1890	383
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	253	0	15	123	0	227	1345	0	72	1890	383
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0		9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0		9.5	40.0		19.0	79.5		11.0	71.5	71.5
Total Split (%)	6.8%	28.6%		6.8%	28.6%		13.6%	56.8%		7.9%	51.1%	51.1%
Maximum Green (s)	5.0	34.0		5.0	34.0		15.0	73.5		7.0	65.5	65.5
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0			27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	18.8	15.3		16.6	10.8		110.9	99.8		93.4	84.1	84.1
Actuated g/C Ratio	0.13	0.11		0.12	0.08		0.79	0.71		0.67	0.60	0.60
v/c Ratio	0.31	0.48		0.10	0.44		0.74	0.43		0.27	0.71	0.37
Control Delay (s/veh)	56.6	16.6		51.1	64.2		42.4	15.7		10.4	30.9	11.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.2	0.0
Total Delay (s/veh)	56.6	16.6		51.1	64.2		42.4	15.7		10.4	31.1	11.6
LOS	E	B		D	E		D	B		B	C	B
Approach Delay (s/veh)		23.6			62.7			19.5			27.3	
Approach LOS		C			E			B			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.74		
Intersection Signal Delay (s/veh): 25.4		Intersection LOS: C
Intersection Capacity Utilization 78.7%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	253	15	123	227	1345	72	1890	383
v/c Ratio	0.31	0.48	0.10	0.44	0.74	0.43	0.27	0.71	0.37
Control Delay (s/veh)	56.6	16.6	51.1	64.2	42.4	15.7	10.4	30.9	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay (s/veh)	56.6	16.6	51.1	64.2	42.4	15.7	10.4	31.1	11.6
Queue Length 50th (m)	13.4	6.0	3.6	17.1	55.7	62.1	4.9	176.1	23.3
Queue Length 95th (m)	26.1	20.0	10.2	27.3	m71.2	84.4	12.1	239.5	62.5
Internal Link Dist (m)		882.8		603.0		688.8		212.3	
Turn Bay Length (m)	75.0		160.0		125.0		50.0		75.0
Base Capacity (vph)	172	918	149	864	310	3137	262	2656	1042
Starvation Cap Reductn	0	0	0	0	0	0	0	212	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.28	0.10	0.14	0.73	0.43	0.27	0.77	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1300	45	72	1890	383
Future Volume (vph)	54	46	207	15	115	8	227	1300	45	72	1890	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	0.88		1.00	0.99		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)	1789	3139		1789	3544		1711	4399		1711	4421	1566
Flt Permitted	0.56	1.00		0.54	1.00		0.05	1.00		0.16	1.00	1.00
Satd. Flow (perm)	1046	3139		1009	3544		84	4399		283	4421	1566
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)	54	46	207	15	115	8	227	1300	45	72	1890	383
RTOR Reduction (vph)	0	184	0	0	5	0	0	2	0	0	0	107
Lane Group Flow (vph)	54	69	0	15	118	0	227	1343	0	72	1890	276
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	20.0	15.3		14.6	12.6		106.2	96.3		87.4	81.5	81.5
Effective Green, g (s)	20.0	15.3		14.6	12.6		106.2	96.3		87.4	81.5	81.5
Actuated g/C Ratio	0.14	0.11		0.10	0.09		0.76	0.69		0.62	0.58	0.58
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	343		116	318		304	3025		236	2573	911
v/s Ratio Prot	c0.01	0.02		0.00	c0.03		c0.11	0.31		0.01	0.43	
v/s Ratio Perm	0.03			0.01			c0.45			0.18		0.18
v/c Ratio	0.31	0.20		0.13	0.37		0.75	0.44		0.31	0.73	0.30
Uniform Delay, d1	53.1	56.8		56.6	60.0		42.6	9.8		10.3	21.4	14.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	1.67		1.37	1.40	2.04
Incremental Delay, d2	1.0	0.3		0.5	0.7		7.0	0.3		0.7	1.8	0.8
Delay (s)	54.1	57.1		57.1	60.7		43.7	16.8		14.9	31.6	31.2
Level of Service	D	E		E	E		D	B		B	C	C
Approach Delay (s/veh)		56.5			60.3			20.7			31.0	
Approach LOS		E			E			C			C	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	30.0	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	78.7%	ICU Level of Service		D	
Analysis Period (min)	15				

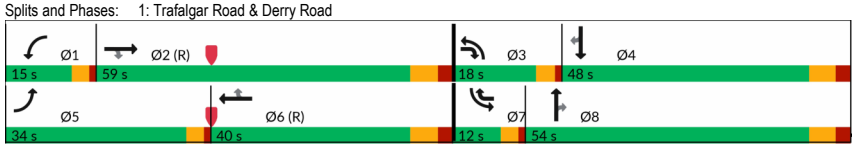
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	707	1564	334	280	699	455	291	1198	148	163	1064	26
Future Volume (vph)	707	1564	334	280	699	455	291	1198	148	163	1064	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			123			124			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	721	1596	341	286	713	464	297	1222	151	166	1086	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	721	1596	341	286	713	464	297	1222	151	166	1086	27
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	34.0	59.0	18.0	15.0	40.0	12.0	18.0	54.0	54.0	12.0	48.0	48.0
Total Split (%)	24.3%	42.1%	12.9%	10.7%	28.6%	8.6%	12.9%	38.6%	38.6%	8.6%	34.3%	34.3%
Maximum Green (s)	30.0	52.1	14.0	11.0	33.1	8.0	14.0	47.2	47.2	8.0	41.2	41.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	31.3	54.1	75.0	12.5	35.3	50.2	15.0	48.7	48.7	9.0	42.7	42.7
Actuated g/C Ratio	0.22	0.39	0.54	0.09	0.25	0.36	0.11	0.35	0.35	0.06	0.31	0.31
v/c Ratio	0.93	0.91	0.39	0.93	0.66	0.70	0.91	0.84	0.24	0.89	0.85	0.05
Control Delay (s/veh)	85.0	47.6	15.1	97.8	50.4	34.2	109.7	42.2	7.3	123.7	44.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.0	47.6	15.1	97.8	50.4	34.2	109.7	42.2	7.3	123.7	44.5	0.2
LOS	F	D	B	F	D	C	F	D	A	F	D	A
Approach Delay (s/veh)		53.6			54.5			51.0			53.8	
Approach LOS		D			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 110		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.93		
Intersection Signal Delay (s/veh): 53.2	Intersection LOS: D	
Intersection Capacity Utilization 82.2%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	721	1596	341	286	713	464	297	1222	151	166	1086	27
v/c Ratio	0.93	0.91	0.39	0.93	0.66	0.70	0.91	0.84	0.24	0.89	0.85	0.05
Control Delay (s/veh)	85.0	47.6	15.1	97.8	50.4	34.2	109.7	42.2	7.3	123.7	44.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.0	47.6	15.1	97.8	50.4	34.2	109.7	42.2	7.3	123.7	44.5	0.2
Queue Length 50th (m)	111.6	144.2	29.4	42.0	78.4	82.3	47.3	145.1	4.6	27.6	124.0	0.0
Queue Length 95th (m)	#144.6	186.4	m45.4	#70.7	96.1	123.3	#75.3	167.7	m9.6	#50.7	146.9	0.2
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	776	1746	877	309	1086	664	327	1467	630	187	1300	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.91	0.39	0.93	0.66	0.70	0.91	0.83	0.24	0.89	0.84	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	707	1564	334	280	699	455	291	1198	148	163	1064	26
Future Volume (vph)	707	1564	334	280	699	455	291	1198	148	163	1064	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	721	1596	341	286	713	464	297	1222	151	166	1086	27
RTOR Reduction (vph)	0	0	30	0	0	83	0	0	81	0	0	19
Lane Group Flow (vph)	721	1596	311	286	713	381	297	1222	70	166	1086	8
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	30.3	52.1	66.1	11.5	33.3	41.3	14.0	46.7	46.7	8.0	40.7	40.7
Effective Green, g (s)	31.3	54.1	70.1	12.5	35.3	45.3	15.0	48.7	48.7	9.0	42.7	42.7
Actuated g/C Ratio	0.22	0.39	0.50	0.09	0.25	0.32	0.11	0.35	0.35	0.06	0.31	0.31
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	776	1746	793	309	1086	528	327	1452	544	187	1285	386
v/s Ratio Prot	c0.21	c0.35	0.04	0.08	0.17	0.05	c0.10	c0.29		0.06	0.26	
v/s Ratio Perm			0.15			0.18			0.04			0.01
v/c Ratio	0.93	0.91	0.39	0.93	0.66	0.72	0.91	0.84	0.13	0.89	0.85	0.02
Uniform Delay, d1	53.3	40.7	21.7	63.3	46.9	41.8	61.8	42.1	31.2	65.0	45.6	34.0
Progression Factor	1.40	1.04	0.93	1.00	1.00	1.00	1.34	0.87	0.80	1.32	0.83	1.00
Incremental Delay, d2	10.9	5.1	0.3	33.4	3.1	5.9	26.5	4.5	0.2	36.9	5.6	0.0
Delay (s)	85.2	47.4	20.6	96.7	50.0	47.7	109.5	41.1	25.3	122.6	43.2	34.1
Level of Service	F	D	C	F	D	D	F	D	C	F	D	C
Approach Delay (s/veh)		54.2			58.4			51.8			53.3	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	54.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	82.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

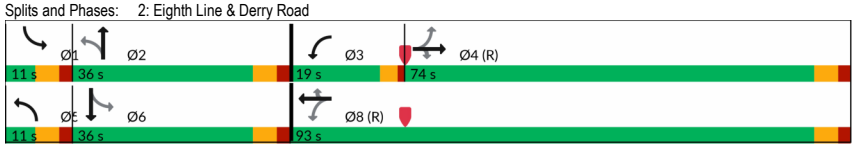
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1709	102	131	876	8	75	0	134	4	0	12
Future Volume (vph)	19	1709	102	131	876	8	75	0	134	4	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555	0	1217	1420	0
Flt Permitted	0.264			0.060			0.357			0.769		
Satd. Flow (perm)	357	4520	1601	115	4391	1633	686	1555	0	985	1420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		252			175	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	20	1780	106	136	913	8	78	0	140	4	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	1780	106	136	913	8	78	140	0	4	13	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	74.0	74.0	74.0	19.0	93.0	93.0	11.0	36.0		11.0	36.0	
Total Split (%)	52.9%	52.9%	52.9%	13.6%	66.4%	66.4%	7.9%	25.7%		7.9%	25.7%	
Maximum Green (s)	68.0	68.0	68.0	15.0	87.0	87.0	5.0	30.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	94.7	94.7	94.7	112.7	110.7	110.7	16.7	14.7		10.0	10.0	
Actuated g/C Ratio	0.68	0.68	0.68	0.81	0.79	0.79	0.12	0.11		0.07	0.07	
v/c Ratio	0.08	0.58	0.10	0.57	0.26	0.01	0.46	0.36		0.05	0.05	
Control Delay (s/veh)	12.5	14.8	2.7	27.1	4.8	0.0	62.3	2.6		50.0	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.5	14.8	2.7	27.1	4.8	0.0	62.3	2.6		50.0	0.3	
LOS	B	B	A	C	A	A	E	A		D	A	
Approach Delay (s/veh)		14.1			7.6			24.0			12.0	
Approach LOS		B			A			C			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.58		
Intersection Signal Delay (s/veh): 12.6	Intersection LOS: B	
Intersection Capacity Utilization 64.4%	ICU Level of Service C	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	1780	106	136	913	8	78	140	4	13
v/c Ratio	0.08	0.58	0.10	0.57	0.26	0.01	0.46	0.36	0.05	0.05
Control Delay (s/veh)	12.5	14.8	2.7	27.1	4.8	0.0	62.3	2.6	50.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.5	14.8	2.7	27.1	4.8	0.0	62.3	2.6	50.0	0.3
Queue Length 50th (m)	2.0	88.5	0.4	9.9	18.2	0.0	21.1	0.0	1.5	0.0
Queue Length 95th (m)	8.8	156.8	8.5	34.9	40.5	0.0	33.7	0.0	6.2	0.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	241	3056	1115	279	3471	1305	171	531	80	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.58	0.10	0.49	0.26	0.01	0.46	0.26	0.05	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1709	102	131	876	8	75	0	134	4	0	12
Future Volume (vph)	19	1709	102	131	876	8	75	0	134	4	0	12
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555		1217	1420	
Flt Permitted	0.26	1.00	1.00	0.06	1.00	1.00	0.36	1.00		0.77	1.00	
Satd. Flow (perm)	357	4520	1601	115	4391	1633	686	1555		985	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	1780	106	136	913	8	78	0	140	4	0	12
RTOR Reduction (vph)	0	0	36	0	0	2	0	125	0	0	13	0
Lane Group Flow (vph)	20	1780	70	136	913	6	78	15	0	4	0	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	89.9	89.9	89.9	105.9	105.9	105.9	22.1	14.7		6.6	5.2	
Effective Green, g (s)	89.9	89.9	89.9	105.9	105.9	105.9	22.1	14.7		6.6	5.2	
Actuated g/C Ratio	0.64	0.64	0.64	0.76	0.76	0.76	0.16	0.11		0.05	0.04	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	2902	1028	233	3321	1235	196	163		48	52	
v/s Ratio Prot		c0.39		c0.05	0.21		c0.03	0.01		0.00	0.00	
v/s Ratio Perm	0.06		0.04	0.39		0.00	c0.03			0.00		
v/c Ratio	0.09	0.61	0.07	0.58	0.27	0.00	0.40	0.09		0.08	0.01	
Uniform Delay, d1	9.5	14.8	9.4	22.7	5.2	4.2	52.0	56.6		63.8	64.9	
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	0.8	1.0	0.1	3.7	0.2	0.0	1.3	0.2		0.7	0.1	
Delay (s)	10.2	15.8	9.5	26.4	5.4	4.2	53.3	56.8		64.5	65.0	
Level of Service	B	B	A	C	A	A	D	E		E	E	
Approach Delay (s/veh)		15.4			8.1			55.6			64.9	
Approach LOS		B			A			E			E	

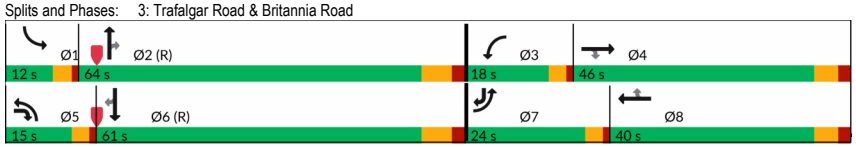
Intersection Summary				
HCM 2000 Control Delay (s/veh)	16.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	64.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	370	1044	461	252	768	233	189	898	225	96	1514	572
Future Volume (vph)	370	1044	461	252	768	233	189	898	225	96	1514	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			162			227			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	374	1055	466	255	776	235	191	907	227	97	1529	578
Shared Lane Traffic (%)												
Lane Group Flow (vph)	374	1055	466	255	776	235	191	907	227	97	1529	578
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	24.0	46.0	15.0	18.0	40.0	40.0	15.0	64.0	64.0	12.0	61.0	24.0
Total Split (%)	17.1%	32.9%	10.7%	12.9%	28.6%	28.6%	10.7%	45.7%	45.7%	8.6%	43.6%	17.1%
Maximum Green (s)	20.0	40.0	11.0	14.0	34.0	34.0	11.0	57.0	57.0	8.0	54.0	20.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	20.0	39.7	57.3	14.4	34.1	34.1	12.5	61.7	61.7	9.1	58.3	84.3
Actuated g/C Ratio	0.14	0.28	0.41	0.10	0.24	0.24	0.09	0.44	0.44	0.07	0.42	0.60
v/c Ratio	0.78	0.83	0.69	0.71	0.72	0.45	0.75	0.48	0.28	0.52	0.85	0.68
Control Delay (s/veh)	69.6	53.3	35.2	72.0	52.6	17.0	80.2	29.4	3.9	81.5	31.4	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.6	53.3	35.2	72.0	52.6	17.0	80.2	29.4	3.9	81.5	31.4	22.7
LOS	E	D	D	E	D	B	F	C	A	F	C	C
Approach Delay (s/veh)		52.1			49.9			32.4			31.3	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 40.9		Intersection LOS: D	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	374	1055	466	255	776	235	191	907	227	97	1529	578
v/c Ratio	0.78	0.83	0.69	0.71	0.72	0.45	0.75	0.48	0.28	0.52	0.85	0.68
Control Delay (s/veh)	69.6	53.3	35.2	72.0	52.6	17.0	80.2	29.4	3.9	81.5	31.4	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.6	53.3	35.2	72.0	52.6	17.0	80.2	29.4	3.9	81.5	31.4	22.7
Queue Length 50th (m)	53.8	115.3	93.9	35.9	84.2	15.9	30.0	79.7	0.0	13.4	183.2	159.2
Queue Length 95th (m)	71.9	134.8	135.2	50.5	101.5	40.1	#50.1	95.4	15.6	m19.4	m201.3	m204.8
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	505	1342	673	375	1139	540	257	1875	817	191	1789	853
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.79	0.69	0.68	0.68	0.44	0.74	0.48	0.28	0.51	0.85	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	370	1044	461	252	768	233	189	898	225	96	1514	572
Future Volume (vph)	370	1044	461	252	768	233	189	898	225	96	1514	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	374	1055	466	255	776	235	191	907	227	97	1529	578
RTOR Reduction (vph)	0	0	38	0	0	123	0	0	127	0	0	24
Lane Group Flow (vph)	374	1055	428	255	776	112	191	907	100	97	1529	554
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	19.0	37.7	49.2	13.4	32.1	32.1	11.5	59.8	59.8	8.1	56.4	75.4
Effective Green, g (s)	20.0	39.7	53.2	14.4	34.1	34.1	12.5	61.8	61.8	9.1	58.4	79.4
Actuated g/C Ratio	0.14	0.28	0.38	0.10	0.24	0.24	0.09	0.44	0.44	0.07	0.42	0.57
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	481	1269	590	360	1079	397	255	1877	691	187	1791	774
v/s Ratio Prot	c0.11	c0.24	c0.07	0.07	0.18		c0.07	0.21		0.03	c0.36	c0.11
v/s Ratio Perm			0.21			0.07			0.06			0.30
v/c Ratio	0.78	0.83	0.72	0.71	0.72	0.28	0.75	0.48	0.15	0.52	0.85	0.72
Uniform Delay, d1	57.9	47.0	37.1	60.8	48.6	43.0	62.2	27.8	23.3	63.3	36.9	22.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.71	1.07
Incremental Delay, d2	7.7	4.8	4.4	6.3	2.3	0.4	11.4	0.9	0.4	2.0	4.4	2.6
Delay (s)	65.6	51.8	41.5	67.0	50.9	43.4	73.6	28.7	23.8	75.0	30.5	26.2
Level of Service	E	D	D	E	D	D	E	C	C	E	C	C
Approach Delay (s/veh)		52.0			52.7			34.3			31.3	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	41.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	76.6%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

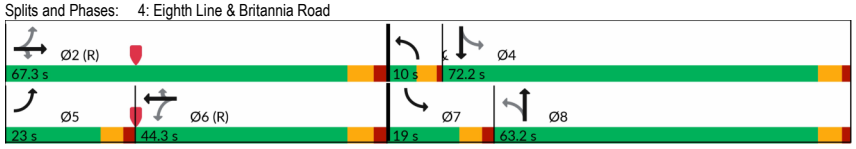
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	1115	55	24	646	84	41	158	29	187	313	201
Future Volume (vph)	163	1115	55	24	646	84	41	158	29	187	313	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.976			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1785	0	1825	1806	0
Flt Permitted	0.272			0.202			0.155			0.450		
Satd. Flow (perm)	523	4476	1306	388	4476	1633	273	1785	0	864	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		7			29	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	166	1138	56	24	659	86	42	161	30	191	319	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	1138	56	24	659	86	42	191	0	191	533	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	23.0	67.3	67.3	44.3	44.3	44.3	10.0	63.2		19.0	72.2	
Total Split (%)	15.4%	45.0%	45.0%	29.6%	29.6%	29.6%	6.7%	42.3%		12.7%	48.3%	
Maximum Green (s)	17.0	60.5	60.5	37.5	37.5	37.5	5.5	57.5		13.0	66.5	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	80.3	79.5	79.5	60.6	60.6	60.6	45.4	38.7		57.2	49.5	
Actuated g/C Ratio	0.54	0.53	0.53	0.41	0.41	0.41	0.30	0.26		0.38	0.33	
v/c Ratio	0.42	0.48	0.08	0.15	0.36	0.12	0.31	0.41		0.46	0.86	
Control Delay (s/veh)	23.7	24.7	0.8	40.0	34.7	0.7	30.9	44.6		33.6	58.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	23.7	24.7	0.8	40.0	34.7	0.7	30.9	44.6		33.6	58.2	
LOS	C	C	A	D	C	A	C	D		C	E	
Approach Delay (s/veh)		23.6			31.0			42.1			51.7	
Approach LOS		C			C			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay (s/veh): 33.4	Intersection LOS: C	
Intersection Capacity Utilization 90.9%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	166	1138	56	24	659	86	42	191	191	533
v/c Ratio	0.42	0.48	0.08	0.15	0.36	0.12	0.31	0.41	0.46	0.86
Control Delay (s/veh)	23.7	24.7	0.8	40.0	34.7	0.7	30.9	44.6	33.6	58.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.7	24.7	0.8	40.0	34.7	0.7	30.9	44.6	33.6	58.2
Queue Length 50th (m)	25.4	91.5	0.0	4.6	59.3	0.0	8.0	46.6	37.7	140.5
Queue Length 95th (m)	45.7	124.5	1.6	14.8	87.1	1.1	14.4	63.1	49.0	166.2
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	431	2379	739	157	1814	745	134	690	414	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.48	0.08	0.15	0.36	0.12	0.31	0.28	0.46	0.65

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	1115	55	24	646	84	41	158	29	187	313	201
Future Volume (vph)	163	1115	55	24	646	84	41	158	29	187	313	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1786		1825	1805	
Flt Permitted	0.27	1.00	1.00	0.20	1.00	1.00	0.15	1.00		0.45	1.00	
Satd. Flow (perm)	523	4476	1306	387	4476	1633	273	1786		865	1805	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	166	1138	56	24	659	86	42	161	30	191	319	214
RTOR Reduction (vph)	0	0	27	0	0	52	0	5	0	0	19	0
Lane Group Flow (vph)	166	1138	29	24	659	34	42	186	0	191	514	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	78.6	78.6	78.6	59.7	59.7	59.7	43.9	39.5		58.4	49.5	
Effective Green, g (s)	78.6	78.6	78.6	59.7	59.7	59.7	43.9	39.5		58.4	49.5	
Actuated g/C Ratio	0.53	0.53	0.53	0.40	0.40	0.40	0.29	0.26		0.39	0.33	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	2353	686	154	1787	652	121	471		420	597	
v/s Ratio Prot	0.04	c0.25			0.15		0.01	0.10		c0.04	c0.28	
v/s Ratio Perm	0.19		0.02	0.06		0.02	0.09			0.14		
v/c Ratio	0.43	0.48	0.04	0.16	0.37	0.05	0.35	0.39		0.45	0.86	
Uniform Delay, d1	19.5	22.5	17.2	28.8	31.6	27.5	40.7	45.2		31.7	46.8	
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	0.8	0.7	0.1	2.1	0.6	0.2	1.7	0.5		0.8	12.1	
Delay (s)	20.3	23.3	17.3	30.9	32.2	27.7	42.4	45.7		32.5	58.9	
Level of Service	C	C	B	C	C	C	D	D		C	E	
Approach Delay (s/veh)		22.7			31.7			45.1			51.9	
Approach LOS		C			C			D			D	

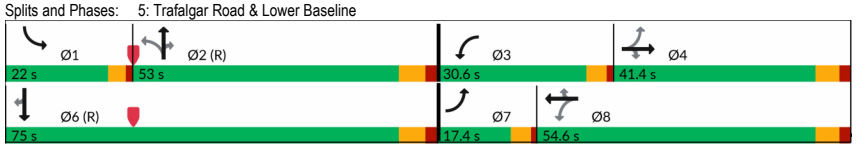
Intersection Summary				
HCM 2000 Control Delay (s/veh)	33.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5	
Intersection Capacity Utilization	90.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	498	98	410	198	159	39	975	231	337	1771	111
Future Volume (vph)	189	498	98	410	198	159	39	975	231	337	1771	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.629			0.101			0.084			0.950		
Satd. Flow (perm)	1151	1902	1601	190	1883	1541	144	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			166			212			91
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	197	519	102	427	206	166	39	975	231	351	1845	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	519	102	427	206	166	39	975	231	351	1845	116
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	25.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	9.5	24.2	24.2	31.6	31.6	31.6	11.0	31.6	31.6
Total Split (s)	17.4	41.4	41.4	30.6	54.6	54.6	53.0	53.0	53.0	22.0	75.0	75.0
Total Split (%)	11.8%	28.2%	28.2%	20.8%	37.1%	37.1%	36.1%	36.1%	36.1%	15.0%	51.0%	51.0%
Maximum Green (s)	12.9	35.2	35.2	26.1	48.4	48.4	46.4	46.4	46.4	18.0	68.4	68.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	4.6	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	51.4	37.2	37.2	68.5	50.8	50.8	47.8	48.8	48.8	18.6	70.4	70.4
Actuated g/C Ratio	0.35	0.25	0.25	0.47	0.35	0.35	0.33	0.33	0.33	0.13	0.48	0.48
v/c Ratio	0.43	1.08	0.21	1.11	0.32	0.26	0.85	0.70	0.35	0.84	0.90	0.15
Control Delay (s/veh)	28.5	114.7	4.9	121.5	37.2	5.6	140.5	46.0	7.4	80.5	42.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.5	114.7	4.9	121.5	37.2	5.6	140.5	46.0	7.4	80.5	42.0	6.6
LOS	C	F	A	F	D	A	F	D	A	F	D	A
Approach Delay (s/veh)		80.3			75.7			41.8			46.1	
Approach LOS		F			E			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 147		
Actuated Cycle Length: 147		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.11		
Intersection Signal Delay (s/veh): 55.0		Intersection LOS: E
Intersection Capacity Utilization 118.5%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	519	102	427	206	166	39	975	231	351	1845	116
v/c Ratio	0.43	1.08	0.21	1.11	0.32	0.26	0.85	0.70	0.35	0.84	0.90	0.15
Control Delay (s/veh)	28.5	114.7	4.9	121.5	37.2	5.6	140.5	46.0	7.4	80.5	42.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.5	114.7	4.9	121.5	37.2	5.6	140.5	46.0	7.4	80.5	42.0	6.6
Queue Length 50th (m)	35.4	~169.5	0.0	~127.9	45.0	0.0	11.2	109.1	3.9	52.9	208.9	3.9
Queue Length 95th (m)	53.2	#239.5	9.8	#195.8	66.9	16.5	#36.9	129.0	23.8	#75.7	236.3	15.4
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	461	481	497	383	651	641	46	1398	656	428	2056	775
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.08	0.21	1.11	0.32	0.26	0.85	0.70	0.35	0.82	0.90	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	498	98	410	198	159	39	975	231	337	1771	111
Future Volume (vph)	189	498	98	410	198	159	39	975	231	337	1771	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.63	1.00	1.00	0.10	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1150	1902	1601	190	1883	1541	144	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	197	519	102	427	206	166	39	975	231	351	1845	116
RTOR Reduction (vph)	0	0	76	0	0	109	0	0	142	0	0	47
Lane Group Flow (vph)	197	519	26	427	206	57	39	975	89	351	1845	69
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	47.7	35.2	35.2	65.8	48.8	48.8	46.8	46.8	46.8	17.6	68.4	68.4
Effective Green, g (s)	49.7	37.2	37.2	66.8	50.8	50.8	47.8	48.8	48.8	18.6	70.4	70.4
Actuated g/C Ratio	0.34	0.25	0.25	0.45	0.35	0.35	0.33	0.33	0.33	0.13	0.48	0.48
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	6.6	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	442	481	405	381	650	532	46	1398	514	419	2056	728
v/s Ratio Prot	0.04	0.27		c0.21	0.11			0.23		0.11	c0.43	
v/s Ratio Perm	0.11		0.02	c0.30		0.04	0.27		0.06			0.05
v/c Ratio	0.45	1.08	0.06	1.12	0.32	0.11	0.85	0.70	0.17	0.84	0.90	0.09
Uniform Delay, d1	36.3	54.9	41.7	47.1	35.3	32.7	46.2	42.7	34.8	62.7	35.0	20.9
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	0.7	64.0	0.1	83.0	0.6	0.2	92.7	2.9	0.7	13.6	6.7	0.3
Delay (s)	37.0	118.9	41.8	130.1	35.9	32.9	138.9	45.6	35.5	76.3	41.7	21.2
Level of Service	D	F	D	F	D	C	F	D	D	E	D	C
Approach Delay (s/veh)		89.5			85.6			46.6			45.9	
Approach LOS		F			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	59.1	HCM 2000 Level of Service		E	
HCM 2000 Volume to Capacity ratio	1.04				
Actuated Cycle Length (s)	147.0	Sum of lost time (s)		15.3	
Intersection Capacity Utilization	118.5%	ICU Level of Service		H	
Analysis Period (min)	15				

c Critical Lane Group

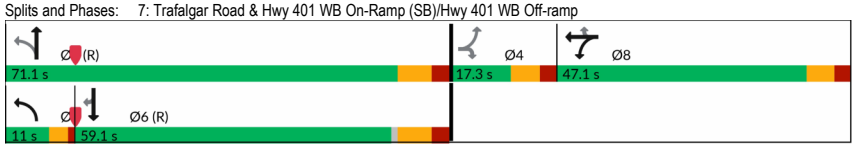
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Future Volume (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.126					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	242	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197			395						161
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	19.1	19.1	19.1	101.9	97.8			93.4	93.4
Actuated g/C Ratio			0.07	0.14	0.14	0.14	0.75	0.72			0.69	0.69
v/c Ratio			0.02	0.75	0.04	0.59	0.06	0.32			0.45	0.18
Control Delay (s/veh)			0.1	67.7	47.7	9.0	7.5	8.5			12.5	3.1
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.1	67.7	47.7	9.0	7.5	8.5			12.5	3.1
LOS			A	E	D	A	A	A			B	A
Approach Delay (s/veh)		0.1			34.4			8.5			11.4	
Approach LOS		A			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 15.7		Intersection LOS: B	
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	7	305	10	405	15	924	1334	170
v/c Ratio	0.02	0.75	0.04	0.59	0.06	0.32	0.45	0.18
Control Delay (s/veh)	0.1	67.7	47.7	9.0	7.5	8.5	12.5	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.1	67.7	47.7	9.0	7.5	8.5	12.5	3.1
Queue Length 50th (m)	0.0	48.6	2.4	1.5	0.8	33.9	50.5	0.7
Queue Length 95th (m)	0.0	63.9	7.4	18.4	4.4	75.3	131.3	16.1
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	302	849	567	1003	264	2844	2969	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.02	0.40	0.06	0.32	0.45	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Future Volume (vph)	0	0	7	305	10	405	15	924	0	0	1334	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.13	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	243	3941			4309	1276
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	7	305	10	405	15	924	0	0	1334	170
RTOR Reduction (vph)	0	0	7	0	0	339	0	0	0	0	0	60
Lane Group Flow (vph)	0	0	0	305	10	66	15	924	0	0	1334	110
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	19.1	19.1	19.1	91.9	91.9			85.1	85.1
Effective Green, g (s)			2.0	19.1	19.1	19.1	91.9	91.9			85.1	85.1
Actuated g/C Ratio			0.01	0.14	0.14	0.14	0.68	0.68			0.63	0.63
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	405	270	346	197	2672			2706	801
v/s Ratio Prot				c0.11	0.01		0.00	c0.23			c0.31	
v/s Ratio Perm			c0.00			0.03	0.05					0.09
v/c Ratio			0.00	0.75	0.04	0.19	0.08	0.35			0.49	0.14
Uniform Delay, d1			65.8	55.9	50.3	51.4	8.4	9.2			13.6	10.3
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	6.9	0.0	0.1	0.1	0.4			0.6	0.4
Delay (s)			65.8	62.8	50.3	51.5	8.4	9.5			14.2	10.6
Level of Service			E	E	D	D	A	A			B	B
Approach Delay (s/veh)		65.8			56.3			9.5			13.8	
Approach LOS		E			E			A			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	22.3	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.53				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	61.6%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

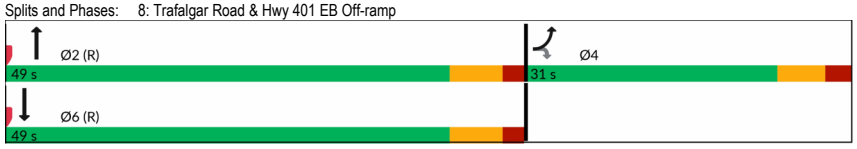
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	541	0	1610	655	0
Future Volume (vph)	165	541	0	1610	655	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.907	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2806	1339	0	4154	4117	0
Flt Permitted	0.981					
Satd. Flow (perm)	2806	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	213	213				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	165	541	0	1610	655	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	436	270	0	1610	655	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	13.5	13.5		52.5	52.5	
Actuated g/C Ratio	0.17	0.17		0.66	0.66	
v/c Ratio	0.67	0.67		0.59	0.24	
Control Delay (s/veh)	20.4	16.4		9.5	6.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.4	16.4		9.5	6.4	
LOS	C	B		A	A	
Approach Delay (s/veh)	18.9			9.5	6.4	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 11.1		Intersection LOS: B	
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	436	270	1610	655
v/c Ratio	0.67	0.67	0.59	0.24
Control Delay (s/veh)	20.4	16.4	9.5	6.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.4	16.4	9.5	6.4
Queue Length 50th (m)	20.2	9.3	50.9	15.2
Queue Length 95th (m)	33.5	33.1	89.2	28.6
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	990	550	2725	2701
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.44	0.49	0.59	0.24

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	541	0	1610	655	0
Future Volume (vph)	165	541	0	1610	655	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2806	1339		4154	4117	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2806	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	541	0	1610	655	0
RTOR Reduction (vph)	177	177	0	0	0	0
Lane Group Flow (vph)	259	93	0	1610	655	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	13.5	13.5		52.5	52.5	
Effective Green, g (s)	13.5	13.5		52.5	52.5	
Actuated g/C Ratio	0.17	0.17		0.66	0.66	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	473	225		2726	2701	
v/s Ratio Prot	c0.09			c0.39	0.16	
v/s Ratio Perm		0.07				
v/c Ratio	0.55	0.41		0.59	0.24	
Uniform Delay, d1	30.5	29.7		7.7	5.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.2		0.9	0.2	
Delay (s)	31.8	30.9		8.7	5.8	
Level of Service	C	C		A	A	
Approach Delay (s/veh)	31.4			8.7	5.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

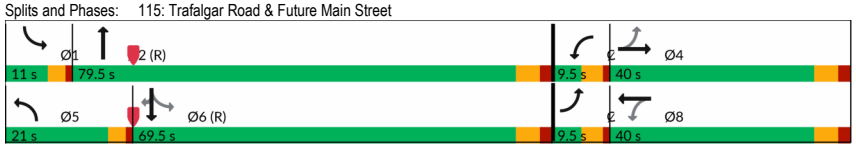
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2187	27	50	1084	74
Future Volume (vph)	70	36	200	5	105	28	42	2187	27	50	1084	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt		0.873			0.969			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3124	0	1789	3468	0	1711	4412	0	1711	4421	1566
Flt Permitted	0.501			0.604			0.950			0.043		
Satd. Flow (perm)	944	3124	0	1138	3468	0	1711	4412	0	77	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		202			22			2				121
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2209	27	51	1095	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	238	0	5	134	0	42	2236	0	51	1095	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8						6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0		9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0		9.5	40.0		21.0	79.5		11.0	69.5	69.5
Total Split (%)	6.8%	28.6%		6.8%	28.6%		15.0%	56.8%		7.9%	49.6%	49.6%
Maximum Green (s)	5.0	34.0		5.0	34.0		17.0	73.5		7.0	63.5	63.5
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0			27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	20.9	18.4		16.6	10.8		9.0	98.6		104.8	96.8	96.8
Actuated g/C Ratio	0.15	0.13		0.12	0.08		0.06	0.70		0.75	0.69	0.69
v/c Ratio	0.39	0.41		0.03	0.47		0.38	0.72		0.36	0.36	0.07
Control Delay (s/veh)	58.1	13.8		49.2	56.7		58.6	13.5		27.1	9.0	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	58.1	13.8		49.2	56.7		58.6	13.5		27.1	9.0	0.7
LOS	E	B		D	E		E	B		C	A	A
Approach Delay (s/veh)		24.0			56.5			14.3			9.3	
Approach LOS		C			E			B			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B
Intersection Capacity Utilization 69.1%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	238	5	134	42	2236	51	1095	75
v/c Ratio	0.39	0.41	0.03	0.47	0.38	0.72	0.36	0.36	0.07
Control Delay (s/veh)	58.1	13.8	49.2	56.7	58.6	13.5	27.1	9.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.1	13.8	49.2	56.7	58.6	13.5	27.1	9.0	0.7
Queue Length 50th (m)	17.2	4.5	1.2	16.2	11.8	129.7	1.3	56.2	0.3
Queue Length 95th (m)	32.3	18.2	5.3	26.8	m14.6	131.6	14.1	68.4	1.6
Internal Link Dist (m)		882.8		603.0		688.8		212.3	
Turn Bay Length (m)	75.0		160.0		125.0		50.0		75.0
Base Capacity (vph)	183	911	159	858	207	3106	143	3056	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.26	0.03	0.16	0.20	0.72	0.36	0.36	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2187	27	50	1084	74
Future Volume (vph)	70	36	200	5	105	28	42	2187	27	50	1084	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	0.87		1.00	0.97		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)	1789	3123		1789	3466		1711	4413		1711	4421	1566
Flt Permitted	0.50	1.00		0.60	1.00		0.95	1.00		0.04	1.00	1.00
Satd. Flow (perm)	944	3123		1137	3466		1711	4413		78	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2209	27	51	1095	75
RTOR Reduction (vph)	0	175	0	0	20	0	0	1	0	0	0	26
Lane Group Flow (vph)	71	63	0	5	114	0	42	2235	0	51	1095	50
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8						6		6
Actuated Green, G (s)	23.9	18.4		14.6	13.6		7.7	94.1		98.4	92.4	92.4
Effective Green, g (s)	23.9	18.4		14.6	13.6		7.7	94.1		98.4	92.4	92.4
Actuated g/C Ratio	0.17	0.13		0.10	0.10		0.06	0.67		0.70	0.66	0.66
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	196	410		123	336		94	2966		124	2917	1033
v/s Ratio Prot	c0.01	0.02		0.00	0.03		c0.02	c0.51		0.02	0.25	
v/s Ratio Perm	c0.05			0.00						0.27		0.03
v/c Ratio	0.36	0.15		0.04	0.34		0.45	0.75		0.41	0.38	0.05
Uniform Delay, d1	50.2	53.9		56.3	59.0		64.1	15.2		16.0	10.8	8.4
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.91		1.81	0.87	2.22
Incremental Delay, d2	1.1	0.2		0.1	0.6		1.8	1.0		2.2	0.4	0.1
Delay (s)	51.3	54.1		56.5	59.6		56.8	14.8		31.2	9.7	18.6
Level of Service	D	D		E	E		E	B		C	A	B
Approach Delay (s/veh)		53.4			59.5			15.6			11.2	
Approach LOS		D			E			B			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	18.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.69				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	69.1%	ICU Level of Service		C	
Analysis Period (min)	15				

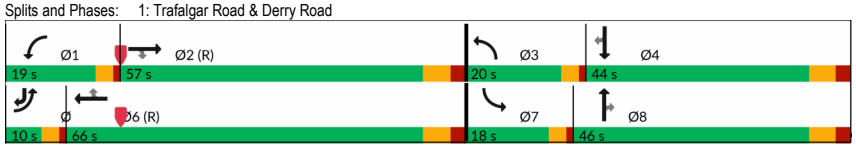
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Future Volume (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			258			151			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	10.0	57.0	57.0	19.0	66.0	66.0	20.0	46.0	46.0	18.0	44.0	10.0
Total Split (%)	7.1%	40.7%	40.7%	13.6%	47.1%	47.1%	14.3%	32.9%	32.9%	12.9%	31.4%	7.1%
Maximum Green (s)	6.0	50.1	50.1	15.0	59.1	59.1	16.0	39.2	39.2	14.0	37.2	6.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	7.0	52.5	52.5	15.6	61.1	61.1	17.0	41.2	41.2	15.0	39.2	52.0
Actuated g/C Ratio	0.05	0.38	0.38	0.11	0.44	0.44	0.12	0.29	0.29	0.11	0.28	0.37
v/c Ratio	0.85	0.51	0.45	0.63	0.93	0.32	1.07	0.85	0.22	0.91	1.03	0.68
Control Delay (s/veh)	117.1	29.5	6.4	64.1	42.4	10.0	112.6	37.2	4.0	103.9	62.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	117.1	29.5	6.4	64.1	42.4	10.0	112.6	37.2	4.0	103.9	62.3	16.8
LOS	F	C	A	E	D	A	F	D	A	F	E	B
Approach Delay (s/veh)		33.1			41.2			54.2			58.8	
Approach LOS		C			D			D			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 47.4	Intersection LOS: D	
Intersection Capacity Utilization 91.8%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
v/c Ratio	0.85	0.51	0.45	0.63	0.93	0.32	1.07	0.85	0.22	0.91	1.03	0.68
Control Delay (s/veh)	117.1	29.5	6.4	64.1	42.4	10.0	112.6	37.2	4.0	103.9	62.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	117.1	29.5	6.4	64.1	42.4	10.0	112.6	37.2	4.0	103.9	62.3	16.8
Queue Length 50th (m)	22.4	77.5	8.9	34.5	203.2	22.7	~64.5	119.1	5.8	41.7	~158.6	60.6
Queue Length 95th (m)	#42.0	93.2	22.2	46.2	#230.2	22.4	m#82.7	m133.0	m6.0	#73.5	#189.4	57.5
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	168	1677	750	400	1992	783	385	1251	548	343	1191	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.51	0.45	0.62	0.93	0.32	1.07	0.85	0.22	0.91	1.03	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Future Volume (vph)	142	852	334	248	1855	251	412	1063	121	311	1224	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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)	142	852	334	248	1855	251	412	1063	121	311	1224	437
RTOR Reduction (vph)	0	0	161	0	0	85	0	0	85	0	0	62
Lane Group Flow (vph)	142	852	173	248	1855	166	412	1063	36	311	1224	375
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	6.0	50.5	50.5	14.6	59.1	59.1	16.0	39.2	39.2	14.0	37.2	43.2
Effective Green, g (s)	7.0	52.5	52.5	15.6	61.1	61.1	17.0	41.2	41.2	15.0	39.2	47.2
Actuated g/C Ratio	0.05	0.38	0.38	0.11	0.44	0.44	0.12	0.29	0.29	0.11	0.28	0.34
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	168	1678	588	390	1992	698	385	1251	460	343	1191	527
v/s Ratio Prot	c0.04	0.19		0.07	c0.41		c0.13	0.25		0.10	c0.29	0.04
v/s Ratio Perm			0.11			0.10			0.02			0.20
v/c Ratio	0.85	0.51	0.29	0.64	0.93	0.24	1.07	0.85	0.08	0.91	1.03	0.71
Uniform Delay, d1	66.0	33.8	30.7	59.5	37.5	24.8	61.5	46.5	35.7	61.8	50.4	40.5
Progression Factor	1.25	0.84	0.59	0.97	0.92	0.92	1.05	0.71	0.62	1.32	0.63	0.42
Incremental Delay, d2	31.5	1.0	1.2	3.8	7.8	0.6	53.3	3.3	0.1	22.1	29.8	4.2
Delay (s)	114.0	29.3	19.3	61.5	42.1	23.4	117.8	36.3	22.3	103.7	61.8	21.4
Level of Service	F	C	B	E	D	C	F	D	C	F	E	C
Approach Delay (s/veh)		35.8			42.1			56.3			59.4	
Approach LOS		D			D			E			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	48.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	91.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

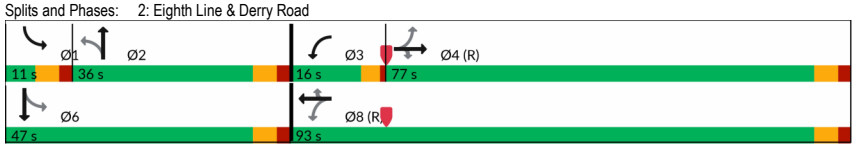
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	982	69	162	2136	4	83	0	130	4	6	8
Future Volume (vph)	4	982	69	162	2136	4	83	0	130	4	6	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633	0	1825	1756	0
Flt Permitted	0.051			0.213			0.748			0.341		
Satd. Flow (perm)	98	4520	1555	409	4565	1633	1437	1633	0	655	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		275			8	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	4	982	69	162	2136	4	83	0	130	4	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	982	69	162	2136	4	83	130	0	4	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	98.0	98.0	98.0	113.7	111.7	111.7	13.9	13.9		16.3	16.3	
Actuated g/C Ratio	0.70	0.70	0.70	0.81	0.80	0.80	0.10	0.10		0.12	0.12	
v/c Ratio	0.06	0.31	0.06	0.38	0.59	0.00	0.58	0.32		0.03	0.07	
Control Delay (s/veh)	13.3	9.4	0.9	6.1	7.2	0.0	65.0	3.3		48.8	32.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.3	9.4	0.9	6.1	7.2	0.0	65.0	3.3		48.8	32.1	
LOS	B	A	A	A	A	A	E	A		D	C	
Approach Delay (s/veh)		8.9			7.1			27.3			35.8	
Approach LOS		A			A			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.59		
Intersection Signal Delay (s/veh): 9.0	Intersection LOS: A	
Intersection Capacity Utilization 84.2%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	982	69	162	2136	4	83	130	4	14
v/c Ratio	0.06	0.31	0.06	0.38	0.59	0.00	0.58	0.32	0.03	0.07
Control Delay (s/veh)	13.3	9.4	0.9	6.1	7.2	0.0	65.0	3.3	48.8	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.3	9.4	0.9	6.1	7.2	0.0	65.0	3.3	48.8	32.1
Queue Length 50th (m)	0.3	37.8	0.0	6.5	69.0	0.0	19.1	1.1	1.0	1.5
Queue Length 95th (m)	2.7	71.0	2.8	20.8	150.2	0.0	m35.6	m5.4	4.2	7.3
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	68	3164	1119	453	3640	1316	307	566	124	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.31	0.06	0.36	0.59	0.00	0.27	0.23	0.03	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	982	69	162	2136	4	83	0	130	4	6	8
Future Volume (vph)	4	982	69	162	2136	4	83	0	130	4	6	8
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633		1825	1756	
Flt Permitted	0.05	1.00	1.00	0.21	1.00	1.00	0.75	1.00		0.34	1.00	
Satd. Flow (perm)	98	4520	1555	410	4565	1633	1438	1633		656	1756	
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)	4	982	69	162	2136	4	83	0	130	4	6	8
RTOR Reduction (vph)	0	0	23	0	0	1	0	117	0	0	7	0
Lane Group Flow (vph)	4	982	46	162	2136	3	83	13	0	4	7	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	93.2	93.2	93.2	106.8	106.8	106.8	13.9	13.9		21.2	21.2	
Effective Green, g (s)	93.2	93.2	93.2	106.8	106.8	106.8	13.9	13.9		21.2	21.2	
Actuated g/C Ratio	0.67	0.67	0.67	0.76	0.76	0.76	0.10	0.10		0.15	0.15	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	65	3009	1035	409	3482	1245	142	162		110	265	
v/s Ratio Prot		0.22		0.03	c0.47			0.01		0.00	c0.00	
v/s Ratio Perm	0.04		0.03	0.27		0.00	c0.06			0.01		
v/c Ratio	0.06	0.33	0.04	0.40	0.61	0.00	0.58	0.08		0.04	0.03	
Uniform Delay, d1	8.2	10.0	8.1	5.1	7.4	3.9	60.3	57.2		50.9	50.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.3	0.1	0.6	0.8	0.0	5.1	0.2		0.1	0.0	
Delay (s)	10.0	10.3	8.1	5.7	8.2	3.9	56.6	57.4		51.0	50.7	
Level of Service	A	B	A	A	A	A	E	E		D	D	
Approach Delay (s/veh)		10.1			8.0			57.1			50.7	
Approach LOS		B			A			E			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	11.8	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		22.0	
Intersection Capacity Utilization	84.2%	ICU Level of Service		E	
Analysis Period (min)	15				

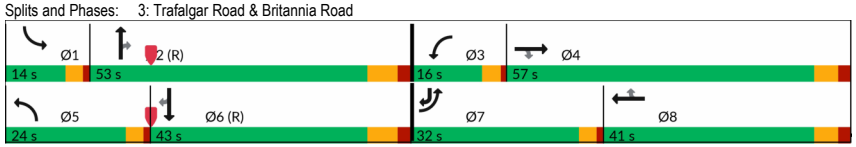
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Future Volume (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			270			156			161			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Shared Lane Traffic (%)												
Lane Group Flow (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	32.0	57.0	57.0	16.0	41.0	41.0	24.0	53.0	53.0	14.0	43.0	32.0
Total Split (%)	22.9%	40.7%	40.7%	11.4%	29.3%	29.3%	17.1%	37.9%	37.9%	10.0%	30.7%	22.9%
Maximum Green (s)	28.0	51.0	51.0	12.0	35.0	35.0	20.0	46.0	46.0	10.0	36.0	28.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	29.0	53.6	53.6	12.4	37.0	37.0	21.0	48.0	48.0	11.0	38.0	73.0
Actuated g/C Ratio	0.21	0.38	0.38	0.09	0.26	0.26	0.15	0.34	0.34	0.08	0.27	0.52
v/c Ratio	0.94	0.63	0.35	0.62	0.95	0.36	0.93	0.86	0.33	0.85	0.77	0.67
Control Delay (s/veh)	78.2	37.3	4.5	88.8	49.3	6.2	77.2	72.6	32.0	105.3	27.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.2	37.3	4.5	88.8	49.3	6.2	77.2	72.6	32.0	105.3	27.4	5.2
LOS	E	D	A	F	D	A	E	E	C	F	C	A
Approach Delay (s/veh)		45.2			49.0			69.1			29.5	
Approach LOS		D			D			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 48.9		Intersection LOS: D	
Intersection Capacity Utilization 86.7%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
v/c Ratio	0.94	0.63	0.35	0.62	0.95	0.36	0.93	0.86	0.33	0.85	0.77	0.67
Control Delay (s/veh)	78.2	37.3	4.5	88.8	49.3	6.2	77.2	72.6	32.0	105.3	27.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.2	37.3	4.5	88.8	49.3	6.2	77.2	72.6	32.0	105.3	27.4	5.2
Queue Length 50th (m)	95.1	103.7	0.0	29.5	133.3	0.3	68.6	147.1	28.6	32.5	52.2	1.4
Queue Length 95th (m)	#133.9	122.1	17.9	42.4	#157.3	13.2	m#84.6	166.2	m38.6	m36.3	m57.8	m3.8
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	632	1713	773	328	1206	522	480	1486	642	244	1165	842
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.63	0.35	0.59	0.95	0.36	0.93	0.86	0.33	0.85	0.77	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Future Volume (vph)	594	1079	270	195	1143	187	444	1283	215	207	896	568
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	594	1079	270	195	1143	187	444	1283	215	207	896	568
RTOR Reduction (vph)	0	0	167	0	0	115	0	0	106	0	0	44
Lane Group Flow (vph)	594	1079	103	195	1143	72	444	1283	109	207	896	524
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	51.6	51.6	11.4	35.0	35.0	20.0	46.0	46.0	10.0	36.0	64.0
Effective Green, g (s)	29.0	53.6	53.6	12.4	37.0	37.0	21.0	48.0	48.0	11.0	38.0	68.0
Actuated g/C Ratio	0.21	0.38	0.38	0.09	0.26	0.26	0.15	0.34	0.34	0.08	0.27	0.49
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	632	1713	606	313	1206	407	480	1486	536	244	1165	746
v/s Ratio Prot	c0.19	0.24		0.06	c0.25		c0.14	c0.30		0.07	0.21	0.15
v/s Ratio Perm			0.07			0.05			0.07			0.19
v/c Ratio	0.94	0.63	0.17	0.62	0.95	0.18	0.93	0.86	0.20	0.85	0.77	0.70
Uniform Delay, d1	54.6	35.1	28.5	61.5	50.6	39.8	58.7	42.9	32.5	63.7	47.0	28.1
Progression Factor	1.00	1.00	1.00	1.32	0.68	0.48	1.02	1.59	3.29	1.43	0.53	0.15
Incremental Delay, d2	21.9	0.7	0.1	3.3	13.3	0.2	15.9	4.1	0.5	12.4	2.4	1.4
Delay (s)	76.5	35.9	28.7	84.2	47.6	19.2	75.8	72.2	107.4	103.5	27.2	5.6
Level of Service	E	D	C	F	D	B	E	E	F	F	C	A
Approach Delay (s/veh)		47.3			48.8			76.9			29.3	
Approach LOS		D			D			E			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	51.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	86.7%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

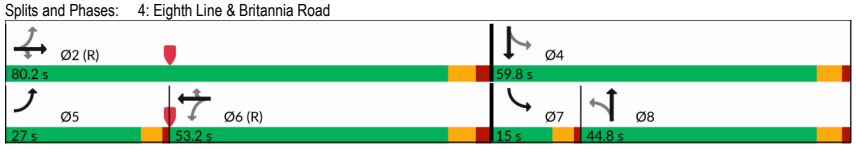
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	906	49	27	1154	170	81	316	47	141	194	184
Future Volume (vph)	235	906	49	27	1154	170	81	316	47	141	194	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.981			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1875	0	1825	1745	0
Flt Permitted	0.115			0.266			0.463			0.151		
Satd. Flow (perm)	221	4476	1328	511	4520	1633	889	1875	0	290	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			139		5			40	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	235	906	49	27	1154	170	81	316	47	141	194	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	906	49	27	1154	170	81	363	0	141	378	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	27.0	80.2	80.2	53.2	53.2	53.2	44.8	44.8		15.0	59.8	
Total Split (%)	19.3%	57.3%	57.3%	38.0%	38.0%	38.0%	32.0%	32.0%		10.7%	42.7%	
Maximum Green (s)	22.5	73.4	73.4	46.4	46.4	46.4	39.1	39.1		10.5	54.1	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	83.3	81.0	81.0	59.7	59.7	59.7	31.6	31.6		47.7	46.5	
Actuated g/C Ratio	0.60	0.58	0.58	0.43	0.43	0.43	0.23	0.23		0.34	0.33	
v/c Ratio	0.73	0.35	0.06	0.12	0.60	0.22	0.41	0.85		0.67	0.62	
Control Delay (s/veh)	63.7	12.1	2.2	31.9	34.5	8.5	44.0	60.7		46.4	38.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	63.7	12.1	2.2	31.9	34.5	8.5	44.0	60.7		46.4	38.1	
LOS	E	B	A	C	C	A	D	E		D	D	
Approach Delay (s/veh)		21.8			31.2			57.7			40.4	
Approach LOS		C			C			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.85		
Intersection Signal Delay (s/veh): 32.7		Intersection LOS: C
Intersection Capacity Utilization 89.0%		ICU Level of Service E
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	906	49	27	1154	170	81	363	141	378
v/c Ratio	0.73	0.35	0.06	0.12	0.60	0.22	0.41	0.85	0.67	0.62
Control Delay (s/veh)	63.7	12.1	2.2	31.9	34.5	8.5	44.0	60.7	46.4	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.7	12.1	2.2	31.9	34.5	8.5	44.0	60.7	46.4	38.1
Queue Length 50th (m)	45.0	29.0	0.5	4.6	104.7	5.0	17.7	91.3	27.8	81.2
Queue Length 95th (m)	m71.5	36.2	m1.3	13.3	141.8	22.4	32.8	123.3	40.4	108.1
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	389	2590	792	217	1926	776	248	527	213	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.35	0.06	0.12	0.60	0.22	0.33	0.69	0.66	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	906	49	27	1154	170	81	316	47	141	194	184
Future Volume (vph)	235	906	49	27	1154	170	81	316	47	141	194	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1874		1825	1745	
Flt Permitted	0.11	1.00	1.00	0.27	1.00	1.00	0.46	1.00		0.15	1.00	
Satd. Flow (perm)	220	4476	1328	511	4520	1633	890	1874		290	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)	235	906	49	27	1154	170	81	316	47	141	194	184
RTOR Reduction (vph)	0	0	21	0	0	80	0	4	0	0	27	0
Lane Group Flow (vph)	235	906	28	27	1154	90	81	359	0	141	351	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	81.0	81.0	81.0	59.7	59.7	59.7	31.7	31.7		46.5	46.5	
Effective Green, g (s)	81.0	81.0	81.0	59.7	59.7	59.7	31.7	31.7		46.5	46.5	
Actuated g/C Ratio	0.58	0.58	0.58	0.43	0.43	0.43	0.23	0.23		0.33	0.33	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	319	2589	768	217	1927	696	201	424		209	579	
v/s Ratio Prot	c0.09	0.20			0.26			c0.19		0.05	c0.20	
v/s Ratio Perm	c0.34		0.02	0.05		0.06	0.09			0.17		
v/c Ratio	0.74	0.35	0.04	0.12	0.60	0.13	0.40	0.85		0.67	0.61	
Uniform Delay, d1	22.9	15.6	12.7	24.3	30.9	24.4	46.1	51.8		36.7	39.1	
Progression Factor	2.54	0.72	0.64	1.00	1.00	1.00	0.86	0.85		0.97	0.97	
Incremental Delay, d2	6.8	0.3	0.1	1.2	1.4	0.4	1.2	13.7		8.3	1.8	
Delay (s)	65.1	11.5	8.2	25.5	32.3	24.8	40.7	57.8		43.9	39.8	
Level of Service	E	B	A	C	C	C	D	E		D	D	
Approach Delay (s/veh)		21.9			31.2			54.6			40.9	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	32.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5	
Intersection Capacity Utilization	89.0%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Future Volume (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.299			0.131			0.132			0.950		
Satd. Flow (perm)	552	1883	1570	249	1902	1585	242	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			150			263			157
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

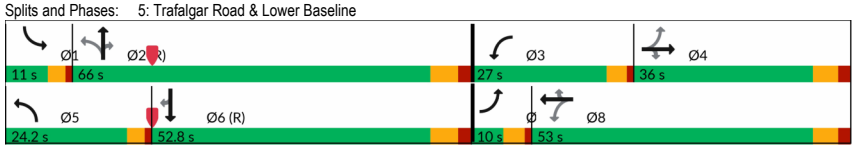
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	10.0	36.0	36.0	27.0	53.0	53.0	24.2	66.0	66.0	11.0	52.8	52.8
Total Split (%)	7.1%	25.7%	25.7%	19.3%	37.9%	37.9%	17.3%	47.1%	47.1%	7.9%	37.7%	37.7%
Maximum Green (s)	5.5	29.8	29.8	22.5	46.8	46.8	20.2	59.4	59.4	7.0	46.2	46.2
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	37.8	30.6	30.6	58.3	47.6	47.6	74.1	61.4	61.4	9.2	54.2	54.2
Actuated g/C Ratio	0.27	0.22	0.22	0.42	0.34	0.34	0.53	0.44	0.44	0.07	0.39	0.39
v/c Ratio	0.45	0.84	0.12	0.97	0.73	0.51	0.71	0.87	0.47	0.88	0.61	0.12
Control Delay (s/veh)	34.8	70.6	0.5	95.1	68.2	41.9	33.9	41.9	10.4	83.5	68.4	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.8	70.6	0.5	95.1	68.2	41.9	33.9	41.9	10.4	83.5	68.4	13.9
LOS	C	E	A	F	E	D	C	D	B	F	E	B
Approach Delay (s/veh)		56.1			69.0			35.8			67.2	
Approach LOS		E			E			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay (s/veh): 52.8 Intersection LOS: D
Intersection Capacity Utilization 90.0% ICU Level of Service E
Analysis Period (min) 15

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
v/c Ratio	0.45	0.84	0.12	0.97	0.73	0.51	0.71	0.87	0.47	0.88	0.61	0.12
Control Delay (s/veh)	34.8	70.6	0.5	95.1	68.2	41.9	33.9	41.9	10.4	83.5	68.4	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.8	70.6	0.5	95.1	68.2	41.9	33.9	41.9	10.4	83.5	68.4	13.9
Queue Length 50th (m)	15.8	92.6	0.0	101.2	127.5	59.1	31.1	177.5	22.0	~29.4	115.4	3.0
Queue Length 95th (m)	27.6	#137.8	0.0	#142.5	174.1	100.9	54.8	202.7	49.0	m#50.1	136.2	m10.7
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	204	427	481	365	662	650	357	1920	841	217	1664	696
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.81	0.11	0.97	0.71	0.50	0.60	0.87	0.47	0.88	0.61	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Future Volume (vph)	92	345	55	355	472	326	215	1675	392	190	1011	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.30	1.00	1.00	0.13	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	552	1883	1570	250	1902	1585	243	4378	1581	3319	4295	1551
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	345	55	355	472	326	215	1675	392	190	1011	81
RTOR Reduction (vph)	0	0	43	0	0	99	0	0	148	0	0	50
Lane Group Flow (vph)	92	345	12	355	472	227	215	1675	244	190	1011	31
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	34.1	28.6	28.6	55.6	45.6	45.6	71.6	59.4	59.4	8.2	52.3	52.3
Effective Green, g (s)	36.1	30.6	30.6	56.6	47.6	47.6	72.6	61.4	61.4	9.2	54.3	54.3
Actuated g/C Ratio	0.26	0.22	0.22	0.40	0.34	0.34	0.52	0.44	0.44	0.07	0.39	0.39
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	198	411	343	362	646	538	300	1920	693	218	1665	601
v/s Ratio Prot	0.02	0.18		c0.16	0.25		c0.08	c0.38		c0.06	0.24	
v/s Ratio Perm	0.10		0.01	c0.23		0.14	0.29		0.15			0.02
v/c Ratio	0.46	0.84	0.04	0.98	0.73	0.42	0.72	0.87	0.35	0.87	0.61	0.05
Uniform Delay, d1	41.2	52.3	43.1	41.5	40.6	35.6	22.8	35.7	26.1	64.8	34.3	26.8
Progression Factor	1.00	1.00	1.00	1.51	1.50	2.06	1.00	1.00	1.00	0.83	1.89	1.00
Incremental Delay, d2	1.7	15.4	0.1	40.6	4.9	1.1	7.9	5.8	1.4	23.5	1.2	0.1
Delay (s)	42.9	67.7	43.2	103.4	65.8	74.3	30.7	41.6	27.5	77.6	66.1	26.9
Level of Service	D	E	D	F	E	E	C	D	C	E	E	C
Approach Delay (s/veh)		60.4			79.8			38.1			65.3	
Approach LOS		E			E			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	56.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	90.0%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

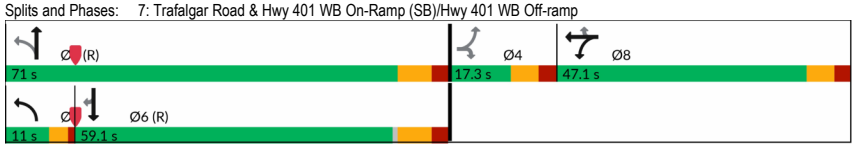
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Future Volume (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.440			0.950			0.105					
Satd. Flow (perm)	845	0	1633	3372	1921	2737	202	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			253						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	11.1		11.1	55.0	55.0	55.0	54.4	50.3			48.1	48.1
Actuated g/C Ratio	0.08		0.08	0.41	0.41	0.41	0.40	0.37			0.36	0.36
v/c Ratio	0.38		0.08	0.63	0.05	1.60	0.05	0.67			0.68	0.12
Control Delay (s/veh)	74.5		0.7	37.2	30.3	298.1	21.8	37.3			39.4	0.5
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	74.5		0.7	37.2	30.3	298.1	21.8	37.3			39.4	0.5
LOS	E		A	D	C	F	C	D			D	A
Approach Delay (s/veh)		41.5			217.2			37.2			37.1	
Approach LOS		D			F			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 135.4		
Actuated Cycle Length: 135.4		
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.60		
Intersection Signal Delay (s/veh): 139.2	Intersection LOS: F	
Intersection Capacity Utilization 110.3%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

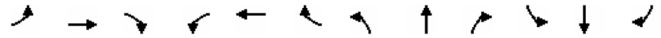
Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp





Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	26	21	863	40	2013	8	1065	1047	66
v/c Ratio	0.38	0.08	0.63	0.05	1.60	0.05	0.67	0.68	0.12
Control Delay (s/veh)	74.5	0.7	37.2	30.3	298.1	21.8	37.3	39.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.5	0.7	37.2	30.3	298.1	21.8	37.3	39.4	0.5
Queue Length 50th (m)	6.8	0.0	100.0	6.6	~436.6	1.3	104.9	101.4	0.0
Queue Length 95th (m)	16.5	0.0	#145.1	16.8	#520.6	4.1	107.9	120.9	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	69	253	1369	780	1261	165	2001	1670	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.08	0.63	0.05	1.60	0.05	0.53	0.63	0.11

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Future Volume (vph)	26	0	21	863	40	2013	8	1065	0	0	1047	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.44		1.00	0.95	1.00	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)	844		1633	3372	1921	2737	201	4309			4350	1306
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)	26	0	21	863	40	2013	8	1065	0	0	1047	66
RTOR Reduction (vph)	0	0	20	0	0	150	0	0	0	0	0	45
Lane Group Flow (vph)	26	0	1	863	40	1863	8	1065	0	0	1047	21
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	9.1		9.1	55.0	55.0	55.0	48.8	48.8			43.4	43.4
Effective Green, g (s)	9.1		9.1	55.0	55.0	55.0	48.8	48.8			43.4	43.4
Actuated g/C Ratio	0.07		0.07	0.41	0.41	0.41	0.36	0.36			0.32	0.32
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		109	1369	780	1111	89	1553			1394	418
v/s Ratio Prot				0.26	0.02		0.00	c0.25			c0.24	
v/s Ratio Perm	c0.03		0.00			c0.68	0.03					0.02
v/c Ratio	0.46		0.01	0.63	0.05	1.68	0.09	0.69			0.75	0.05
Uniform Delay, d1	60.8		59.0	32.1	24.4	40.2	30.2	36.8			41.2	31.8
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	6.0		0.0	0.7	0.0	308.5	0.2	2.5			3.8	0.2
Delay (s)	66.8		59.0	32.8	24.4	348.7	30.4	39.3			44.9	32.0
Level of Service	E		E	C	C	F	C	D			D	C
Approach Delay (s/veh)		63.3			250.7			39.2			44.2	
Approach LOS		E			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	160.3	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.20				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	110.3%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

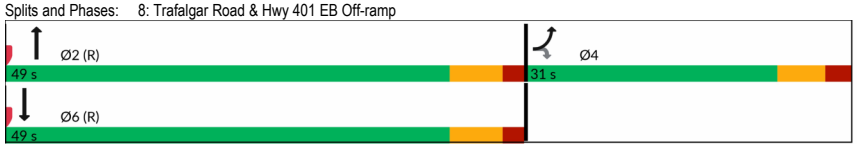
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	213	737	0	1290	1354	0
Future Volume (vph)	213	737	0	1290	1354	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.905	0.850				
Flt Protected	0.982					
Satd. Flow (prot)	2957	1327	0	4309	4350	0
Flt Permitted	0.982					
Satd. Flow (perm)	2957	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	33	33				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	213	737	0	1290	1354	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	582	368	0	1290	1354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	25.3	25.3		40.7	40.7	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
v/c Ratio	0.61	0.83		0.59	0.61	
Control Delay (s/veh)	24.3	40.4		15.8	16.1	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.3	40.4		15.8	16.1	
LOS	C	D		B	B	
Approach Delay (s/veh)	30.5			15.8	16.1	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 19.8		Intersection LOS: B	
Intersection Capacity Utilization 68.3%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	582	368	1290	1354
v/c Ratio	0.61	0.83	0.59	0.61
Control Delay (s/veh)	24.3	40.4	15.8	16.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.3	40.4	15.8	16.1
Queue Length 50th (m)	37.1	53.2	62.0	65.5
Queue Length 95th (m)	55.5	#109.1	74.9	79.0
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1000	461	2323	2345
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.80	0.56	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	213	737	0	1290	1354	0
Future Volume (vph)	213	737	0	1290	1354	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2957	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2957	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	213	737	0	1290	1354	0
RTOR Reduction (vph)	23	23	0	0	0	0
Lane Group Flow (vph)	559	345	0	1290	1354	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	25.3	25.3		40.7	40.7	
Effective Green, g (s)	25.3	25.3		40.7	40.7	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	935	419		2192	2213	
v/s Ratio Prot	0.19			0.30	c0.31	
v/s Ratio Perm		c0.26				
v/c Ratio	0.60	0.82		0.59	0.61	
Uniform Delay, d1	23.1	25.3		13.8	14.0	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	12.4		1.2	1.3	
Delay (s)	24.1	37.7		14.9	15.3	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	29.4			14.9	15.3	
Approach LOS	C			B	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

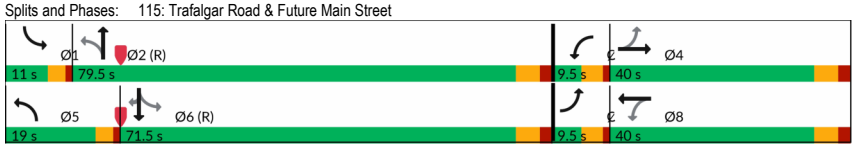
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1312	45	72	1905	383
Future Volume (vph)	54	46	207	15	115	8	227	1312	45	72	1905	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt		0.877			0.990			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3138	0	1789	3543	0	1711	4399	0	1711	4421	1566
Flt Permitted	0.559			0.530			0.047			0.155		
Satd. Flow (perm)	1053	3138	0	998	3543	0	85	4399	0	279	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		207			5			5				253
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	54	46	207	15	115	8	227	1312	45	72	1905	383
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	253	0	15	123	0	227	1357	0	72	1905	383
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0		9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0		9.5	40.0		19.0	79.5		11.0	71.5	71.5
Total Split (%)	6.8%	28.6%		6.8%	28.6%		13.6%	56.8%		7.9%	51.1%	51.1%
Maximum Green (s)	5.0	34.0		5.0	34.0		15.0	73.5		7.0	65.5	65.5
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0			27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	18.7	15.2		16.5	10.8		111.0	99.9		93.5	84.3	84.3
Actuated g/C Ratio	0.13	0.11		0.12	0.08		0.79	0.71		0.67	0.60	0.60
v/c Ratio	0.32	0.48		0.10	0.44		0.74	0.43		0.28	0.72	0.37
Control Delay (s/veh)	56.8	16.6		51.3	64.2		42.3	15.5		10.4	31.0	11.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.3	0.0
Total Delay (s/veh)	56.8	16.6		51.3	64.2		42.3	15.5		10.4	31.3	11.7
LOS	E	B		D	E		D	B		B	C	B
Approach Delay (s/veh)		23.7			62.8			19.4			27.5	
Approach LOS		C			E			B			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.74		
Intersection Signal Delay (s/veh): 25.4		Intersection LOS: C
Intersection Capacity Utilization 79.0%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	253	15	123	227	1357	72	1905	383
v/c Ratio	0.32	0.48	0.10	0.44	0.74	0.43	0.28	0.72	0.37
Control Delay (s/veh)	56.8	16.6	51.3	64.2	42.3	15.5	10.4	31.0	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay (s/veh)	56.8	16.6	51.3	64.2	42.3	15.5	10.4	31.3	11.7
Queue Length 50th (m)	13.5	6.0	3.7	17.1	55.6	60.9	4.7	174.4	22.6
Queue Length 95th (m)	26.1	20.0	10.2	27.3	m70.2	85.0	12.2	242.4	63.2
Internal Link Dist (m)		882.8		603.0		688.8		212.3	
Turn Bay Length (m)	75.0		160.0		125.0		50.0		75.0
Base Capacity (vph)	171	918	147	864	310	3141	260	2660	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	215	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.28	0.10	0.14	0.73	0.43	0.28	0.78	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1312	45	72	1905	383
Future Volume (vph)	54	46	207	15	115	8	227	1312	45	72	1905	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	0.88		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)	1789	3139		1789	3544		1711	4399		1711	4421	1566
Flt Permitted	0.56	1.00		0.53	1.00		0.05	1.00		0.15	1.00	1.00
Satd. Flow (perm)	1052	3139		999	3544		84	4399		279	4421	1566
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)	54	46	207	15	115	8	227	1312	45	72	1905	383
RTOR Reduction (vph)	0	185	0	0	5	0	0	2	0	0	0	106
Lane Group Flow (vph)	54	68	0	15	118	0	227	1355	0	72	1905	277
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	19.8	15.2		14.6	12.6		106.3	96.4		87.5	81.6	81.6
Effective Green, g (s)	19.8	15.2		14.6	12.6		106.3	96.4		87.5	81.6	81.6
Actuated g/C Ratio	0.14	0.11		0.10	0.09		0.76	0.69		0.63	0.58	0.58
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	172	340		115	318		304	3029		234	2576	912
v/s Ratio Prot	c0.01	0.02		0.00	0.03		c0.11	0.31		0.01	0.43	
v/s Ratio Perm	c0.03			0.01			c0.46			0.18		0.18
v/c Ratio	0.31	0.20		0.13	0.37		0.75	0.45		0.31	0.74	0.30
Uniform Delay, d1	53.2	56.9		56.6	60.0		42.7	9.8		10.3	21.4	14.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	1.66		1.38	1.40	2.04
Incremental Delay, d2	1.1	0.3		0.5	0.7		6.9	0.3		0.7	1.8	0.8
Delay (s)	54.3	57.2		57.2	60.7		43.8	16.6		14.9	31.8	31.0
Level of Service	D	E		E	E		D	B		B	C	C
Approach Delay (s/veh)		56.7			60.3			20.5			31.2	
Approach LOS		E			E			C			C	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	30.0	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	79.0%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

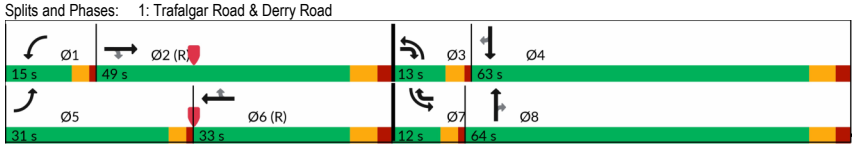
2051 Future Background

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	712	1730	385	302	746	468	256	1296	137	173	1128	50
Future Volume (vph)	712	1730	385	302	746	468	256	1296	137	173	1128	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			124			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	727	1765	393	308	761	478	261	1322	140	177	1151	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	727	1765	393	308	761	478	261	1322	140	177	1151	51
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	31.0	49.0	13.0	15.0	33.0	12.0	13.0	64.0	64.0	12.0	63.0	63.0
Total Split (%)	22.1%	35.0%	9.3%	10.7%	23.6%	8.6%	9.3%	45.7%	45.7%	8.6%	45.0%	45.0%
Maximum Green (s)	27.0	42.1	9.0	11.0	26.1	8.0	9.0	57.2	57.2	8.0	56.2	56.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	30.2	44.1	60.0	14.2	28.1	43.0	10.0	57.0	57.0	9.0	56.0	56.0
Actuated g/C Ratio	0.22	0.32	0.43	0.10	0.20	0.31	0.07	0.41	0.41	0.06	0.40	0.40
v/c Ratio	0.97	1.24	0.55	0.88	0.88	0.85	1.20	0.78	0.20	0.95	0.68	0.09
Control Delay (s/veh)	86.9	155.7	29.1	87.0	66.9	51.4	181.9	31.6	5.4	133.9	30.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	86.9	155.7	29.1	87.0	66.9	51.4	181.9	31.6	5.4	133.9	30.4	0.3
LOS	F	F	C	F	E	D	F	C	A	F	C	A
Approach Delay (s/veh)		121.1			66.1			52.2			42.6	
Approach LOS		F			E			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.24		
Intersection Signal Delay (s/veh): 79.7	Intersection LOS: E	
Intersection Capacity Utilization 87.7%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	727	1765	393	308	761	478	261	1322	140	177	1151	51
v/c Ratio	0.97	1.24	0.55	0.88	0.88	0.85	1.20	0.78	0.20	0.95	0.68	0.09
Control Delay (s/veh)	86.9	155.7	29.1	87.0	66.9	51.4	181.9	31.6	5.4	133.9	30.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	86.9	155.7	29.1	87.0	66.9	51.4	181.9	31.6	5.4	133.9	30.4	0.3
Queue Length 50th (m)	~117.7	~254.4	54.4	~47.9	90.9	103.3	~48.7	77.8	3.8	29.3	111.5	0.0
Queue Length 95th (m)	m#141.2	#289.4	m66.9	#78.2	#116.1	#160.3	#79.2	97.6	8.1	#55.0	133.3	0.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	747	1423	714	351	864	565	218	1765	733	187	1751	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	1.24	0.55	0.88	0.88	0.85	1.20	0.75	0.19	0.95	0.66	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	712	1730	385	302	746	468	256	1296	137	173	1128	50
Future Volume (vph)	712	1730	385	302	746	468	256	1296	137	173	1128	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	727	1765	393	308	761	478	261	1322	140	177	1151	51
RTOR Reduction (vph)	0	0	37	0	0	67	0	0	74	0	0	31
Lane Group Flow (vph)	727	1765	356	308	761	411	261	1322	66	177	1151	20
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	29.2	42.1	51.1	13.2	26.1	34.1	9.0	55.0	55.0	8.0	54.0	54.0
Effective Green, g (s)	30.2	44.1	55.1	14.2	28.1	38.1	10.0	57.0	57.0	9.0	56.0	56.0
Actuated g/C Ratio	0.22	0.32	0.39	0.10	0.20	0.27	0.07	0.41	0.41	0.06	0.40	0.40
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	748	1423	623	352	864	444	218	1699	637	187	1685	507
v/s Ratio Prot	c0.21	c0.39	0.04	0.09	0.18	0.07	c0.09	c0.32		0.06	0.27	
v/s Ratio Perm			0.18			0.19			0.04			0.02
v/c Ratio	0.97	1.24	0.57	0.88	0.88	0.93	1.20	0.78	0.10	0.95	0.68	0.04
Uniform Delay, d1	54.5	48.0	33.2	62.0	54.3	49.6	65.0	36.0	25.7	65.3	34.7	25.6
Progression Factor	1.36	1.14	1.10	1.00	1.00	1.00	1.18	0.79	0.90	1.30	0.82	1.00
Incremental Delay, d2	15.0	110.7	0.8	22.2	12.5	26.1	120.9	2.4	0.1	50.2	1.4	0.1
Delay (s)	88.9	165.5	37.3	84.2	66.8	75.7	197.8	30.8	23.2	135.2	29.8	25.7
Level of Service	F	F	D	F	E	E	F	C	C	F	C	C
Approach Delay (s/veh)		128.7			73.0			55.5			43.2	
Approach LOS		F			E			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	84.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	87.7%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

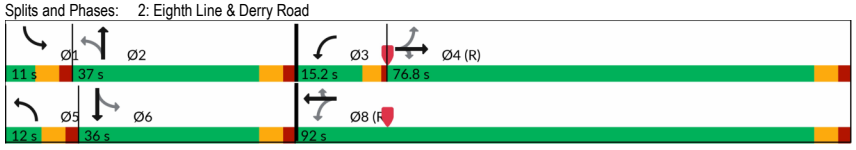
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1853	110	139	915	9	84	0	154	5	0	15
Future Volume (vph)	21	1853	110	139	915	9	84	0	154	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555	0	1217	1420	0
Flt Permitted	0.251			0.045			0.357			0.769		
Satd. Flow (perm)	340	4520	1601	86	4391	1633	686	1555	0	985	1420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		206			159	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	22	1930	115	145	953	9	88	0	160	5	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	1930	115	145	953	9	88	160	0	5	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	94.2	94.2	94.2	113.2	111.2	111.2	15.8	14.6		9.7	10.0	
Actuated g/C Ratio	0.67	0.67	0.67	0.81	0.79	0.79	0.11	0.10		0.07	0.07	
v/c Ratio	0.10	0.63	0.10	0.63	0.27	0.01	0.54	0.46		0.06	0.06	
Control Delay (s/veh)	11.9	24.6	5.5	40.2	4.6	0.0	68.6	7.1		52.2	0.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.9	24.6	5.5	40.2	4.6	0.0	68.6	7.1		52.2	0.5	
LOS	B	C	A	D	A	A	E	A		D	A	
Approach Delay (s/veh)		23.4			9.2			28.9			12.8	
Approach LOS		C			A			C			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.63		
Intersection Signal Delay (s/veh): 19.2	Intersection LOS: B	
Intersection Capacity Utilization 68.2%	ICU Level of Service C	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	1930	115	145	953	9	88	160	5	16
v/c Ratio	0.10	0.63	0.10	0.63	0.27	0.01	0.54	0.46	0.06	0.06
Control Delay (s/veh)	11.9	24.6	5.5	40.2	4.6	0.0	68.6	7.1	52.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.9	24.6	5.5	40.2	4.6	0.0	68.6	7.1	52.2	0.5
Queue Length 50th (m)	2.2	193.8	4.6	19.5	20.0	0.0	23.8	0.0	1.9	0.0
Queue Length 95th (m)	m5.8	256.4	m14.7	43.3	37.1	0.0	#43.6	8.9	7.4	0.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	228	3040	1109	238	3486	1311	162	504	77	429
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.63	0.10	0.61	0.27	0.01	0.54	0.32	0.06	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1853	110	139	915	9	84	0	154	5	0	15
Future Volume (vph)	21	1853	110	139	915	9	84	0	154	5	0	15
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555		1217	1420	
Flt Permitted	0.25	1.00	1.00	0.04	1.00	1.00	0.36	1.00		0.77	1.00	
Satd. Flow (perm)	340	4520	1601	86	4391	1633	686	1555		985	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1930	115	145	953	9	88	0	160	5	0	16
RTOR Reduction (vph)	0	0	37	0	0	2	0	143	0	0	15	0
Lane Group Flow (vph)	22	1930	78	145	953	7	88	17	0	5	1	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	89.4	89.4	89.4	106.4	106.4	106.4	21.6	14.6		6.2	5.2	
Effective Green, g (s)	89.4	89.4	89.4	106.4	106.4	106.4	21.6	14.6		6.2	5.2	
Actuated g/C Ratio	0.64	0.64	0.64	0.76	0.76	0.76	0.15	0.10		0.04	0.04	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	217	2886	1022	226	3337	1241	190	162		45	52	
v/s Ratio Prot		c0.43		c0.06	0.22		c0.03	0.01		0.00	0.00	
v/s Ratio Perm	0.06		0.05	0.43		0.00	c0.04			0.00		
v/c Ratio	0.10	0.67	0.08	0.64	0.29	0.01	0.46	0.10		0.11	0.01	
Uniform Delay, d1	9.8	16.0	9.6	35.1	5.1	4.0	52.7	56.8		64.2	64.9	
Progression Factor	0.98	1.61	1.90	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.9	0.1	6.1	0.2	0.0	1.8	0.3		1.1	0.1	
Delay (s)	10.2	26.6	18.4	41.2	5.4	4.1	54.5	57.1		65.3	65.0	
Level of Service	B	C	B	D	A	A	D	E		E	E	
Approach Delay (s/veh)		25.9			10.1			56.2			65.1	
Approach LOS		C			B			E			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

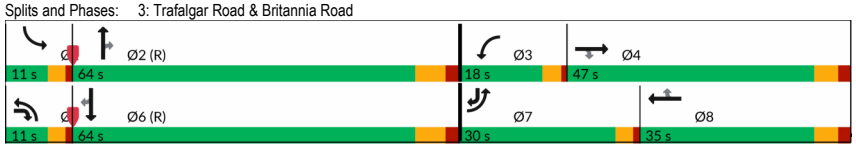
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	389	1126	503	270	802	241	224	968	268	106	1765	591
Future Volume (vph)	389	1126	503	270	802	241	224	968	268	106	1765	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			139			271			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	393	1137	508	273	810	243	226	978	271	107	1783	597
Shared Lane Traffic (%)												
Lane Group Flow (vph)	393	1137	508	273	810	243	226	978	271	107	1783	597
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	30.0	47.0	11.0	18.0	35.0	35.0	11.0	64.0	64.0	11.0	64.0	30.0
Total Split (%)	21.4%	33.6%	7.9%	12.9%	25.0%	25.0%	7.9%	45.7%	45.7%	7.9%	45.7%	21.4%
Maximum Green (s)	26.0	41.0	7.0	14.0	29.0	29.0	7.0	57.0	57.0	7.0	57.0	26.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	22.9	41.4	56.4	14.6	33.1	33.1	10.0	60.5	60.5	8.5	59.0	87.9
Actuated g/C Ratio	0.16	0.30	0.40	0.10	0.24	0.24	0.07	0.43	0.43	0.06	0.42	0.63
v/c Ratio	0.71	0.86	0.77	0.75	0.77	0.49	1.11	0.53	0.33	0.61	0.99	0.68
Control Delay (s/veh)	62.8	54.0	40.6	74.2	55.9	23.2	151.8	30.9	3.9	70.9	52.3	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.8	54.0	40.6	74.2	55.9	23.2	151.8	30.9	3.9	70.9	52.3	25.0
LOS	E	D	D	E	E	C	F	C	A	E	D	C
Approach Delay (s/veh)		52.4			53.7			44.5			46.5	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 49.0		Intersection LOS: D	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	393	1137	508	273	810	243	226	978	271	107	1783	597
v/c Ratio	0.71	0.86	0.77	0.75	0.77	0.49	1.11	0.53	0.33	0.61	0.99	0.68
Control Delay (s/veh)	62.8	54.0	40.6	74.2	55.9	23.2	151.8	30.9	3.9	70.9	52.3	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.8	54.0	40.6	74.2	55.9	23.2	151.8	30.9	3.9	70.9	52.3	25.0
Queue Length 50th (m)	55.6	125.0	112.2	38.6	89.4	23.6	~47.4	87.7	0.0	15.5	212.7	142.5
Queue Length 95th (m)	71.4	146.2	160.3	54.0	111.9	51.8	#77.1	104.5	16.5	m24.8	#255.9	m193.0
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	650	1374	663	375	1048	492	204	1839	830	174	1810	915
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.83	0.77	0.73	0.77	0.49	1.11	0.53	0.33	0.61	0.99	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	389	1126	503	270	802	241	224	968	268	106	1765	591
Future Volume (vph)	389	1126	503	270	802	241	224	968	268	106	1765	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	393	1137	508	273	810	243	226	978	271	107	1783	597
RTOR Reduction (vph)	0	0	39	0	0	106	0	0	154	0	0	22
Lane Group Flow (vph)	393	1137	469	273	810	137	226	978	117	107	1783	575
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	21.9	39.4	48.4	13.6	31.1	31.1	9.0	58.5	58.5	7.5	57.0	78.9
Effective Green, g (s)	22.9	41.4	52.4	14.6	33.1	33.1	10.0	60.5	60.5	8.5	59.0	82.9
Actuated g/C Ratio	0.16	0.30	0.37	0.10	0.24	0.24	0.07	0.43	0.43	0.06	0.42	0.59
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	551	1323	582	365	1048	386	204	1838	676	175	1810	808
v/s Ratio Prot	0.12	c0.25	0.06	c0.08	0.18		c0.08	0.23		0.04	c0.42	c0.12
v/s Ratio Perm			0.24			0.08			0.07			0.30
v/c Ratio	0.71	0.86	0.81	0.75	0.77	0.35	1.11	0.53	0.17	0.61	0.99	0.71
Uniform Delay, d1	55.4	46.6	39.2	60.9	49.9	44.5	65.0	29.3	24.4	64.1	40.1	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	1.40
Incremental Delay, d2	4.4	5.8	8.0	8.1	3.6	0.6	94.9	1.1	0.6	5.5	16.6	2.6
Delay (s)	59.8	52.3	47.3	69.1	53.5	45.1	159.9	30.4	25.0	62.4	52.1	30.7
Level of Service	E	D	D	E	D	D	F	C	C	E	D	C
Approach Delay (s/veh)		52.5			55.2			49.3			47.4	
Approach LOS		D			E			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	50.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

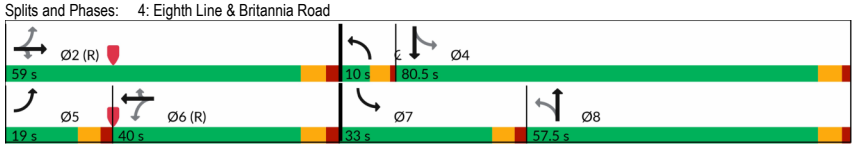
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1212	57	27	703	84	48	175	39	201	348	210
Future Volume (vph)	165	1212	57	27	703	84	48	175	39	201	348	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.973			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1782	0	1825	1810	0
Flt Permitted	0.230			0.165			0.169			0.424		
Satd. Flow (perm)	442	4476	1306	317	4476	1633	298	1782	0	815	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		8			30	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	168	1237	58	28	717	86	49	179	40	205	355	223
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	1237	58	28	717	86	49	219	0	205	578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	74.9	74.1	74.1	54.3	54.3	54.3	47.5	40.8		62.6	54.9	
Actuated g/C Ratio	0.50	0.50	0.50	0.36	0.36	0.36	0.32	0.27		0.42	0.37	
v/c Ratio	0.48	0.56	0.08	0.24	0.44	0.13	0.34	0.45		0.46	0.85	
Control Delay (s/veh)	28.5	29.7	1.2	50.4	40.6	0.8	28.9	44.3		29.9	52.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.5	29.7	1.2	50.4	40.6	0.8	28.9	44.3		29.9	52.4	
LOS	C	C	A	D	D	A	C	D		C	D	
Approach Delay (s/veh)		28.4			36.8			41.4			46.5	
Approach LOS		C			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.85		
Intersection Signal Delay (s/veh): 35.8		Intersection LOS: D
Intersection Capacity Utilization 95.2%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	168	1237	58	28	717	86	49	219	205	578
v/c Ratio	0.48	0.56	0.08	0.24	0.44	0.13	0.34	0.45	0.46	0.85
Control Delay (s/veh)	28.5	29.7	1.2	50.4	40.6	0.8	28.9	44.3	29.9	52.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.5	29.7	1.2	50.4	40.6	0.8	28.9	44.3	29.9	52.4
Queue Length 50th (m)	27.8	110.7	0.0	5.9	70.5	0.0	8.8	53.3	38.2	149.2
Queue Length 95th (m)	50.5	150.7	2.4	18.7	102.7	1.2	14.6	71.3	47.5	170.9
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	360	2219	695	115	1625	682	145	625	523	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.56	0.08	0.24	0.44	0.13	0.34	0.35	0.39	0.63

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1212	57	27	703	84	48	175	39	201	348	210
Future Volume (vph)	165	1212	57	27	703	84	48	175	39	201	348	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1781		1825	1810	
Flt Permitted	0.23	1.00	1.00	0.17	1.00	1.00	0.17	1.00		0.42	1.00	
Satd. Flow (perm)	441	4476	1306	318	4476	1633	299	1781		814	1810	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	168	1237	58	28	717	86	49	179	40	205	355	223
RTOR Reduction (vph)	0	0	30	0	0	55	0	6	0	0	19	0
Lane Group Flow (vph)	168	1237	28	28	717	31	49	213	0	205	559	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	73.2	73.2	73.2	53.4	53.4	53.4	46.2	41.8		63.8	54.9	
Effective Green, g (s)	73.2	73.2	73.2	53.4	53.4	53.4	46.2	41.8		63.8	54.9	
Actuated g/C Ratio	0.49	0.49	0.49	0.36	0.36	0.36	0.31	0.28		0.43	0.37	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	2191	639	113	1598	583	132	497		455	664	
v/s Ratio Prot	0.05	c0.28			0.16		0.01	0.12		c0.05	c0.31	
v/s Ratio Perm	0.19		0.02	0.09		0.02	0.10			0.14		
v/c Ratio	0.49	0.56	0.04	0.25	0.45	0.05	0.37	0.43		0.45	0.84	
Uniform Delay, d1	23.0	26.9	19.9	33.9	36.8	31.5	39.2	44.1		28.6	43.3	
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	1.1	1.1	0.1	5.2	0.9	0.2	1.8	0.6		0.7	9.5	
Delay (s)	24.1	28.0	20.0	39.1	37.7	31.7	40.9	44.7		29.3	52.8	
Level of Service	C	C	C	D	D	C	D	D		C	D	
Approach Delay (s/veh)		27.2			37.1			44.0			46.7	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	35.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5	
Intersection Capacity Utilization	95.2%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	600	120	476	236	192	47	1077	268	407	2064	123
Future Volume (vph)	226	600	120	476	236	192	47	1077	268	407	2064	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.599			0.158			0.062			0.950		
Satd. Flow (perm)	1096	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			200			234			115
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	235	625	125	496	246	200	47	1077	268	424	2150	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	625	125	496	246	200	47	1077	268	424	2150	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	27.8	27.0	27.0	36.0	35.2	35.2	9.5	70.0	70.0	26.0	86.5	86.5
Total Split (%)	17.5%	17.0%	17.0%	22.6%	22.1%	22.1%	6.0%	44.0%	44.0%	16.4%	54.4%	54.4%
Maximum Green (s)	23.3	20.8	20.8	31.5	29.0	29.0	5.0	63.4	63.4	22.0	79.9	79.9
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	44.5	22.8	22.8	59.5	34.3	34.3	72.8	65.7	65.7	22.7	83.8	83.8
Actuated g/C Ratio	0.28	0.14	0.14	0.37	0.22	0.22	0.46	0.41	0.41	0.14	0.53	0.53
v/c Ratio	0.60	1.21	0.35	1.19	0.32	0.41	0.45	0.62	0.34	0.89	0.95	0.15
Control Delay (s/veh)	44.0	165.1	8.2	149.2	54.7	9.1	33.0	38.8	6.6	88.7	46.3	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.0	165.1	8.2	149.2	54.7	9.1	33.0	38.8	6.6	88.7	46.3	4.5
LOS	D	F	A	F	D	A	C	D	A	F	D	A
Approach Delay (s/veh)		116.3			94.8			32.4			51.0	
Approach LOS		F			F			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 159		
Actuated Cycle Length: 159		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.21		
Intersection Signal Delay (s/veh): 64.2		Intersection LOS: E
Intersection Capacity Utilization 101.0%		ICU Level of Service G
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	235	625	125	496	246	200	47	1077	268	424	2150	128
v/c Ratio	0.60	1.21	0.35	1.19	0.32	0.41	0.45	0.62	0.34	0.89	0.95	0.15
Control Delay (s/veh)	44.0	165.1	8.2	149.2	54.7	9.1	33.0	38.8	6.6	88.7	46.3	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.0	165.1	8.2	149.2	54.7	9.1	33.0	38.8	6.6	88.7	46.3	4.5
Queue Length 50th (m)	55.8	~127.0	0.0	~174.9	35.6	0.0	6.5	117.8	6.6	69.8	280.0	2.1
Queue Length 95th (m)	80.6	#166.6	13.5	#247.0	50.4	23.2	14.8	136.7	26.1	#98.4	#327.9	13.2
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	427	518	353	416	771	489	105	1741	778	480	2263	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	1.21	0.35	1.19	0.32	0.41	0.45	0.62	0.34	0.88	0.95	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	600	120	476	236	192	47	1077	268	407	2064	123
Future Volume (vph)	226	600	120	476	236	192	47	1077	268	407	2064	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.60	1.00	1.00	0.16	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1096	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	235	625	125	496	246	200	47	1077	268	424	2150	128
RTOR Reduction (vph)	0	0	107	0	0	157	0	0	137	0	0	55
Lane Group Flow (vph)	235	625	18	496	246	43	47	1077	131	424	2150	73
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	40.8	20.8	20.8	56.8	32.3	32.3	67.7	63.7	63.7	21.7	80.9	80.9
Effective Green, g (s)	42.8	22.8	22.8	57.8	34.3	34.3	69.7	65.7	65.7	22.7	82.9	82.9
Actuated g/C Ratio	0.27	0.14	0.14	0.36	0.22	0.22	0.44	0.41	0.41	0.14	0.52	0.52
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	379	518	229	413	772	332	94	1741	640	473	2239	793
v/s Ratio Prot	0.08	0.17		c0.25	0.07		0.02	0.26		c0.13	c0.50	
v/s Ratio Perm	0.08		0.01	c0.19		0.03	0.20		0.08			0.05
v/c Ratio	0.62	1.21	0.08	1.20	0.32	0.13	0.50	0.62	0.20	0.90	0.96	0.09
Uniform Delay, d1	49.1	68.1	59.0	49.5	52.5	50.3	35.6	36.8	29.9	67.0	36.5	19.1
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	3.1	110.1	0.3	111.6	0.5	0.4	4.1	1.7	0.7	19.2	11.7	0.2
Delay (s)	52.2	178.2	59.3	161.1	53.0	50.7	39.7	38.4	30.6	86.2	48.2	19.4
Level of Service	D	F	E	F	D	D	D	D	C	F	D	B
Approach Delay (s/veh)		133.1			109.4			37.0			52.8	
Approach LOS		F			F			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	71.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	15.8	
Intersection Capacity Utilization	101.0%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

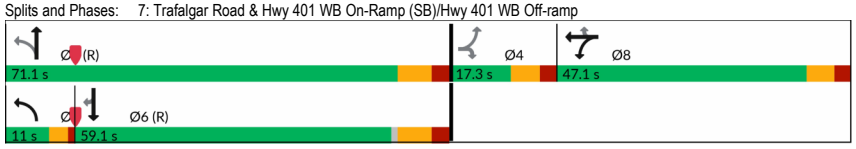
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Future Volume (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.108					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	207	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172			362						182
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	21.6	21.6	21.6	99.3	95.2			93.0	93.0
Actuated g/C Ratio			0.07	0.16	0.16	0.16	0.73	0.70			0.69	0.69
v/c Ratio			0.03	0.77	0.04	0.70	0.03	0.37			0.48	0.22
Control Delay (s/veh)			0.2	66.0	45.6	19.1	8.7	10.0			13.1	3.5
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.2	66.0	45.6	19.1	8.7	10.0			13.1	3.5
LOS			A	E	D	B	A	A			B	A
Approach Delay (s/veh)		0.2			39.0			10.0			11.9	
Approach LOS		A			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 17.9		Intersection LOS: B	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	9	355	13	488	6	1034	1423	205
v/c Ratio	0.03	0.77	0.04	0.70	0.03	0.37	0.48	0.22
Control Delay (s/veh)	0.2	66.0	45.6	19.1	8.7	10.0	13.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.2	66.0	45.6	19.1	8.7	10.0	13.1	3.5
Queue Length 50th (m)	0.0	56.4	3.0	19.6	0.3	42.7	60.2	1.9
Queue Length 95th (m)	0.0	72.4	8.8	41.3	2.6	91.4	150.2	20.7
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	279	849	567	980	235	2769	2958	932
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.42	0.02	0.50	0.03	0.37	0.48	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Future Volume (vph)	0	0	9	355	13	488	6	1034	0	0	1423	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	208	3941			4309	1276
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	9	355	13	488	6	1034	0	0	1423	205
RTOR Reduction (vph)	0	0	9	0	0	304	0	0	0	0	0	69
Lane Group Flow (vph)	0	0	0	355	13	184	6	1034	0	0	1423	136
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	21.6	21.6	21.6	89.4	89.4			84.0	84.0
Effective Green, g (s)			2.0	21.6	21.6	21.6	89.4	89.4			84.0	84.0
Actuated g/C Ratio			0.01	0.16	0.16	0.16	0.66	0.66			0.62	0.62
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	458	306	391	153	2600			2671	791
v/s Ratio Prot				c0.12	0.01		0.00	c0.26			c0.33	
v/s Ratio Perm			c0.00			0.07	0.03					0.11
v/c Ratio			0.01	0.78	0.04	0.47	0.04	0.40			0.53	0.17
Uniform Delay, d1			65.8	54.6	48.2	51.7	9.6	10.6			14.6	11.0
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	7.3	0.0	0.3	0.0	0.5			0.8	0.5
Delay (s)			65.9	61.9	48.2	52.1	9.6	11.1			15.4	11.4
Level of Service			E	E	D	D	A	B			B	B
Approach Delay (s/veh)		65.9			56.1			11.1			14.9	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	23.9	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.57				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	64.7%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

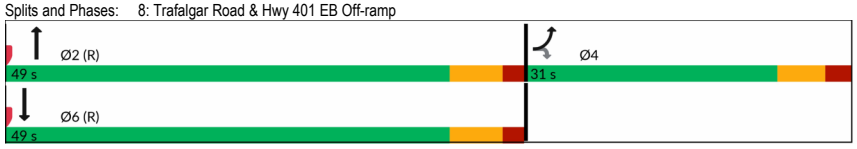
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	643	0	1756	591	0
Future Volume (vph)	200	643	0	1756	591	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.907	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2804	1339	0	4154	4117	0
Flt Permitted	0.981					
Satd. Flow (perm)	2804	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	252	252				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	200	643	0	1756	591	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	522	321	0	1756	591	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	15.2	15.2		50.8	50.8	
Actuated g/C Ratio	0.19	0.19		0.64	0.64	
v/c Ratio	0.71	0.70		0.67	0.23	
Control Delay (s/veh)	20.3	15.9		11.8	7.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.3	15.9		11.8	7.2	
LOS	C	B		B	A	
Approach Delay (s/veh)	18.6			11.8	7.2	
Approach LOS	B			B	A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 55		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.71		
Intersection Signal Delay (s/veh): 12.7		Intersection LOS: B
Intersection Capacity Utilization 77.2%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	522	321	1756	591
v/c Ratio	0.71	0.70	0.67	0.23
Control Delay (s/veh)	20.3	15.9	11.8	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.3	15.9	11.8	7.2
Queue Length 50th (m)	24.1	10.8	66.0	15.0
Queue Length 95th (m)	38.1	36.7	113.7	28.3
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1017	578	2638	2615
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.56	0.67	0.23

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	643	0	1756	591	0
Future Volume (vph)	200	643	0	1756	591	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2806	1339		4154	4117	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2806	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	643	0	1756	591	0
RTOR Reduction (vph)	204	204	0	0	0	0
Lane Group Flow (vph)	318	117	0	1756	591	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	15.2	15.2		50.8	50.8	
Effective Green, g (s)	15.2	15.2		50.8	50.8	
Actuated g/C Ratio	0.19	0.19		0.64	0.64	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	533	254		2637	2614	
v/s Ratio Prot	c0.11			c0.42	0.14	
v/s Ratio Perm		0.09				
v/c Ratio	0.60	0.46		0.67	0.23	
Uniform Delay, d1	29.6	28.8		9.2	6.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	1.3		1.3	0.2	
Delay (s)	31.4	30.1		10.6	6.4	
Level of Service	C	C		B	A	
Approach Delay (s/veh)	30.9			10.6	6.4	
Approach LOS	C			B	A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	15.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	77.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

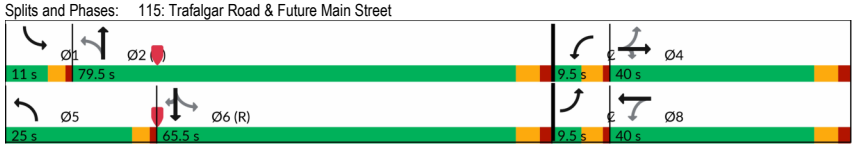
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2202	27	50	1044	74
Future Volume (vph)	70	36	200	5	105	28	42	2202	27	50	1044	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt			0.850		0.969			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1601	1789	3468	0	1711	4412	0	1711	4421	1566
Flt Permitted	0.506			0.732			0.204			0.042		
Satd. Flow (perm)	953	3579	1601	1379	3468	0	367	4412	0	76	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		22			2				121
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2224	27	51	1055	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	36	202	5	134	0	42	2251	0	51	1055	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		25.0	79.5		11.0	65.5	65.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		17.9%	56.8%		7.9%	46.8%	46.8%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		21.0	73.5		7.0	59.5	59.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	20.7	18.2	18.2	16.9	11.2		106.0	98.7		107.3	99.3	99.3
Actuated g/C Ratio	0.15	0.13	0.13	0.12	0.08		0.76	0.71		0.77	0.71	0.71
v/c Ratio	0.39	0.08	0.53	0.03	0.45		0.12	0.72		0.35	0.34	0.07
Control Delay (s/veh)	58.2	53.6	12.6	48.6	55.9		3.6	11.9		25.2	7.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	58.2	53.6	12.6	48.6	55.9		3.6	11.9		25.2	7.7	0.2
LOS	E	D	B	D	E		A	B		C	A	A
Approach Delay (s/veh)		27.8			55.7			11.7			8.0	
Approach LOS		C			E			B			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay (s/veh): 13.4		Intersection LOS: B
Intersection Capacity Utilization 69.4%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	36	202	5	134	42	2251	51	1055	75
v/c Ratio	0.39	0.08	0.53	0.03	0.45	0.12	0.72	0.35	0.34	0.07
Control Delay (s/veh)	58.2	53.6	12.6	48.6	55.9	3.6	11.9	25.2	7.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.2	53.6	12.6	48.6	55.9	3.6	11.9	25.2	7.7	0.2
Queue Length 50th (m)	17.5	4.5	0.0	1.2	16.2	2.2	123.8	2.1	47.8	0.0
Queue Length 95th (m)	31.8	10.6	24.1	5.2	26.5	m3.2	m131.8	14.1	60.1	0.5
Internal Link Dist (m)		882.8			603.0		688.8		212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0		75.0
Base Capacity (vph)	180	869	541	182	858	489	3111	144	3137	1146
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.04	0.37	0.03	0.16	0.09	0.72	0.35	0.34	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2202	27	50	1044	74
Future Volume (vph)	70	36	200	5	105	28	42	2202	27	50	1044	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3579	1601	1789	3466		1711	4413		1711	4421	1566
Flt Permitted	0.51	1.00	1.00	0.73	1.00		0.20	1.00		0.04	1.00	1.00
Satd. Flow (perm)	953	3579	1601	1379	3466		367	4413		76	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2224	27	51	1055	75
RTOR Reduction (vph)	0	0	176	0	20	0	0	1	0	0	0	24
Lane Group Flow (vph)	71	36	26	5	114	0	42	2250	0	51	1055	51
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	23.6	18.2	18.2	14.8	13.8		99.6	94.3		101.0	95.0	95.0
Effective Green, g (s)	23.6	18.2	18.2	14.8	13.8		99.6	94.3		101.0	95.0	95.0
Actuated g/C Ratio	0.17	0.13	0.13	0.11	0.10		0.71	0.67		0.72	0.68	0.68
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	465	208	148	341		311	2972		124	2999	1062
v/s Ratio Prot	c0.01	0.01		0.00	0.03		0.01	c0.51		c0.02	0.24	
v/s Ratio Perm	c0.05		0.02	0.00			0.09			0.28		0.03
v/c Ratio	0.37	0.08	0.13	0.03	0.33		0.14	0.76		0.41	0.35	0.05
Uniform Delay, d1	50.5	53.5	53.9	56.1	58.8		6.2	15.2		16.6	9.5	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.78	0.79		1.92	0.86	0.45
Incremental Delay, d2	1.2	0.1	0.3	0.1	0.6		0.1	1.0		2.2	0.3	0.1
Delay (s)	51.7	53.6	54.1	56.2	59.4		5.0	13.0		34.1	8.5	3.5
Level of Service	D	D	D	E	E		A	B		C	A	A
Approach Delay (s/veh)		53.5			59.3			12.8			9.3	
Approach LOS		D			E			B			A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	16.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	69.4%	ICU Level of Service	C	
Analysis Period (min)	15			

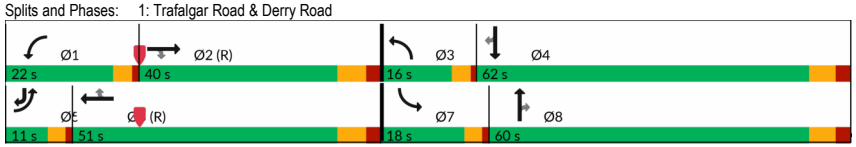
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Future Volume (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138			121			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Shared Lane Traffic (%)												
Lane Group Flow (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	16.0	60.0	60.0	18.0	62.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	11.4%	42.9%	42.9%	12.9%	44.3%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	9.4	40.8	40.8	15.7	47.1	47.1	13.0	52.8	52.8	15.0	54.8	70.0
Actuated g/C Ratio	0.07	0.29	0.29	0.11	0.34	0.34	0.09	0.38	0.38	0.11	0.39	0.50
v/c Ratio	0.66	0.54	0.25	0.48	1.31	0.42	1.31	0.76	0.13	0.99	0.77	0.60
Control Delay (s/veh)	89.8	40.5	5.4	61.9	178.2	16.4	199.7	26.0	2.6	108.1	40.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	89.8	40.5	5.4	61.9	178.2	16.4	199.7	26.0	2.6	108.1	40.7	23.0
LOS	F	D	A	E	F	B	F	C	A	F	D	C
Approach Delay (s/veh)		43.0			152.2			64.3			47.4	
Approach LOS		D			F			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.31		
Intersection Signal Delay (s/veh): 86.2	Intersection LOS: F	
Intersection Capacity Utilization 95.3%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
v/c Ratio	0.66	0.54	0.25	0.48	1.31	0.42	1.31	0.76	0.13	0.99	0.77	0.60
Control Delay (s/veh)	89.8	40.5	5.4	61.9	178.2	16.4	199.7	26.0	2.6	108.1	40.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	89.8	40.5	5.4	61.9	178.2	16.4	199.7	26.0	2.6	108.1	40.7	23.0
Queue Length 50th (m)	23.6	69.5	0.0	26.1	~306.2	29.7	~70.8	116.2	2.7	50.0	130.7	77.5
Queue Length 95th (m)	#41.0	91.8	11.5	35.4	#337.4	31.8	m#94.1	m135.2	m3.2	#82.2	152.0	112.9
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	226	1303	555	475	1536	619	294	1677	692	343	1738	829
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.54	0.25	0.40	1.31	0.42	1.31	0.73	0.12	0.99	0.74	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Future Volume (vph)	149	709	138	190	2012	259	385	1225	85	340	1287	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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)	149	709	138	190	2012	259	385	1225	85	340	1287	494
RTOR Reduction (vph)	0	0	98	0	0	80	0	0	53	0	0	50
Lane Group Flow (vph)	149	709	40	190	2012	179	385	1225	32	340	1287	444
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	8.4	38.8	38.8	14.7	45.1	45.1	12.0	50.8	50.8	14.0	52.8	61.2
Effective Green, g (s)	9.4	40.8	40.8	15.7	47.1	47.1	13.0	52.8	52.8	15.0	54.8	65.2
Actuated g/C Ratio	0.07	0.29	0.29	0.11	0.34	0.34	0.09	0.38	0.38	0.11	0.39	0.47
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	226	1304	457	393	1535	538	294	1604	590	343	1665	729
v/s Ratio Prot	c0.04	0.16		0.05	c0.44		c0.12	0.29		0.11	c0.30	0.05
v/s Ratio Perm			0.03			0.11			0.02			0.24
v/c Ratio	0.66	0.54	0.09	0.48	1.31	0.33	1.31	0.76	0.05	0.99	0.77	0.61
Uniform Delay, d1	63.7	41.8	36.1	58.3	46.4	34.7	63.5	38.1	27.7	62.4	37.2	27.9
Progression Factor	1.20	0.90	0.69	1.01	0.90	0.78	0.99	0.63	1.85	1.00	1.00	1.00
Incremental Delay, d2	8.7	1.6	0.4	1.5	143.5	1.3	152.5	1.5	0.0	46.2	2.7	2.1
Delay (s)	85.0	39.4	25.3	60.6	185.3	28.3	215.1	25.5	51.3	108.6	39.9	30.0
Level of Service	F	D	C	E	F	C	F	C	D	F	D	C
Approach Delay (s/veh)		44.2			159.1			69.9			48.6	
Approach LOS		D			F			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	90.4	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.02			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	95.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

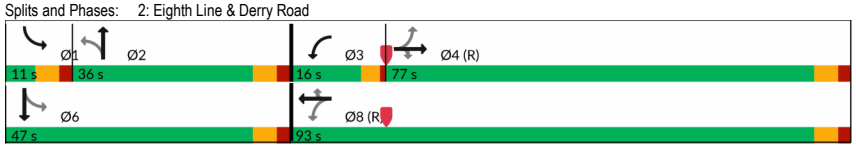
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1030	73	170	2319	5	103	0	156	5	8	10
Future Volume (vph)	5	1030	73	170	2319	5	103	0	156	5	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633	0	1825	1762	0
Flt Permitted	0.044			0.198			0.746			0.298		
Satd. Flow (perm)	85	4520	1555	380	4565	1633	1433	1633	0	572	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		266			6	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	5	1030	73	170	2319	5	103	0	156	5	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1030	73	170	2319	5	103	156	0	5	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	96.2	96.2	96.2	111.9	109.9	109.9	15.6	15.6		18.1	18.1	
Actuated g/C Ratio	0.69	0.69	0.69	0.80	0.79	0.79	0.11	0.11		0.13	0.13	
v/c Ratio	0.09	0.33	0.07	0.42	0.65	0.00	0.65	0.37		0.04	0.08	
Control Delay (s/veh)	16.8	10.5	1.2	7.4	8.9	0.0	68.2	6.3		47.0	36.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	16.8	10.5	1.2	7.4	8.9	0.0	68.2	6.3		47.0	36.6	
LOS	B	B	A	A	A	A	E	A		D	D	
Approach Delay (s/veh)		9.9			8.8			30.9			38.9	
Approach LOS		A			A			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 10.8		Intersection LOS: B
Intersection Capacity Utilization 88.8%		ICU Level of Service E
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	1030	73	170	2319	5	103	156	5	18
v/c Ratio	0.09	0.33	0.07	0.42	0.65	0.00	0.65	0.37	0.04	0.08
Control Delay (s/veh)	16.8	10.5	1.2	7.4	8.9	0.0	68.2	6.3	47.0	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.8	10.5	1.2	7.4	8.9	0.0	68.2	6.3	47.0	36.6
Queue Length 50th (m)	0.4	42.0	0.0	7.7	89.5	0.0	29.6	4.0	1.3	3.0
Queue Length 95th (m)	3.6	80.3	3.7	23.6	189.4	0.0	m44.1	m9.7	4.7	9.1
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	58	3105	1100	428	3582	1296	307	558	126	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.33	0.07	0.40	0.65	0.00	0.34	0.28	0.04	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1030	73	170	2319	5	103	0	156	5	8	10
Future Volume (vph)	5	1030	73	170	2319	5	103	0	156	5	8	10
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633		1825	1761	
Flt Permitted	0.04	1.00	1.00	0.20	1.00	1.00	0.75	1.00		0.30	1.00	
Satd. Flow (perm)	84	4520	1555	380	4565	1633	1433	1633		573	1761	
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	1030	73	170	2319	5	103	0	156	5	8	10
RTOR Reduction (vph)	0	0	25	0	0	1	0	139	0	0	5	0
Lane Group Flow (vph)	5	1030	48	170	2319	4	103	17	0	5	13	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	91.4	91.4	91.4	105.1	105.1	105.1	15.6	15.6		22.9	22.9	
Effective Green, g (s)	91.4	91.4	91.4	105.1	105.1	105.1	15.6	15.6		22.9	22.9	
Actuated g/C Ratio	0.65	0.65	0.65	0.75	0.75	0.75	0.11	0.11		0.16	0.16	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	2950	1015	385	3427	1225	159	181		105	288	
v/s Ratio Prot		0.23		0.03	c0.51			0.01		0.00	c0.01	
v/s Ratio Perm	0.06		0.03	0.30		0.00	c0.07			0.01		
v/c Ratio	0.09	0.35	0.05	0.44	0.68	0.00	0.65	0.10		0.05	0.05	
Uniform Delay, d1	9.0	10.9	8.7	5.8	8.8	4.4	59.6	55.9		49.6	49.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00		1.00	1.00	
Incremental Delay, d2	3.4	0.3	0.1	0.8	1.1	0.0	7.4	0.2		0.2	0.1	
Delay (s)	12.4	11.3	8.8	6.6	9.9	4.4	60.6	56.1		49.8	49.4	
Level of Service	B	B	A	A	A	A	E	E		D	D	
Approach Delay (s/veh)		11.1			9.7			57.9			49.5	
Approach LOS		B			A			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	13.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	88.8%	ICU Level of Service	E	
Analysis Period (min)	15			

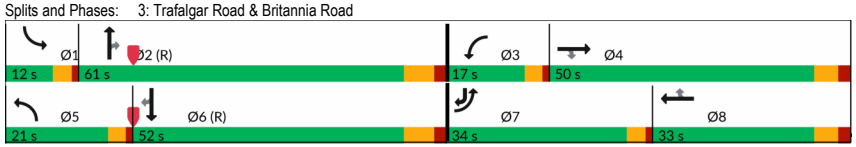
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Future Volume (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			224			156			184			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Shared Lane Traffic (%)												
Lane Group Flow (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	34.0	50.0	50.0	17.0	33.0	33.0	21.0	61.0	61.0	12.0	52.0	34.0
Total Split (%)	24.3%	35.7%	35.7%	12.1%	23.6%	23.6%	15.0%	43.6%	43.6%	8.6%	37.1%	24.3%
Maximum Green (s)	30.0	44.0	44.0	13.0	27.0	27.0	17.0	54.0	54.0	8.0	45.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	30.6	46.8	46.8	13.2	29.4	29.4	18.0	56.0	56.0	9.0	47.0	83.6
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.60
v/c Ratio	0.91	0.76	0.43	0.63	1.28	0.44	1.30	0.82	0.34	1.13	0.68	0.65
Control Delay (s/veh)	72.5	45.9	11.1	92.5	162.8	6.4	188.6	60.6	25.0	160.5	24.9	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.5	45.9	11.1	92.5	162.8	6.4	188.6	60.6	25.0	160.5	24.9	24.2
LOS	E	D	B	F	F	A	F	E	C	F	C	C
Approach Delay (s/veh)		48.8			134.7			87.4			41.4	
Approach LOS		D			F			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 135		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay (s/veh): 76.3	Intersection LOS: E	
Intersection Capacity Utilization 91.2%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
v/c Ratio	0.91	0.76	0.43	0.63	1.28	0.44	1.30	0.82	0.34	1.13	0.68	0.65
Control Delay (s/veh)	72.5	45.9	11.1	92.5	162.8	6.4	188.6	60.6	25.0	160.5	24.9	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.5	45.9	11.1	92.5	162.8	6.4	188.6	60.6	25.0	160.5	24.9	24.2
Queue Length 50th (m)	96.0	121.5	13.5	32.0	~183.2	15.8	~99.7	159.9	29.8	~37.1	104.0	164.4
Queue Length 95th (m)	#132.0	142.4	38.6	m44.0	#207.3	m2.5	m#126.9	182.0	m41.7	m#62.5	122.8	202.5
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	675	1495	678	354	959	446	411	1734	736	200	1441	956
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.76	0.43	0.60	1.28	0.44	1.30	0.82	0.34	1.13	0.68	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Future Volume (vph)	608	1142	292	212	1225	198	533	1427	250	225	984	617
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	608	1142	292	212	1225	198	533	1427	250	225	984	617
RTOR Reduction (vph)	0	0	149	0	0	123	0	0	110	0	0	38
Lane Group Flow (vph)	608	1142	143	212	1225	75	533	1427	140	225	984	579
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	29.6	44.8	44.8	12.2	27.4	27.4	17.0	54.0	54.0	8.0	45.0	74.6
Effective Green, g (s)	30.6	46.8	46.8	13.2	29.4	29.4	18.0	56.0	56.0	9.0	47.0	78.6
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.56
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	667	1496	529	333	958	323	411	1734	626	200	1441	862
v/s Ratio Prot	c0.20	0.26		0.06	c0.27		c0.17	c0.33		0.07	0.23	0.15
v/s Ratio Perm			0.09			0.05			0.09			0.23
v/c Ratio	0.91	0.76	0.27	0.64	1.28	0.23	1.30	0.82	0.22	1.13	0.68	0.67
Uniform Delay, d1	53.4	41.7	34.1	61.1	55.3	45.9	61.0	37.6	27.7	65.5	40.1	21.6
Progression Factor	1.00	1.00	1.00	1.40	0.63	0.32	0.96	1.53	2.98	1.17	0.56	1.34
Incremental Delay, d2	16.8	2.4	0.3	3.1	131.7	0.3	143.4	2.6	0.5	95.3	2.2	1.7
Delay (s)	70.1	44.0	34.4	88.6	166.5	15.0	201.8	60.0	83.0	172.1	24.8	30.7
Level of Service	E	D	C	F	F	B	F	E	F	F	C	C
Approach Delay (s/veh)		50.4			138.0			96.8			44.9	
Approach LOS		D			F			F			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	81.0	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.04			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

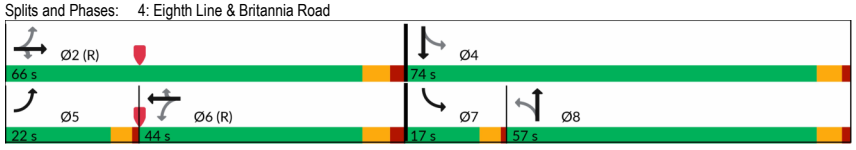
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	986	51	30	1254	173	95	344	64	150	209	198
Future Volume (vph)	235	986	51	30	1254	173	95	344	64	150	209	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.976			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1863	0	1825	1745	0
Flt Permitted	0.074			0.242			0.475			0.146		
Satd. Flow (perm)	142	4476	1328	465	4520	1633	913	1863	0	280	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			118		8			48	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	235	986	51	30	1254	173	95	344	64	150	209	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	986	51	30	1254	173	95	408	0	150	407	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	77.2	74.9	74.9	52.9	52.9	52.9	36.1	36.1		53.8	52.6	
Actuated g/C Ratio	0.55	0.54	0.54	0.38	0.38	0.38	0.26	0.26		0.38	0.38	
v/c Ratio	0.82	0.41	0.07	0.17	0.73	0.25	0.40	0.84		0.63	0.59	
Control Delay (s/veh)	75.8	23.1	9.7	39.2	42.4	13.7	41.5	58.2		40.0	32.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	75.8	23.1	9.7	39.2	42.4	13.7	41.5	58.2		40.0	32.4	
LOS	E	C	A	D	D	B	D	E		D	C	
Approach Delay (s/veh)		32.3			38.9			55.1			34.4	
Approach LOS		C			D			E			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.84		
Intersection Signal Delay (s/veh): 38.2		Intersection LOS: D
Intersection Capacity Utilization 92.2%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	986	51	30	1254	173	95	408	150	407
v/c Ratio	0.82	0.41	0.07	0.17	0.73	0.25	0.40	0.84	0.63	0.59
Control Delay (s/veh)	75.8	23.1	9.7	39.2	42.4	13.7	41.5	58.2	40.0	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.8	23.1	9.7	39.2	42.4	13.7	41.5	58.2	40.0	32.4
Queue Length 50th (m)	58.4	51.8	0.6	5.6	127.5	9.9	21.9	105.8	27.7	82.3
Queue Length 95th (m)	m77.8	m72.1	m2.5	16.3	#192.9	31.4	m34.3	135.7	35.7	82.2
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	313	2394	736	175	1707	690	334	687	245	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.41	0.07	0.17	0.73	0.25	0.28	0.59	0.61	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	986	51	30	1254	173	95	344	64	150	209	198
Future Volume (vph)	235	986	51	30	1254	173	95	344	64	150	209	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1864		1825	1745	
Flt Permitted	0.07	1.00	1.00	0.24	1.00	1.00	0.47	1.00		0.15	1.00	
Satd. Flow (perm)	141	4476	1328	464	4520	1633	912	1864		281	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)	235	986	51	30	1254	173	95	344	64	150	209	198
RTOR Reduction (vph)	0	0	24	0	0	73	0	6	0	0	30	0
Lane Group Flow (vph)	235	986	27	30	1254	100	95	402	0	150	377	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	74.9	74.9	74.9	52.9	52.9	52.9	36.1	36.1		52.6	52.6	
Effective Green, g (s)	74.9	74.9	74.9	52.9	52.9	52.9	36.1	36.1		52.6	52.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.38	0.38	0.38	0.26	0.26		0.38	0.38	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	2394	710	175	1707	617	235	480		237	655	
v/s Ratio Prot	c0.10	0.22			0.28			c0.22		0.05	c0.22	
v/s Ratio Perm	c0.34		0.02	0.06		0.06	0.10			0.18		
v/c Ratio	0.82	0.41	0.04	0.17	0.73	0.16	0.40	0.84		0.63	0.58	
Uniform Delay, d1	38.7	19.4	15.5	29.0	37.5	28.9	43.0	49.2		33.3	34.8	
Progression Factor	1.80	1.10	2.21	1.00	1.00	1.00	0.89	0.93		1.03	0.96	
Incremental Delay, d2	11.8	0.3	0.1	2.1	2.9	0.6	1.0	10.8		5.4	1.2	
Delay (s)	81.4	21.8	34.3	31.1	40.4	29.4	39.3	56.3		39.7	34.8	
Level of Service	F	C	C	C	D	C	D	E		D	C	
Approach Delay (s/veh)		33.3			38.9			53.1			36.1	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	38.5	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		21.5	
Intersection Capacity Utilization	92.2%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

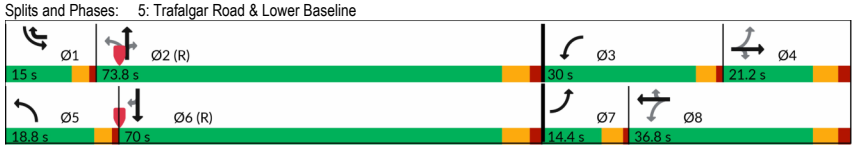
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Future Volume (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.411			0.205			0.130			0.950		
Satd. Flow (perm)	759	3579	1570	390	3614	1585	239	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			63			296			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	7.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	11.0	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	14.4	21.2	21.2	30.0	36.8	15.0	18.8	73.8	73.8	15.0	70.0	70.0
Total Split (%)	10.3%	15.1%	15.1%	21.4%	26.3%	10.7%	13.4%	52.7%	52.7%	10.7%	50.0%	50.0%
Maximum Green (s)	9.9	15.0	15.0	25.5	30.6	11.0	14.8	67.2	67.2	11.0	63.4	63.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	3.0	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.0	17.0	17.0	47.7	33.2	50.4	85.4	69.2	69.2	12.0	66.1	66.1
Actuated g/C Ratio	0.20	0.12	0.12	0.34	0.24	0.36	0.61	0.49	0.49	0.09	0.47	0.47
v/c Ratio	0.46	0.95	0.21	1.04	0.67	0.64	0.84	0.87	0.48	0.81	0.56	0.12
Control Delay (s/veh)	40.9	93.7	1.6	115.6	73.2	46.8	44.3	37.2	9.1	73.6	31.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.9	93.7	1.6	115.6	73.2	46.8	44.3	37.2	9.1	73.6	31.2	6.6
LOS	D	F	A	F	E	D	D	D	A	E	C	A
Approach Delay (s/veh)		74.1			78.5			33.0			36.4	
Approach LOS		E			E			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay (s/veh): 48.2		Intersection LOS: D	
Intersection Capacity Utilization 91.5%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
v/c Ratio	0.46	0.95	0.21	1.04	0.67	0.64	0.84	0.87	0.48	0.81	0.56	0.12
Control Delay (s/veh)	40.9	93.7	1.6	115.6	73.2	46.8	44.3	37.2	9.1	73.6	31.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.9	93.7	1.6	115.6	73.2	46.8	44.3	37.2	9.1	73.6	31.2	6.6
Queue Length 50th (m)	20.6	61.8	0.0	~124.9	85.2	62.6	34.8	194.0	24.3	35.1	75.9	0.7
Queue Length 95th (m)	35.2	#94.8	0.0	#177.0	107.6	119.5	#78.6	220.5	51.3	#55.0	100.6	m5.9
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	232	434	303	401	856	610	316	2163	931	284	2027	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.95	0.21	1.04	0.67	0.64	0.82	0.87	0.48	0.81	0.56	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Future Volume (vph)	103	414	65	416	570	393	260	1889	449	229	1129	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.41	1.00	1.00	0.21	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	760	3579	1570	390	3614	1585	239	4378	1581	3319	4295	1551
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)	103	414	65	416	570	393	260	1889	449	229	1129	92
RTOR Reduction (vph)	0	0	57	0	0	42	0	0	150	0	0	49
Lane Group Flow (vph)	103	414	8	416	570	351	260	1889	299	229	1129	43
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	24.3	15.0	15.0	45.0	31.2	42.2	81.3	67.2	67.2	11.0	64.1	64.1
Effective Green, g (s)	26.3	17.0	17.0	46.0	33.2	46.2	83.2	69.2	69.2	12.0	66.1	66.1
Actuated g/C Ratio	0.19	0.12	0.12	0.33	0.24	0.33	0.59	0.49	0.49	0.09	0.47	0.47
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	4.0	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	215	434	190	396	857	523	304	2163	781	284	2027	732
v/s Ratio Prot	0.04	0.12		c0.20	0.16	0.06	c0.09	c0.43		0.07	0.26	
v/s Ratio Perm	0.05		0.01	c0.15		0.16	0.41		0.19			0.03
v/c Ratio	0.48	0.95	0.04	1.05	0.67	0.67	0.86	0.87	0.38	0.81	0.56	0.06
Uniform Delay, d1	49.1	61.1	54.3	41.7	48.4	40.4	23.0	31.5	22.1	62.9	26.5	20.1
Progression Factor	1.00	1.00	1.00	1.71	1.42	1.33	1.00	1.00	1.00	0.89	1.13	5.19
Incremental Delay, d2	1.7	32.0	0.2	56.5	2.3	3.0	20.3	5.3	1.4	12.3	0.9	0.1
Delay (s)	50.7	93.2	54.5	127.9	71.1	56.7	43.2	36.8	23.5	68.4	30.9	104.2
Level of Service	D	F	D	F	E	E	D	D	C	E	C	F
Approach Delay (s/veh)		81.3			84.1			35.1			41.4	
Approach LOS		F			F			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	52.4	HCM 2000 Level of Service	D			
HCM 2000 Volume to Capacity ratio	0.96					
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3			
Intersection Capacity Utilization	91.5%	ICU Level of Service	F			
Analysis Period (min)	15					

c Critical Lane Group

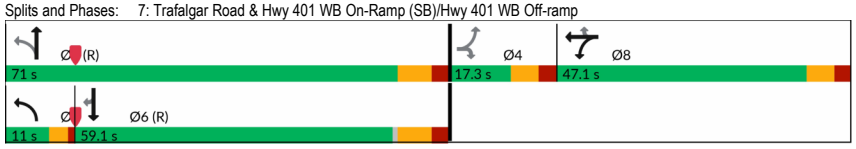
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Future Volume (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.444			0.950			0.086					
Satd. Flow (perm)	853	0	1633	3372	1921	2737	165	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			214						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	11.0		11.0	51.8	51.8	51.8	57.6	53.5			51.3	51.3
Actuated g/C Ratio	0.08		0.08	0.38	0.38	0.38	0.43	0.40			0.38	0.38
v/c Ratio	0.45		0.10	0.77	0.07	2.06	0.06	0.69			0.70	0.14
Control Delay (s/veh)	79.9		0.8	43.5	31.9	503.4	20.5	36.1			38.1	1.5
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	79.9		0.8	43.5	31.9	503.4	20.5	36.1			38.1	1.5
LOS	E		A	D	C	F	C	D			D	A
Approach Delay (s/veh)		43.8			365.2			36.0			35.8	
Approach LOS		D			F			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.06			
Intersection Signal Delay (s/veh): 227.7		Intersection LOS: F	
Intersection Capacity Utilization 127.2%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



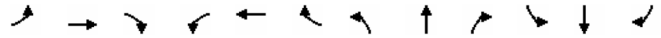


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	31	26	993	49	2429	10	1183	1161	80
v/c Ratio	0.45	0.10	0.77	0.07	2.06	0.06	0.69	0.70	0.14
Control Delay (s/veh)	79.9	0.8	43.5	31.9	503.4	20.5	36.1	38.1	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	79.9	0.8	43.5	31.9	503.4	20.5	36.1	38.1	1.5
Queue Length 50th (m)	8.0	0.0	128.7	8.6	~596.3	1.6	115.7	111.5	0.0
Queue Length 95th (m)	#21.4	0.0	#189.2	19.3	#665.4	4.4	118.6	133.2	3.2
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	69	253	1289	734	1178	155	2001	1697	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.10	0.77	0.07	2.06	0.06	0.59	0.68	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Future Volume (vph)	31	0	26	993	49	2429	10	1183	0	0	1161	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.44		1.00	0.95	1.00	1.00	0.09	1.00			1.00	1.00
Satd. Flow (perm)	854		1633	3372	1921	2737	165	4309			4350	1306
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)	31	0	26	993	49	2429	10	1183	0	0	1161	80
RTOR Reduction (vph)	0	0	24	0	0	132	0	0	0	0	0	52
Lane Group Flow (vph)	31	0	2	993	49	2297	10	1183	0	0	1161	28
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	9.0		9.0	51.8	51.8	51.8	52.1	52.1			46.7	46.7
Effective Green, g (s)	9.0		9.0	51.8	51.8	51.8	52.1	52.1			46.7	46.7
Actuated g/C Ratio	0.07		0.07	0.38	0.38	0.38	0.38	0.38			0.34	0.34
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		108	1290	734	1047	80	1658			1500	450
v/s Ratio Prot				0.29	0.03		0.00	c0.27			c0.27	
v/s Ratio Perm	c0.04		0.00			c0.84	0.05					0.02
v/c Ratio	0.55		0.02	0.77	0.07	2.19	0.13	0.71			0.77	0.06
Uniform Delay, d1	61.3		59.1	36.6	26.5	41.8	28.8	35.3			39.6	29.7
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	11.3		0.1	2.5	0.0	540.3	0.3	2.6			4.0	0.3
Delay (s)	72.6		59.1	39.1	26.5	582.1	29.1	38.0			43.6	29.9
Level of Service	E		E	D	C	F	C	D			D	C
Approach Delay (s/veh)		66.4			418.9			37.9			42.7	
Approach LOS		E			F			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	261.0	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.44			
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5	
Intersection Capacity Utilization	127.2%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

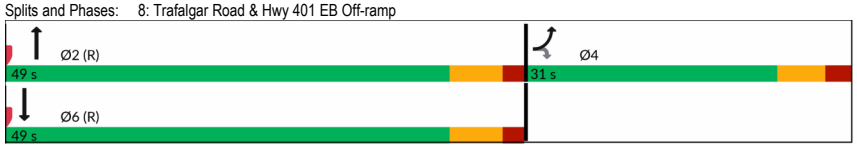
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	256	794	0	1400	1481	0
Future Volume (vph)	256	794	0	1400	1481	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.909	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2967	1327	0	4309	4350	0
Flt Permitted	0.981					
Satd. Flow (perm)	2967	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24	24				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	256	794	0	1400	1481	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	653	397	0	1400	1481	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	26.9	26.9		39.1	39.1	
Actuated g/C Ratio	0.34	0.34		0.49	0.49	
v/c Ratio	0.65	0.86		0.66	0.70	
Control Delay (s/veh)	25.3	44.2		17.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.3	44.2		17.4	18.0	
LOS	C	D		B	B	
Approach Delay (s/veh)	32.4			17.4	18.0	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 21.7		Intersection LOS: C	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	653	397	1400	1481
v/c Ratio	0.65	0.86	0.66	0.70
Control Delay (s/veh)	25.3	44.2	17.4	18.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.3	44.2	17.4	18.0
Queue Length 50th (m)	42.3	59.4	72.6	78.0
Queue Length 95th (m)	67.1	#130.7	79.3	84.8
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1014	462	2265	2286
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.86	0.62	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	256	794	0	1400	1481	0
Future Volume (vph)	256	794	0	1400	1481	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2966	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2966	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	256	794	0	1400	1481	0
RTOR Reduction (vph)	16	16	0	0	0	0
Lane Group Flow (vph)	637	381	0	1400	1481	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	26.9	26.9		39.1	39.1	
Effective Green, g (s)	26.9	26.9		39.1	39.1	
Actuated g/C Ratio	0.34	0.34		0.49	0.49	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	997	446		2106	2126	
v/s Ratio Prot	0.21			0.32	c0.34	
v/s Ratio Perm		c0.29				
v/c Ratio	0.64	0.85		0.66	0.70	
Uniform Delay, d1	22.4	24.7		15.5	15.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	14.7		1.7	1.9	
Delay (s)	23.8	39.4		17.2	17.8	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	29.7			17.2	17.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

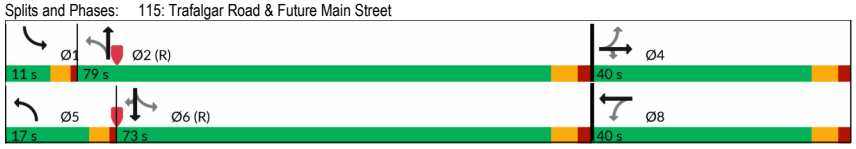
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1275	45	72	1950	383
Future Volume (vph)	54	46	207	15	115	8	227	1275	45	72	1950	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt			0.850		0.990			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1601	1789	3543	0	1711	4399	0	1711	4421	1566
Flt Permitted	0.674			0.725			0.048			0.162		
Satd. Flow (perm)	1269	3579	1601	1365	3543	0	86	4399	0	292	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134		5			6				293
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	54	46	207	15	115	8	227	1275	45	72	1950	383
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	46	207	15	123	0	227	1320	0	72	1950	383
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	40.0	40.0	40.0	40.0	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	79.0		11.0	73.0	73.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%		13.1%	60.8%		8.5%	56.2%	56.2%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0		13.0	73.0		7.0	67.0	67.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Don't Walk (s)	27.0	27.0	27.0	27.0	27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)	13.5	13.5	13.5	13.5	13.5		106.5	95.5		89.0	79.8	79.8
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.10		0.82	0.73		0.68	0.61	0.61
v/c Ratio	0.41	0.12	0.72	0.11	0.33		0.69	0.41		0.26	0.72	0.36
Control Delay (s/veh)	62.5	51.6	35.1	51.8	53.1		44.3	7.7		7.1	20.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.2	0.0
Total Delay (s/veh)	62.5	51.6	35.1	51.8	53.1		44.3	7.7		7.1	20.6	4.5
LOS	E	D	D	D	D		D	A		A	C	A
Approach Delay (s/veh)		42.4			52.9			13.1			17.7	
Approach LOS		D			D			B			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 100		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay (s/veh): 18.9	Intersection LOS: B	
Intersection Capacity Utilization 85.3%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	46	207	15	123	227	1320	72	1950	383
v/c Ratio	0.41	0.12	0.72	0.11	0.33	0.69	0.41	0.26	0.72	0.36
Control Delay (s/veh)	62.5	51.6	35.1	51.8	53.1	44.3	7.7	7.1	20.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay (s/veh)	62.5	51.6	35.1	51.8	53.1	44.3	7.7	7.1	20.6	4.5
Queue Length 50th (m)	13.6	5.8	18.4	3.7	15.4	39.5	48.3	2.6	132.0	8.7
Queue Length 95th (m)	25.7	11.4	43.0	10.1	23.7	67.1	75.3	7.4	197.2	29.9
Internal Link Dist (m)		882.8			603.0		688.8		212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0		75.0
Base Capacity (vph)	331	936	517	357	930	328	3233	278	2715	1074
Starvation Cap Reductn	0	0	0	0	0	0	0	0	193	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.05	0.40	0.04	0.13	0.69	0.41	0.26	0.77	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1275	45	72	1950	383
Future Volume (vph)	54	46	207	15	115	8	227	1275	45	72	1950	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3579	1601	1789	3544		1711	4398		1711	4421	1566
Flt Permitted	0.67	1.00	1.00	0.73	1.00		0.05	1.00		0.16	1.00	1.00
Satd. Flow (perm)	1270	3579	1601	1366	3544		86	4398		291	4421	1566
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)	54	46	207	15	115	8	227	1275	45	72	1950	383
RTOR Reduction (vph)	0	0	120	0	4	0	0	2	0	0	0	113
Lane Group Flow (vph)	54	46	87	15	119	0	227	1318	0	72	1950	270
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	13.5	13.5	13.5	13.5	13.5		104.5	94.7		85.7	79.9	79.9
Effective Green, g (s)	13.5	13.5	13.5	13.5	13.5		104.5	94.7		85.7	79.9	79.9
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.10		0.80	0.73		0.66	0.61	0.61
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	371	166	141	368		326	3203		255	2717	962
v/s Ratio Prot		0.01			0.03		c0.11	0.30		0.01	c0.44	
v/s Ratio Perm	0.04		c0.05	0.01			0.45			0.17		0.17
v/c Ratio	0.41	0.12	0.52	0.11	0.32		0.70	0.41		0.28	0.72	0.28
Uniform Delay, d1	54.5	52.9	55.2	52.8	54.0		37.9	6.8		7.9	17.3	11.7
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	2.1	0.2	3.0	0.3	0.5		6.3	0.4		0.6	1.7	0.7
Delay (s)	56.6	53.0	58.2	53.1	54.5		44.2	7.2		8.5	18.9	12.4
Level of Service	E	D	E	D	D		D	A		A	B	B
Approach Delay (s/veh)		57.1			54.4			12.7			17.6	
Approach LOS		E			D			B			B	

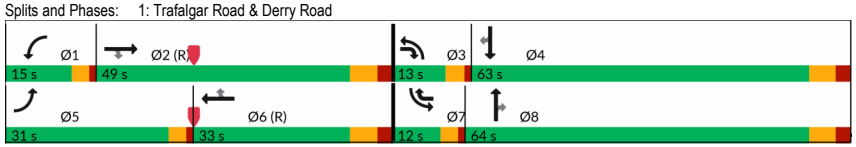
Intersection Summary				
HCM 2000 Control Delay (s/veh)	19.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	85.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	723	1749	388	304	753	469	257	1305	139	173	1138	51
Future Volume (vph)	723	1749	388	304	753	469	257	1305	139	173	1138	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			124			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	738	1785	396	310	768	479	262	1332	142	177	1161	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	738	1785	396	310	768	479	262	1332	142	177	1161	52
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	31.0	49.0	13.0	15.0	33.0	12.0	13.0	64.0	64.0	12.0	63.0	63.0
Total Split (%)	22.1%	35.0%	9.3%	10.7%	23.6%	8.6%	9.3%	45.7%	45.7%	8.6%	45.0%	45.0%
Maximum Green (s)	27.0	42.1	9.0	11.0	26.1	8.0	9.0	57.2	57.2	8.0	56.2	56.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	29.9	44.1	60.0	13.9	28.1	43.0	10.0	57.3	57.3	9.0	56.3	56.3
Actuated g/C Ratio	0.21	0.32	0.43	0.10	0.20	0.31	0.07	0.41	0.41	0.06	0.40	0.40
v/c Ratio	0.99	1.25	0.55	0.90	0.89	0.85	1.20	0.78	0.20	0.95	0.69	0.09
Control Delay (s/veh)	90.6	161.4	29.3	90.3	67.7	51.6	183.4	31.4	5.5	134.7	30.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.6	161.4	29.3	90.3	67.7	51.6	183.4	31.4	5.5	134.7	30.5	0.3
LOS	F	F	C	F	E	D	F	C	A	F	C	A
Approach Delay (s/veh)		125.6			67.2			52.2			42.6	
Approach LOS		F			E			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.25		
Intersection Signal Delay (s/veh): 81.7	Intersection LOS: F	
Intersection Capacity Utilization 88.3%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	738	1785	396	310	768	479	262	1332	142	177	1161	52
v/c Ratio	0.99	1.25	0.55	0.90	0.89	0.85	1.20	0.78	0.20	0.95	0.69	0.09
Control Delay (s/veh)	90.6	161.4	29.3	90.3	67.7	51.6	183.4	31.4	5.5	134.7	30.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.6	161.4	29.3	90.3	67.7	51.6	183.4	31.4	5.5	134.7	30.5	0.3
Queue Length 50th (m)	~121.0	~259.5	55.5	~48.5	91.9	103.7	~48.9	78.3	3.9	29.2	112.8	0.0
Queue Length 95th (m)	m#141.7	#294.0	m66.5	#78.9	#117.9	#161.4	#79.1	99.2	8.1	#54.8	134.8	0.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	742	1423	714	345	864	565	218	1765	733	187	1751	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.25	0.55	0.90	0.89	0.85	1.20	0.75	0.19	0.95	0.66	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	723	1749	388	304	753	469	257	1305	139	173	1138	51
Future Volume (vph)	723	1749	388	304	753	469	257	1305	139	173	1138	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	738	1785	396	310	768	479	262	1332	142	177	1161	52
RTOR Reduction (vph)	0	0	37	0	0	67	0	0	73	0	0	31
Lane Group Flow (vph)	738	1785	359	310	768	412	262	1332	69	177	1161	21
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	28.9	42.1	51.1	12.9	26.1	34.1	9.0	55.3	55.3	8.0	54.3	54.3
Effective Green, g (s)	29.9	44.1	55.1	13.9	28.1	38.1	10.0	57.3	57.3	9.0	56.3	56.3
Actuated g/C Ratio	0.21	0.32	0.39	0.10	0.20	0.27	0.07	0.41	0.41	0.06	0.40	0.40
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	741	1423	623	344	864	444	218	1708	640	187	1694	509
v/s Ratio Prot	c0.21	c0.39	0.05	0.09	0.18	0.07	c0.09	c0.32		0.06	0.28	
v/s Ratio Perm			0.18			0.19			0.04			0.02
v/c Ratio	1.00	1.25	0.58	0.90	0.89	0.93	1.20	0.78	0.11	0.95	0.69	0.04
Uniform Delay, d1	55.0	48.0	33.3	62.4	54.4	49.6	65.0	35.9	25.5	65.3	34.5	25.4
Progression Factor	1.35	1.15	1.11	1.00	1.00	1.00	1.19	0.79	0.88	1.32	0.82	1.00
Incremental Delay, d2	19.5	116.8	0.8	26.8	13.2	26.5	122.5	2.4	0.1	50.1	1.4	0.1
Delay (s)	93.7	171.8	37.7	89.2	67.6	76.1	199.6	30.6	22.6	136.1	29.7	25.5
Level of Service	F	F	D	F	E	E	F	C	C	F	C	C
Approach Delay (s/veh)		133.9			74.5			55.5			43.1	
Approach LOS		F			E			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	87.2	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.01			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	88.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

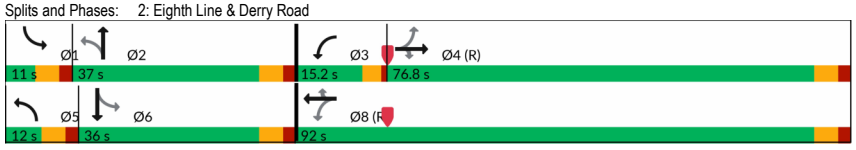
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1874	112	141	926	9	84	0	156	5	0	15
Future Volume (vph)	21	1874	112	141	926	9	84	0	156	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555	0	1217	1420	0
Flt Permitted	0.248			0.043			0.357			0.769		
Satd. Flow (perm)	336	4520	1601	83	4391	1633	686	1555	0	985	1420	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		205			155	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	22	1952	117	147	965	9	88	0	163	5	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	1952	117	147	965	9	88	163	0	5	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	94.1	94.1	94.1	113.3	111.3	111.3	15.7	14.5		9.7	10.0	
Actuated g/C Ratio	0.67	0.67	0.67	0.81	0.80	0.80	0.11	0.10		0.07	0.07	
v/c Ratio	0.10	0.64	0.11	0.64	0.28	0.01	0.55	0.47		0.06	0.07	
Control Delay (s/veh)	11.9	24.7	5.5	41.8	4.6	0.0	68.9	7.7		52.4	0.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.9	24.7	5.5	41.8	4.6	0.0	68.9	7.7		52.4	0.5	
LOS	B	C	A	D	A	A	E	A		D	A	
Approach Delay (s/veh)		23.5			9.4			29.1			12.9	
Approach LOS		C			A			C			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.64		
Intersection Signal Delay (s/veh): 19.3		Intersection LOS: B
Intersection Capacity Utilization 68.7%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	1952	117	147	965	9	88	163	5	16
v/c Ratio	0.10	0.64	0.11	0.64	0.28	0.01	0.55	0.47	0.06	0.07
Control Delay (s/veh)	11.9	24.7	5.5	41.8	4.6	0.0	68.9	7.7	52.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.9	24.7	5.5	41.8	4.6	0.0	68.9	7.7	52.4	0.5
Queue Length 50th (m)	2.1	196.8	4.6	20.8	20.3	0.0	23.8	0.0	1.9	0.0
Queue Length 95th (m)	m5.9	259.2	m14.8	44.5	37.6	0.0	#43.6	10.0	7.4	0.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	225	3036	1108	238	3489	1312	161	503	77	426
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.64	0.11	0.62	0.28	0.01	0.55	0.32	0.06	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1874	112	141	926	9	84	0	156	5	0	15
Future Volume (vph)	21	1874	112	141	926	9	84	0	156	5	0	15
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1555		1217	1420	
Flt Permitted	0.25	1.00	1.00	0.04	1.00	1.00	0.36	1.00		0.77	1.00	
Satd. Flow (perm)	335	4520	1601	82	4391	1633	686	1555		985	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1952	117	147	965	9	88	0	162	5	0	16
RTOR Reduction (vph)	0	0	37	0	0	2	0	146	0	0	15	0
Lane Group Flow (vph)	22	1952	80	147	965	7	88	17	0	5	1	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	89.3	89.3	89.3	106.5	106.5	106.5	21.5	14.5		6.2	5.2	
Effective Green, g (s)	89.3	89.3	89.3	106.5	106.5	106.5	21.5	14.5		6.2	5.2	
Actuated g/C Ratio	0.64	0.64	0.64	0.76	0.76	0.76	0.15	0.10		0.04	0.04	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	213	2883	1021	226	3340	1242	189	161		45	52	
v/s Ratio Prot		c0.43		c0.06	0.22		c0.03	0.01		0.00	0.00	
v/s Ratio Perm	0.07		0.05	0.43		0.00	c0.04			0.00		
v/c Ratio	0.10	0.68	0.08	0.65	0.29	0.01	0.47	0.10		0.11	0.01	
Uniform Delay, d1	9.8	16.2	9.7	36.7	5.1	4.0	52.8	56.9		64.2	64.9	
Progression Factor	0.97	1.60	1.84	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.9	0.1	6.5	0.2	0.0	1.8	0.3		1.1	0.1	
Delay (s)	10.2	26.7	17.9	43.2	5.4	4.0	54.6	57.2		65.3	65.0	
Level of Service	B	C	B	D	A	A	D	E		E	E	
Approach Delay (s/veh)		26.0			10.3			56.3			65.1	
Approach LOS		C			B			E			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

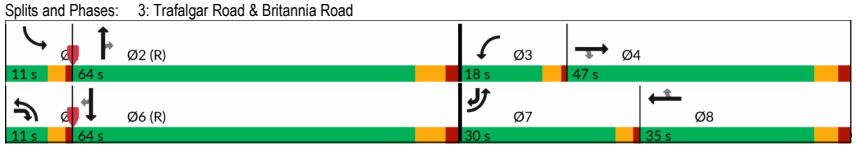
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1136	508	274	806	243	226	979	270	106	1781	591
Future Volume (vph)	390	1136	508	274	806	243	226	979	270	106	1781	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			138			273			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	394	1147	513	277	814	245	228	989	273	107	1799	597
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	1147	513	277	814	245	228	989	273	107	1799	597
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	30.0	47.0	11.0	18.0	35.0	35.0	11.0	64.0	64.0	11.0	64.0	30.0
Total Split (%)	21.4%	33.6%	7.9%	12.9%	25.0%	25.0%	7.9%	45.7%	45.7%	7.9%	45.7%	21.4%
Maximum Green (s)	26.0	41.0	7.0	14.0	29.0	29.0	7.0	57.0	57.0	7.0	57.0	26.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	22.9	41.5	56.4	14.6	33.3	33.3	9.8	60.4	60.4	8.4	59.0	87.9
Actuated g/C Ratio	0.16	0.30	0.40	0.10	0.24	0.24	0.07	0.43	0.43	0.06	0.42	0.63
v/c Ratio	0.72	0.86	0.77	0.76	0.77	0.50	1.13	0.54	0.33	0.62	0.99	0.68
Control Delay (s/veh)	62.8	54.3	41.1	74.7	55.8	23.6	160.3	31.1	3.8	71.3	54.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.8	54.3	41.1	74.7	55.8	23.6	160.3	31.1	3.8	71.3	54.2	24.8
LOS	E	D	D	E	E	C	F	C	A	E	D	C
Approach Delay (s/veh)		52.7			53.8			45.9			47.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 49.9		Intersection LOS: D	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	394	1147	513	277	814	245	228	989	273	107	1799	597
v/c Ratio	0.72	0.86	0.77	0.76	0.77	0.50	1.13	0.54	0.33	0.62	0.99	0.68
Control Delay (s/veh)	62.8	54.3	41.1	74.7	55.8	23.6	160.3	31.1	3.8	71.3	54.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.8	54.3	41.1	74.7	55.8	23.6	160.3	31.1	3.8	71.3	54.2	24.8
Queue Length 50th (m)	55.8	126.4	114.1	39.2	90.0	24.4	~48.1	89.1	0.0	15.6	215.8	142.9
Queue Length 95th (m)	71.7	148.1	163.2	54.6	112.6	52.6	#78.0	105.9	16.6	m25.0	#259.7	m191.9
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	650	1374	663	375	1053	493	201	1836	830	173	1810	915
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.83	0.77	0.74	0.77	0.50	1.13	0.54	0.33	0.62	0.99	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1136	508	274	806	243	226	979	270	106	1781	591
Future Volume (vph)	390	1136	508	274	806	243	226	979	270	106	1781	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	394	1147	513	277	814	245	228	989	273	107	1799	597
RTOR Reduction (vph)	0	0	39	0	0	105	0	0	155	0	0	22
Lane Group Flow (vph)	394	1147	474	277	814	140	228	989	118	107	1799	575
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	21.9	39.6	48.4	13.6	31.3	31.3	8.8	58.4	58.4	7.4	57.0	78.9
Effective Green, g (s)	22.9	41.6	52.4	14.6	33.3	33.3	9.8	60.4	60.4	8.4	59.0	82.9
Actuated g/C Ratio	0.16	0.30	0.37	0.10	0.24	0.24	0.07	0.43	0.43	0.06	0.42	0.59
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	551	1330	582	365	1054	388	200	1835	675	173	1810	808
v/s Ratio Prot	0.12	c0.26	0.06	c0.08	0.18		c0.08	0.23		0.04	c0.42	c0.12
v/s Ratio Perm			0.24			0.09			0.08			0.30
v/c Ratio	0.72	0.86	0.81	0.76	0.77	0.36	1.14	0.54	0.17	0.62	0.99	0.71
Uniform Delay, d1	55.5	46.5	39.4	61.0	49.8	44.5	65.1	29.5	24.5	64.2	40.3	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.88	1.39
Incremental Delay, d2	4.4	6.0	8.6	8.8	3.6	0.6	106.4	1.1	0.6	5.7	18.4	2.6
Delay (s)	59.9	52.5	48.0	69.7	53.4	45.0	171.5	30.6	25.0	62.9	54.0	30.6
Level of Service	E	D	D	E	D	D	F	C	C	E	D	C
Approach Delay (s/veh)		52.8			55.2			51.2			48.8	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	51.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	84.8%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

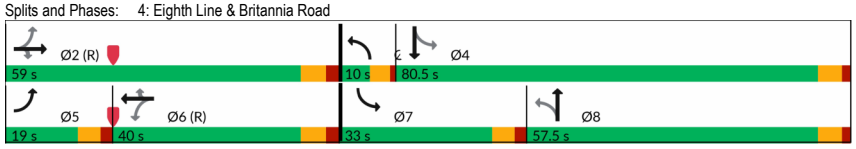
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1224	57	27	710	86	48	177	39	201	350	210
Future Volume (vph)	166	1224	57	27	710	86	48	177	39	201	350	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.973			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1782	0	1825	1810	0
Flt Permitted	0.226			0.162			0.168			0.421		
Satd. Flow (perm)	434	4476	1306	311	4476	1633	296	1782	0	809	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		8			30	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	169	1249	58	28	724	88	49	181	40	205	357	223
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	1249	58	28	724	88	49	221	0	205	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	74.8	74.0	74.0	54.1	54.1	54.1	47.7	41.0		62.7	55.0	
Actuated g/C Ratio	0.50	0.49	0.49	0.36	0.36	0.36	0.32	0.27		0.42	0.37	
v/c Ratio	0.49	0.56	0.08	0.25	0.45	0.13	0.34	0.45		0.46	0.85	
Control Delay (s/veh)	28.7	29.9	1.2	51.0	40.8	1.1	28.8	44.2		29.9	52.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.7	29.9	1.2	51.0	40.8	1.1	28.8	44.2		29.9	52.4	
LOS	C	C	A	D	D	A	C	D		C	D	
Approach Delay (s/veh)		28.6			37.0			41.4			46.5	
Approach LOS		C			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.85		
Intersection Signal Delay (s/veh): 35.9	Intersection LOS: D	
Intersection Capacity Utilization 95.5%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	169	1249	58	28	724	88	49	221	205	580
v/c Ratio	0.49	0.56	0.08	0.25	0.45	0.13	0.34	0.45	0.46	0.85
Control Delay (s/veh)	28.7	29.9	1.2	51.0	40.8	1.1	28.8	44.2	29.9	52.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.7	29.9	1.2	51.0	40.8	1.1	28.8	44.2	29.9	52.4
Queue Length 50th (m)	28.0	112.3	0.0	6.0	71.4	0.0	8.8	53.8	38.2	149.9
Queue Length 95th (m)	50.8	153.0	2.4	18.8	103.7	1.9	14.5	72.0	47.4	171.2
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	357	2214	694	112	1618	679	145	626	523	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.56	0.08	0.25	0.45	0.13	0.34	0.35	0.39	0.63

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1224	57	27	710	86	48	177	39	201	350	210
Future Volume (vph)	166	1224	57	27	710	86	48	177	39	201	350	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1781		1825	1810	
Flt Permitted	0.23	1.00	1.00	0.16	1.00	1.00	0.17	1.00		0.42	1.00	
Satd. Flow (perm)	434	4476	1306	311	4476	1633	296	1781		809	1810	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	169	1249	58	28	724	88	49	181	40	205	357	223
RTOR Reduction (vph)	0	0	30	0	0	57	0	6	0	0	19	0
Lane Group Flow (vph)	169	1249	28	28	724	31	49	215	0	205	561	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	73.1	73.1	73.1	53.2	53.2	53.2	46.3	41.9		63.9	55.0	
Effective Green, g (s)	73.1	73.1	73.1	53.2	53.2	53.2	46.3	41.9		63.9	55.0	
Actuated g/C Ratio	0.49	0.49	0.49	0.36	0.36	0.36	0.31	0.28		0.43	0.37	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341	2188	638	110	1592	581	132	499		454	665	
v/s Ratio Prot	0.05	c0.28			0.16		0.01	0.12		c0.05	c0.31	
v/s Ratio Perm	0.20		0.02	0.09		0.02	0.10			0.14		
v/c Ratio	0.50	0.57	0.04	0.25	0.45	0.05	0.37	0.43		0.45	0.84	
Uniform Delay, d1	23.1	27.1	20.0	34.1	37.0	31.6	39.1	44.0		28.6	43.3	
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	1.1	1.1	0.1	5.5	0.9	0.2	1.8	0.6		0.7	9.6	
Delay (s)	24.2	28.2	20.1	39.6	37.9	31.8	40.9	44.6		29.3	52.9	
Level of Service	C	C	C	D	D	C	D	D		C	D	
Approach Delay (s/veh)		27.4			37.4			44.0			46.7	
Approach LOS		C			D			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	35.7	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.73				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		24.5	
Intersection Capacity Utilization	95.5%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	606	120	478	239	194	48	1090	271	411	2083	125
Future Volume (vph)	227	606	120	478	239	194	48	1090	271	411	2083	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.597			0.158			0.062			0.950		
Satd. Flow (perm)	1092	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			202			234			115
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	236	631	125	498	249	202	48	1090	271	428	2170	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	631	125	498	249	202	48	1090	271	428	2170	130
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	27.8	27.0	27.0	36.0	35.2	35.2	9.5	70.0	70.0	26.0	86.5	86.5
Total Split (%)	17.5%	17.0%	17.0%	22.6%	22.1%	22.1%	6.0%	44.0%	44.0%	16.4%	54.4%	54.4%
Maximum Green (s)	23.3	20.8	20.8	31.5	29.0	29.0	5.0	63.4	63.4	22.0	79.9	79.9
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	44.5	22.8	22.8	59.5	34.3	34.3	72.7	65.6	65.6	22.8	83.8	83.8
Actuated g/C Ratio	0.28	0.14	0.14	0.37	0.22	0.22	0.46	0.41	0.41	0.14	0.53	0.53
v/c Ratio	0.60	1.22	0.35	1.20	0.32	0.41	0.46	0.63	0.35	0.90	0.96	0.15
Control Delay (s/veh)	44.1	169.3	8.2	151.0	54.8	9.2	33.7	39.0	6.8	89.4	47.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.1	169.3	8.2	151.0	54.8	9.2	33.7	39.0	6.8	89.4	47.7	4.7
LOS	D	F	A	F	D	A	C	D	A	F	D	A
Approach Delay (s/veh)		119.2			95.6			32.6			52.2	
Approach LOS		F			F			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 159		
Actuated Cycle Length: 159		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.22		
Intersection Signal Delay (s/veh): 65.4		Intersection LOS: E
Intersection Capacity Utilization 101.6%		ICU Level of Service G
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	631	125	498	249	202	48	1090	271	428	2170	130
v/c Ratio	0.60	1.22	0.35	1.20	0.32	0.41	0.46	0.63	0.35	0.90	0.96	0.15
Control Delay (s/veh)	44.1	169.3	8.2	151.0	54.8	9.2	33.7	39.0	6.8	89.4	47.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.1	169.3	8.2	151.0	54.8	9.2	33.7	39.0	6.8	89.4	47.7	4.7
Queue Length 50th (m)	56.1	~129.1	0.0	~176.3	36.2	0.0	6.7	119.6	7.2	70.6	285.4	2.4
Queue Length 95th (m)	80.6	#168.7	13.5	#249.0	51.0	23.2	15.1	138.6	27.2	#99.7	#333.6	13.5
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	427	518	353	416	771	490	105	1739	777	480	2263	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	1.22	0.35	1.20	0.32	0.41	0.46	0.63	0.35	0.89	0.96	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	606	120	478	239	194	48	1090	271	411	2083	125
Future Volume (vph)	227	606	120	478	239	194	48	1090	271	411	2083	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.60	1.00	1.00	0.16	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1093	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	236	631	125	498	249	202	48	1090	271	428	2170	130
RTOR Reduction (vph)	0	0	107	0	0	158	0	0	137	0	0	55
Lane Group Flow (vph)	236	631	18	498	249	44	48	1090	134	428	2170	75
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	40.8	20.8	20.8	56.8	32.3	32.3	67.6	63.6	63.6	21.8	80.9	80.9
Effective Green, g (s)	42.8	22.8	22.8	57.8	34.3	34.3	69.6	65.6	65.6	22.8	82.9	82.9
Actuated g/C Ratio	0.27	0.14	0.14	0.36	0.22	0.22	0.44	0.41	0.41	0.14	0.52	0.52
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	379	518	229	413	772	332	94	1738	639	475	2239	793
v/s Ratio Prot	0.08	0.17		c0.25	0.07		0.02	0.26		c0.13	c0.51	
v/s Ratio Perm	0.09		0.01	c0.19		0.03	0.21		0.09			0.05
v/c Ratio	0.62	1.22	0.08	1.21	0.32	0.13	0.51	0.63	0.21	0.90	0.97	0.09
Uniform Delay, d1	49.1	68.1	59.0	49.5	52.6	50.3	36.1	37.0	30.0	67.0	36.8	19.2
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	3.2	114.8	0.3	113.5	0.5	0.4	4.6	1.7	0.7	20.0	13.0	0.2
Delay (s)	52.3	182.9	59.3	163.0	53.1	50.7	40.7	38.7	30.8	87.0	49.8	19.4
Level of Service	D	F	E	F	D	D	D	D	C	F	D	B
Approach Delay (s/veh)		136.2			110.3			37.3			54.2	
Approach LOS		F			F			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	72.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	15.8	
Intersection Capacity Utilization	101.6%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

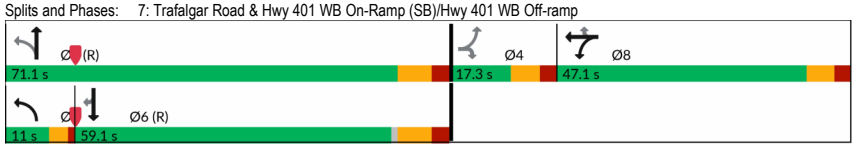
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Future Volume (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.105					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	202	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171			360						182
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	21.7	21.7	21.7	99.2	95.1			92.9	92.9
Actuated g/C Ratio			0.07	0.16	0.16	0.16	0.73	0.70			0.69	0.69
v/c Ratio			0.03	0.78	0.04	0.71	0.03	0.38			0.49	0.22
Control Delay (s/veh)			0.2	66.0	45.5	19.9	8.7	10.1			13.3	3.6
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.2	66.0	45.5	19.9	8.7	10.1			13.3	3.6
LOS			A	E	D	B	A	B			B	A
Approach Delay (s/veh)		0.2			39.4			10.1			12.1	
Approach LOS		A			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 18.1		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	9	358	13	494	6	1042	1443	208
v/c Ratio	0.03	0.78	0.04	0.71	0.03	0.38	0.49	0.22
Control Delay (s/veh)	0.2	66.0	45.5	19.9	8.7	10.1	13.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.2	66.0	45.5	19.9	8.7	10.1	13.3	3.6
Queue Length 50th (m)	0.0	56.9	3.0	21.0	0.3	43.3	61.7	2.1
Queue Length 95th (m)	0.0	72.6	8.7	42.7	2.6	92.6	153.6	21.8
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	278	849	567	978	231	2766	2954	931
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.42	0.02	0.51	0.03	0.38	0.49	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Future Volume (vph)	0	0	9	358	13	494	6	1042	0	0	1443	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	201	3941			4309	1276
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	9	358	13	494	6	1042	0	0	1443	208
RTOR Reduction (vph)	0	0	9	0	0	302	0	0	0	0	0	69
Lane Group Flow (vph)	0	0	0	358	13	192	6	1042	0	0	1443	139
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	21.7	21.7	21.7	89.3	89.3			83.9	83.9
Effective Green, g (s)			2.0	21.7	21.7	21.7	89.3	89.3			83.9	83.9
Actuated g/C Ratio			0.01	0.16	0.16	0.16	0.66	0.66			0.62	0.62
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	461	307	393	149	2597			2668	790
v/s Ratio Prot				c0.12	0.01		0.00	c0.26			c0.33	
v/s Ratio Perm			c0.00			0.08	0.03					0.11
v/c Ratio			0.01	0.78	0.04	0.49	0.04	0.40			0.54	0.18
Uniform Delay, d1			65.8	54.6	48.1	51.8	9.7	10.7			14.8	11.0
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	7.3	0.0	0.3	0.0	0.5			0.8	0.5
Delay (s)			65.9	61.9	48.1	52.2	9.7	11.2			15.6	11.5
Level of Service			E	E	D	D	A	B			B	B
Approach Delay (s/veh)		65.9			56.1			11.2			15.1	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	24.0	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	65.2%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

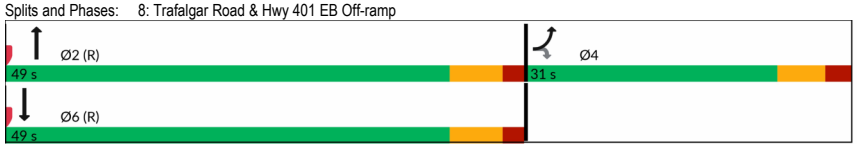
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	202	649	0	1769	600	0
Future Volume (vph)	202	649	0	1769	600	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.907	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2804	1339	0	4154	4117	0
Flt Permitted	0.981					
Satd. Flow (perm)	2804	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	246	246				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	202	649	0	1769	600	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	527	324	0	1769	600	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	15.5	15.5		50.5	50.5	
Actuated g/C Ratio	0.19	0.19		0.63	0.63	
v/c Ratio	0.71	0.71		0.67	0.23	
Control Delay (s/veh)	20.7	16.7		12.1	7.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.7	16.7		12.1	7.4	
LOS	C	B		B	A	
Approach Delay (s/veh)	19.2			12.1	7.4	
Approach LOS	B			B	A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 55		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.71		
Intersection Signal Delay (s/veh): 13.1		Intersection LOS: B
Intersection Capacity Utilization 77.9%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	527	324	1769	600
v/c Ratio	0.71	0.71	0.67	0.23
Control Delay (s/veh)	20.7	16.7	12.1	7.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.7	16.7	12.1	7.4
Queue Length 50th (m)	25.1	12.4	67.6	15.5
Queue Length 95th (m)	38.8	38.5	117.4	29.4
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1013	573	2623	2599
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.52	0.57	0.67	0.23

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	202	649	0	1769	600	0
Future Volume (vph)	202	649	0	1769	600	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2806	1339		4154	4117	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2806	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	202	649	0	1769	600	0
RTOR Reduction (vph)	198	198	0	0	0	0
Lane Group Flow (vph)	329	126	0	1769	600	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	15.5	15.5		50.5	50.5	
Effective Green, g (s)	15.5	15.5		50.5	50.5	
Actuated g/C Ratio	0.19	0.19		0.63	0.63	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	543	259		2622	2598	
v/s Ratio Prot	c0.12			c0.43	0.15	
v/s Ratio Perm		0.09				
v/c Ratio	0.61	0.49		0.67	0.23	
Uniform Delay, d1	29.5	28.7		9.5	6.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	1.4		1.4	0.2	
Delay (s)	31.4	30.1		10.9	6.6	
Level of Service	C	C		B	A	
Approach Delay (s/veh)	30.9			10.9	6.6	
Approach LOS	C			B	A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	15.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	77.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

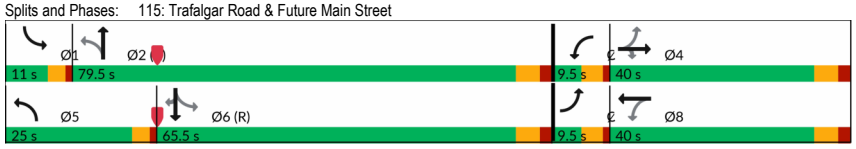
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2219	27	50	1058	74
Future Volume (vph)	70	36	200	5	105	28	42	2219	27	50	1058	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt			0.850		0.969			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1601	1789	3468	0	1711	4412	0	1711	4421	1566
Flt Permitted	0.518			0.732			0.200			0.042		
Satd. Flow (perm)	976	3579	1601	1379	3468	0	360	4412	0	76	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		22			2				121
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2241	27	51	1069	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	36	202	5	134	0	42	2268	0	51	1069	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		25.0	79.5		11.0	65.5	65.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		17.9%	56.8%		7.9%	46.8%	46.8%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		21.0	73.5		7.0	59.5	59.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	20.4	17.9	17.9	16.9	11.2		106.4	99.0		107.6	99.7	99.7
Actuated g/C Ratio	0.15	0.13	0.13	0.12	0.08		0.76	0.71		0.77	0.71	0.71
v/c Ratio	0.40	0.08	0.53	0.03	0.45		0.12	0.73		0.35	0.34	0.07
Control Delay (s/veh)	58.7	53.9	12.7	48.8	55.9		3.6	11.9		25.0	7.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	58.7	53.9	12.7	48.8	55.9		3.6	11.9		25.0	7.6	0.2
LOS	E	D	B	D	E		A	B		C	A	A
Approach Delay (s/veh)		28.1			55.7			11.7			7.9	
Approach LOS		C			E			B			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.73		
Intersection Signal Delay (s/veh): 13.4		Intersection LOS: B
Intersection Capacity Utilization 69.7%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	36	202	5	134	42	2268	51	1069	75
v/c Ratio	0.40	0.08	0.53	0.03	0.45	0.12	0.73	0.35	0.34	0.07
Control Delay (s/veh)	58.7	53.9	12.7	48.8	55.9	3.6	11.9	25.0	7.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.7	53.9	12.7	48.8	55.9	3.6	11.9	25.0	7.6	0.2
Queue Length 50th (m)	17.8	4.6	0.0	1.2	16.2	2.1	123.6	2.0	46.6	0.0
Queue Length 95th (m)	31.8	10.6	24.1	5.2	26.5	m3.2	m132.2	14.1	61.4	0.5
Internal Link Dist (m)		882.8			603.0		688.8		212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0		75.0
Base Capacity (vph)	179	869	541	182	858	485	3121	144	3147	1149
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.37	0.03	0.16	0.09	0.73	0.35	0.34	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	36	200	5	105	28	42	2219	27	50	1058	74
Future Volume (vph)	70	36	200	5	105	28	42	2219	27	50	1058	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3579	1601	1789	3466		1711	4413		1711	4421	1566
Flt Permitted	0.52	1.00	1.00	0.73	1.00		0.20	1.00		0.04	1.00	1.00
Satd. Flow (perm)	976	3579	1601	1379	3466		361	4413		76	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	71	36	202	5	106	28	42	2241	27	51	1069	75
RTOR Reduction (vph)	0	0	176	0	20	0	0	1	0	0	0	24
Lane Group Flow (vph)	71	36	26	5	114	0	42	2267	0	51	1069	51
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	22.9	17.9	17.9	14.9	13.9		99.9	94.6		101.3	95.3	95.3
Effective Green, g (s)	22.9	17.9	17.9	14.9	13.9		99.9	94.6		101.3	95.3	95.3
Actuated g/C Ratio	0.16	0.13	0.13	0.11	0.10		0.71	0.68		0.72	0.68	0.68
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	188	457	204	149	344		308	2981		125	3009	1065
v/s Ratio Prot	c0.01	0.01		0.00	0.03		0.01	c0.51		c0.02	0.24	
v/s Ratio Perm	c0.05		0.02	0.00			0.09			0.28		0.03
v/c Ratio	0.38	0.08	0.13	0.03	0.33		0.14	0.76		0.41	0.36	0.05
Uniform Delay, d1	51.1	53.8	54.1	56.0	58.7		6.1	15.1		16.7	9.4	7.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.79		1.92	0.86	0.36
Incremental Delay, d2	1.3	0.1	0.3	0.1	0.6		0.1	1.0		2.1	0.3	0.1
Delay (s)	52.3	53.9	54.4	56.1	59.3		5.0	13.0		34.3	8.4	2.8
Level of Service	D	D	D	E	E		A	B		C	A	A
Approach Delay (s/veh)		53.9			59.2			12.9			9.2	
Approach LOS		D			E			B			A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	16.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	69.7%	ICU Level of Service	C	
Analysis Period (min)	15			

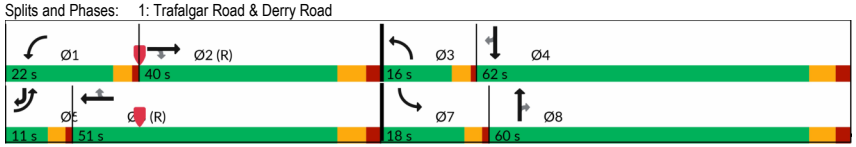
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Future Volume (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			120			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	16.0	60.0	60.0	18.0	62.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	11.4%	42.9%	42.9%	12.9%	44.3%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	9.4	40.6	40.6	15.8	47.0	47.0	13.0	52.9	52.9	15.0	54.9	70.1
Actuated g/C Ratio	0.07	0.29	0.29	0.11	0.34	0.34	0.09	0.38	0.38	0.11	0.39	0.50
v/c Ratio	0.67	0.55	0.25	0.49	1.33	0.42	1.32	0.77	0.13	0.99	0.78	0.60
Control Delay (s/veh)	90.4	40.8	5.4	62.7	185.2	16.7	205.0	25.9	2.6	108.9	40.8	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.4	40.8	5.4	62.7	185.2	16.7	205.0	25.9	2.6	108.9	40.8	23.2
LOS	F	D	A	E	F	B	F	C	A	F	D	C
Approach Delay (s/veh)		43.3			158.0			65.5			47.5	
Approach LOS		D			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay (s/veh): 88.6		Intersection LOS: F	
Intersection Capacity Utilization 96.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
v/c Ratio	0.67	0.55	0.25	0.49	1.33	0.42	1.32	0.77	0.13	0.99	0.78	0.60
Control Delay (s/veh)	90.4	40.8	5.4	62.7	185.2	16.7	205.0	25.9	2.6	108.9	40.8	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.4	40.8	5.4	62.7	185.2	16.7	205.0	25.9	2.6	108.9	40.8	23.2
Queue Length 50th (m)	23.7	71.8	0.0	26.4	~311.5	30.3	~72.0	117.9	2.7	50.2	132.2	78.8
Queue Length 95th (m)	#41.3	93.2	11.5	36.9	#339.7	31.5	m#94.5	m136.8	m3.1	#82.5	153.6	114.8
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	225	1296	553	475	1533	617	294	1677	692	343	1738	830
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.55	0.25	0.41	1.33	0.42	1.32	0.74	0.12	0.99	0.75	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Future Volume (vph)	150	718	139	193	2033	260	389	1237	86	341	1297	499
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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)	150	718	139	193	2033	260	389	1237	86	341	1297	499
RTOR Reduction (vph)	0	0	99	0	0	80	0	0	54	0	0	50
Lane Group Flow (vph)	150	718	40	193	2033	180	389	1237	32	341	1297	449
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	8.4	38.6	38.6	14.8	45.0	45.0	12.0	50.9	50.9	14.0	52.9	61.3
Effective Green, g (s)	9.4	40.6	40.6	15.8	47.0	47.0	13.0	52.9	52.9	15.0	54.9	65.3
Actuated g/C Ratio	0.07	0.29	0.29	0.11	0.34	0.34	0.09	0.38	0.38	0.11	0.39	0.47
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	226	1298	455	395	1532	537	294	1607	591	343	1668	730
v/s Ratio Prot	c0.04	0.16		0.06	c0.45		c0.12	0.29		0.11	c0.30	0.05
v/s Ratio Perm			0.03			0.11			0.02			0.24
v/c Ratio	0.66	0.55	0.09	0.49	1.33	0.34	1.32	0.77	0.05	0.99	0.78	0.62
Uniform Delay, d1	63.8	42.0	36.2	58.3	46.5	34.8	63.5	38.2	27.7	62.5	37.2	28.0
Progression Factor	1.20	0.90	0.69	1.03	0.90	0.79	0.99	0.63	1.79	1.00	1.00	1.00
Incremental Delay, d2	9.0	1.6	0.4	1.5	150.7	1.3	158.1	1.5	0.0	46.9	2.8	2.2
Delay (s)	85.4	39.6	25.5	61.4	192.5	28.7	221.0	25.5	49.5	109.4	40.0	30.2
Level of Service	F	D	C	E	F	C	F	C	D	F	D	C
Approach Delay (s/veh)		44.5			165.2			71.1			48.8	
Approach LOS		D			F			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	92.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.03			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	96.0%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

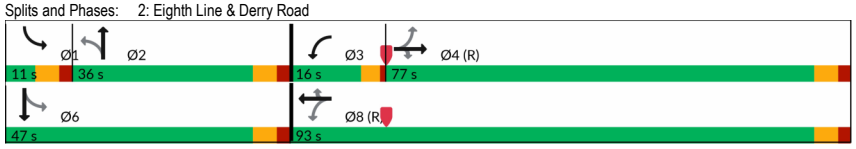
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1042	73	170	2343	5	103	0	156	5	8	10
Future Volume (vph)	5	1042	73	170	2343	5	103	0	156	5	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633	0	1825	1762	0
Flt Permitted	0.044			0.195			0.746			0.298		
Satd. Flow (perm)	85	4520	1555	375	4565	1633	1433	1633	0	572	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		264			6	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	5	1042	73	170	2343	5	103	0	156	5	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1042	73	170	2343	5	103	156	0	5	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	96.5	96.5	96.5	112.1	110.1	110.1	15.6	15.6		17.9	17.9	
Actuated g/C Ratio	0.69	0.69	0.69	0.80	0.79	0.79	0.11	0.11		0.13	0.13	
v/c Ratio	0.09	0.33	0.07	0.43	0.65	0.00	0.65	0.38		0.04	0.08	
Control Delay (s/veh)	16.2	10.3	1.2	7.4	8.8	0.0	67.6	6.4		47.6	37.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	16.2	10.3	1.2	7.4	8.8	0.0	67.6	6.4		47.6	37.0	
LOS	B	B	A	A	A	A	E	A		D	D	
Approach Delay (s/veh)		9.8			8.7			30.7			39.3	
Approach LOS		A			A			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 10.6		Intersection LOS: B
Intersection Capacity Utilization 89.3%		ICU Level of Service E
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	1042	73	170	2343	5	103	156	5	18
v/c Ratio	0.09	0.33	0.07	0.43	0.65	0.00	0.65	0.38	0.04	0.08
Control Delay (s/veh)	16.2	10.3	1.2	7.4	8.8	0.0	67.6	6.4	47.6	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.2	10.3	1.2	7.4	8.8	0.0	67.6	6.4	47.6	37.0
Queue Length 50th (m)	0.4	42.6	0.0	7.7	91.2	0.0	29.2	4.1	1.3	3.0
Queue Length 95th (m)	3.5	79.4	3.6	22.9	187.5	0.0	m43.7	m9.4	4.7	9.2
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	58	3115	1103	425	3590	1299	307	557	123	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.33	0.07	0.40	0.65	0.00	0.34	0.28	0.04	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1042	73	170	2343	5	103	0	156	5	8	10
Future Volume (vph)	5	1042	73	170	2343	5	103	0	156	5	8	10
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.85		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1633		1825	1761	
Flt Permitted	0.04	1.00	1.00	0.19	1.00	1.00	0.75	1.00		0.30	1.00	
Satd. Flow (perm)	84	4520	1555	374	4565	1633	1433	1633		573	1761	
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	1042	73	170	2343	5	103	0	156	5	8	10
RTOR Reduction (vph)	0	0	25	0	0	1	0	139	0	0	5	0
Lane Group Flow (vph)	5	1042	48	170	2343	4	103	17	0	5	13	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	91.7	91.7	91.7	105.3	105.3	105.3	15.6	15.6		22.7	22.7	
Effective Green, g (s)	91.7	91.7	91.7	105.3	105.3	105.3	15.6	15.6		22.7	22.7	
Actuated g/C Ratio	0.66	0.66	0.66	0.75	0.75	0.75	0.11	0.11		0.16	0.16	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	2960	1018	380	3433	1228	159	181		102	285	
v/s Ratio Prot		0.23		0.03	c0.51			0.01		0.00	c0.01	
v/s Ratio Perm	0.06		0.03	0.31		0.00	c0.07			0.01		
v/c Ratio	0.09	0.35	0.05	0.45	0.68	0.00	0.65	0.10		0.05	0.05	
Uniform Delay, d1	8.9	10.8	8.6	5.8	8.8	4.3	59.6	55.9		49.8	49.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00		1.00	1.00	
Incremental Delay, d2	3.2	0.3	0.1	0.8	1.1	0.0	7.3	0.2		0.2	0.1	
Delay (s)	12.1	11.2	8.7	6.6	10.0	4.3	60.1	56.1		50.0	49.6	
Level of Service	B	B	A	A	A	A	E	E		D	D	
Approach Delay (s/veh)		11.0			9.7			57.7			49.7	
Approach LOS		B			A			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	13.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	89.3%	ICU Level of Service	E	
Analysis Period (min)	15			

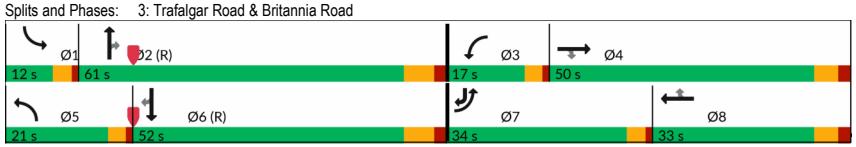
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Future Volume (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223			156			183			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Shared Lane Traffic (%)												
Lane Group Flow (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	34.0	50.0	50.0	17.0	33.0	33.0	21.0	61.0	61.0	12.0	52.0	34.0
Total Split (%)	24.3%	35.7%	35.7%	12.1%	23.6%	23.6%	15.0%	43.6%	43.6%	8.6%	37.1%	24.3%
Maximum Green (s)	30.0	44.0	44.0	13.0	27.0	27.0	17.0	54.0	54.0	8.0	45.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	30.6	46.8	46.8	13.2	29.4	29.4	18.0	56.0	56.0	9.0	47.0	83.6
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.60
v/c Ratio	0.91	0.77	0.44	0.64	1.29	0.45	1.31	0.83	0.34	1.13	0.69	0.65
Control Delay (s/veh)	72.6	46.1	11.5	92.5	167.6	6.4	193.2	60.8	25.1	160.4	25.1	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.6	46.1	11.5	92.5	167.6	6.4	193.2	60.8	25.1	160.4	25.1	24.3
LOS	E	D	B	F	F	A	F	E	C	F	C	C
Approach Delay (s/veh)		49.0			138.4			88.7			41.3	
Approach LOS		D			F			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 135		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.31		
Intersection Signal Delay (s/veh): 77.5	Intersection LOS: E	
Intersection Capacity Utilization 91.6%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
v/c Ratio	0.91	0.77	0.44	0.64	1.29	0.45	1.31	0.83	0.34	1.13	0.69	0.65
Control Delay (s/veh)	72.6	46.1	11.5	92.5	167.6	6.4	193.2	60.8	25.1	160.4	25.1	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.6	46.1	11.5	92.5	167.6	6.4	193.2	60.8	25.1	160.4	25.1	24.3
Queue Length 50th (m)	96.2	122.5	14.4	32.2	~186.0	15.3	~101.3	161.8	30.3	~37.1	105.7	165.8
Queue Length 95th (m)	#132.3	143.5	39.5	m44.0	#209.9	m2.3	m#126.9	183.8	m41.4	m#62.1	124.3	203.3
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	675	1494	677	354	958	446	411	1734	736	200	1441	956
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.77	0.44	0.60	1.29	0.45	1.31	0.83	0.34	1.13	0.69	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Future Volume (vph)	609	1149	295	213	1235	199	538	1441	251	225	996	621
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	609	1149	295	213	1235	199	538	1441	251	225	996	621
RTOR Reduction (vph)	0	0	148	0	0	123	0	0	110	0	0	38
Lane Group Flow (vph)	609	1149	147	213	1235	76	538	1441	141	225	996	583
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	29.6	44.8	44.8	12.2	27.4	27.4	17.0	54.0	54.0	8.0	45.0	74.6
Effective Green, g (s)	30.6	46.8	46.8	13.2	29.4	29.4	18.0	56.0	56.0	9.0	47.0	78.6
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.56
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	667	1496	529	333	958	323	411	1734	626	200	1441	862
v/s Ratio Prot	c0.20	0.26		0.06	c0.27		c0.17	c0.33		0.07	0.23	0.15
v/s Ratio Perm			0.09			0.05			0.09			0.23
v/c Ratio	0.91	0.77	0.28	0.64	1.29	0.23	1.31	0.83	0.23	1.13	0.69	0.68
Uniform Delay, d1	53.4	41.7	34.2	61.1	55.3	46.0	61.0	37.7	27.7	65.5	40.2	21.7
Progression Factor	1.00	1.00	1.00	1.40	0.63	0.31	0.96	1.52	2.94	1.17	0.56	1.34
Incremental Delay, d2	16.9	2.4	0.3	3.1	136.2	0.3	148.4	2.6	0.4	95.2	2.2	1.7
Delay (s)	70.3	44.2	34.5	88.7	171.0	14.6	206.8	60.2	82.0	172.1	24.9	30.8
Level of Service	E	D	C	F	F	B	F	E	F	F	C	C
Approach Delay (s/veh)		50.5			141.4			98.0			44.9	
Approach LOS		D			F			F			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	82.1	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.04			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	91.6%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

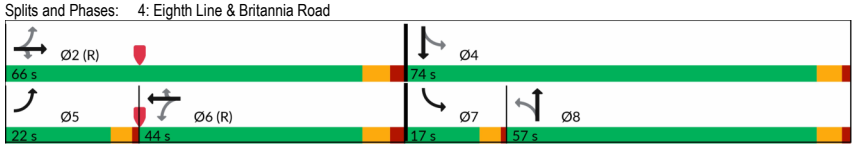
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	995	51	30	1267	173	95	344	64	150	210	200
Future Volume (vph)	237	995	51	30	1267	173	95	344	64	150	210	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.976			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1863	0	1825	1745	0
Flt Permitted	0.070			0.239			0.470			0.146		
Satd. Flow (perm)	134	4476	1328	459	4520	1633	903	1863	0	280	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			117		8			48	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	237	995	51	30	1267	173	95	344	64	150	210	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	995	51	30	1267	173	95	408	0	150	410	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	77.2	74.9	74.9	52.7	52.7	52.7	36.1	36.1		53.8	52.6	
Actuated g/C Ratio	0.55	0.54	0.54	0.38	0.38	0.38	0.26	0.26		0.38	0.38	
v/c Ratio	0.83	0.42	0.07	0.17	0.75	0.25	0.41	0.84		0.63	0.60	
Control Delay (s/veh)	77.4	23.3	9.8	39.5	42.9	13.9	41.5	58.0		40.0	32.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	77.4	23.3	9.8	39.5	42.9	13.9	41.5	58.0		40.0	32.6	
LOS	E	C	A	D	D	B	D	E		D	C	
Approach Delay (s/veh)		32.7			39.4			54.9			34.6	
Approach LOS		C			D			D			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.84		
Intersection Signal Delay (s/veh): 38.5		Intersection LOS: D
Intersection Capacity Utilization 92.5%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	237	995	51	30	1267	173	95	408	150	410
v/c Ratio	0.83	0.42	0.07	0.17	0.75	0.25	0.41	0.84	0.63	0.60
Control Delay (s/veh)	77.4	23.3	9.8	39.5	42.9	13.9	41.5	58.0	40.0	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.4	23.3	9.8	39.5	42.9	13.9	41.5	58.0	40.0	32.6
Queue Length 50th (m)	59.5	52.7	0.6	5.6	129.8	10.1	22.1	106.3	27.9	82.9
Queue Length 95th (m)	m78.6	m73.0	m2.6	16.3	#196.3	31.7	m34.2	135.7	35.5	83.3
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	311	2394	736	172	1700	687	330	687	245	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.42	0.07	0.17	0.75	0.25	0.29	0.59	0.61	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	995	51	30	1267	173	95	344	64	150	210	200
Future Volume (vph)	237	995	51	30	1267	173	95	344	64	150	210	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1864		1825	1745	
Flt Permitted	0.07	1.00	1.00	0.24	1.00	1.00	0.47	1.00		0.15	1.00	
Satd. Flow (perm)	135	4476	1328	459	4520	1633	903	1864		281	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)	237	995	51	30	1267	173	95	344	64	150	210	200
RTOR Reduction (vph)	0	0	24	0	0	73	0	6	0	0	30	0
Lane Group Flow (vph)	237	995	27	30	1267	100	95	402	0	150	380	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	74.9	74.9	74.9	52.7	52.7	52.7	36.1	36.1		52.6	52.6	
Effective Green, g (s)	74.9	74.9	74.9	52.7	52.7	52.7	36.1	36.1		52.6	52.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.38	0.38	0.38	0.26	0.26		0.38	0.38	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	2394	710	172	1701	614	232	480		237	655	
v/s Ratio Prot	c0.10	0.22			0.28			c0.22		0.05	c0.22	
v/s Ratio Perm	c0.34		0.02	0.07		0.06	0.11			0.18		
v/c Ratio	0.83	0.42	0.04	0.17	0.74	0.16	0.41	0.84		0.63	0.58	
Uniform Delay, d1	39.9	19.5	15.5	29.1	37.8	29.0	43.1	49.2		33.3	34.9	
Progression Factor	1.75	1.11	2.24	1.00	1.00	1.00	0.89	0.92		1.03	0.96	
Incremental Delay, d2	12.4	0.3	0.1	2.2	3.0	0.6	1.0	10.8		5.4	1.3	
Delay (s)	82.3	22.0	34.7	31.3	40.8	29.6	39.2	56.2		39.7	35.0	
Level of Service	F	C	C	C	D	C	D	E		D	C	
Approach Delay (s/veh)		33.6			39.3			53.0			36.2	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	38.7	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		21.5	
Intersection Capacity Utilization	92.5%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

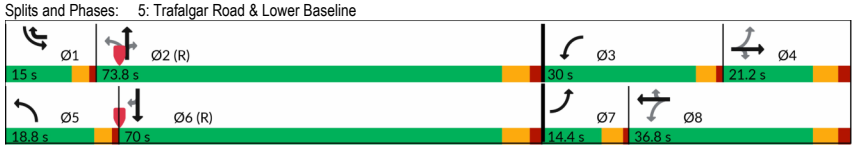
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Future Volume (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.403			0.205			0.127			0.950		
Satd. Flow (perm)	744	3579	1570	390	3614	1585	233	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			63			295			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	7.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	11.0	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	14.4	21.2	21.2	30.0	36.8	15.0	18.8	73.8	73.8	15.0	70.0	70.0
Total Split (%)	10.3%	15.1%	15.1%	21.4%	26.3%	10.7%	13.4%	52.7%	52.7%	10.7%	50.0%	50.0%
Maximum Green (s)	9.9	15.0	15.0	25.5	30.6	11.0	14.8	67.2	67.2	11.0	63.4	63.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	3.0	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.0	17.0	17.0	47.7	33.2	50.4	85.5	69.2	69.2	12.0	65.9	65.9
Actuated g/C Ratio	0.20	0.12	0.12	0.34	0.24	0.36	0.61	0.49	0.49	0.09	0.47	0.47
v/c Ratio	0.46	0.96	0.22	1.04	0.67	0.65	0.86	0.88	0.49	0.82	0.57	0.12
Control Delay (s/veh)	41.1	95.1	1.7	117.3	73.7	47.6	46.7	37.8	9.3	74.3	31.8	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.1	95.1	1.7	117.3	73.7	47.6	46.7	37.8	9.3	74.3	31.8	6.9
LOS	D	F	A	F	E	D	D	D	A	E	C	A
Approach Delay (s/veh)		74.8			79.4			33.8			37.0	
Approach LOS		E			E			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.04		
Intersection Signal Delay (s/veh): 49.0	Intersection LOS: D	
Intersection Capacity Utilization 92.2%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
v/c Ratio	0.46	0.96	0.22	1.04	0.67	0.65	0.86	0.88	0.49	0.82	0.57	0.12
Control Delay (s/veh)	41.1	95.1	1.7	117.3	73.7	47.6	46.7	37.8	9.3	74.3	31.8	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.1	95.1	1.7	117.3	73.7	47.6	46.7	37.8	9.3	74.3	31.8	6.9
Queue Length 50th (m)	20.6	62.3	0.0	~127.3	87.0	65.2	36.7	197.4	25.1	35.5	77.8	0.8
Queue Length 95th (m)	35.2	#95.4	0.0	#179.3	108.7	121.3	#81.6	223.9	52.5	#55.7	102.3	m6.1
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	230	434	303	401	856	610	313	2163	930	284	2021	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.96	0.22	1.04	0.67	0.65	0.84	0.88	0.49	0.82	0.57	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Future Volume (vph)	103	417	68	419	575	398	263	1908	452	232	1142	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.40	1.00	1.00	0.21	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	745	3579	1570	390	3614	1585	233	4378	1581	3319	4295	1551
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)	103	417	68	419	575	398	263	1908	452	232	1142	93
RTOR Reduction (vph)	0	0	60	0	0	42	0	0	149	0	0	49
Lane Group Flow (vph)	103	417	8	419	575	356	263	1908	303	232	1142	44
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	24.3	15.0	15.0	45.0	31.2	42.2	81.5	67.2	67.2	11.0	63.9	63.9
Effective Green, g (s)	26.3	17.0	17.0	46.0	33.2	46.2	83.2	69.2	69.2	12.0	65.9	65.9
Actuated g/C Ratio	0.19	0.12	0.12	0.33	0.24	0.33	0.59	0.49	0.49	0.09	0.47	0.47
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	4.0	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	214	434	190	396	857	523	303	2163	781	284	2021	730
v/s Ratio Prot	0.04	0.12		c0.20	0.16	0.06	c0.09	c0.44		0.07	0.27	
v/s Ratio Perm	0.05		0.01	c0.15		0.16	0.42		0.19			0.03
v/c Ratio	0.48	0.96	0.04	1.06	0.67	0.68	0.87	0.88	0.39	0.82	0.57	0.06
Uniform Delay, d1	49.1	61.2	54.3	41.7	48.4	40.5	24.6	31.7	22.1	62.9	26.7	20.2
Progression Factor	1.00	1.00	1.00	1.71	1.43	1.34	1.00	1.00	1.00	0.89	1.14	5.10
Incremental Delay, d2	1.7	33.6	0.2	58.7	2.4	3.2	22.1	5.6	1.5	13.2	0.9	0.1
Delay (s)	50.8	94.8	54.5	130.2	71.6	57.5	46.7	37.4	23.6	69.2	31.5	103.1
Level of Service	D	F	D	F	E	E	D	D	C	E	C	F
Approach Delay (s/veh)		82.4			85.2			35.9			42.0	
Approach LOS		F			F			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	53.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	92.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

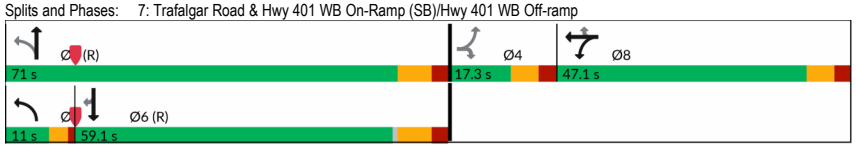
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Future Volume (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.440			0.950			0.084					
Satd. Flow (perm)	845	0	1633	3372	1921	2737	161	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			210						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	11.1		11.1	51.5	51.5	51.5	57.8	53.7			51.5	51.5
Actuated g/C Ratio	0.08		0.08	0.38	0.38	0.38	0.43	0.40			0.38	0.38
v/c Ratio	0.46		0.10	0.78	0.07	2.10	0.06	0.70			0.71	0.14
Control Delay (s/veh)	80.8		0.8	44.3	32.0	519.1	20.4	36.1			38.1	1.5
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	80.8		0.8	44.3	32.0	519.1	20.4	36.1			38.1	1.5
LOS	F		A	D	C	F	C	D			D	A
Approach Delay (s/veh)		44.9			376.4			36.0			35.8	
Approach LOS		D			F			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 135.4		
Actuated Cycle Length: 135.4		
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 2.10		
Intersection Signal Delay (s/veh): 234.2	Intersection LOS: F	
Intersection Capacity Utilization 128.3%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	32	26	1004	49	2454	10	1197	1172	81
v/c Ratio	0.46	0.10	0.78	0.07	2.10	0.06	0.70	0.71	0.14
Control Delay (s/veh)	80.8	0.8	44.3	32.0	519.1	20.4	36.1	38.1	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	0.8	44.3	32.0	519.1	20.4	36.1	38.1	1.5
Queue Length 50th (m)	8.3	0.0	131.4	8.6	~606.7	1.6	117.3	112.7	0.0
Queue Length 95th (m)	#22.6	0.0	#192.8	19.3	#674.7	4.4	120.2	134.8	3.4
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	69	254	1282	730	1170	154	2001	1700	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.10	0.78	0.07	2.10	0.06	0.60	0.69	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Future Volume (vph)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.44		1.00	0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)	844		1633	3372	1921	2737	161	4309			4350	1306
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)	32	0	26	1004	49	2454	10	1197	0	0	1172	81
RTOR Reduction (vph)	0	0	24	0	0	130	0	0	0	0	0	53
Lane Group Flow (vph)	32	0	2	1004	49	2324	10	1197	0	0	1172	28
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	9.1		9.1	51.5	51.5	51.5	52.3	52.3			46.9	46.9
Effective Green, g (s)	9.1		9.1	51.5	51.5	51.5	52.3	52.3			46.9	46.9
Actuated g/C Ratio	0.07		0.07	0.38	0.38	0.38	0.39	0.39			0.35	0.35
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		109	1282	730	1041	79	1664			1506	452
v/s Ratio Prot				0.30	0.03		0.00	c0.28			c0.27	
v/s Ratio Perm	c0.04		0.00			c0.85	0.05					0.02
v/c Ratio	0.57		0.02	0.78	0.07	2.23	0.13	0.72			0.78	0.06
Uniform Delay, d1	61.3		59.0	37.0	26.7	42.0	28.8	35.3			39.6	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	13.3		0.1	3.0	0.0	557.7	0.3	2.7			4.0	0.3
Delay (s)	74.6		59.0	40.0	26.7	599.6	29.1	38.0			43.6	29.8
Level of Service	E		E	D	C	F	C	D			D	C
Approach Delay (s/veh)		67.6			431.4			38.0			42.7	
Approach LOS		E			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	268.2	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.46				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	128.3%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

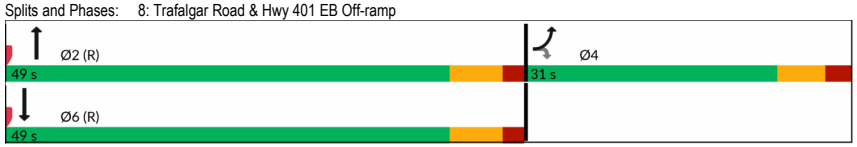
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	260	800	0	1414	1497	0
Future Volume (vph)	260	800	0	1414	1497	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.909	0.850				
Flt Protected	0.981					
Satd. Flow (prot)	2967	1327	0	4309	4350	0
Flt Permitted	0.981					
Satd. Flow (perm)	2967	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	23	23				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	260	800	0	1414	1497	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	660	400	0	1414	1497	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	27.0	27.0		39.0	39.0	
Actuated g/C Ratio	0.34	0.34		0.49	0.49	
v/c Ratio	0.65	0.86		0.67	0.71	
Control Delay (s/veh)	25.4	44.7		17.6	18.3	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.4	44.7		17.6	18.3	
LOS	C	D		B	B	
Approach Delay (s/veh)	32.7			17.6	18.3	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 21.9		Intersection LOS: C	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	660	400	1414	1497
v/c Ratio	0.65	0.86	0.67	0.71
Control Delay (s/veh)	25.4	44.7	17.6	18.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.4	44.7	17.6	18.3
Queue Length 50th (m)	43.4	60.6	73.1	78.7
Queue Length 95th (m)	68.4	#133.2	79.9	85.6
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1017	463	2262	2283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.65	0.86	0.63	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	260	800	0	1414	1497	0
Future Volume (vph)	260	800	0	1414	1497	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.91	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2967	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2967	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	800	0	1414	1497	0
RTOR Reduction (vph)	15	15	0	0	0	0
Lane Group Flow (vph)	645	385	0	1414	1497	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	27.0	27.0		39.0	39.0	
Effective Green, g (s)	27.0	27.0		39.0	39.0	
Actuated g/C Ratio	0.34	0.34		0.49	0.49	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1001	447		2100	2120	
v/s Ratio Prot	0.22			0.33	c0.34	
v/s Ratio Perm		c0.29				
v/c Ratio	0.64	0.86		0.67	0.71	
Uniform Delay, d1	22.4	24.7		15.6	16.0	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	15.5		1.7	2.0	
Delay (s)	23.9	40.2		17.4	18.0	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	30.0			17.4	18.0	
Approach LOS	C			B	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

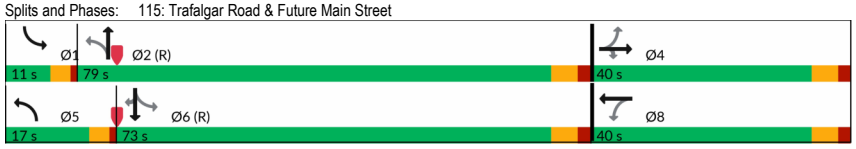
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1288	45	72	1967	383
Future Volume (vph)	54	46	207	15	115	8	227	1288	45	72	1967	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	*0.80	0.91	1.00	*0.80	1.00
Frt			0.850		0.990			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1601	1789	3543	0	1711	4399	0	1711	4421	1566
Flt Permitted	0.674			0.725			0.048			0.159		
Satd. Flow (perm)	1269	3579	1601	1365	3543	0	86	4399	0	286	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134		5			6				290
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	54	46	207	15	115	8	227	1288	45	72	1967	383
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	46	207	15	123	0	227	1333	0	72	1967	383
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		6.5	20.0		7.0	20.0	20.0
Minimum Split (s)	40.0	40.0	40.0	40.0	40.0		11.0	26.0		11.0	26.0	26.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	79.0		11.0	73.0	73.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%		13.1%	60.8%		8.5%	56.2%	56.2%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0		13.0	73.0		7.0	67.0	67.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Don't Walk (s)	27.0	27.0	27.0	27.0	27.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)	13.5	13.5	13.5	13.5	13.5		106.5	95.5		89.0	79.8	79.8
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.10		0.82	0.73		0.68	0.61	0.61
v/c Ratio	0.41	0.12	0.72	0.11	0.33		0.69	0.41		0.26	0.72	0.36
Control Delay (s/veh)	62.5	51.6	35.1	51.8	53.1		44.3	7.8		7.2	20.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.2	0.0
Total Delay (s/veh)	62.5	51.6	35.1	51.8	53.1		44.3	7.8		7.2	20.8	4.6
LOS	E	D	D	D	D		D	A		A	C	A
Approach Delay (s/veh)		42.4			52.9			13.1			17.9	
Approach LOS		D			D			B			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 100		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay (s/veh): 19.0		Intersection LOS: B
Intersection Capacity Utilization 85.6%		ICU Level of Service E
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	46	207	15	123	227	1333	72	1967	383
v/c Ratio	0.41	0.12	0.72	0.11	0.33	0.69	0.41	0.26	0.72	0.36
Control Delay (s/veh)	62.5	51.6	35.1	51.8	53.1	44.3	7.8	7.2	20.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay (s/veh)	62.5	51.6	35.1	51.8	53.1	44.3	7.8	7.2	20.8	4.6
Queue Length 50th (m)	13.6	5.8	18.4	3.7	15.4	39.5	48.9	2.6	134.2	9.0
Queue Length 95th (m)	25.7	11.4	43.0	10.1	23.7	67.1	76.3	7.4	200.1	30.5
Internal Link Dist (m)		882.8			603.0		688.8		212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0		75.0
Base Capacity (vph)	331	936	517	357	930	328	3233	274	2715	1073
Starvation Cap Reductn	0	0	0	0	0	0	0	0	191	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.05	0.40	0.04	0.13	0.69	0.41	0.26	0.78	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	207	15	115	8	227	1288	45	72	1967	383
Future Volume (vph)	54	46	207	15	115	8	227	1288	45	72	1967	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	*0.80		1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3579	1601	1789	3544		1711	4399		1711	4421	1566
Flt Permitted	0.67	1.00	1.00	0.73	1.00		0.05	1.00		0.16	1.00	1.00
Satd. Flow (perm)	1270	3579	1601	1366	3544		86	4399		287	4421	1566
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)	54	46	207	15	115	8	227	1288	45	72	1967	383
RTOR Reduction (vph)	0	0	120	0	4	0	0	2	0	0	0	112
Lane Group Flow (vph)	54	46	87	15	119	0	227	1331	0	72	1967	271
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	13.5	13.5	13.5	13.5	13.5		104.5	94.7		85.7	79.9	79.9
Effective Green, g (s)	13.5	13.5	13.5	13.5	13.5		104.5	94.7		85.7	79.9	79.9
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.10		0.80	0.73		0.66	0.61	0.61
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	371	166	141	368		326	3204		252	2717	962
v/s Ratio Prot		0.01			0.03		c0.11	0.30		0.01	c0.44	
v/s Ratio Perm	0.04		c0.05	0.01			0.45			0.18		0.17
v/c Ratio	0.41	0.12	0.52	0.11	0.32		0.70	0.42		0.29	0.72	0.28
Uniform Delay, d1	54.5	52.9	55.2	52.8	54.0		38.0	6.9		7.9	17.4	11.7
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	2.1	0.2	3.0	0.3	0.5		6.3	0.4		0.6	1.7	0.7
Delay (s)	56.6	53.0	58.2	53.1	54.5		44.3	7.3		8.5	19.1	12.4
Level of Service	E	D	E	D	D		D	A		A	B	B
Approach Delay (s/veh)		57.1			54.4			12.7			17.7	
Approach LOS		E			D			B			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	19.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	85.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Appendix E
ITE Trip Generation Manual

person parks off-site and walks to an office building, the trip is considered an entering vehicle trip for the office building. However, if a person travels by transit and walks the final distance, the trip is counted as a transit trip, not a vehicle trip.

Walk Trip—An inbound or outbound person trip where the greatest distance traveled is on foot or via any type of assistive device (e.g., wheelchair, scooter, skates, or skateboard).

Walk+Bike+Transit Trip—An inbound or outbound person trip made by walking, bicycling, or transit.

Setting/Location

Center City Core—The downtown area of a major metropolitan region, typically the focal point of a regional light- or heavy-rail transit system. This area is characterized by multi-storied buildings, diverse land uses, an extensive pedestrian sidewalk network, and shared/priced parking both on-street and in structured garages or surface lots. It is generally an employment destination and includes an adjacent commercial core.

Dense Multi-Use Urban—A fully (or nearly fully) developed area with diverse and interacting complementary land uses; good pedestrian connectivity; and convenient and frequent transit. It may be a well-developed urban area outside a major metropolitan downtown or a mid-sized urban area downtown. Common land uses include office, retail, residential, entertainment, hotel, and other commercial uses. The residential uses are typically multifamily or single-family on lots no larger than one-fourth acre. Buildings often have minimal setbacks from the sidewalk. Vehicles remain the primary mode of travel, but the area also supports walking, biking, and transit. Parking is provided on and off-street. The complementary land uses in dense multi-urban areas provide the opportunity for short trips within the area, made convenient by walking, biking, or transit. Significant transit access, such as rail or bus, supports high transit mode share.

General Urban/Suburban—A predominantly vehicle-oriented area where most person trips are made by personal or commercial vehicle. These areas may be fully developed (or nearly so) at low to medium density and typically contain a mix of residential and commercial land uses. Commercial uses are often located at intersections or along corridors and surrounded by parking. These corridors are often situated near low-density, almost entirely residential development. Most commercial buildings are located behind the parking area or surrounded by parking. The mixing of land uses is only in terms of their proximity, not in terms of function. A retail land use may focus on serving a regional clientele whereas a service land use may target motorists or pass-by vehicle trips. Although the land uses are geographically close, a lack of pedestrian, bicycling, and transit infrastructure discourages non-vehicle travel.

Rural—An agricultural or undeveloped area with scattered parcels and very low population density.

Time Periods

Friday—A continuous 24-hour period during a Friday.

Friday, Peak Hour of Generator—The one-hour period with the highest volume of vehicle or person trips entering and exiting a site on a Friday. This peak may occur during either the AM or PM.

Friday, Peak Hour of Adjacent Street Traffic—The one-hour period during the morning or evening commuter peak periods when combined site-generated vehicle traffic and adjacent street traffic is the highest on a Friday. If adjacent street traffic volumes are unknown, the peak hour of the adjacent street is assumed to be the one hour when the highest hourly vehicle trips are generated by the site during the

Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing is a residential building with two or three floors (levels) of residences. Various configurations fit this description, including the following:

- Walk-up apartment or multiplex—access to the individual dwelling units is typically internal to the structure and provided through a shared entry, stairway, and hallway.
- Mansion apartment with several dwelling units within what appears from the outside to be a single-family dwelling unit.
- Stacked townhouse designed to match the external appearance of a townhouse, but which has dwelling units that share both floors and walls and with access through a central entry and stairway.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there was an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Arizona, British Columbia (CAN), California, Delaware, Florida, Illinois, Maine, Massachusetts, Minnesota, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, and Washington.

Source Numbers

357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076, 1219, 1236, 1265, 1267

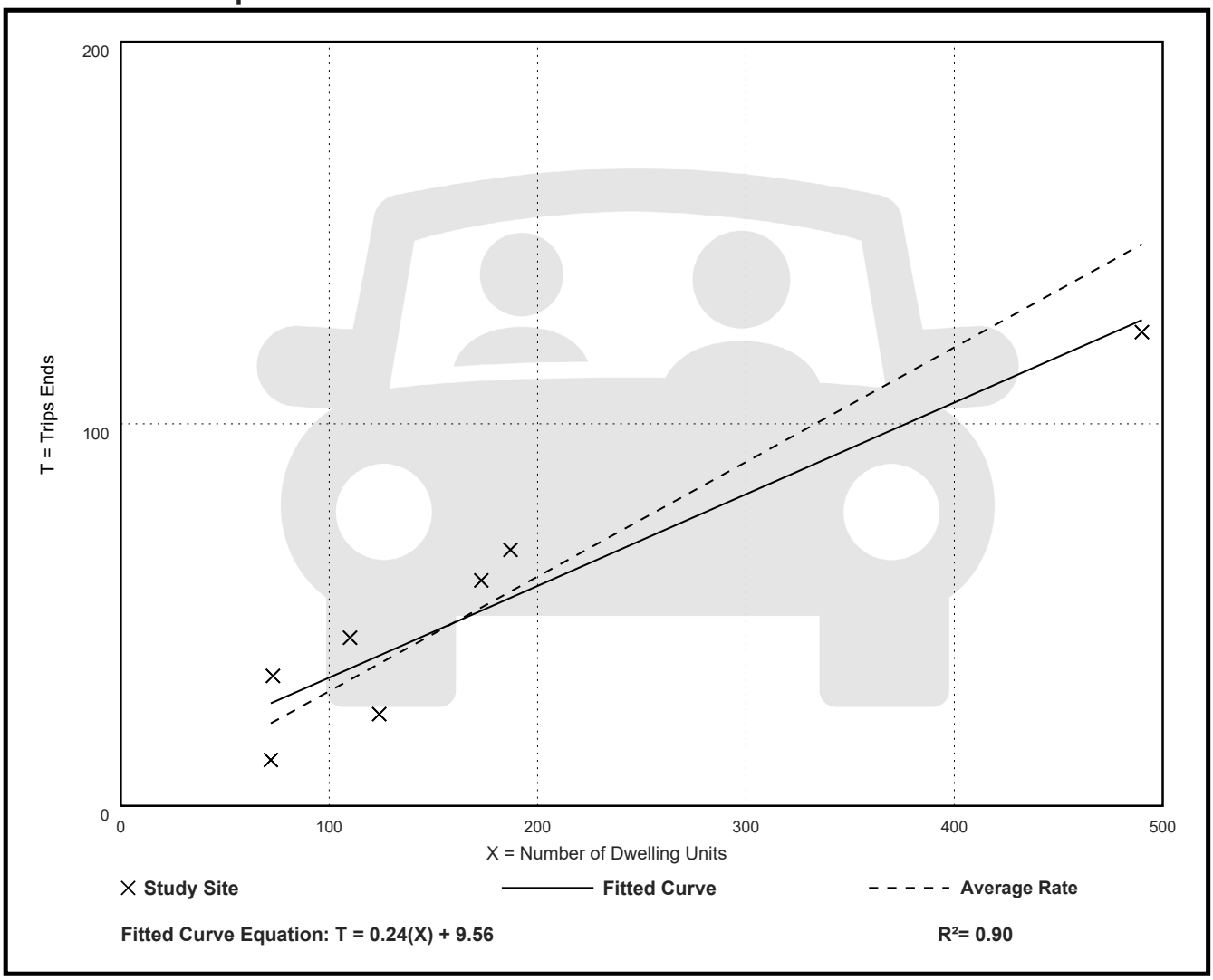
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**Dense Multi-Use Urban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	176
Directional Distribution:	10% entering, 90% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.17 - 0.47	0.09

Data Plot and Equation



Fitted Curve Equation: T = 0.24(X) + 9.56

R^2= 0.90

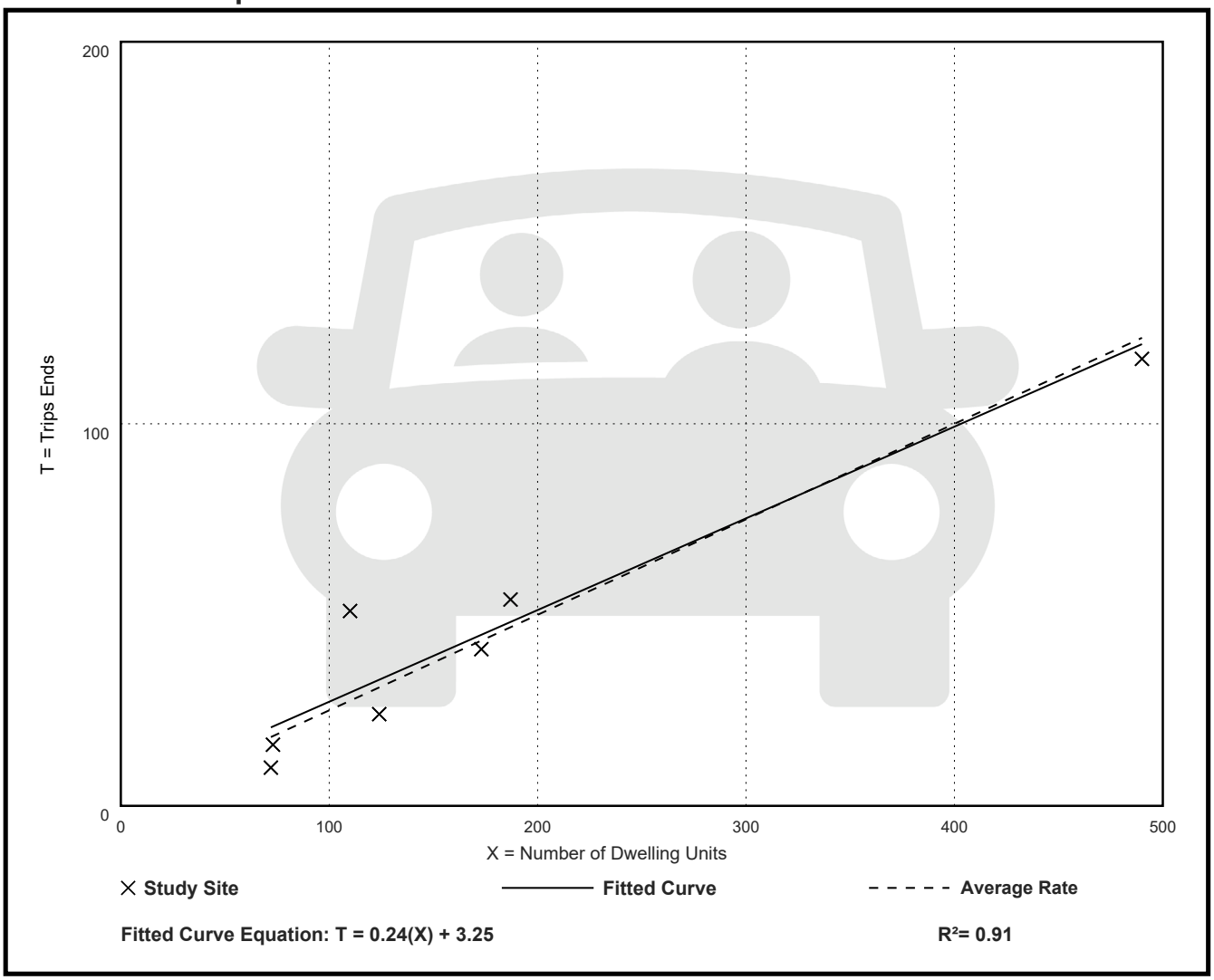
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**Dense Multi-Use Urban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	176
Directional Distribution:	90% entering, 10% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.25	0.14 - 0.46	0.08

Data Plot and Equation



Fitted Curve Equation: T = 0.24(X) + 3.25

R^2= 0.91

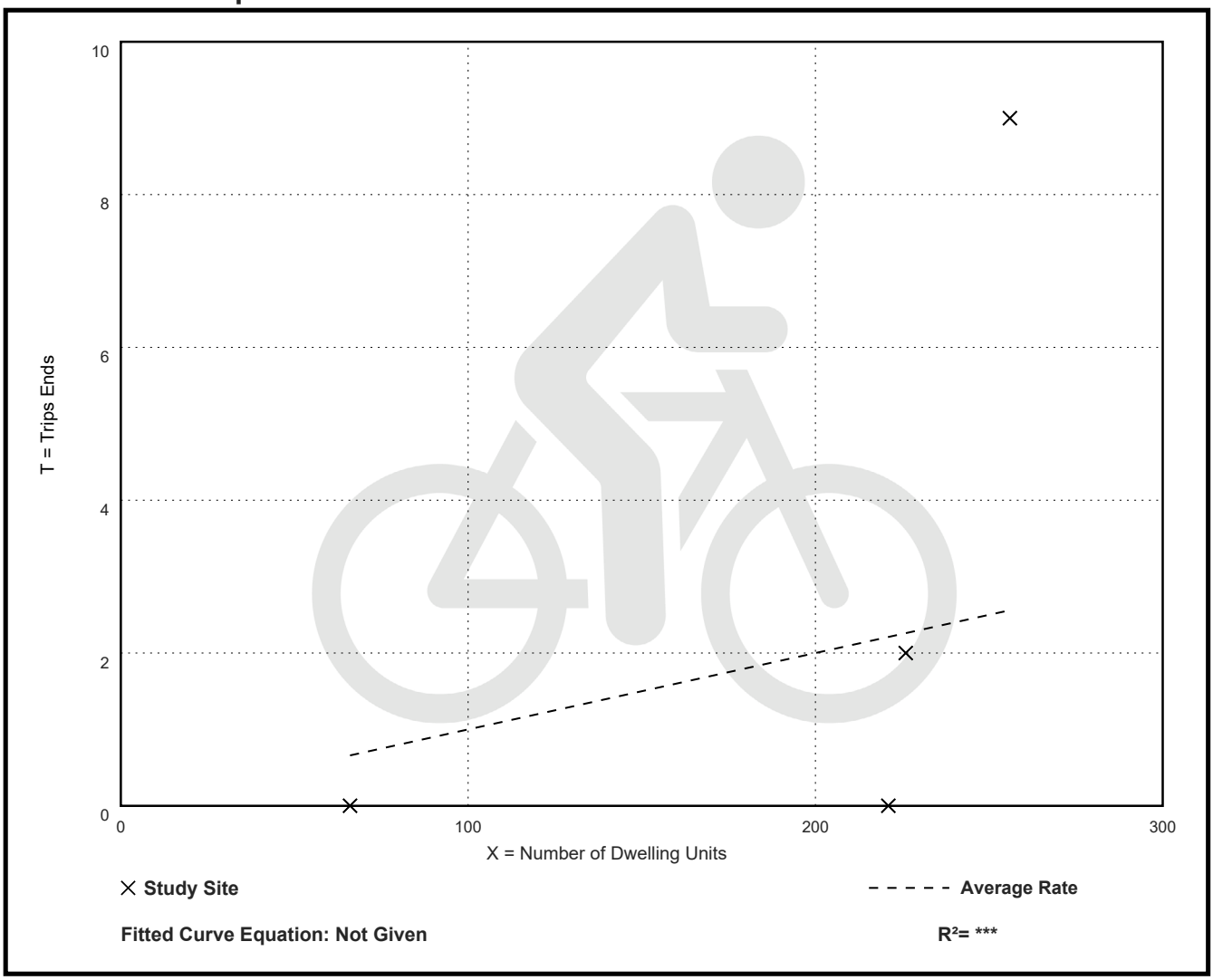
Multifamily Housing (Low-Rise)
Close to Rail Transit (220)

Bicycle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 4
Avg. Num. of Dwelling Units: 192
Directional Distribution: Not Available

Bicycle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.01	0.00 - 0.04	0.02

Data Plot and Equation



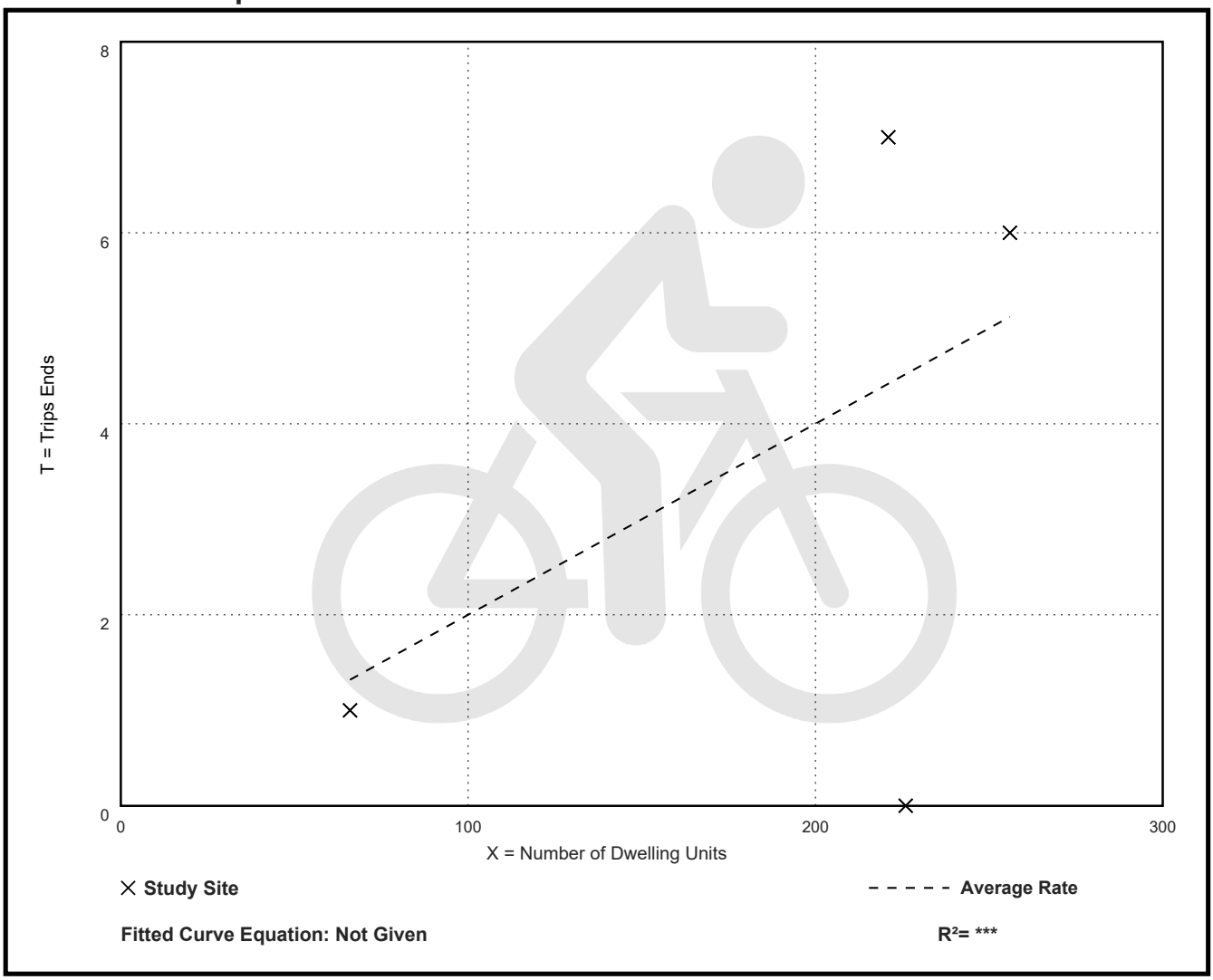
Multifamily Housing (Low-Rise)
Close to Rail Transit (220)

Bicycle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 4
Avg. Num. of Dwelling Units: 192
Directional Distribution: Not Available

Bicycle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 0.03	0.01

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing is a residential building with between four and 10 floors of residence. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there was an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, and Virginia.

Source Numbers

818, 857, 862, 866, 901, 904, 910, 949, 951, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1057, 1058, 1071, 1076, 1219, 1292

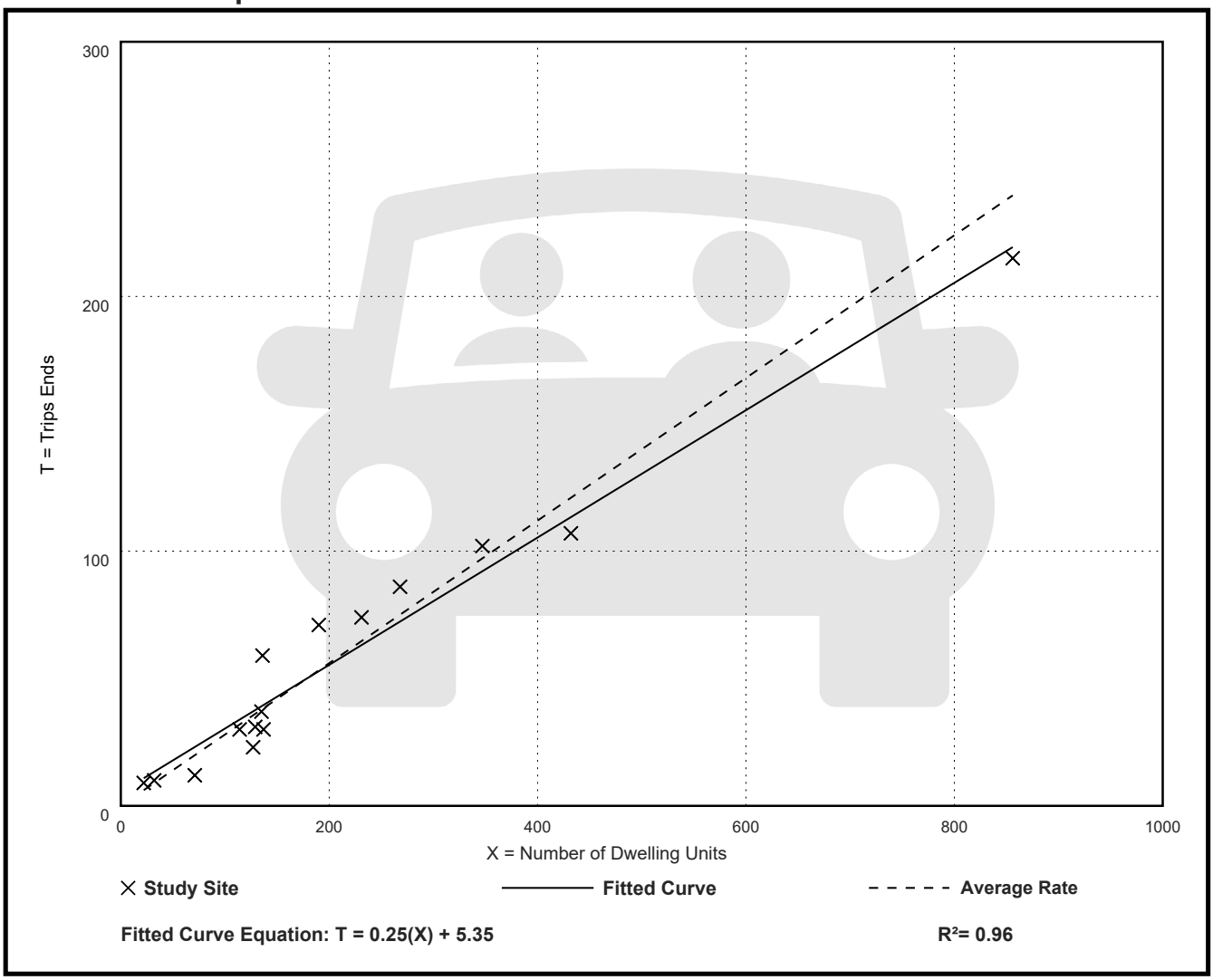
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**Dense Multi-Use Urban**
Number of Studies:	15
Avg. Num. of Dwelling Units:	215
Directional Distribution:	14% entering, 86% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.28	0.17 - 0.43	0.06

Data Plot and Equation



Fitted Curve Equation: T = 0.25(X) + 5.35

R^2= 0.96

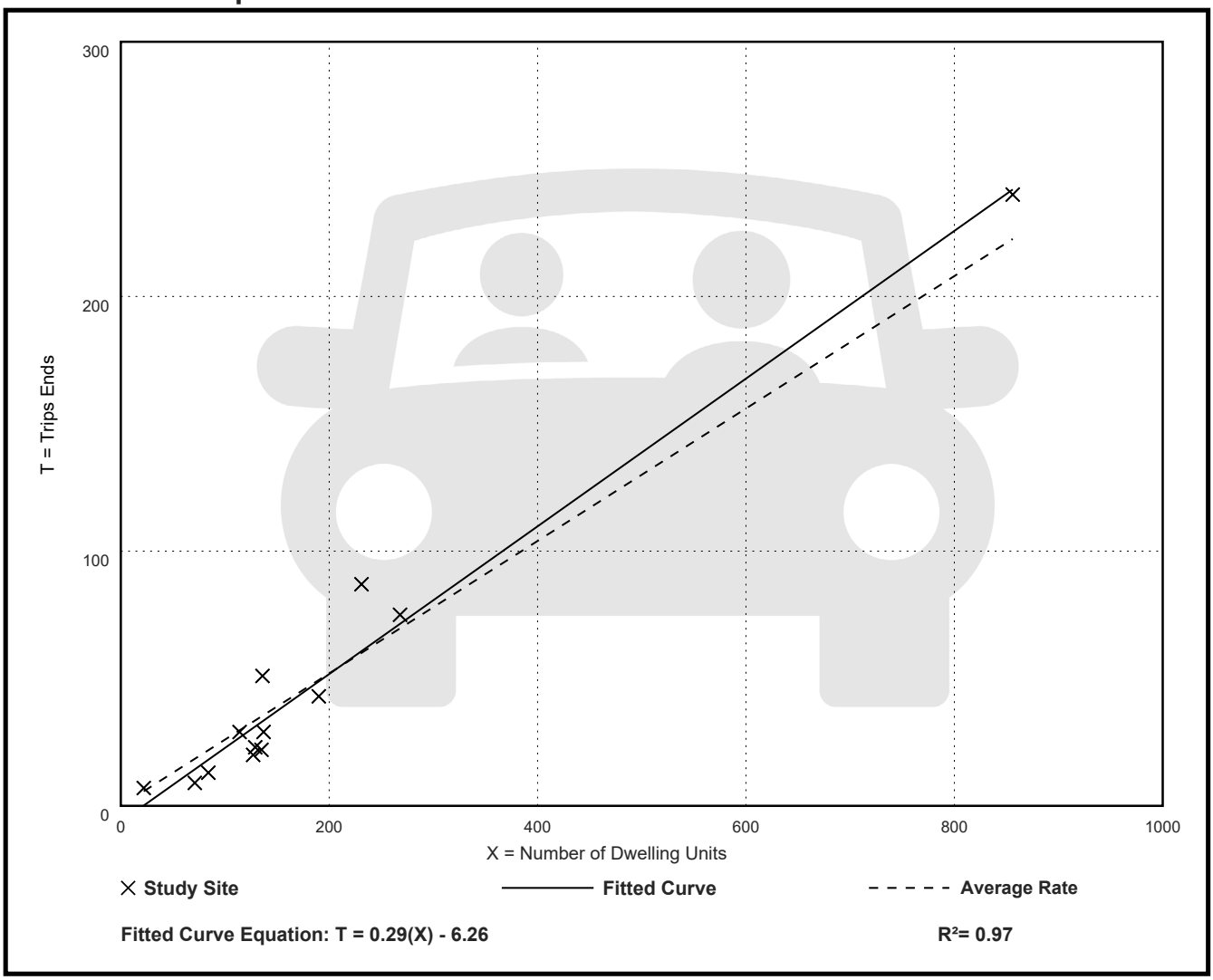
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 13
Avg. Num. of Dwelling Units: 192
Directional Distribution: 74% entering, 26% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.26	0.13 - 0.38	0.07

Data Plot and Equation



Fitted Curve Equation: T = 0.29(X) - 6.26

R^2= 0.97

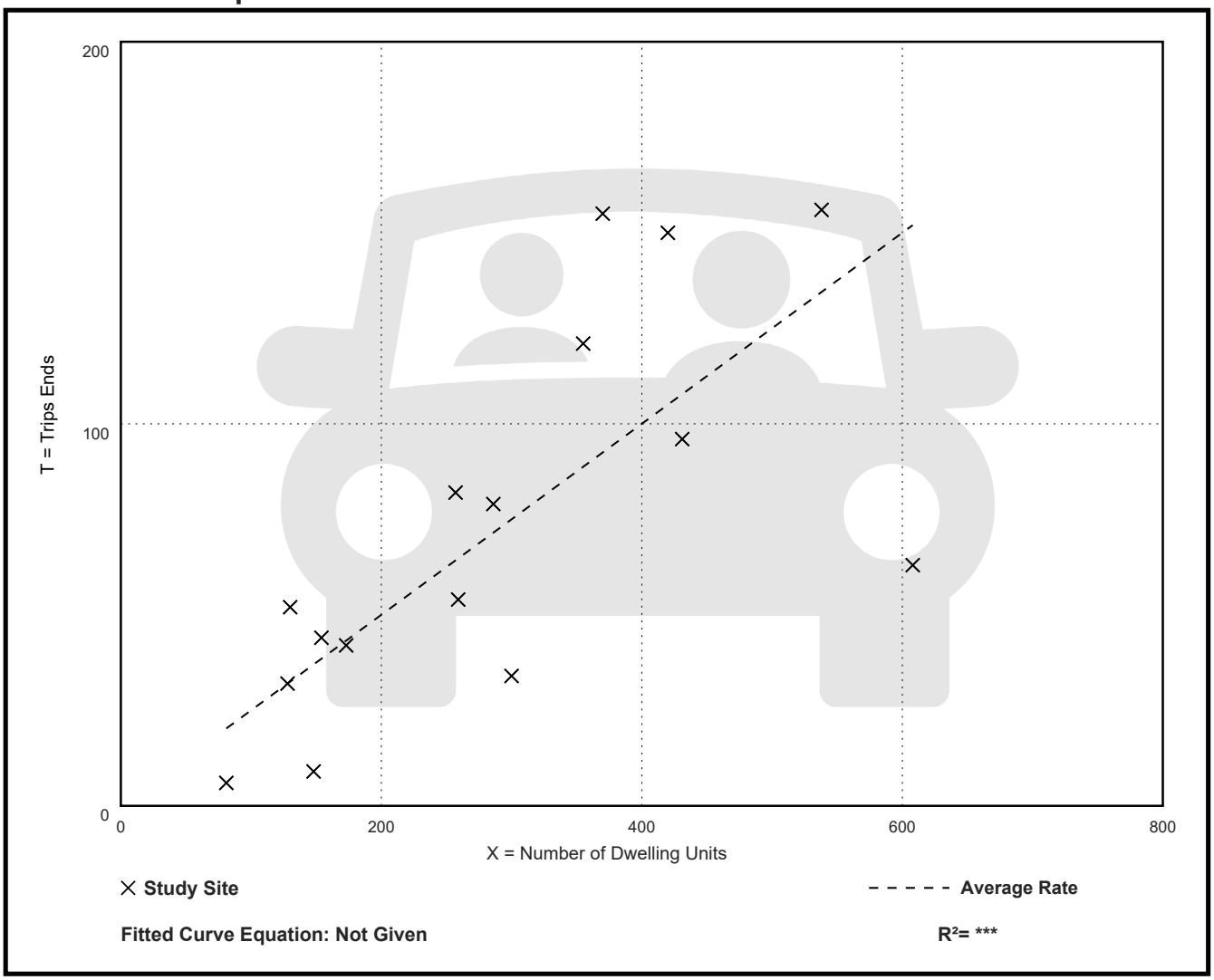
Multifamily Housing (Mid-Rise)
Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 16
Avg. Num. of Dwelling Units: 290
Directional Distribution: 15% entering, 85% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.25	0.06 - 0.42	0.11

Data Plot and Equation



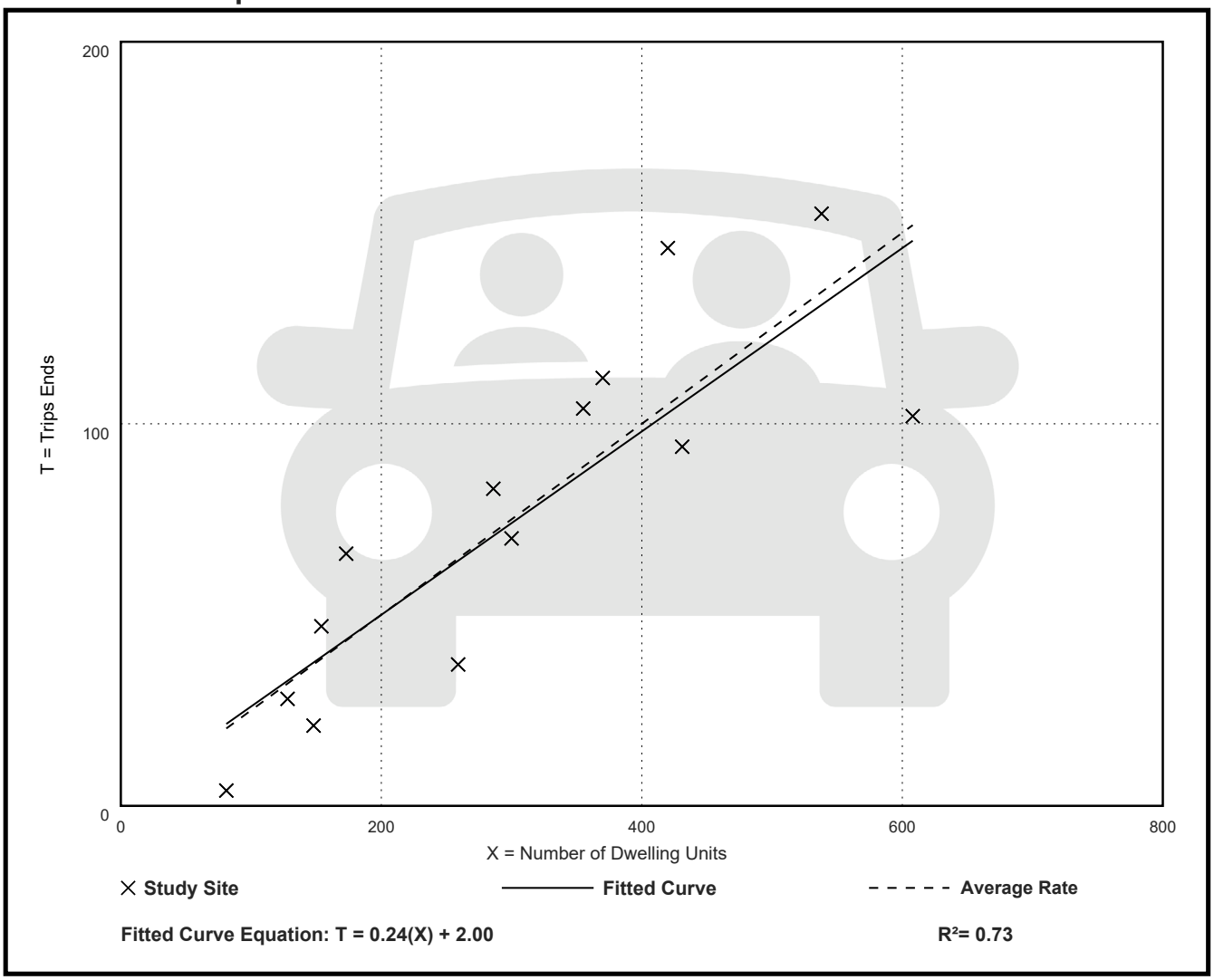
Multifamily Housing (Mid-Rise)
Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 14
Avg. Num. of Dwelling Units: 304
Directional Distribution: 74% entering, 26% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.25	0.05 - 0.38	0.08

Data Plot and Equation



Fitted Curve Equation: T = 0.24(X) + 2.00

R^2= 0.73

Land Use: 222
Multifamily Housing (High-Rise)

Description

High-rise multifamily housing is a residential building with more than 10 floors (levels) of residence. Access to individual dwelling units is through an outside building entrance, a lobby, elevators, and a set of hallways.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the 12 sites for which both the number of residents and the number of occupied dwelling units were available, there was an average of 1.6 residents per occupied dwelling unit.

For the 26 sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 98 percent of the total dwelling units were occupied.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 2000s and the 2010s in California, District of Columbia, New York, Ontario (CAN), Oregon, and Virginia.

Source Numbers

818, 862, 901, 910, 949, 963, 964, 966, 967, 1056, 1057, 1076, 1077

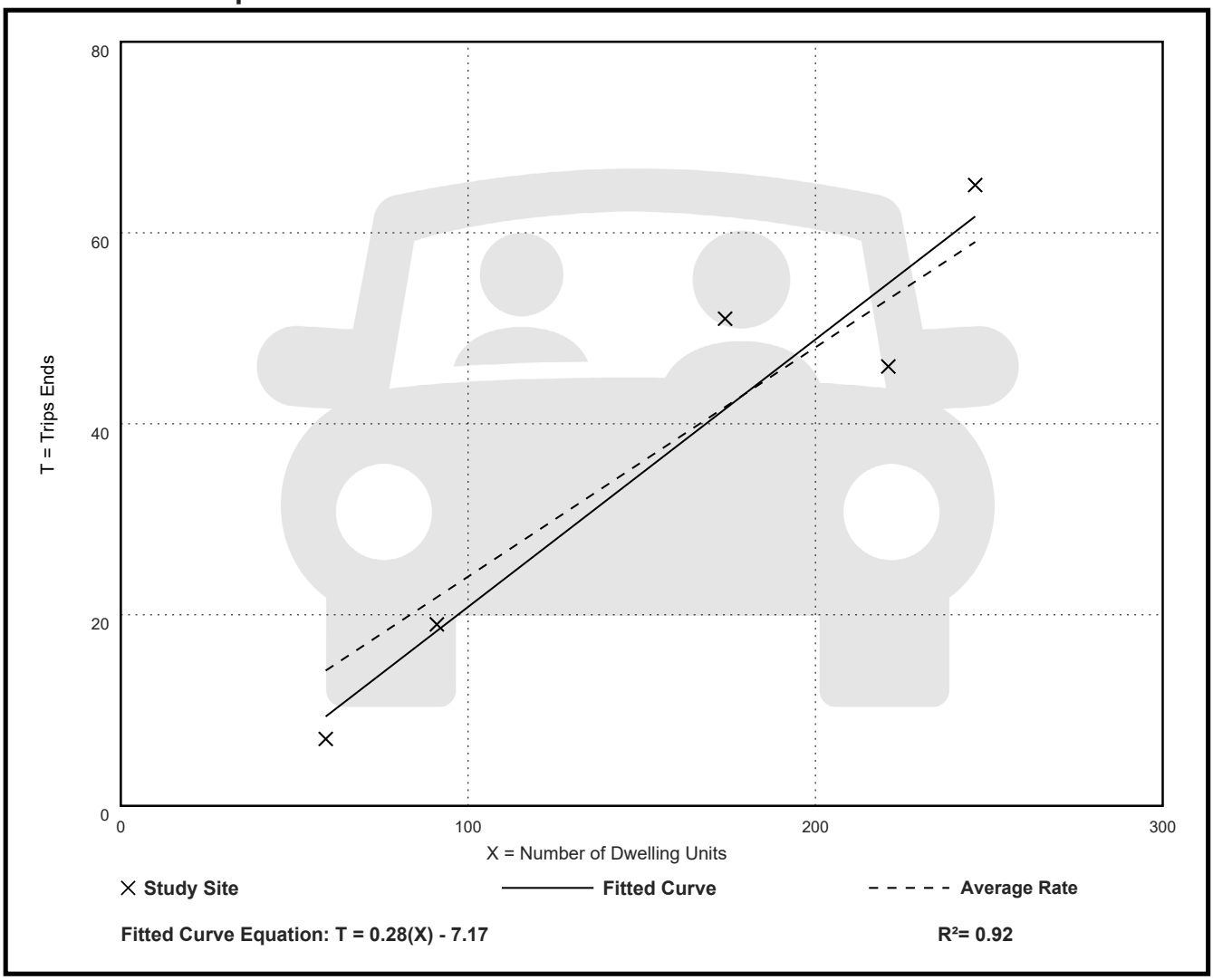
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**Dense Multi-Use Urban**
Number of Studies:	5
Avg. Num. of Dwelling Units:	158
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.12 - 0.29	0.05

Data Plot and Equation



Fitted Curve Equation: T = 0.28(X) - 7.17

R^2= 0.92

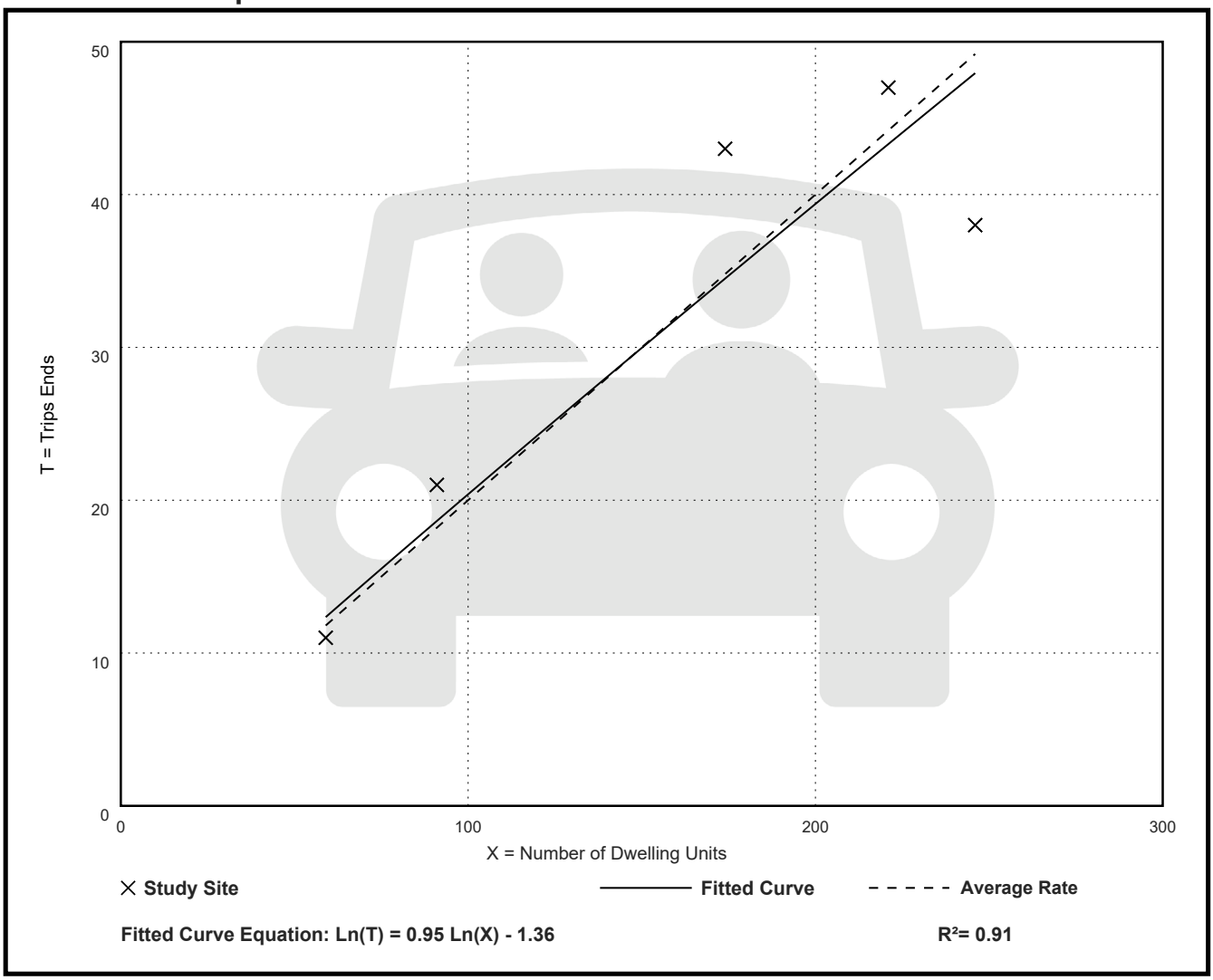
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**Dense Multi-Use Urban**
Number of Studies:	5
Avg. Num. of Dwelling Units:	158
Directional Distribution:	73% entering, 27% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.20	0.15 - 0.25	0.04

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.95 Ln(X) - 1.36

R^2= 0.91

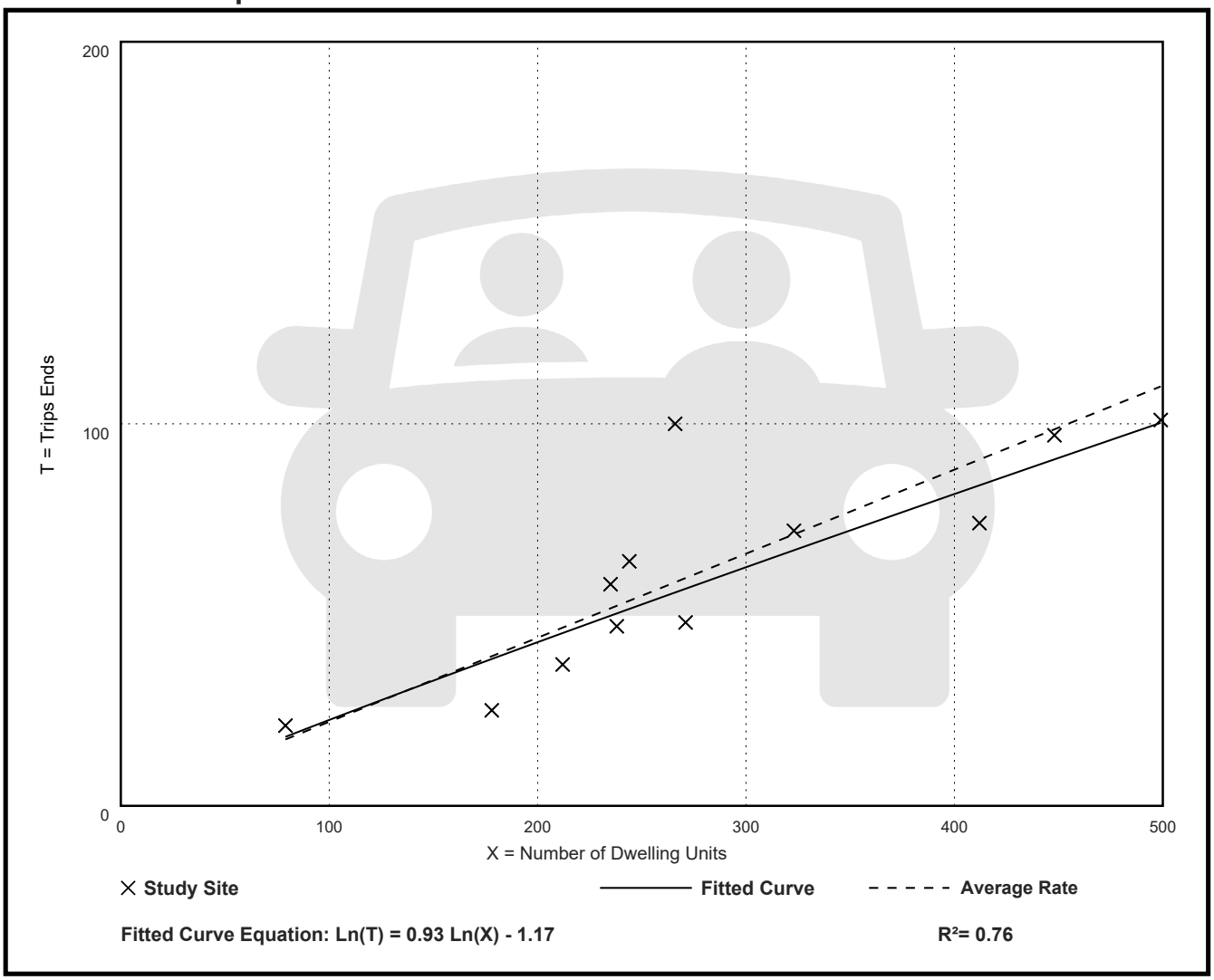
Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 12
Avg. Num. of Dwelling Units: 284
Directional Distribution: 11% entering, 89% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.22	0.14 - 0.38	0.06

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.93 Ln(X) - 1.17

R^2= 0.76

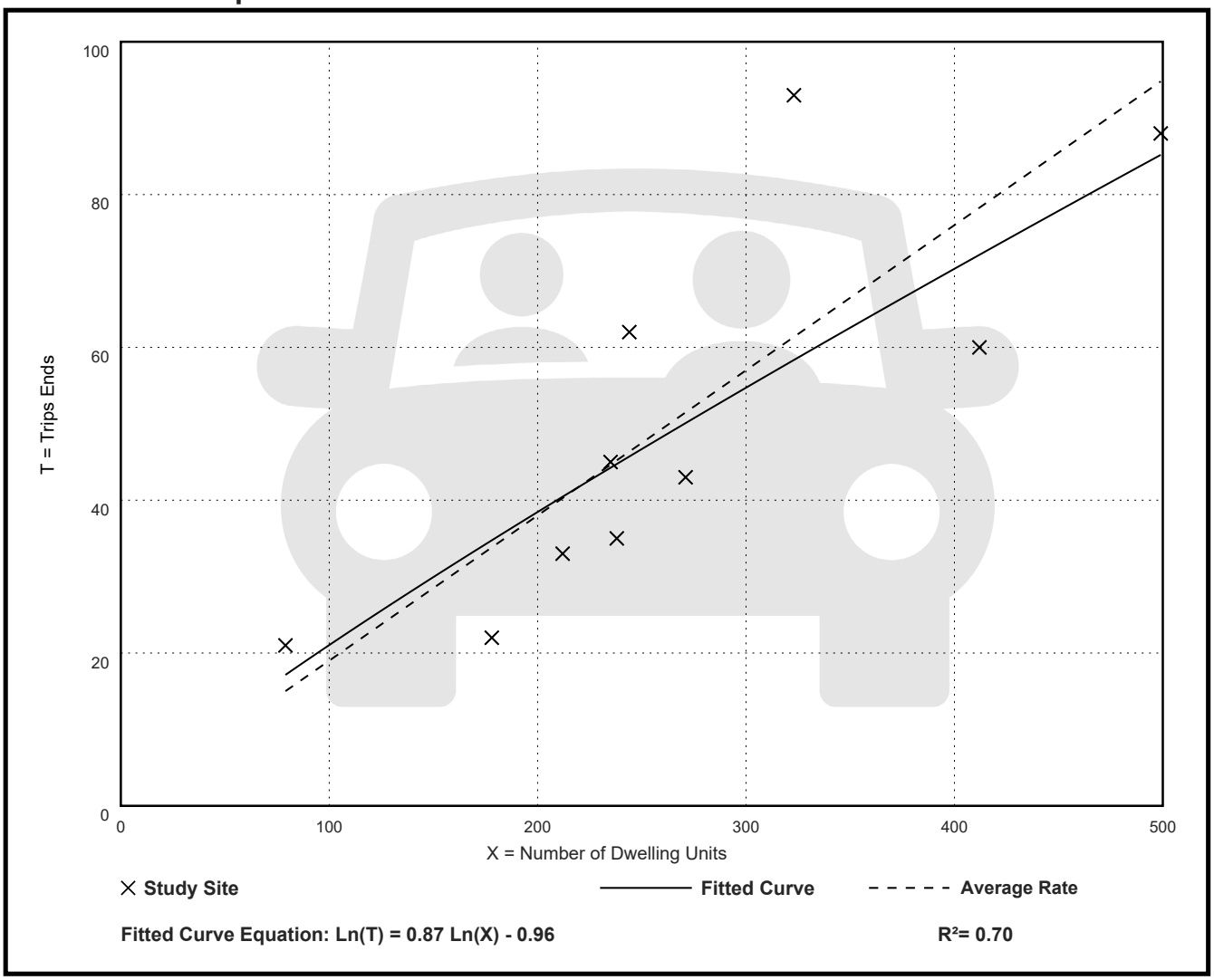
Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 10
Avg. Num. of Dwelling Units: 269
Directional Distribution: 69% entering, 31% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.19	0.12 - 0.29	0.05

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) - 0.96

R^2= 0.70

Land Use: 710
General Office Building

Description

A general office building is a building with multiple tenants that employ persons in the management, direction, or conduct of legal, accounting, engineering, consulting, real estate, insurance, financial, or other professional services. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712).

Additional Data

If two or more general office buildings are in close physical proximity (within walking distance) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

The average building occupancy varies considerably among the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Connecticut, Georgia, Indiana, Kentucky, Maine, Minnesota, Montana, New Hampshire, New Jersey, Ontario (CAN), Texas, Utah, and Virginia.

Source Numbers

404, 407, 408, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061, 1219, 1221

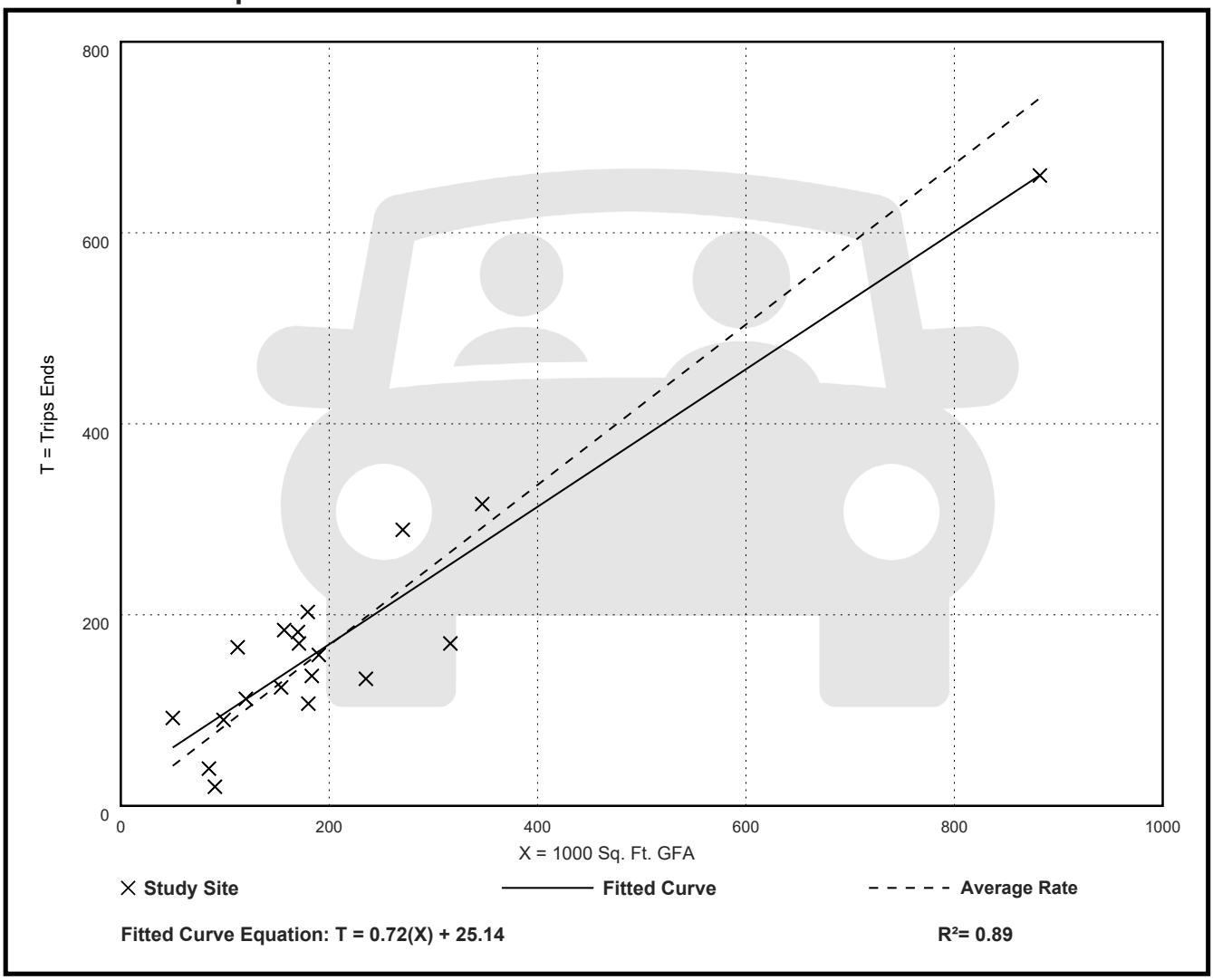
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 19
Avg. 1000 Sq. Ft. GFA: 210
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.84	0.22 - 1.84	0.27

Data Plot and Equation



Fitted Curve Equation: T = 0.72(X) + 25.14

R^2= 0.89

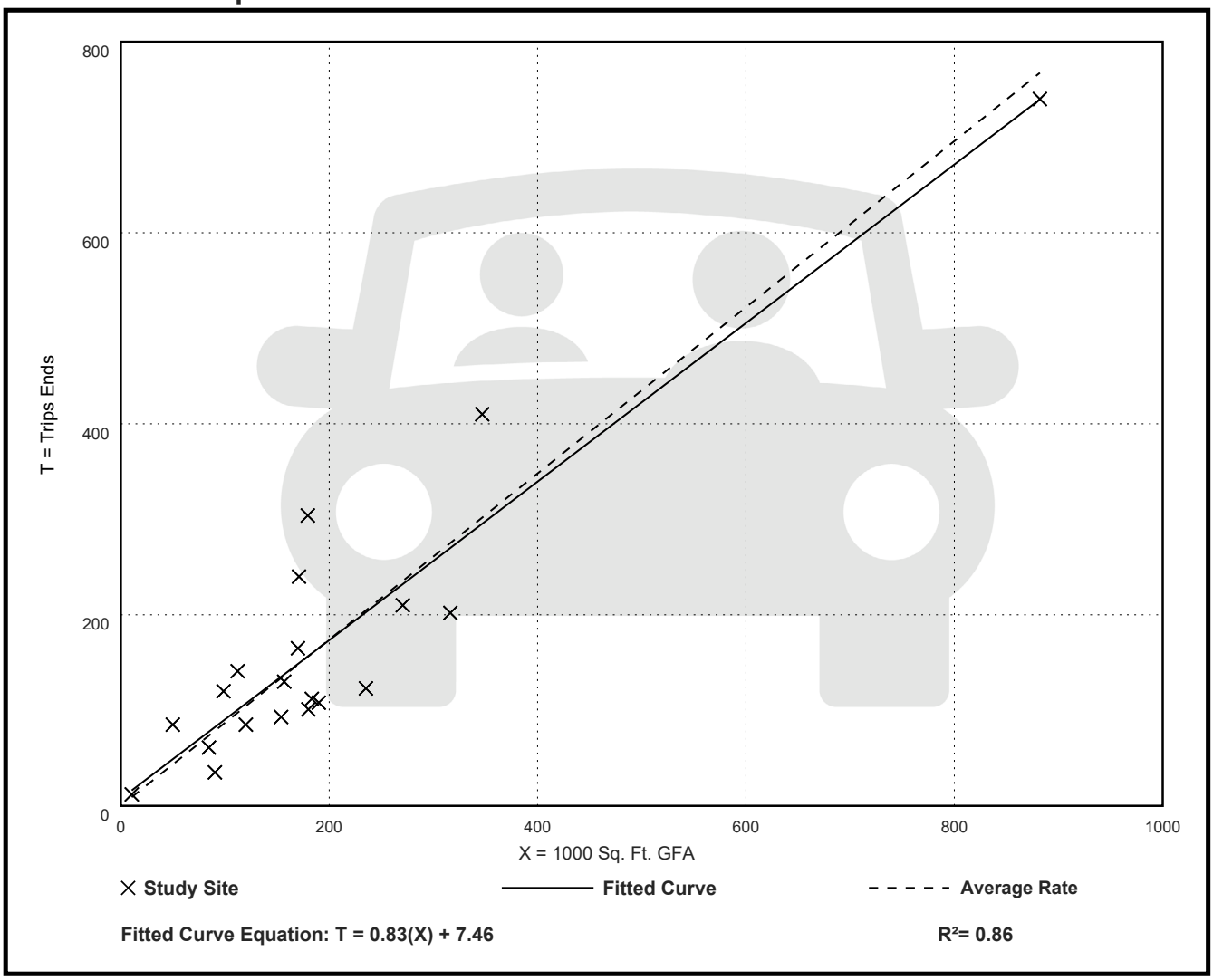
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 20
Avg. 1000 Sq. Ft. GFA: 200
Directional Distribution: 16% entering, 84% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.87	0.39 - 1.70	0.33

Data Plot and Equation



Fitted Curve Equation: T = 0.83(X) + 7.46

R^2= 0.86

Land Use: 130
Industrial Park

Description

An industrial park contains several individual industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities. Some parks in the database have a large number of small businesses and others have one or two dominant industries. Business park (Land Use 770) is a related use.

Additional Data

The sites were surveyed in the 2000s, 2010s, and the 2020s in Georgia, Massachusetts, Ontario (CAN), and Pennsylvania.

Source Numbers

706, 747, 753, 937, 1032, 1070, 1228

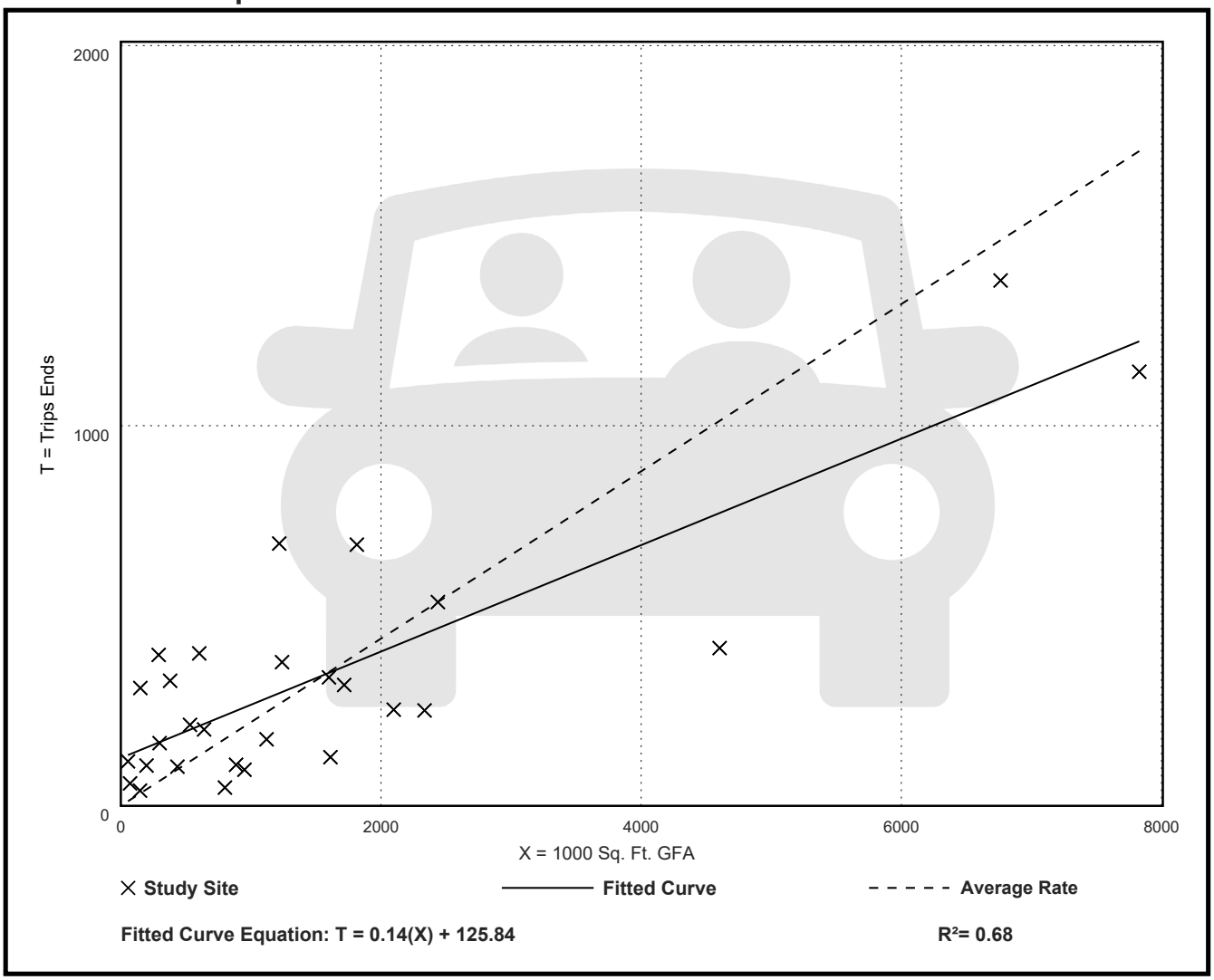
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 28
Avg. 1000 Sq. Ft. GFA: 1529
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.22	0.06 - 2.13	0.22

Data Plot and Equation



Fitted Curve Equation: T = 0.14(X) + 125.84

R^2= 0.68

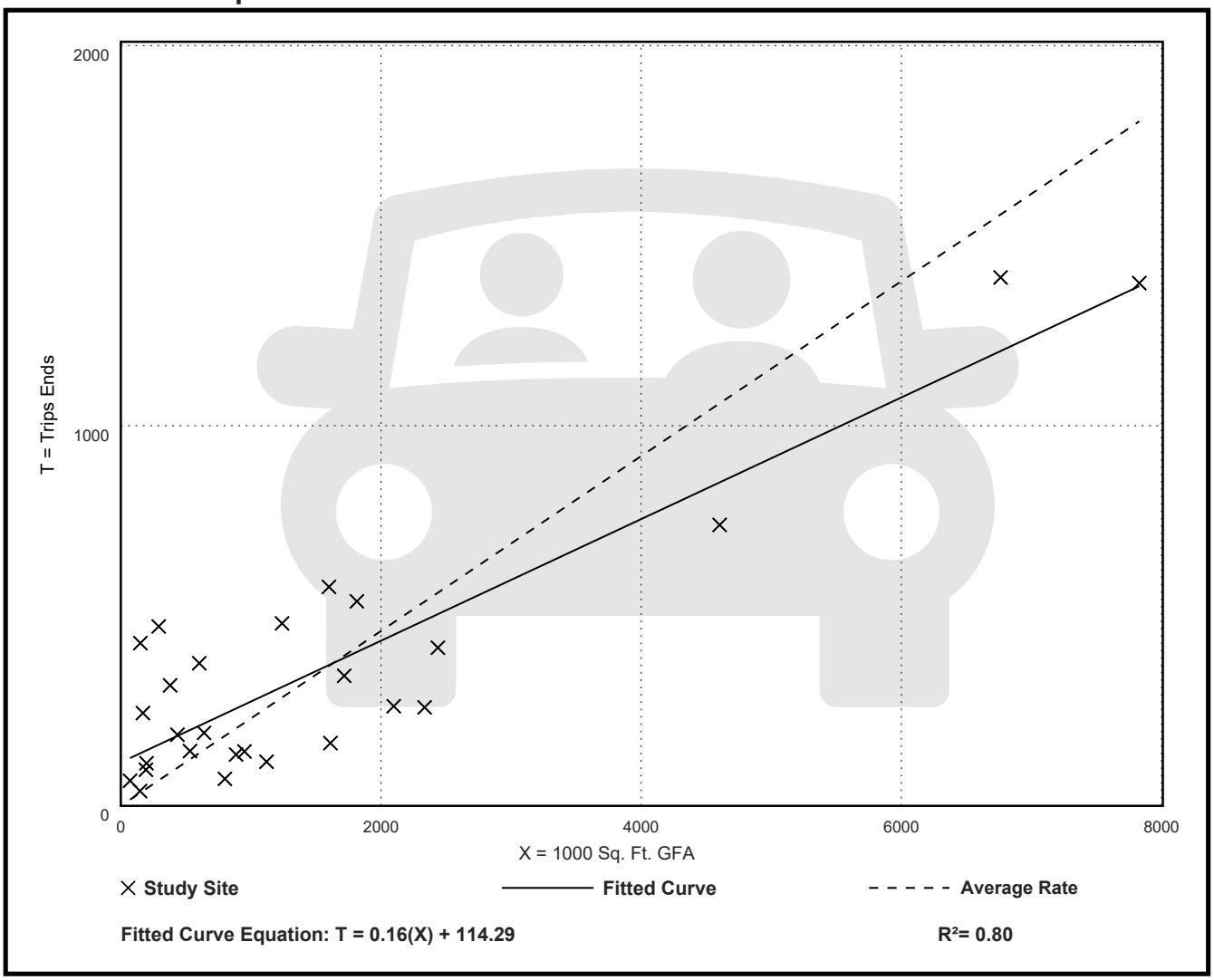
Industrial Park
(130)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	27
Avg. 1000 Sq. Ft. GFA:	1541
Directional Distribution:	28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.23	0.09 - 2.85	0.25

Data Plot and Equation



Fitted Curve Equation: T = 0.16(X) + 114.29

R^2= 0.80

Land Use: 411
Public Park

Description

A public park is owned and operated by a municipal, county, state, or federal agency. Park facilities in the study sites range from passive amenities, such as walking trails and picnic sites, to active amenities, such as basketball courts, playgrounds, skate parks, athletic fields, and horseshoe pits. Seasonal use of the individual sites differs widely because of the varying facilities and local conditions, such as weather.

Additional Data

The percentage of the park area that is used most intensively varies considerably within the studies contained in this land use. Therefore, caution should be used when using acres as an independent variable.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Arizona, California, New Jersey, North Carolina, and Oregon.

Source Numbers

392, 407, 709, 729, 852, 905, 1208, 1247, 1266

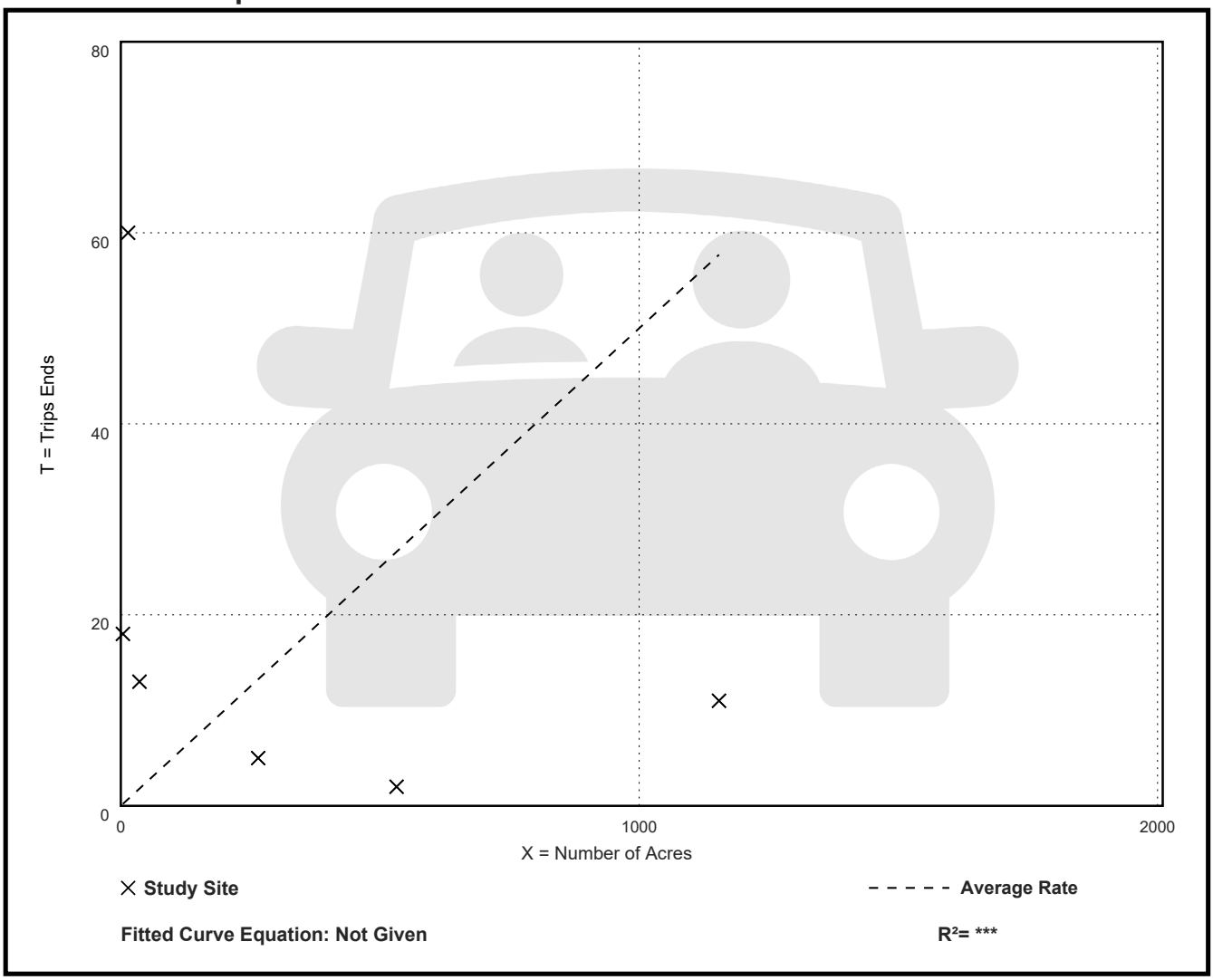
Public Park
(411)

Vehicle Trip Ends vs:	**Acres**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	6
Avg. Num. of Acres:	334
Directional Distribution:	62% entering, 38% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.05	0.00 - 4.50	0.45

Data Plot and Equation



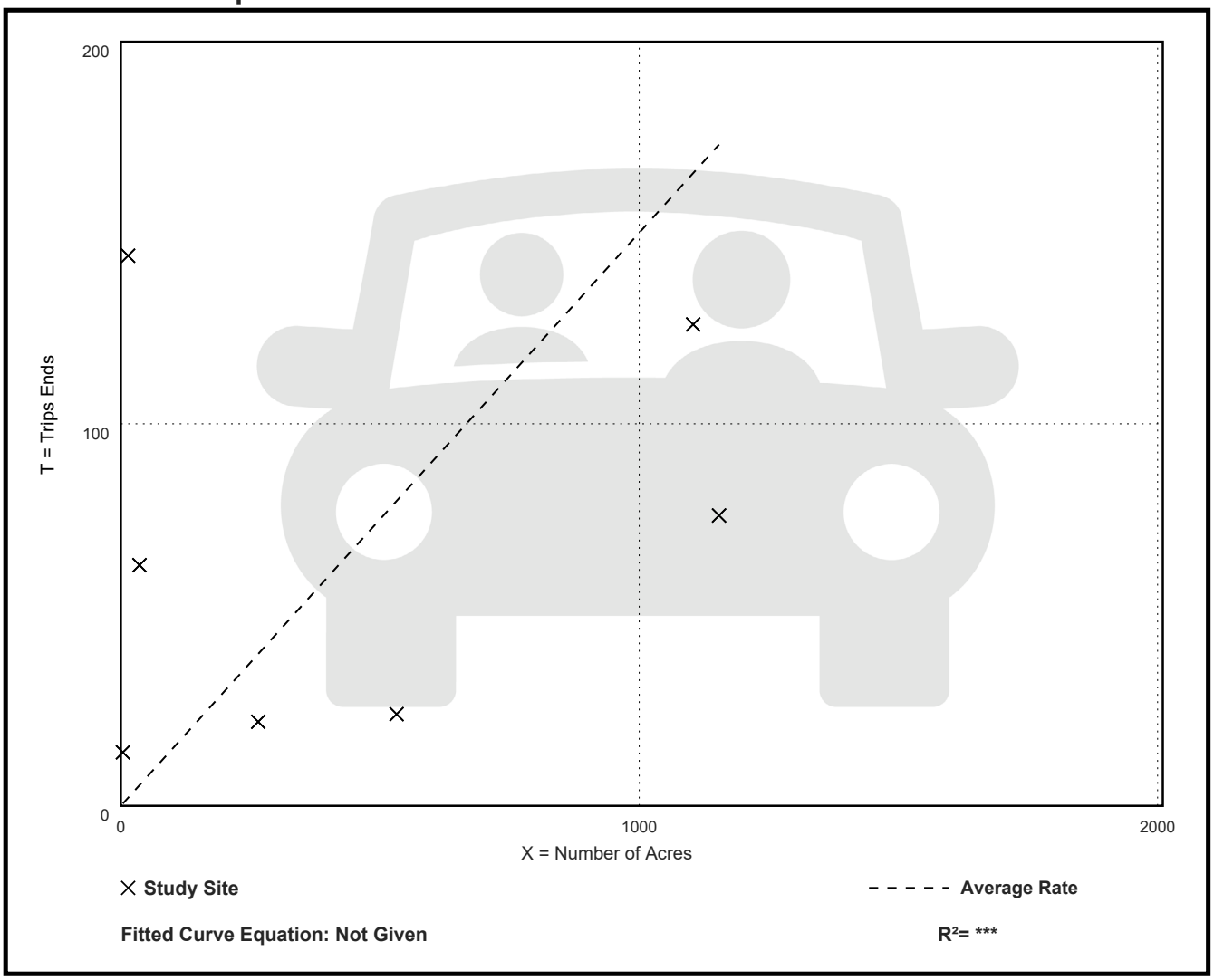
Public Park
(411)

Vehicle Trip Ends vs:	**Acres**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Acres:	444
Directional Distribution:	57% entering, 43% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.15	0.05 - 10.29	0.77

Data Plot and Equation



Land Use: 495
Recreational Community Center

Description

A recreational community center is a stand-alone public facility similar to and including YMCAs. These facilities often include classes and clubs for adults and children, a day care or nursery school, meeting rooms and other social facilities, swimming pools and whirlpools, saunas, tennis, racquetball, handball, pickleball, basketball and volleyball courts, outdoor athletic fields/courts, exercise classes, weightlifting and gymnastics equipment, locker rooms, and a restaurant or snack bar. Public access is typically allowed, and a membership fee may be charged.

Additional Data

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), Arizona, Indiana, Minnesota, New Hampshire, Oregon, Pennsylvania, Tennessee, and Utah.

Source Numbers

410, 443, 571, 618, 705, 719, 850, 866, 971, 1055, 1219

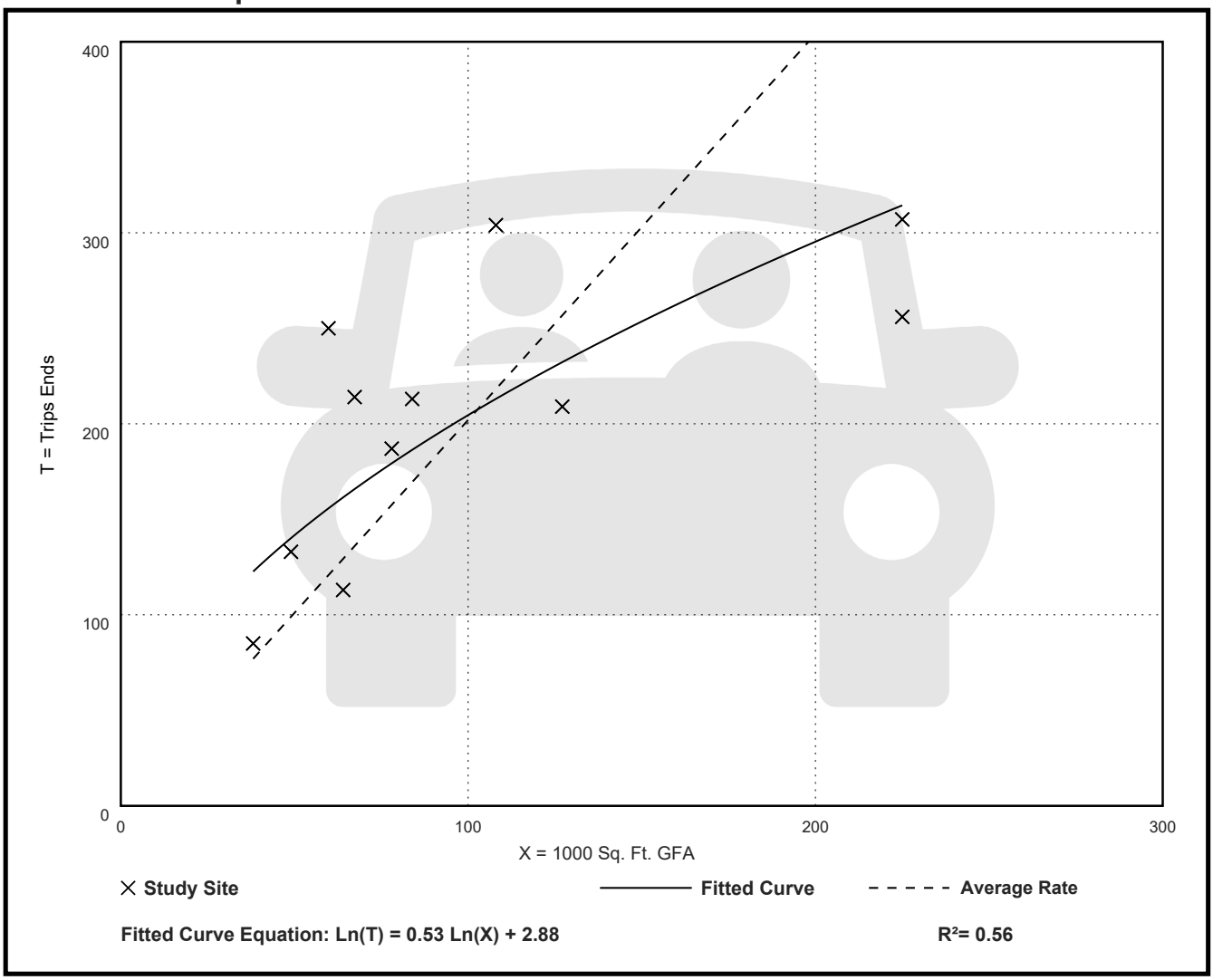
Recreational Community Center
(495)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 11
Avg. 1000 Sq. Ft. GFA: 102
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.02	1.14 - 4.18	0.88

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.53 Ln(X) + 2.88

R^2= 0.56

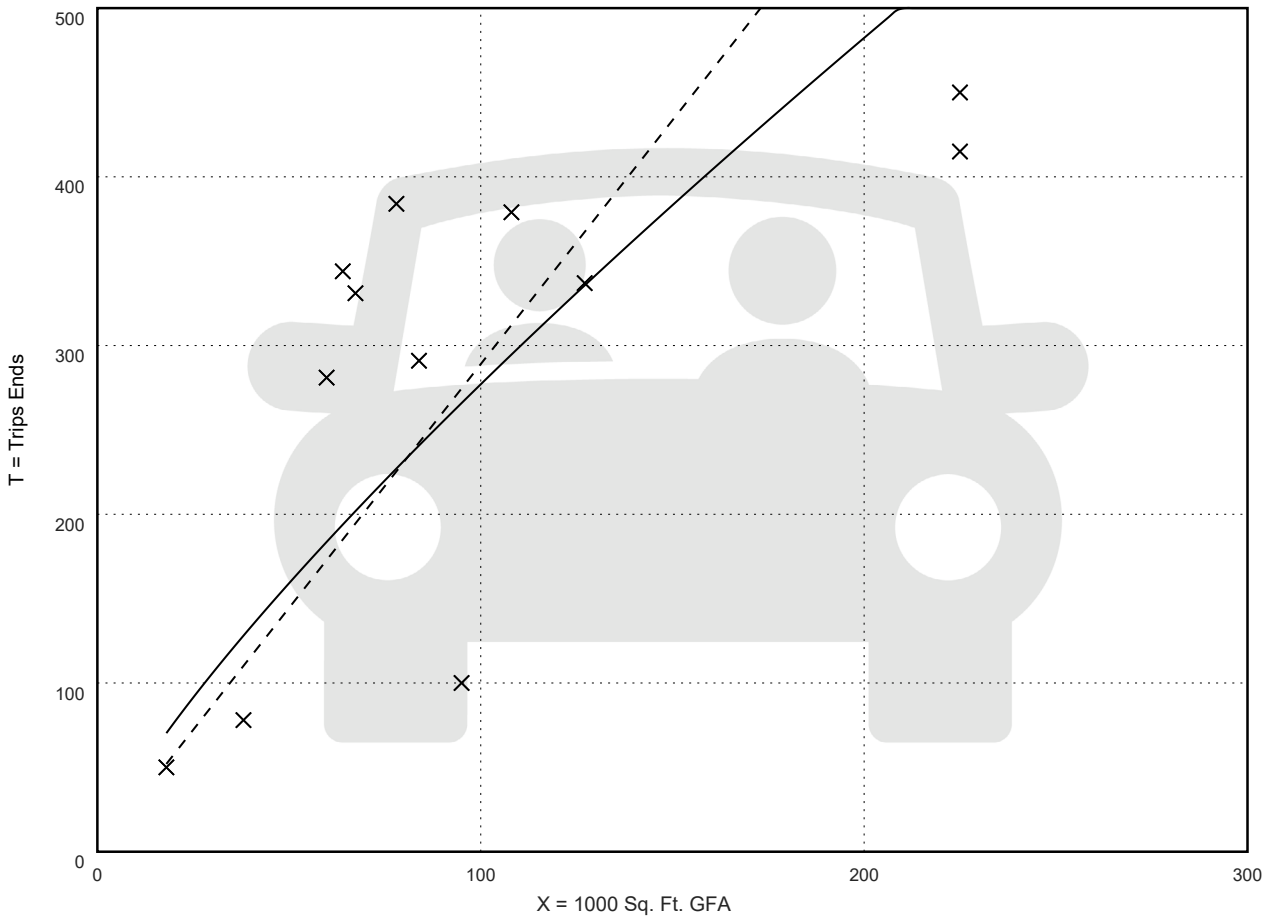
Recreational Community Center
(495)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	12
Avg. 1000 Sq. Ft. GFA:	99
Directional Distribution:	48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.89	1.05 - 5.37	1.37

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.80 Ln(X) + 1.94

R^2= 0.58

Land Use: 520
Elementary School

Description

An elementary school is a public school that typically serves students attending kindergarten through the fifth or sixth grade. An elementary school is usually centrally located in a residential community to facilitate student access. Bus service is commonly provided to students living beyond a specified distance from the school.

Additional Data

Elementary school students generally used school buses more than regular transit and were dropped off and picked up more than high school students, who were apt to walk longer distances, ride bicycles, or, in some cases, drive to school. The percentage of students at the sites who were transported to school via bus varied considerably. Some sites experienced higher than average trip rates because many students did not utilize the available school bus service. Due to the varied transit and school bus usage at these sites, it is desirable that future studies report additional detail on the percentage of students who were bused to school and the percentage that were dropped off and picked up.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alabama, Arizona, British Columbia (CAN), California, Delaware, Florida, Hawaii, Minnesota, Montana, Nevada, North Carolina, Oregon, Pennsylvania, Texas, Utah, Washington, and West Virginia.

Source Numbers

390, 395, 533, 536, 572, 579, 583, 609, 611, 612, 613, 707, 852, 856, 858, 866, 896, 940, 1039, 1048, 1067, 1083, 1218, 1219, 1284

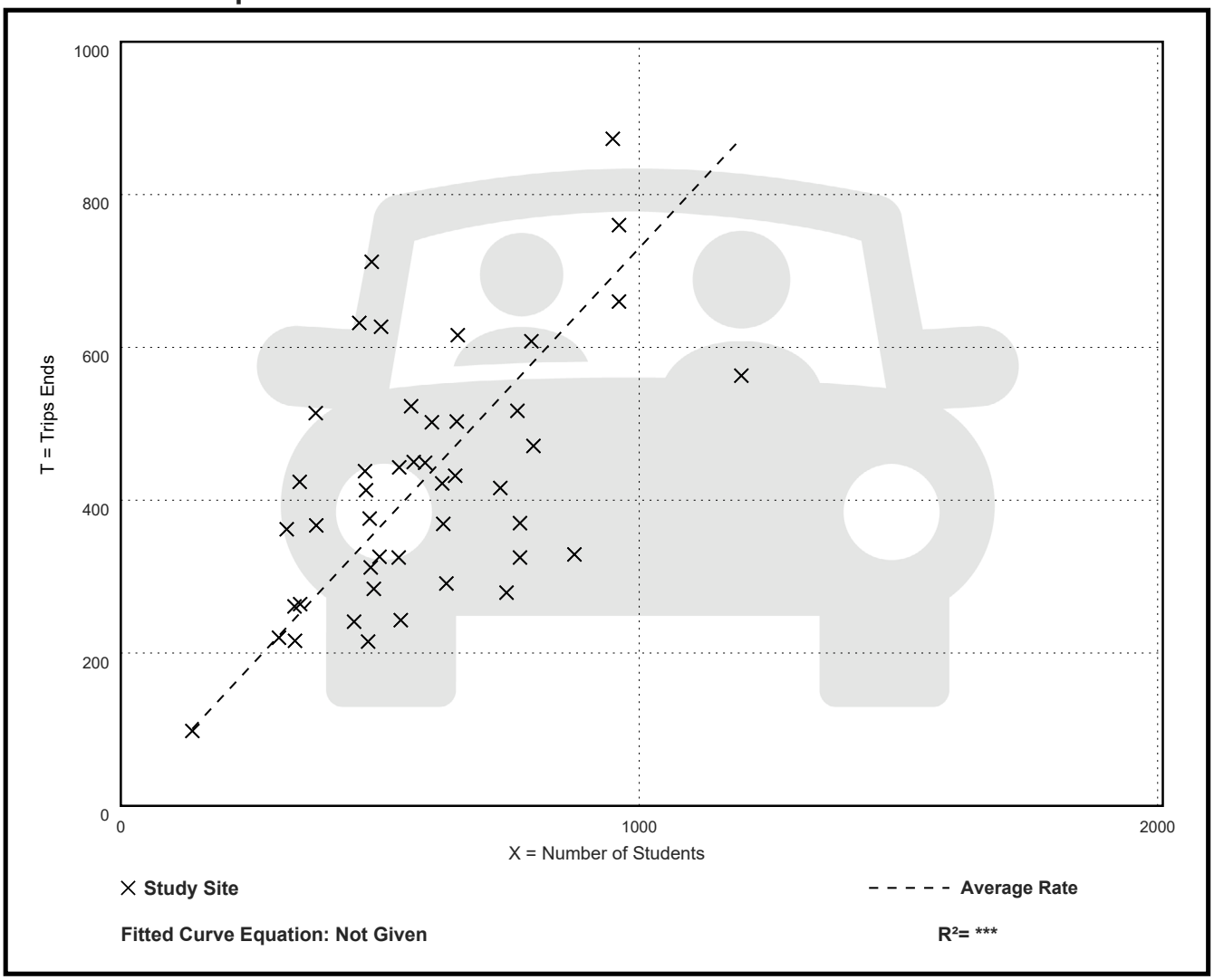
Elementary School
(520)

Vehicle Trip Ends vs:	**Students**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	45
Avg. Num. of Students:	582
Directional Distribution:	54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.73	0.38 - 1.47	0.26

Data Plot and Equation



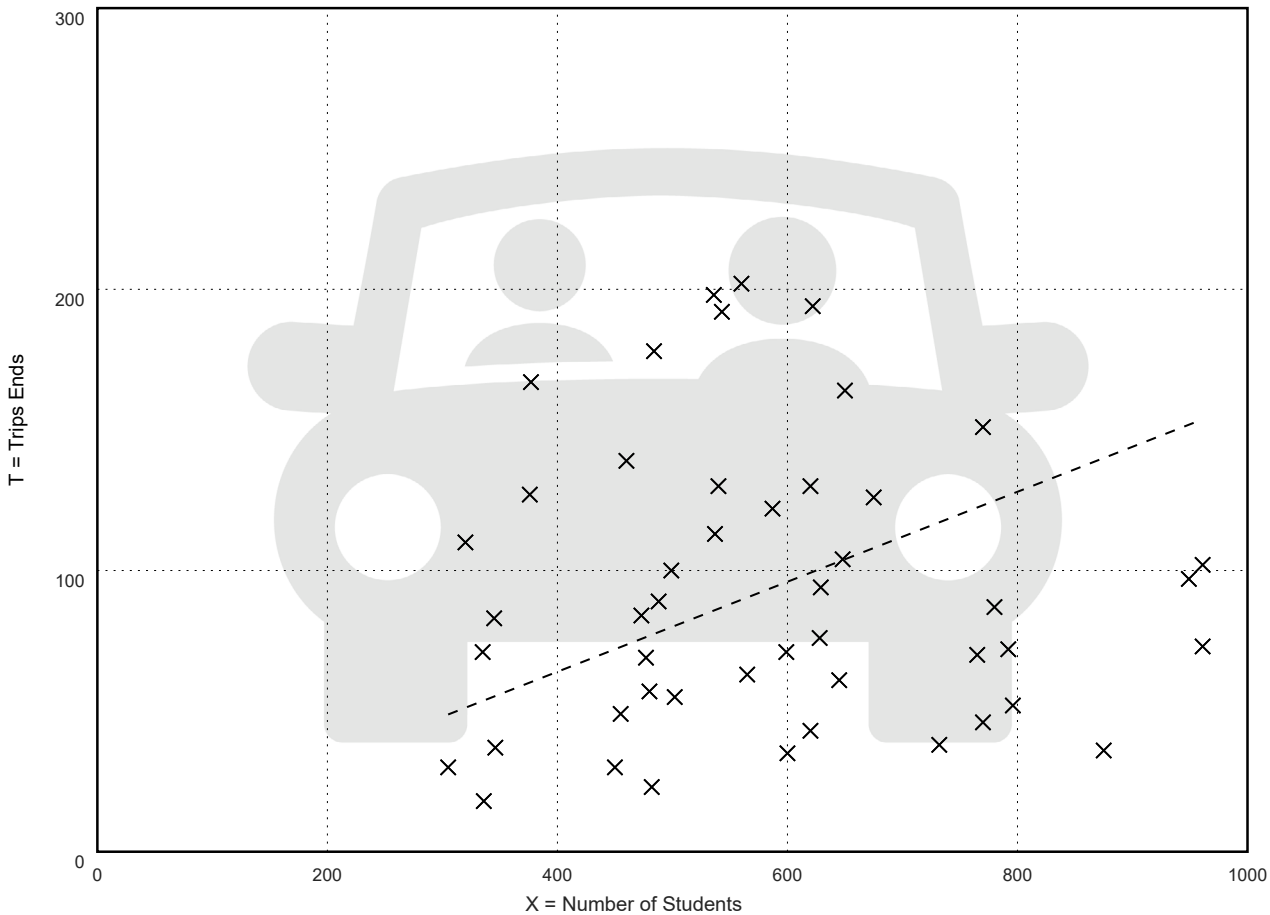
Elementary School
(520)

Vehicle Trip Ends vs:	**Students**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	48
Avg. Num. of Students:	582
Directional Distribution:	46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.16	0.04 - 0.44	0.10

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

Land Use: 590
Library

Description

A library is a facility that houses shelved books and reading rooms or areas. A library may also provide meeting rooms. A library can be either a public or private entity.

Additional Data

The sites were surveyed in the 1990s and the 2000s in Florida, Georgia, New Jersey, and Oregon.

Source Numbers

407, 415, 444, 590

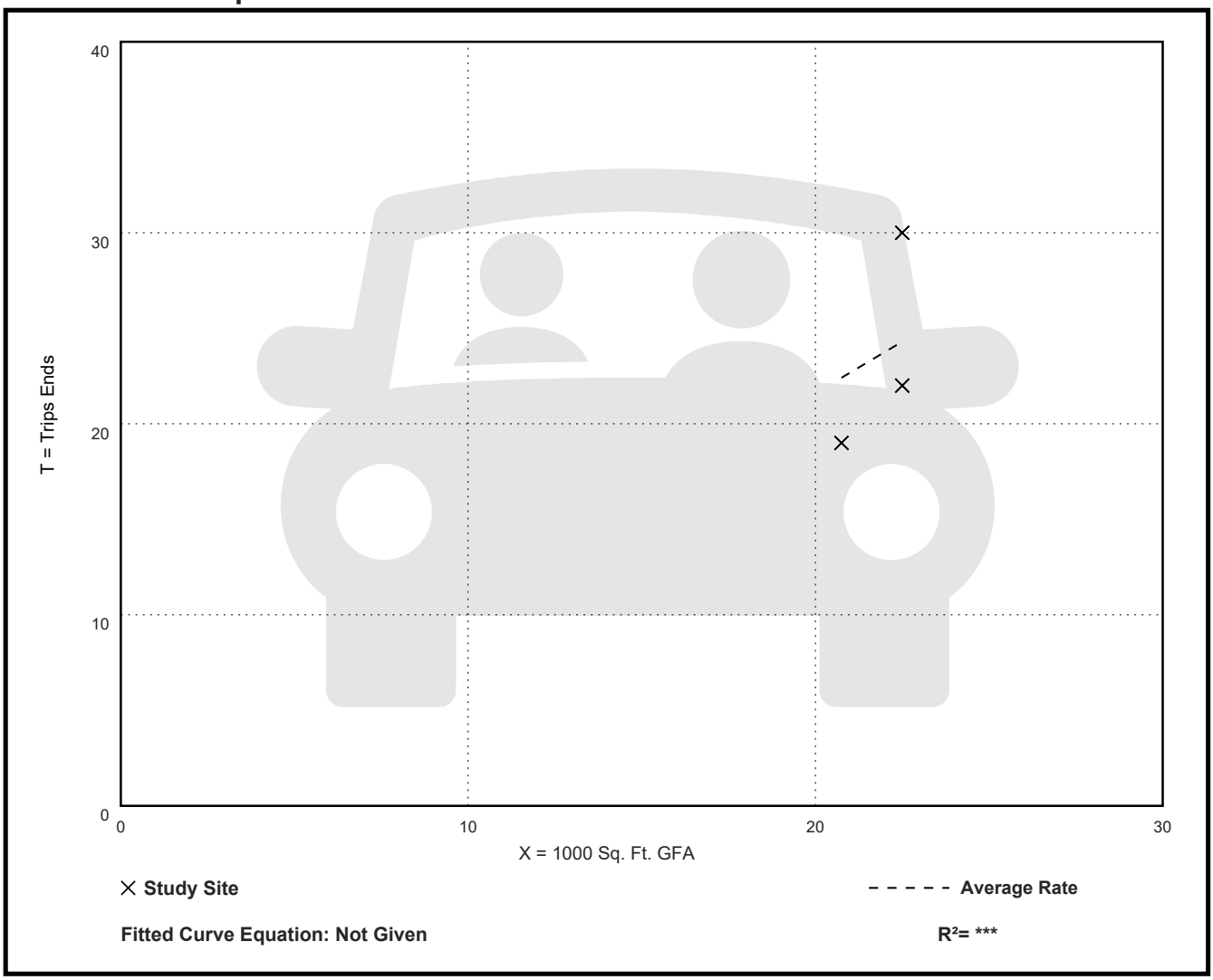
Library
(590)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	3
Avg. 1000 Sq. Ft. GFA:	22
Directional Distribution:	71% entering, 29% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.08	0.92 - 1.33	0.23

Data Plot and Equation



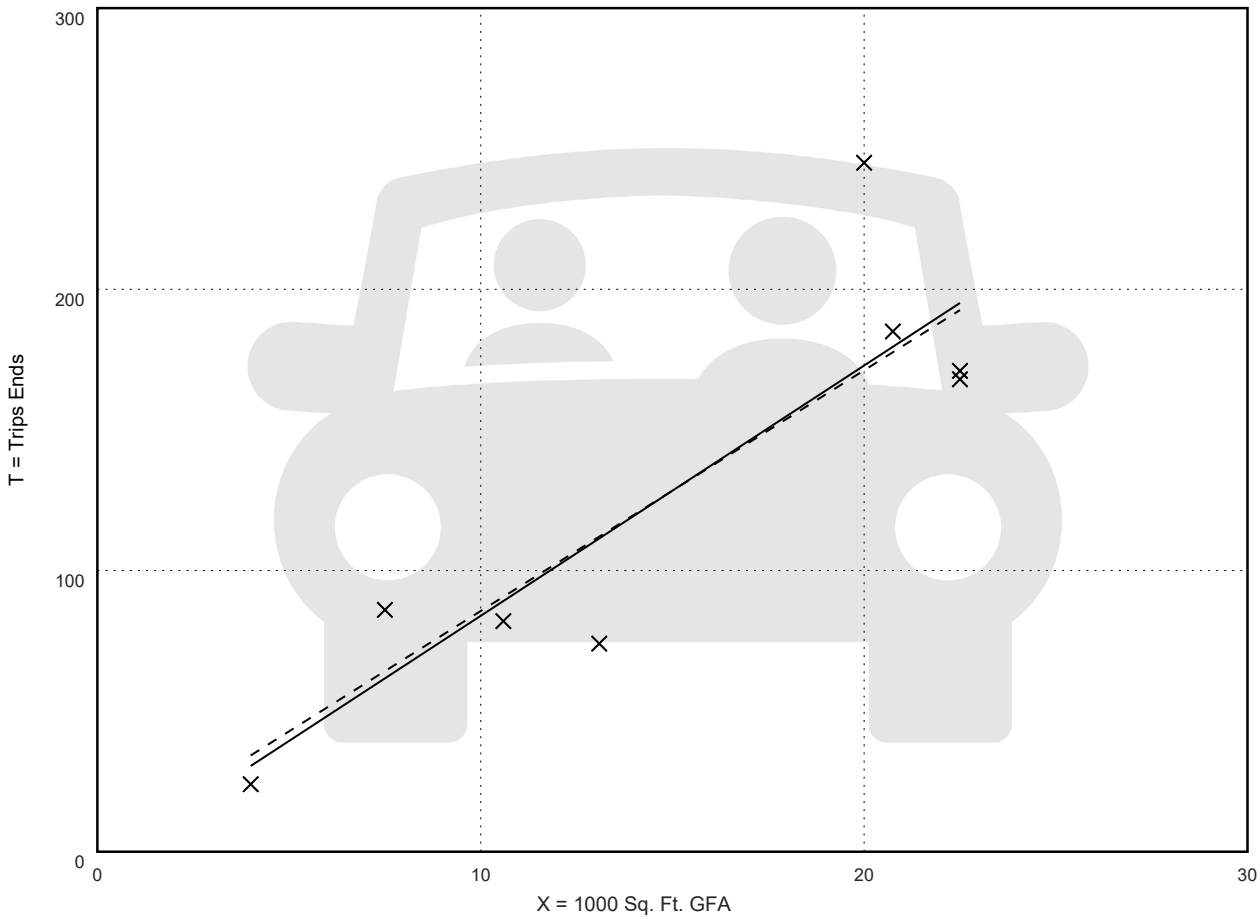
Library
(590)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.56	5.65 - 12.25	2.24

Data Plot and Equation



Fitted Curve Equation: T = 8.90(X) - 5.11

R^2= 0.77

Land Use: 770
Business Park

Description

A business park consists of a group of flex-type or incubator, one- or two-story buildings served by a common roadway system. The tenant space is flexible and lends itself to a variety of uses. The rear side of each building is often served by a garage door. Tenants may be start-up companies or small mature companies that require a variety of space. The space may include offices, retail and wholesale stores, restaurants, recreational areas, warehousing, manufacturing, light industrial, and scientific research functions. A common mix is 20 to 30 percent office/commercial and 70 to 80 percent industrial/warehousing. Industrial park (Land Use 130) is a related use.

Additional Data

The sites were surveyed in the 1990s, the 2000s, and the 2010s in New Jersey and Vermont.

Source Numbers

407, 715, 926

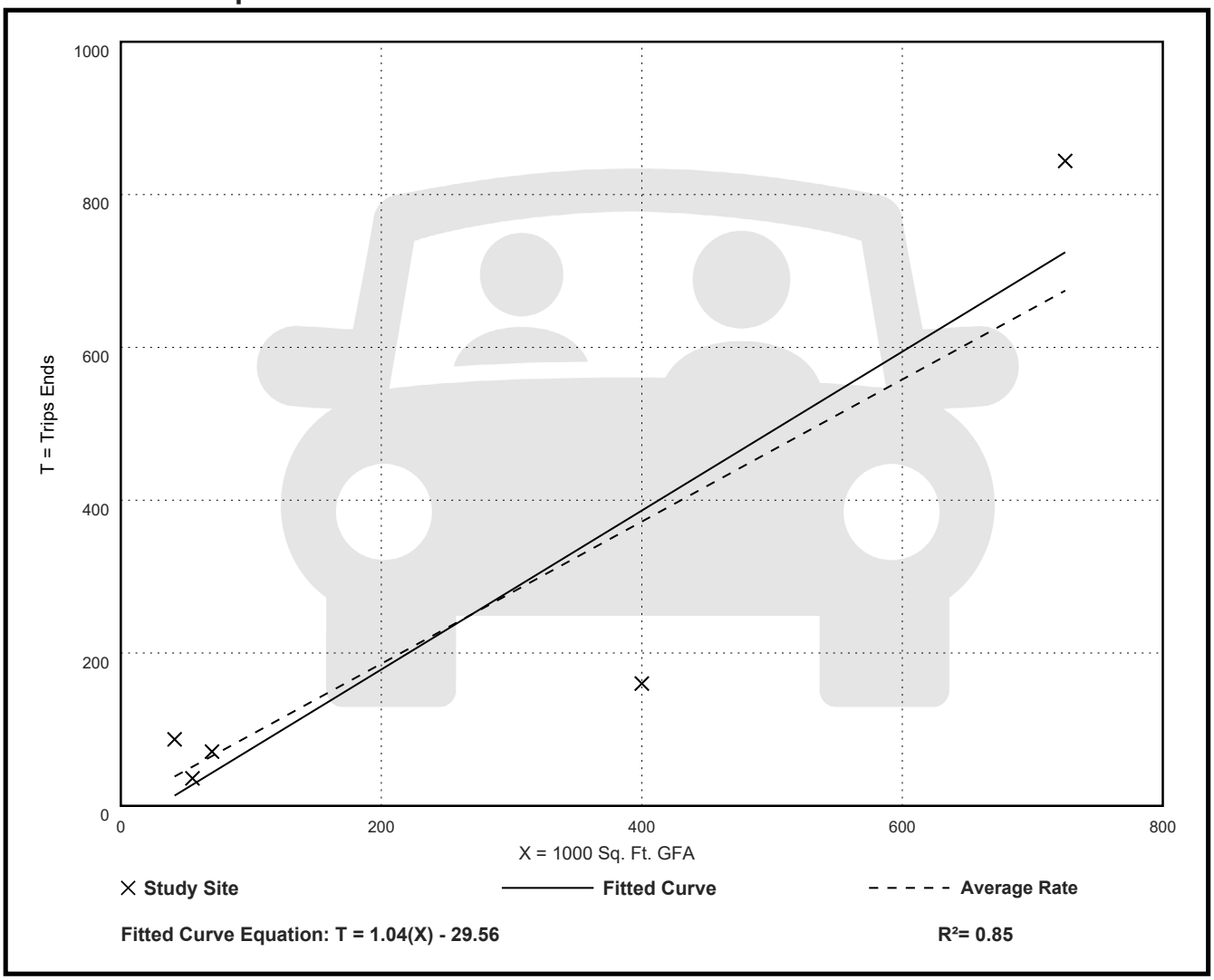
Business Park
(770)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	5
Avg. 1000 Sq. Ft. GFA:	258
Directional Distribution:	82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.93	0.40 - 2.11	0.46

Data Plot and Equation



Fitted Curve Equation: T = 1.04(X) - 29.56

R^2= 0.85

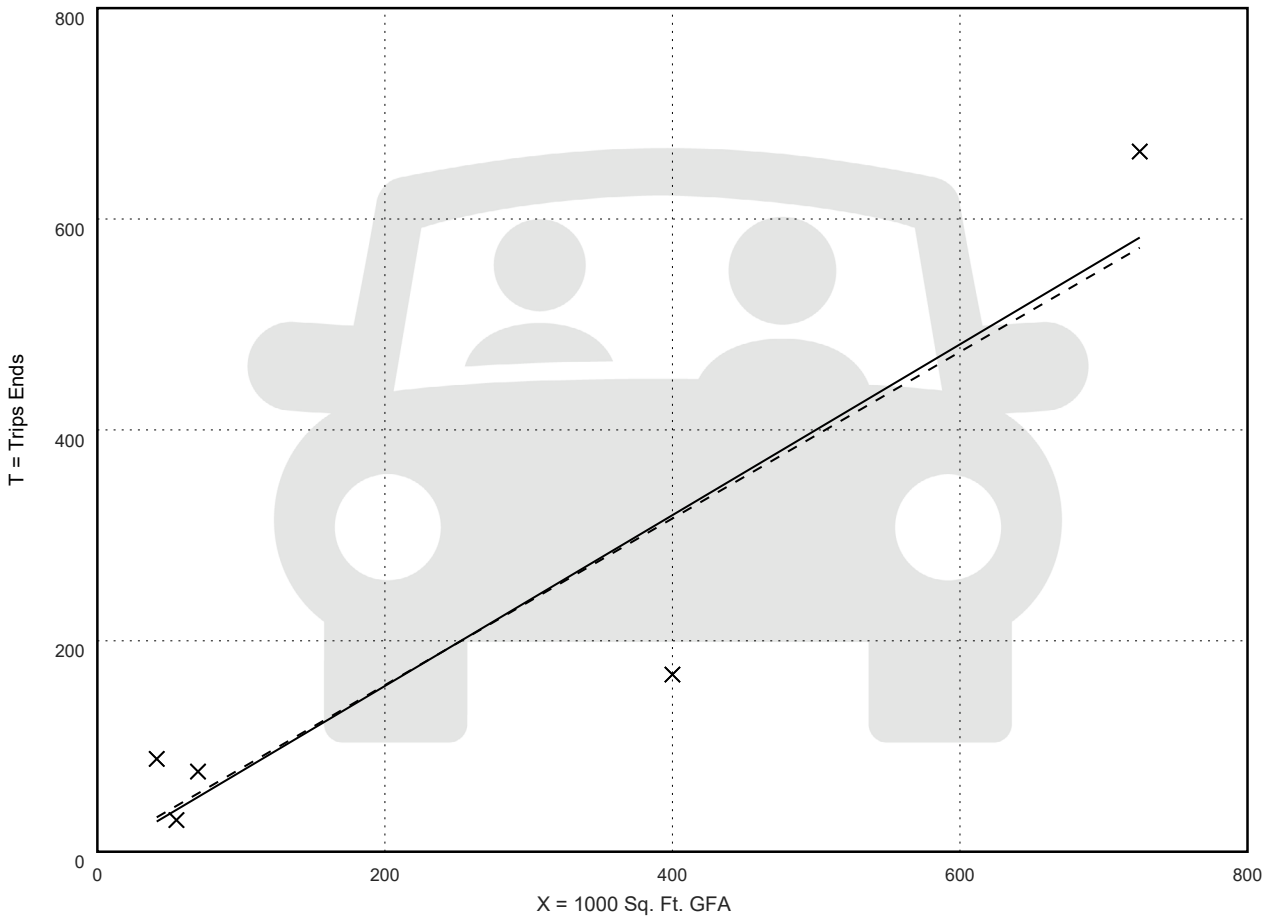
Business Park
(770)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	5
Avg. 1000 Sq. Ft. GFA:	258
Directional Distribution:	29% entering, 71% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.79	0.42 - 2.13	0.38

Data Plot and Equation



Fitted Curve Equation: T = 0.81(X) - 4.84

R^2= 0.88

Appendix F
TAZs Land Use and Trip Generation

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 1

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
89 Units	Gross Trips	3	28	31	22	2	24
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**28**	**31**	**22**	**2**	**24**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
111 Units	Gross Trips	5	28	33	21	8	29
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**28**	**33**	**21**	**8**	**29**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
602 Units	Gross Trips	36	108	144	82	30	112
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**36**	**108**	**144**	**82**	**30**	**112**
	Gross Trips	44	164	208	125	40	165
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
802 Units	**Net Trips**	**44**	**164**	**208**	**125**	**40**	**165**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
19,000 sq. ft GFA	Gross Trips	10	7	17	86	90	176
	Mode Split Reduction (28%)	3	2	5	24	25	49
	Pass-by (34% PM)	0	0	0	22	22	44
	Net Trips	**7**	**5**	**12**	**40**	**43**	**83**
	Net Trips (90% Internal)	6	5	11	36	39	75
	Net Trips (10% External)	1	0	1	4	4	8
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
19,000 sq. ft GFA	Gross Trips	34	5	39	4	20	24
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**34**	**5**	**39**	**4**	**20**	**24**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	34	5	39	4	20	24
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	44	12	56	90	110	200
	Mode Split Reduction	3	2	5	24	25	49
	Pass-by	0	0	0	22	22	44
	Net Trips	**41**	**10**	**51**	**44**	**63**	**107**
	Net Trips (Internal)	6	5	11	36	39	75
	Net Trips (External)	35	5	40	8	24	32
Total Trips	Gross Trips	88	176	264	215	150	365
	Mode Split Reduction	3	2	5	24	25	49
	Pass-by	0	0	0	22	22	44
	Net Trips	**85**	**174**	**259**	**169**	**103**	**272**
	Net Trips (Internal)	6	5	11	36	39	75
	Net Trips (External)	79	169	248	133	64	197

2041-withGO Trip Generation Table

Report for TAZ: 1

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
159 Units	Gross Trips	5	48	53	44	5	49
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**48**	**53**	**44**	**5**	**49**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
199 Units	Gross Trips	7	43	50	37	13	50
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**7**	**43**	**50**	**37**	**13**	**50**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,084 Units	Gross Trips	23	183	206	115	52	167
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**23**	**183**	**206**	**115**	**52**	**167**
	Gross Trips	35	274	309	196	70	266
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,442 Units	**Net Trips**	**35**	**274**	**309**	**196**	**70**	**266**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
35,000 sq. ft GFA	Gross Trips	19	12	31	129	135	264
	Mode Split Reduction (33%)	6	4	10	43	45	88
	Pass-by (34% PM)	0	0	0	30	30	60
	Net Trips	**13**	**8**	**21**	**56**	**60**	**116**
	Net Trips (90% Internal)	12	7	19	50	54	104
	Net Trips (10% External)	1	1	2	6	6	12
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
35,000 sq. ft GFA	Gross Trips	44	6	50	6	31	37
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**44**	**6**	**50**	**6**	**31**	**37**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	44	6	50	6	31	37
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	63	18	81	135	166	301
	Mode Split Reduction	6	4	10	43	45	88
	Pass-by	0	0	0	30	30	60
	Net Trips	**57**	**14**	**71**	**62**	**91**	**153**
	Net Trips (Internal)	12	7	19	50	54	104
	Net Trips (External)	45	7	52	12	37	49
Total Trips	Gross Trips	98	292	390	331	236	567
	Mode Split Reduction	6	4	10	43	45	88
	Pass-by	0	0	0	30	30	60
	Net Trips	**92**	**288**	**380**	**258**	**161**	**419**
	Net Trips (Internal)	12	7	19	50	54	104
	Net Trips (External)	80	281	361	208	107	315

2041-withoutGO Trip Generation Table

Report for TAZ: 1

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
159 Units	Gross Trips	5	43	48	37	4	41
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**43**	**48**	**37**	**4**	**41**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
199 Units	Gross Trips	8	47	55	38	13	51
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**8**	**47**	**55**	**38**	**13**	**51**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,084 Units	Gross Trips	65	195	260	143	53	196
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**65**	**195**	**260**	**143**	**53**	**196**
	Gross Trips	78	285	363	218	70	288
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,442 Units	**Net Trips**	**78**	**285**	**363**	**218**	**70**	**288**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
35,000 sq. ft GFA	Gross Trips	19	12	31	129	135	264
	Mode Split Reduction (28%)	5	3	8	36	38	74
	Pass-by (34% PM)	0	0	0	34	34	68
	Net Trips	**14**	**9**	**23**	**59**	**63**	**122**
	Net Trips (90% Internal)	13	8	21	53	57	110
	Net Trips (10% External)	1	1	2	6	6	12
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
35,000 sq. ft GFA	Gross Trips	44	6	50	6	31	37
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**44**	**6**	**50**	**6**	**31**	**37**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	44	6	50	6	31	37
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	63	18	81	135	166	301
	Mode Split Reduction	5	3	8	36	38	74
	Pass-by	0	0	0	34	34	68
	Net Trips	**58**	**15**	**73**	**65**	**94**	**159**
	Net Trips (Internal)	13	8	21	53	57	110
	Net Trips (External)	45	7	52	12	37	49
Total Trips	Gross Trips	141	303	444	353	236	589
	Mode Split Reduction	5	3	8	36	38	74
	Pass-by	0	0	0	34	34	68
	Net Trips	**136**	**300**	**436**	**283**	**164**	**447**
	Net Trips (Internal)	13	8	21	53	57	110
	Net Trips (External)	123	292	415	230	107	337

2051-withGO Trip Generation Table

Report for TAZ: 1

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
177 Units	Gross Trips	6	52	58	48	6	54
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**52**	**58**	**48**	**6**	**54**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
221 Units	Gross Trips	8	47	55	41	14	55
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**8**	**47**	**55**	**41**	**14**	**55**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,204 Units	Gross Trips	25	202	227	126	57	183
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**25**	**202**	**227**	**126**	**57**	**183**
	Gross Trips	39	301	340	215	77	292
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,602 Units	**Net Trips**	**39**	**301**	**340**	**215**	**77**	**292**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
63,000 sq. ft GFA	Gross Trips	34	21	55	191	198	389
	Mode Split Reduction (33%)	11	7	18	63	65	128
	Pass-by (34% PM)	0	0	0	46	46	92
	Net Trips	**23**	**14**	**37**	**82**	**87**	**169**
	Net Trips (90% Internal)	21	13	34	74	78	152
	Net Trips (10% External)	2	1	3	8	9	17
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
63,000 sq. ft GFA	Gross Trips	61	10	71	10	50	60
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**61**	**10**	**71**	**10**	**50**	**60**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	61	10	71	10	50	60
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	95	31	126	201	248	449
	Mode Split Reduction	11	7	18	63	65	128
	Pass-by	0	0	0	46	46	92
	Net Trips	**84**	**24**	**108**	**92**	**137**	**229**
	Net Trips (Internal)	21	13	34	74	78	152
	Net Trips (External)	63	11	74	18	59	77
Total Trips	Gross Trips	134	332	466	416	325	741
	Mode Split Reduction	11	7	18	63	65	128
	Pass-by	0	0	0	46	46	92
	Net Trips	**123**	**325**	**448**	**307**	**214**	**521**
	Net Trips (Internal)	21	13	34	74	78	152
	Net Trips (External)	102	312	414	233	136	369

2051-withoutGO Trip Generation Table

Report for TAZ: 1

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
177 Units	Gross Trips	5	47	52	41	5	46
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**47**	**52**	**41**	**5**	**46**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
221 Units	Gross Trips	8	53	61	43	15	58
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**8**	**53**	**61**	**43**	**15**	**58**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,204 Units	Gross Trips	72	217	289	158	59	217
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**72**	**217**	**289**	**158**	**59**	**217**
	Gross Trips	85	317	402	242	79	321
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,602 Units	**Net Trips**	**85**	**317**	**402**	**242**	**79**	**321**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
63,000 sq. ft GFA	Gross Trips	34	21	55	191	199	390
	Mode Split Reduction (28%)	10	6	16	53	56	109
	Pass-by (34% PM)	0	0	0	48	48	96
	Net Trips	**24**	**15**	**39**	**90**	**95**	**185**
	Net Trips (90% Internal)	22	14	36	81	86	167
	Net Trips (10% External)	2	1	3	9	9	18
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
63,000 sq. ft GFA	Gross Trips	61	10	71	10	50	60
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**61**	**10**	**71**	**10**	**50**	**60**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	61	10	71	10	50	60
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	95	31	126	201	249	450
	Mode Split Reduction	10	6	16	53	56	109
	Pass-by	0	0	0	48	48	96
	Net Trips	**85**	**25**	**110**	**100**	**145**	**245**
	Net Trips (Internal)	22	14	36	81	86	167
	Net Trips (External)	63	11	74	19	59	78
Total Trips	Gross Trips	180	348	528	443	328	771
	Mode Split Reduction	10	6	16	53	56	109
	Pass-by	0	0	0	48	48	96
	Net Trips	**170**	**342**	**512**	**342**	**224**	**566**
	Net Trips (Internal)	22	14	36	81	86	167
	Net Trips (External)	148	328	476	261	138	399

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 2

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
722 Units	Gross Trips	43	130	173	97	36	133
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**43**	**130**	**173**	**97**	**36**	**133**
	Gross Trips	43	130	173	97	36	133
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
722 Units	**Net Trips**	**43**	**130**	**173**	**97**	**36**	**133**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
57,000 sq. ft GFA	Gross Trips	31	19	50	179	186	365
	Mode Split Reduction (28%)	9	5	14	50	52	102
	Pass-by (34% PM)	0	0	0	46	46	92
	Net Trips	**22**	**14**	**36**	**83**	**88**	**171**
	Net Trips (90% Internal)	20	13	33	75	79	154
	Net Trips (10% External)	2	1	3	8	9	17
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
28,000 sq. ft GFA	Gross Trips	39	6	45	5	26	31
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**39**	**6**	**45**	**5**	**26**	**31**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	39	6	45	5	26	31
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	70	25	95	184	212	396
	Mode Split Reduction	9	5	14	50	52	102
	Pass-by	0	0	0	46	46	92
	Net Trips	**61**	**20**	**81**	**88**	**114**	**202**
	Net Trips (Internal)	20	13	33	75	79	154
	Net Trips (External)	41	7	48	13	35	48
Total Trips	Gross Trips	113	155	268	281	248	529
	Mode Split Reduction	9	5	14	50	52	102
	Pass-by	0	0	0	46	46	92
	Net Trips	**104**	**150**	**254**	**185**	**150**	**335**
	Net Trips (Internal)	20	13	33	75	79	154
	Net Trips (External)	84	137	221	110	71	181

2041-withGO Trip Generation Table

Report for TAZ: 2

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,299 Units	Gross Trips	27	217	244	135	61	196
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**27**	**217**	**244**	**135**	**61**	**196**
	Gross Trips	27	217	244	135	61	196
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,299 Units	**Net Trips**	**27**	**217**	**244**	**135**	**61**	**196**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
105,000 sq. ft GFA	Gross Trips	57	35	92	267	278	545
	Mode Split Reduction (33%)	19	12	31	88	92	180
	Pass-by (34% PM)	0	0	0	64	64	128
	Net Trips	**38**	**23**	**61**	**115**	**122**	**237**
	Net Trips (90% Internal)	34	21	55	104	110	214
	Net Trips (10% External)	4	2	6	11	12	23
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
51,000 sq. ft GFA	Gross Trips	54	8	62	8	42	50
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**54**	**8**	**62**	**8**	**42**	**50**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	54	8	62	8	42	50
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	111	43	154	275	320	595
	Mode Split Reduction	19	12	31	88	92	180
	Pass-by	0	0	0	64	64	128
	Net Trips	**92**	**31**	**123**	**123**	**164**	**287**
	Net Trips (Internal)	34	21	55	104	110	214
	Net Trips (External)	58	10	68	19	54	73
Total Trips	Gross Trips	138	260	398	410	381	791
	Mode Split Reduction	19	12	31	88	92	180
	Pass-by	0	0	0	64	64	128
	Net Trips	**119**	**248**	**367**	**258**	**225**	**483**
	Net Trips (Internal)	34	21	55	104	110	214
	Net Trips (External)	85	227	312	154	115	269

2041-withoutGO Trip Generation Table

Report for TAZ: 2

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,299 Units	Gross Trips	78	234	312	170	63	233
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**78**	**234**	**312**	**170**	**63**	**233**
	Gross Trips	78	234	312	170	63	233
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,299 Units	**Net Trips**	**78**	**234**	**312**	**170**	**63**	**233**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
105,000 sq. ft GFA	Gross Trips	57	35	92	267	278	545
	Mode Split Reduction (28%)	16	10	26	75	78	153
	Pass-by (34% PM)	0	0	0	68	68	136
	Net Trips	**41**	**25**	**66**	**124**	**132**	**256**
	Net Trips (90% Internal)	37	23	60	112	119	231
	Net Trips (10% External)	4	2	6	12	13	25
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
51,000 sq. ft GFA	Gross Trips	54	8	62	8	42	50
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**54**	**8**	**62**	**8**	**42**	**50**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	54	8	62	8	42	50
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	111	43	154	275	320	595
	Mode Split Reduction	16	10	26	75	78	153
	Pass-by	0	0	0	68	68	136
	Net Trips	**95**	**33**	**128**	**132**	**174**	**306**
	Net Trips (Internal)	37	23	60	112	119	231
	Net Trips (External)	58	10	68	20	55	75
Total Trips	Gross Trips	189	277	466	445	383	828
	Mode Split Reduction	16	10	26	75	78	153
	Pass-by	0	0	0	68	68	136
	Net Trips	**173**	**267**	**440**	**302**	**237**	**539**
	Net Trips (Internal)	37	23	60	112	119	231
	Net Trips (External)	136	244	380	190	118	308

2051-withGO Trip Generation Table

Report for TAZ: 2

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,443 Units	Gross Trips	30	239	269	148	67	215
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**30**	**239**	**269**	**148**	**67**	**215**
	Gross Trips	30	239	269	148	67	215
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,443 Units	**Net Trips**	**30**	**239**	**269**	**148**	**67**	**215**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
191,000 sq. ft GFA	Gross Trips	104	64	168	397	413	810
	Mode Split Reduction (33%)	34	21	55	131	136	267
	Pass-by (34% PM)	0	0	0	94	94	188
	Net Trips	**70**	**43**	**113**	**172**	**183**	**355**
	Net Trips (90% Internal)	63	39	102	155	165	320
	Net Trips (10% External)	7	4	11	17	18	35
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
92,000 sq. ft GFA	Gross Trips	80	11	91	13	71	84
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**80**	**11**	**91**	**13**	**71**	**84**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	80	11	91	13	71	84
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	184	75	259	410	484	894
	Mode Split Reduction	34	21	55	131	136	267
	Pass-by	0	0	0	94	94	188
	Net Trips	**150**	**54**	**204**	**185**	**254**	**439**
	Net Trips (Internal)	63	39	102	155	165	320
	Net Trips (External)	87	15	102	30	89	119
Total Trips	Gross Trips	214	314	528	558	551	1109
	Mode Split Reduction	34	21	55	131	136	267
	Pass-by	0	0	0	94	94	188
	Net Trips	**180**	**293**	**473**	**333**	**321**	**654**
	Net Trips (Internal)	63	39	102	155	165	320
	Net Trips (External)	117	254	371	178	156	334

2051-withoutGO Trip Generation Table

Report for TAZ: 2

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,443 Units	Gross Trips	87	259	346	188	70	258
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**87**	**259**	**346**	**188**	**70**	**258**
	Gross Trips	87	259	346	188	70	258
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,443 Units	**Net Trips**	**87**	**259**	**346**	**188**	**70**	**258**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
191,000 sq. ft GFA	Gross Trips	104	64	168	397	413	810
	Mode Split Reduction (28%)	29	18	47	111	116	227
	Pass-by (34% PM)	0	0	0	100	100	200
	Net Trips	**75**	**46**	**121**	**186**	**197**	**383**
	Net Trips (90% Internal)	68	41	109	167	177	344
	Net Trips (10% External)	7	5	12	19	20	39
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
92,000 sq. ft GFA	Gross Trips	80	11	91	13	70	83
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**80**	**11**	**91**	**13**	**70**	**83**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	80	11	91	13	70	83
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	184	75	259	410	483	893
	Mode Split Reduction	29	18	47	111	116	227
	Pass-by	0	0	0	100	100	200
	Net Trips	**155**	**57**	**212**	**199**	**267**	**466**
	Net Trips (Internal)	68	41	109	167	177	344
	Net Trips (External)	87	16	103	32	90	122
Total Trips	Gross Trips	271	334	605	598	553	1151
	Mode Split Reduction	29	18	47	111	116	227
	Pass-by	0	0	0	100	100	200
	Net Trips	**242**	**316**	**558**	**387**	**337**	**724**
	Net Trips (Internal)	68	41	109	167	177	344
	Net Trips (External)	174	275	449	220	160	380

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 3

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
96 Units	Gross Trips	3	30	33	24	3	27
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**30**	**33**	**24**	**3**	**27**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
34 Units	Gross Trips	2	12	14	7	2	9
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**12**	**14**	**7**	**2**	**9**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
34 Units	Gross Trips	2	6	8	5	2	7
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**6**	**8**	**5**	**2**	**7**
	Gross Trips	7	48	55	36	7	43
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
164 Units	**Net Trips**	**7**	**48**	**55**	**36**	**7**	**43**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	7	48	55	36	7	43
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**7**	**48**	**55**	**36**	**7**	**43**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	7	48	55	36	7	43

2041-withGO Trip Generation Table

Report for TAZ: 3

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
172 Units	Gross Trips	6	51	57	47	5	52
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**51**	**57**	**47**	**5**	**52**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
61 Units	Gross Trips	2	13	15	12	5	17
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**13**	**15**	**12**	**5**	**17**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
61 Units	Gross Trips	2	12	14	9	5	14
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**12**	**14**	**9**	**5**	**14**
	Gross Trips	10	76	86	68	15	83
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
294 Units	**Net Trips**	**10**	**76**	**86**	**68**	**15**	**83**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	10	76	86	68	15	83
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**10**	**76**	**86**	**68**	**15**	**83**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	10	76	86	68	15	83

2041-withoutGO Trip Generation Table

Report for TAZ: 3

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
172 Units	Gross Trips	5	46	51	40	4	44
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**46**	**51**	**40**	**4**	**44**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
61 Units	Gross Trips	3	18	21	12	4	16
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**18**	**21**	**12**	**4**	**16**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
61 Units	Gross Trips	4	11	15	9	3	12
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**11**	**15**	**9**	**3**	**12**
	Gross Trips	12	75	87	61	11	72
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
294 Units	**Net Trips**	**12**	**75**	**87**	**61**	**11**	**72**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	12	75	87	61	11	72
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**12**	**75**	**87**	**61**	**11**	**72**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	12	75	87	61	11	72

2051-withGO Trip Generation Table

Report for TAZ: 3

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
191 Units	Gross Trips	6	56	62	52	6	58
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**56**	**62**	**52**	**6**	**58**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
68 Units	Gross Trips	3	14	17	14	4	18
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**14**	**17**	**14**	**4**	**18**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
68 Units	Gross Trips	2	14	16	10	5	15
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**14**	**16**	**10**	**5**	**15**
	Gross Trips	11	84	95	76	15	91
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
327 Units	**Net Trips**	**11**	**84**	**95**	**76**	**15**	**91**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	11	84	95	76	15	91
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**11**	**84**	**95**	**76**	**15**	**91**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	11	84	95	76	15	91

2051-withoutGO Trip Generation Table

Report for TAZ: 3

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
191 Units	Gross Trips	6	49	55	44	5	49
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**49**	**55**	**44**	**5**	**49**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
68 Units	Gross Trips	3	19	22	13	5	18
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**19**	**22**	**13**	**5**	**18**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
68 Units	Gross Trips	4	12	16	10	4	14
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**12**	**16**	**10**	**4**	**14**
	Gross Trips	13	80	93	67	14	81
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
327 Units	**Net Trips**	**13**	**80**	**93**	**67**	**14**	**81**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	13	80	93	67	14	81
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**13**	**80**	**93**	**67**	**14**	**81**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	13	80	93	67	14	81

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 4

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
70 Units	Gross Trips	3	23	26	18	2	20
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**23**	**26**	**18**	**2**	**20**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
35 Units	Gross Trips	2	12	14	7	2	9
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**12**	**14**	**7**	**2**	**9**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
78 Units	Gross Trips	5	14	19	12	4	16
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**14**	**19**	**12**	**4**	**16**
	Gross Trips	10	49	59	37	8	45
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
183 Units	**Net Trips**	**10**	**49**	**59**	**37**	**8**	**45**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	10	49	59	37	8	45
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**10**	**49**	**59**	**37**	**8**	**45**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	10	49	59	37	8	45

2041-withGO Trip Generation Table

Report for TAZ: 4

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
125 Units	Gross Trips	4	39	43	36	4	40
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**39**	**43**	**36**	**4**	**40**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
62 Units	Gross Trips	2	14	16	12	5	17
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**14**	**16**	**12**	**5**	**17**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
140 Units	Gross Trips	3	28	31	19	9	28
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**28**	**31**	**19**	**9**	**28**
	Gross Trips	9	81	90	67	18	85
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
327 Units	**Net Trips**	**9**	**81**	**90**	**67**	**18**	**85**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	9	81	90	67	18	85
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**9**	**81**	**90**	**67**	**18**	**85**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	9	81	90	67	18	85

2041-withoutGO Trip Generation Table

Report for TAZ: 4

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
125 Units	Gross Trips	4	36	40	30	3	33
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**36**	**40**	**30**	**3**	**33**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
62 Units	Gross Trips	3	18	21	12	4	16
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**18**	**21**	**12**	**4**	**16**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
140 Units	Gross Trips	8	26	34	20	8	28
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**8**	**26**	**34**	**20**	**8**	**28**
	Gross Trips	15	80	95	62	15	77
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
327 Units	**Net Trips**	**15**	**80**	**95**	**62**	**15**	**77**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	15	80	95	62	15	77
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**15**	**80**	**95**	**62**	**15**	**77**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	15	80	95	62	15	77

2051-withGO Trip Generation Table

Report for TAZ: 4

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
139 Units	Gross Trips	5	42	47	39	4	43
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**42**	**47**	**39**	**4**	**43**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
69 Units	Gross Trips	3	14	17	14	5	19
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**14**	**17**	**14**	**5**	**19**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
155 Units	Gross Trips	4	30	34	21	10	31
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**30**	**34**	**21**	**10**	**31**
	Gross Trips	12	86	98	74	19	93
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
363 Units	**Net Trips**	**12**	**86**	**98**	**74**	**19**	**93**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	12	86	98	74	19	93
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**12**	**86**	**98**	**74**	**19**	**93**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	12	86	98	74	19	93

2051-withoutGO Trip Generation Table

Report for TAZ: 4

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
139 Units	Gross Trips	4	39	43	33	4	37
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**39**	**43**	**33**	**4**	**37**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
69 Units	Gross Trips	3	20	23	13	5	18
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**20**	**23**	**13**	**5**	**18**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
155 Units	Gross Trips	9	28	37	23	8	31
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**9**	**28**	**37**	**23**	**8**	**31**
	Gross Trips	16	87	103	69	17	86
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
363 Units	**Net Trips**	**16**	**87**	**103**	**69**	**17**	**86**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	16	87	103	69	17	86
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**16**	**87**	**103**	**69**	**17**	**86**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	16	87	103	69	17	86

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 5

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
44 Units	Gross Trips	2	18	20	12	1	13
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**18**	**20**	**12**	**1**	**13**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	2	18	20	12	1	13
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
44 Units	**Net Trips**	**2**	**18**	**20**	**12**	**1**	**13**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	32	27	59	6	7	13
Total Trips	Gross Trips	298	270	568	67	66	133
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**215**	**199**	**414**	**52**	**48**	**100**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	34	45	79	18	8	26

2041-withGO Trip Generation Table

Report for TAZ: 5

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
79 Units	Gross Trips	3	26	29	24	2	26
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**26**	**29**	**24**	**2**	**26**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	3	26	29	24	2	26
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
79 Units	**Net Trips**	**3**	**26**	**29**	**24**	**2**	**26**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	32	27	59	6	7	13
Total Trips	Gross Trips	299	278	577	79	67	146
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**216**	**207**	**423**	**64**	**49**	**113**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	35	53	88	30	9	39

2041-withoutGO Trip Generation Table

Report for TAZ: 5

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
79 Units	Gross Trips	3	26	29	20	2	22
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**26**	**29**	**20**	**2**	**22**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	3	26	29	20	2	22
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
79 Units	**Net Trips**	**3**	**26**	**29**	**20**	**2**	**22**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	32	27	59	6	7	13
Total Trips	Gross Trips	299	278	577	75	67	142
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**216**	**207**	**423**	**60**	**49**	**109**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	35	53	88	26	9	35

2051-withGO Trip Generation Table

Report for TAZ: 5

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
88 Units	Gross Trips	3	29	32	26	3	29
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**29**	**32**	**26**	**3**	**29**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	3	29	32	26	3	29
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
88 Units	**Net Trips**	**3**	**29**	**32**	**26**	**3**	**29**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	32	27	59	6	7	13
Total Trips	Gross Trips	299	281	580	81	68	149
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**216**	**210**	**426**	**66**	**50**	**116**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	35	56	91	32	10	42

2051-withoutGO Trip Generation Table

Report for TAZ: 5

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
88 Units	Gross Trips	3	28	31	22	2	24
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**28**	**31**	**22**	**2**	**24**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	3	28	31	22	2	24
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
88 Units	**Net Trips**	**3**	**28**	**31**	**22**	**2**	**24**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
750 Students	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction (28%)	83	71	154	15	18	33
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (85% Internal)	181	154	335	34	40	74
	Net Trips (15% External)	32	27	59	6	7	13
Total Non-Residential	Gross Trips	296	252	548	55	65	120
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**213**	**181**	**394**	**40**	**47**	**87**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	32	27	59	6	7	13
Total Trips	Gross Trips	299	280	579	77	67	144
	Mode Split Reduction	83	71	154	15	18	33
	Pass-by	0	0	0	0	0	0
	Net Trips	**216**	**209**	**425**	**62**	**49**	**111**
	Net Trips (Internal)	181	154	335	34	40	74
	Net Trips (External)	35	55	90	28	9	37

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 6

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
34 Units	Gross Trips	2	16	18	10	1	11
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**16**	**18**	**10**	**1**	**11**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
9 Units	Gross Trips	1	7	8	2	1	3
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**7**	**8**	**2**	**1**	**3**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
9 Units	Gross Trips	1	1	2	2	1	3
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**1**	**2**	**2**	**1**	**3**
	Gross Trips	4	24	28	14	3	17
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
52 Units	**Net Trips**	**4**	**24**	**28**	**14**	**3**	**17**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	4	24	28	14	3	17
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**4**	**24**	**28**	**14**	**3**	**17**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	4	24	28	14	3	17

2041-withGO Trip Generation Table

Report for TAZ: 6

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
61 Units	Gross Trips	2	21	23	19	2	21
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**21**	**23**	**19**	**2**	**21**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
16 Units	Gross Trips	1	3	4	4	2	6
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**3**	**4**	**4**	**2**	**6**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
16 Units	Gross Trips	0	4	4	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**4**	**4**	**3**	**1**	**4**
	Gross Trips	3	28	31	26	5	31
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
93 Units	**Net Trips**	**3**	**28**	**31**	**26**	**5**	**31**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	3	28	31	26	5	31
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**3**	**28**	**31**	**26**	**5**	**31**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	3	28	31	26	5	31

2041-withoutGO Trip Generation Table

Report for TAZ: 6

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
61 Units	Gross Trips	2	22	24	16	2	18
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**22**	**24**	**16**	**2**	**18**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
16 Units	Gross Trips	1	8	9	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**8**	**9**	**3**	**1**	**4**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
16 Units	Gross Trips	1	3	4	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**3**	**4**	**3**	**1**	**4**
	Gross Trips	4	33	37	22	4	26
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
93 Units	**Net Trips**	**4**	**33**	**37**	**22**	**4**	**26**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	4	33	37	22	4	26
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**4**	**33**	**37**	**22**	**4**	**26**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	4	33	37	22	4	26

2051-withGO Trip Generation Table

Report for TAZ: 6

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
68 Units	Gross Trips	3	22	25	21	2	23
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**22**	**25**	**21**	**2**	**23**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
18 Units	Gross Trips	1	4	5	5	1	6
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**4**	**5**	**5**	**1**	**6**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
18 Units	Gross Trips	1	4	5	3	2	5
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**4**	**5**	**3**	**2**	**5**
	Gross Trips	5	30	35	29	5	34
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
104 Units	**Net Trips**	**5**	**30**	**35**	**29**	**5**	**34**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	5	30	35	29	5	34
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**5**	**30**	**35**	**29**	**5**	**34**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	5	30	35	29	5	34

2051-withoutGO Trip Generation Table

Report for TAZ: 6

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
68 Units	Gross Trips	3	23	26	18	2	20
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**23**	**26**	**18**	**2**	**20**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
18 Units	Gross Trips	1	9	10	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**9**	**10**	**3**	**1**	**4**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
18 Units	Gross Trips	1	3	4	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**3**	**4**	**3**	**1**	**4**
	Gross Trips	5	35	40	24	4	28
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
104 Units	**Net Trips**	**5**	**35**	**40**	**24**	**4**	**28**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	5	35	40	24	4	28
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**5**	**35**	**40**	**24**	**4**	**28**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	5	35	40	24	4	28

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 7

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
416 Units	Gross Trips	25	75	100	58	21	79
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**25**	**75**	**100**	**58**	**21**	**79**
	Gross Trips	25	75	100	58	21	79
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
416 Units	**Net Trips**	**25**	**75**	**100**	**58**	**21**	**79**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
52,000 sq. ft GFA	Gross Trips	28	18	46	168	175	343
	Mode Split Reduction (28%)	8	5	13	47	49	96
	Pass-by (34% PM)	0	0	0	42	42	84
	Net Trips	**20**	**13**	**33**	**79**	**84**	**163**
	Net Trips (90% Internal)	18	12	30	71	76	147
	Net Trips (10% External)	2	1	3	8	8	16
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
17,000 sq. ft GFA	Gross Trips	33	4	37	3	18	21
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**33**	**4**	**37**	**3**	**18**	**21**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	33	4	37	3	18	21
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	61	22	83	171	193	364
	Mode Split Reduction	8	5	13	47	49	96
	Pass-by	0	0	0	42	42	84
	Net Trips	**53**	**17**	**70**	**82**	**102**	**184**
	Net Trips (Internal)	18	12	30	71	76	147
	Net Trips (External)	35	5	40	11	26	37
Total Trips	Gross Trips	86	97	183	229	214	443
	Mode Split Reduction	8	5	13	47	49	96
	Pass-by	0	0	0	42	42	84
	Net Trips	**78**	**92**	**170**	**140**	**123**	**263**
	Net Trips (Internal)	18	12	30	71	76	147
	Net Trips (External)	60	80	140	69	47	116

2041-withGO Trip Generation Table

Report for TAZ: 7

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
749 Units	Gross Trips	16	130	146	84	37	121
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**16**	**130**	**146**	**84**	**37**	**121**
	Gross Trips	16	130	146	84	37	121
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
749 Units	**Net Trips**	**16**	**130**	**146**	**84**	**37**	**121**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
94,000 sq. ft GFA	Gross Trips	51	32	83	248	259	507
	Mode Split Reduction (33%)	17	11	28	82	85	167
	Pass-by (34% PM)	0	0	0	58	58	116
	Net Trips	**34**	**21**	**55**	**108**	**116**	**224**
	Net Trips (90% Internal)	31	19	50	97	104	201
	Net Trips (10% External)	3	2	5	11	12	23
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
31,000 sq. ft GFA	Gross Trips	41	6	47	5	28	33
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**41**	**6**	**47**	**5**	**28**	**33**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	41	6	47	5	28	33
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	92	38	130	253	287	540
	Mode Split Reduction	17	11	28	82	85	167
	Pass-by	0	0	0	58	58	116
	Net Trips	**75**	**27**	**102**	**113**	**144**	**257**
	Net Trips (Internal)	31	19	50	97	104	201
	Net Trips (External)	44	8	52	16	40	56
Total Trips	Gross Trips	108	168	276	337	324	661
	Mode Split Reduction	17	11	28	82	85	167
	Pass-by	0	0	0	58	58	116
	Net Trips	**91**	**157**	**248**	**197**	**181**	**378**
	Net Trips (Internal)	31	19	50	97	104	201
	Net Trips (External)	60	138	198	100	77	177

2041-withoutGO Trip Generation Table

Report for TAZ: 7

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
749 Units	Gross Trips	45	135	180	101	37	138
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**45**	**135**	**180**	**101**	**37**	**138**
	Gross Trips	45	135	180	101	37	138
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
749 Units	**Net Trips**	**45**	**135**	**180**	**101**	**37**	**138**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
94,000 sq. ft GFA	Gross Trips	51	32	83	248	259	507
	Mode Split Reduction (28%)	14	9	23	69	73	142
	Pass-by (34% PM)	0	0	0	64	64	128
	Net Trips	**37**	**23**	**60**	**115**	**122**	**237**
	Net Trips (90% Internal)	33	21	54	104	110	214
	Net Trips (10% External)	4	2	6	11	12	23
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
31,000 sq. ft GFA	Gross Trips	41	6	47	5	28	33
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**41**	**6**	**47**	**5**	**28**	**33**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	41	6	47	5	28	33
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	92	38	130	253	287	540
	Mode Split Reduction	14	9	23	69	73	142
	Pass-by	0	0	0	64	64	128
	Net Trips	**78**	**29**	**107**	**120**	**150**	**270**
	Net Trips (Internal)	33	21	54	104	110	214
	Net Trips (External)	45	8	53	16	40	56
Total Trips	Gross Trips	137	173	310	354	324	678
	Mode Split Reduction	14	9	23	69	73	142
	Pass-by	0	0	0	64	64	128
	Net Trips	**123**	**164**	**287**	**221**	**187**	**408**
	Net Trips (Internal)	33	21	54	104	110	214
	Net Trips (External)	90	143	233	117	77	194

2051-withGO Trip Generation Table

Report for TAZ: 7

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
832 Units	Gross Trips	18	143	161	92	41	133
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**18**	**143**	**161**	**92**	**41**	**133**
	Gross Trips	18	143	161	92	41	133
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
832 Units	**Net Trips**	**18**	**143**	**161**	**92**	**41**	**133**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
172,000 sq. ft GFA	Gross Trips	94	57	151	370	385	755
	Mode Split Reduction (33%)	31	19	50	122	127	249
	Pass-by (34% PM)	0	0	0	88	88	176
	Net Trips	**63**	**38**	**101**	**160**	**170**	**330**
	Net Trips (90% Internal)	57	34	91	144	153	297
	Net Trips (10% External)	6	4	10	16	17	33
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
57,000 sq. ft GFA	Gross Trips	58	8	66	9	46	55
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**58**	**8**	**66**	**9**	**46**	**55**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	58	8	66	9	46	55
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	152	65	217	379	431	810
	Mode Split Reduction	31	19	50	122	127	249
	Pass-by	0	0	0	88	88	176
	Net Trips	**121**	**46**	**167**	**169**	**216**	**385**
	Net Trips (Internal)	57	34	91	144	153	297
	Net Trips (External)	64	12	76	25	63	88
Total Trips	Gross Trips	170	208	378	471	472	943
	Mode Split Reduction	31	19	50	122	127	249
	Pass-by	0	0	0	88	88	176
	Net Trips	**139**	**189**	**328**	**261**	**257**	**518**
	Net Trips (Internal)	57	34	91	144	153	297
	Net Trips (External)	82	155	237	117	104	221

2051-withoutGO Trip Generation Table

Report for TAZ: 7

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
832 Units	Gross Trips	50	150	200	111	41	152
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**50**	**150**	**200**	**111**	**41**	**152**
	Gross Trips	50	150	200	111	41	152
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
832 Units	**Net Trips**	**50**	**150**	**200**	**111**	**41**	**152**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
172,000 sq. ft GFA	Gross Trips	94	57	151	370	385	755
	Mode Split Reduction (28%)	26	16	42	104	108	212
	Pass-by (34% PM)	0	0	0	94	94	188
	Net Trips	**68**	**41**	**109**	**172**	**183**	**355**
	Net Trips (90% Internal)	61	37	98	155	165	320
	Net Trips (10% External)	7	4	11	17	18	35
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
57,000 sq. ft GFA	Gross Trips	58	8	66	9	46	55
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**58**	**8**	**66**	**9**	**46**	**55**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	58	8	66	9	46	55
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	152	65	217	379	431	810
	Mode Split Reduction	26	16	42	104	108	212
	Pass-by	0	0	0	94	94	188
	Net Trips	**126**	**49**	**175**	**181**	**229**	**410**
	Net Trips (Internal)	61	37	98	155	165	320
	Net Trips (External)	65	12	77	26	64	90
Total Trips	Gross Trips	202	215	417	490	472	962
	Mode Split Reduction	26	16	42	104	108	212
	Pass-by	0	0	0	94	94	188
	Net Trips	**176**	**199**	**375**	**292**	**270**	**562**
	Net Trips (Internal)	61	37	98	155	165	320
	Net Trips (External)	115	162	277	137	105	242

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 8

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
29 Units	Gross Trips	2	15	17	9	1	10
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**15**	**17**	**9**	**1**	**10**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
15 Units	Gross Trips	1	8	9	3	1	4
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**8**	**9**	**3**	**1**	**4**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
15 Units	Gross Trips	1	3	4	2	1	3
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**3**	**4**	**2**	**1**	**3**
	Gross Trips	4	26	30	14	3	17
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
59 Units	**Net Trips**	**4**	**26**	**30**	**14**	**3**	**17**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
24,000 sq. ft GFA	Gross Trips	13	8	21	101	105	206
	Mode Split Reduction (28%)	4	2	6	28	29	57
	Pass-by (34% PM)	0	0	0	26	26	52
	Net Trips	**9**	**6**	**15**	**47**	**50**	**97**
	Net Trips (90% Internal)	8	5	13	42	45	87
	Net Trips (10% External)	1	1	2	5	5	10
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
8,000 sq. ft GFA	Gross Trips	27	4	31	2	12	14
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**27**	**4**	**31**	**2**	**12**	**14**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	27	4	31	2	12	14
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	40	12	52	103	117	220
	Mode Split Reduction	4	2	6	28	29	57
	Pass-by	0	0	0	26	26	52
	Net Trips	**36**	**10**	**46**	**49**	**62**	**111**
	Net Trips (Internal)	8	5	13	42	45	87
	Net Trips (External)	28	5	33	7	17	24
Total Trips	Gross Trips	44	38	82	117	120	237
	Mode Split Reduction	4	2	6	28	29	57
	Pass-by	0	0	0	26	26	52
	Net Trips	**40**	**36**	**76**	**63**	**65**	**128**
	Net Trips (Internal)	8	5	13	42	45	87
	Net Trips (External)	32	31	63	21	20	41

2041-withGO Trip Generation Table

Report for TAZ: 8

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
51 Units	Gross Trips	2	18	20	16	2	18
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**18**	**20**	**16**	**2**	**18**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
26 Units	Gross Trips	1	6	7	6	2	8
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**6**	**7**	**6**	**2**	**8**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
26 Units	Gross Trips	1	5	6	4	3	7
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**5**	**6**	**4**	**3**	**7**
	Gross Trips	4	29	33	26	7	33
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
103 Units	**Net Trips**	**4**	**29**	**33**	**26**	**7**	**33**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
43,000 sq. ft GFA	Gross Trips	23	15	38	148	155	303
	Mode Split Reduction (33%)	8	5	13	49	51	100
	Pass-by (34% PM)	0	0	0	36	36	72
	Net Trips	**15**	**10**	**25**	**63**	**68**	**131**
	Net Trips (90% Internal)	14	9	23	57	61	118
	Net Trips (10% External)	1	1	2	6	7	13
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
14,000 sq. ft GFA	Gross Trips	31	4	35	3	16	19
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**31**	**4**	**35**	**3**	**16**	**19**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	31	4	35	3	16	19
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	54	19	73	151	171	322
	Mode Split Reduction	8	5	13	49	51	100
	Pass-by	0	0	0	36	36	72
	Net Trips	**46**	**14**	**60**	**66**	**84**	**150**
	Net Trips (Internal)	14	9	23	57	61	118
	Net Trips (External)	32	5	37	9	23	32
Total Trips	Gross Trips	58	48	106	177	178	355
	Mode Split Reduction	8	5	13	49	51	100
	Pass-by	0	0	0	36	36	72
	Net Trips	**50**	**43**	**93**	**92**	**91**	**183**
	Net Trips (Internal)	14	9	23	57	61	118
	Net Trips (External)	36	34	70	35	30	65

2041-withoutGO Trip Generation Table

Report for TAZ: 8

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
51 Units	Gross Trips	2	20	22	14	2	16
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**20**	**22**	**14**	**2**	**16**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
26 Units	Gross Trips	2	10	12	5	2	7
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**10**	**12**	**5**	**2**	**7**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
26 Units	Gross Trips	2	4	6	4	2	6
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**4**	**6**	**4**	**2**	**6**
	Gross Trips	6	34	40	23	6	29
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
103 Units	**Net Trips**	**6**	**34**	**40**	**23**	**6**	**29**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
43,000 sq. ft GFA	Gross Trips	23	15	38	148	154	302
	Mode Split Reduction (28%)	6	4	10	41	43	84
	Pass-by (34% PM)	0	0	0	38	38	76
	Net Trips	**17**	**11**	**28**	**69**	**73**	**142**
	Net Trips (90% Internal)	15	10	25	62	66	128
	Net Trips (10% External)	2	1	3	7	7	14
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
14,000 sq. ft GFA	Gross Trips	31	4	35	3	16	19
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**31**	**4**	**35**	**3**	**16**	**19**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	31	4	35	3	16	19
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	54	19	73	151	170	321
	Mode Split Reduction	6	4	10	41	43	84
	Pass-by	0	0	0	38	38	76
	Net Trips	**48**	**15**	**63**	**72**	**89**	**161**
	Net Trips (Internal)	15	10	25	62	66	128
	Net Trips (External)	33	5	38	10	23	33
Total Trips	Gross Trips	60	53	113	174	176	350
	Mode Split Reduction	6	4	10	41	43	84
	Pass-by	0	0	0	38	38	76
	Net Trips	**54**	**49**	**103**	**95**	**95**	**190**
	Net Trips (Internal)	15	10	25	62	66	128
	Net Trips (External)	39	39	78	33	29	62

2051-withGO Trip Generation Table

Report for TAZ: 8

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
57 Units	Gross Trips	2	20	22	18	2	20
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**20**	**22**	**18**	**2**	**20**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
29 Units	Gross Trips	1	6	7	7	2	9
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**6**	**7**	**7**	**2**	**9**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
29 Units	Gross Trips	1	6	7	5	2	7
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**1**	**6**	**7**	**5**	**2**	**7**
	Gross Trips	4	32	36	30	6	36
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
115 Units	**Net Trips**	**4**	**32**	**36**	**30**	**6**	**36**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
79,000 sq. ft GFA	Gross Trips	43	27	70	222	230	452
	Mode Split Reduction (33%)	14	9	23	73	76	149
	Pass-by (34% PM)	0	0	0	52	52	104
	Net Trips	**29**	**18**	**47**	**97**	**102**	**199**
	Net Trips (90% Internal)	26	16	42	87	92	179
	Net Trips (10% External)	3	2	5	10	10	20
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
26,000 sq. ft GFA	Gross Trips	38	6	44	5	24	29
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**38**	**6**	**44**	**5**	**24**	**29**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	38	6	44	5	24	29
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	81	33	114	227	254	481
	Mode Split Reduction	14	9	23	73	76	149
	Pass-by	0	0	0	52	52	104
	Net Trips	**67**	**24**	**91**	**102**	**126**	**228**
	Net Trips (Internal)	26	16	42	87	92	179
	Net Trips (External)	41	8	49	15	34	49
Total Trips	Gross Trips	85	65	150	257	260	517
	Mode Split Reduction	14	9	23	73	76	149
	Pass-by	0	0	0	52	52	104
	Net Trips	**71**	**56**	**127**	**132**	**132**	**264**
	Net Trips (Internal)	26	16	42	87	92	179
	Net Trips (External)	45	40	85	45	40	85

2051-withoutGO Trip Generation Table

Report for TAZ: 8

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
57 Units	Gross Trips	2	21	23	15	2	17
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**21**	**23**	**15**	**2**	**17**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
29 Units	Gross Trips	2	11	13	6	2	8
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**11**	**13**	**6**	**2**	**8**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
29 Units	Gross Trips	2	5	7	5	2	7
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**5**	**7**	**5**	**2**	**7**
	Gross Trips	6	37	43	26	6	32
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
115 Units	**Net Trips**	**6**	**37**	**43**	**26**	**6**	**32**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
79,000 sq. ft GFA	Gross Trips	43	27	70	222	231	453
	Mode Split Reduction (28%)	12	8	20	62	65	127
	Pass-by (34% PM)	0	0	0	56	56	112
	Net Trips	**31**	**19**	**50**	**104**	**110**	**214**
	Net Trips (90% Internal)	28	17	45	94	99	193
	Net Trips (10% External)	3	2	5	10	11	21
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
26,000 sq. ft GFA	Gross Trips	38	6	44	5	24	29
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**38**	**6**	**44**	**5**	**24**	**29**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	38	6	44	5	24	29
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	81	33	114	227	255	482
	Mode Split Reduction	12	8	20	62	65	127
	Pass-by	0	0	0	56	56	112
	Net Trips	**69**	**25**	**94**	**109**	**134**	**243**
	Net Trips (Internal)	28	17	45	94	99	193
	Net Trips (External)	41	8	49	15	35	50
Total Trips	Gross Trips	87	70	157	253	261	514
	Mode Split Reduction	12	8	20	62	65	127
	Pass-by	0	0	0	56	56	112
	Net Trips	**75**	**62**	**137**	**135**	**140**	**275**
	Net Trips (Internal)	28	17	45	94	99	193
	Net Trips (External)	47	45	92	41	41	82

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 9

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
109 Units	Gross Trips	4	32	36	26	3	29
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**32**	**36**	**26**	**3**	**29**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
55 Units	Gross Trips	3	16	19	11	4	15
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**16**	**19**	**11**	**4**	**15**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
55 Units	Gross Trips	3	10	13	8	3	11
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**10**	**13**	**8**	**3**	**11**
	Gross Trips	10	58	68	45	10	55
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
219 Units	**Net Trips**	**10**	**58**	**68**	**45**	**10**	**55**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	10	58	68	45	10	55
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**10**	**58**	**68**	**45**	**10**	**55**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	10	58	68	45	10	55

2041-withGO Trip Generation Table

Report for TAZ: 9

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
195 Units	Gross Trips	6	57	63	53	6	59
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**57**	**63**	**53**	**6**	**59**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
98 Units	Gross Trips	4	21	25	19	7	26
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**21**	**25**	**19**	**7**	**26**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
98 Units	Gross Trips	2	20	22	14	7	21
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**2**	**20**	**22**	**14**	**7**	**21**
	Gross Trips	12	98	110	86	20	106
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
391 Units	**Net Trips**	**12**	**98**	**110**	**86**	**20**	**106**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	12	98	110	86	20	106
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**12**	**98**	**110**	**86**	**20**	**106**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	12	98	110	86	20	106

2041-withoutGO Trip Generation Table

Report for TAZ: 9

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
195 Units	Gross Trips	6	50	56	45	5	50
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**50**	**56**	**45**	**5**	**50**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
98 Units	Gross Trips	4	26	30	19	7	26
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**26**	**30**	**19**	**7**	**26**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
98 Units	Gross Trips	6	18	24	15	5	20
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**18**	**24**	**15**	**5**	**20**
	Gross Trips	16	94	110	79	17	96
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
391 Units	**Net Trips**	**16**	**94**	**110**	**79**	**17**	**96**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	16	94	110	79	17	96
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**16**	**94**	**110**	**79**	**17**	**96**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	16	94	110	79	17	96

2051-withGO Trip Generation Table

Report for TAZ: 9

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
217 Units	Gross Trips	7	62	69	58	6	64
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**7**	**62**	**69**	**58**	**6**	**64**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
109 Units	Gross Trips	4	23	27	21	7	28
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**4**	**23**	**27**	**21**	**7**	**28**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
109 Units	Gross Trips	3	21	24	16	7	23
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**3**	**21**	**24**	**16**	**7**	**23**
	Gross Trips	14	106	120	95	20	115
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
435 Units	**Net Trips**	**14**	**106**	**120**	**95**	**20**	**115**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	14	106	120	95	20	115
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**14**	**106**	**120**	**95**	**20**	**115**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	14	106	120	95	20	115

2051-withoutGO Trip Generation Table

Report for TAZ: 9

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
217 Units	Gross Trips	6	56	62	50	6	56
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**6**	**56**	**62**	**50**	**6**	**56**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
109 Units	Gross Trips	5	28	33	21	7	28
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**5**	**28**	**33**	**21**	**7**	**28**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
109 Units	Gross Trips	7	19	26	16	6	22
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**7**	**19**	**26**	**16**	**6**	**22**
	Gross Trips	18	103	121	87	19	106
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
435 Units	**Net Trips**	**18**	**103**	**121**	**87**	**19**	**106**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	0	0	0	0	0	0
Total Trips	Gross Trips	18	103	121	87	19	106
	Mode Split Reduction	0	0	0	0	0	0
	Pass-by	0	0	0	0	0	0
	Net Trips	**18**	**103**	**121**	**87**	**19**	**106**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	18	103	121	87	19	106

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 10

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
912 Units	Gross Trips	55	164	219	122	45	167
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**55**	**164**	**219**	**122**	**45**	**167**
	Gross Trips	55	164	219	122	45	167
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
912 Units	**Net Trips**	**55**	**164**	**219**	**122**	**45**	**167**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
113,000 sq. ft GFA	Gross Trips	62	37	99	281	292	573
	Mode Split Reduction (28%)	17	10	27	79	82	161
	Pass-by (34% PM)	0	0	0	72	72	144
	Net Trips	**45**	**27**	**72**	**130**	**138**	**268**
	Net Trips (90% Internal)	41	24	65	117	124	241
	Net Trips (10% External)	4	3	7	13	14	27
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
38,000 sq. ft GFA	Gross Trips	46	7	53	6	33	39
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**46**	**7**	**53**	**6**	**33**	**39**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	46	7	53	6	33	39
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	108	44	152	287	325	612
	Mode Split Reduction	17	10	27	79	82	161
	Pass-by	0	0	0	72	72	144
	Net Trips	**91**	**34**	**125**	**136**	**171**	**307**
	Net Trips (Internal)	41	24	65	117	124	241
	Net Trips (External)	50	10	60	19	47	66
Total Trips	Gross Trips	163	208	371	409	370	779
	Mode Split Reduction	17	10	27	79	82	161
	Pass-by	0	0	0	72	72	144
	Net Trips	**146**	**198**	**344**	**258**	**216**	**474**
	Net Trips (Internal)	41	24	65	117	124	241
	Net Trips (External)	105	174	279	141	92	233

2041-withGO Trip Generation Table

Report for TAZ: 10

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,641 Units	Gross Trips	33	270	303	166	74	240
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**33**	**270**	**303**	**166**	**74**	**240**
	Gross Trips	33	270	303	166	74	240
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,641 Units	**Net Trips**	**33**	**270**	**303**	**166**	**74**	**240**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
207,000 sq. ft GFA	Gross Trips	113	69	182	418	436	854
	Mode Split Reduction (33%)	37	23	60	138	144	282
	Pass-by (34% PM)	0	0	0	98	98	196
	Net Trips	**76**	**46**	**122**	**182**	**194**	**376**
	Net Trips (90% Internal)	68	41	109	164	175	339
	Net Trips (10% External)	8	5	13	18	19	37
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
69,000 sq. ft GFA	Gross Trips	65	10	75	10	55	65
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**65**	**10**	**75**	**10**	**55**	**65**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	65	10	75	10	55	65
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	178	79	257	428	491	919
	Mode Split Reduction	37	23	60	138	144	282
	Pass-by	0	0	0	98	98	196
	Net Trips	**141**	**56**	**197**	**192**	**249**	**441**
	Net Trips (Internal)	68	41	109	164	175	339
	Net Trips (External)	73	15	88	28	74	102
Total Trips	Gross Trips	211	349	560	594	565	1159
	Mode Split Reduction	37	23	60	138	144	282
	Pass-by	0	0	0	98	98	196
	Net Trips	**174**	**326**	**500**	**358**	**323**	**681**
	Net Trips (Internal)	68	41	109	164	175	339
	Net Trips (External)	106	285	391	194	148	342

2041-withoutGO Trip Generation Table

Report for TAZ: 10

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,641 Units	Gross Trips	98	296	394	212	79	291
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**98**	**296**	**394**	**212**	**79**	**291**
	Gross Trips	98	296	394	212	79	291
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,641 Units	**Net Trips**	**98**	**296**	**394**	**212**	**79**	**291**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
207,000 sq. ft GFA	Gross Trips	113	69	182	418	435	853
	Mode Split Reduction (28%)	32	19	51	117	122	239
	Pass-by (34% PM)	0	0	0	106	106	212
	Net Trips	**81**	**50**	**131**	**195**	**207**	**402**
	Net Trips (90% Internal)	73	45	118	176	186	362
	Net Trips (10% External)	8	5	13	19	21	40
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
69,000 sq. ft GFA	Gross Trips	65	10	75	10	54	64
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**65**	**10**	**75**	**10**	**54**	**64**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	65	10	75	10	54	64
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	178	79	257	428	489	917
	Mode Split Reduction	32	19	51	117	122	239
	Pass-by	0	0	0	106	106	212
	Net Trips	**146**	**60**	**206**	**205**	**261**	**466**
	Net Trips (Internal)	73	45	118	176	186	362
	Net Trips (External)	73	15	88	29	75	104
Total Trips	Gross Trips	276	375	651	640	568	1208
	Mode Split Reduction	32	19	51	117	122	239
	Pass-by	0	0	0	106	106	212
	Net Trips	**244**	**356**	**600**	**417**	**340**	**757**
	Net Trips (Internal)	73	45	118	176	186	362
	Net Trips (External)	171	311	482	241	154	395

2051-withGO Trip Generation Table

Report for TAZ: 10

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
1,823 Units	Gross Trips	37	298	335	181	82	263
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**37**	**298**	**335**	**181**	**82**	**263**
	Gross Trips	37	298	335	181	82	263
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,823 Units	**Net Trips**	**37**	**298**	**335**	**181**	**82**	**263**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
377,000 sq. ft GFA	Gross Trips	206	126	332	621	647	1268
	Mode Split Reduction (33%)	68	42	110	205	214	419
	Pass-by (34% PM)	0	0	0	146	146	292
	Net Trips	**138**	**84**	**222**	**270**	**287**	**557**
	Net Trips (90% Internal)	124	76	200	243	258	501
	Net Trips (10% External)	14	8	22	27	29	56
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
126,000 sq. ft GFA	Gross Trips	101	15	116	18	94	112
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**101**	**15**	**116**	**18**	**94**	**112**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	101	15	116	18	94	112
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	307	141	448	639	741	1380
	Mode Split Reduction	68	42	110	205	214	419
	Pass-by	0	0	0	146	146	292
	Net Trips	**239**	**99**	**338**	**288**	**381**	**669**
	Net Trips (Internal)	124	76	200	243	258	501
	Net Trips (External)	115	23	138	45	123	168
Total Trips	Gross Trips	344	439	783	820	823	1643
	Mode Split Reduction	68	42	110	205	214	419
	Pass-by	0	0	0	146	146	292
	Net Trips	**276**	**397**	**673**	**469**	**463**	**932**
	Net Trips (Internal)	124	76	200	243	258	501
	Net Trips (External)	152	321	473	226	205	431

2051-withoutGO Trip Generation Table

Report for TAZ: 10

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
1,823 Units	Gross Trips	109	329	438	235	87	322
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**109**	**329**	**438**	**235**	**87**	**322**
	Gross Trips	109	329	438	235	87	322
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
1,823 Units	**Net Trips**	**109**	**329**	**438**	**235**	**87**	**322**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
377,000 sq. ft GFA	Gross Trips	206	126	332	621	647	1268
	Mode Split Reduction (28%)	58	35	93	174	181	355
	Pass-by (34% PM)	0	0	0	156	156	312
	Net Trips	**148**	**91**	**239**	**291**	**310**	**601**
	Net Trips (90% Internal)	133	82	215	262	279	541
	Net Trips (10% External)	15	9	24	29	31	60
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
126,000 sq. ft GFA	Gross Trips	101	15	116	18	94	112
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**101**	**15**	**116**	**18**	**94**	**112**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	101	15	116	18	94	112
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	307	141	448	639	741	1380
	Mode Split Reduction	58	35	93	174	181	355
	Pass-by	0	0	0	156	156	312
	Net Trips	**249**	**106**	**355**	**309**	**404**	**713**
	Net Trips (Internal)	133	82	215	262	279	541
	Net Trips (External)	116	24	140	47	125	172
Total Trips	Gross Trips	416	470	886	874	828	1702
	Mode Split Reduction	58	35	93	174	181	355
	Pass-by	0	0	0	156	156	312
	Net Trips	**358**	**435**	**793**	**544**	**491**	**1035**
	Net Trips (Internal)	133	82	215	262	279	541
	Net Trips (External)	225	353	578	282	212	494

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 11

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
44,000 sq. ft GFA	Gross Trips	13	3	16	9	22	31
	Mode Split Reduction (28%)	4	1	5	3	6	9
	Net Trips	**9**	**2**	**11**	**6**	**16**	**22**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	9	2	11	6	16	22
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65
	Net Trips (80% External)	95	48	143	122	132	254
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	177	88	265	223	254	477
	Mode Split Reduction	50	24	74	63	71	134
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**64**	**191**	**160**	**183**	**343**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	104	51	155	129	149	278
Total Trips	Gross Trips	177	88	265	223	254	477
	Mode Split Reduction	50	24	74	63	71	134
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**64**	**191**	**160**	**183**	**343**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	104	51	155	129	149	278

2041-withGO Trip Generation Table

Report for TAZ: 11

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
80,000 sq. ft GFA	Gross Trips	44	10	54	17	43	60
	Mode Split Reduction (33%)	15	3	18	6	14	20
	Net Trips	**29**	**7**	**36**	**11**	**29**	**40**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	29	7	36	11	29	40
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (33%)	54	27	81	70	76	146
	Net Trips	**110**	**57**	**167**	**143**	**155**	**298**
	Net Trips (20% Internal)	22	12	34	29	31	60
	Net Trips (80% External)	88	45	133	114	124	238
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	208	95	303	231	275	506
	Mode Split Reduction	69	30	99	76	90	166
	Pass-by	0	0	0	0	0	0
	Net Trips	**139**	**65**	**204**	**155**	**185**	**340**
	Net Trips (Internal)	22	12	34	29	31	60
	Net Trips (External)	117	53	170	126	154	280
Total Trips	Gross Trips	208	95	303	231	275	506
	Mode Split Reduction	69	30	99	76	90	166
	Pass-by	0	0	0	0	0	0
	Net Trips	**139**	**65**	**204**	**155**	**185**	**340**
	Net Trips (Internal)	22	12	34	29	31	60
	Net Trips (External)	117	53	170	126	154	280

2041-withoutGO Trip Generation Table

Report for TAZ: 11

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
80,000 sq. ft GFA	Gross Trips	44	10	54	17	43	60
	Mode Split Reduction (28%)	12	3	15	5	12	17
	Net Trips	**32**	**7**	**39**	**12**	**31**	**43**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	32	7	39	12	31	43
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65
	Net Trips (80% External)	95	48	143	122	132	254
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	208	95	303	231	275	506
	Mode Split Reduction	58	26	84	65	77	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**150**	**69**	**219**	**166**	**198**	**364**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	127	56	183	135	164	299
Total Trips	Gross Trips	208	95	303	231	275	506
	Mode Split Reduction	58	26	84	65	77	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**150**	**69**	**219**	**166**	**198**	**364**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	127	56	183	135	164	299

2051-withGO Trip Generation Table

Report for TAZ: 11

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
145,000 sq. ft GFA	Gross Trips	99	22	121	33	80	113
	Mode Split Reduction (33%)	33	7	40	11	26	37
	Net Trips	**66**	**15**	**81**	**22**	**54**	**76**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	66	15	81	22	54	76
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (33%)	54	27	81	70	76	146
	Net Trips	**110**	**57**	**167**	**143**	**155**	**298**
	Net Trips (20% Internal)	22	12	34	29	31	60
	Net Trips (80% External)	88	45	133	114	124	238
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	263	107	370	247	312	559
	Mode Split Reduction	87	34	121	81	102	183
	Pass-by	0	0	0	0	0	0
	Net Trips	**176**	**73**	**249**	**166**	**210**	**376**
	Net Trips (Internal)	22	12	34	29	31	60
	Net Trips (External)	154	61	215	137	179	316
Total Trips	Gross Trips	263	107	370	247	312	559
	Mode Split Reduction	87	34	121	81	102	183
	Pass-by	0	0	0	0	0	0
	Net Trips	**176**	**73**	**249**	**166**	**210**	**376**
	Net Trips (Internal)	22	12	34	29	31	60
	Net Trips (External)	154	61	215	137	179	316

2051-withoutGO Trip Generation Table

Report for TAZ: 11

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
145,000 sq. ft GFA	Gross Trips	99	22	121	33	80	113
	Mode Split Reduction (28%)	28	6	34	9	22	31
	Net Trips	**71**	**16**	**87**	**24**	**58**	**82**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	71	16	87	24	58	82
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
142,000 sq. ft GFA	Gross Trips	164	84	248	213	231	444
	Mode Split Reduction (28%)	46	23	69	60	65	125
	Net Trips	**118**	**61**	**179**	**153**	**166**	**319**
	Net Trips (20% Internal)	23	13	36	31	34	65
	Net Trips (80% External)	95	48	143	122	132	254
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
14.83 acres	Gross Trips	0	1	1	1	1	2
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**1**	**1**	**1**	**1**	**2**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	1	1	1	1	2
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	263	107	370	247	312	559
	Mode Split Reduction	74	29	103	69	87	156
	Pass-by	0	0	0	0	0	0
	Net Trips	**189**	**78**	**267**	**178**	**225**	**403**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	166	65	231	147	191	338
Total Trips	Gross Trips	263	107	370	247	312	559
	Mode Split Reduction	74	29	103	69	87	156
	Pass-by	0	0	0	0	0	0
	Net Trips	**189**	**78**	**267**	**178**	**225**	**403**
	Net Trips (Internal)	23	13	36	31	34	65
	Net Trips (External)	166	65	231	147	191	338

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 12

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
50,000 sq. ft GFA	Gross Trips	18	4	22	10	25	35
	Mode Split Reduction (28%)	5	1	6	3	7	10
	Net Trips	**13**	**3**	**16**	**7**	**18**	**25**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	13	3	16	7	18	25
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
255,000 sq. ft GFA	Gross Trips	124	38	162	43	112	155
	Mode Split Reduction (28%)	35	11	46	12	31	43
	Net Trips	**89**	**27**	**116**	**31**	**81**	**112**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	89	27	116	31	81	112
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	142	42	184	53	137	190
	Mode Split Reduction	40	12	52	15	38	53
	Pass-by	0	0	0	0	0	0
	Net Trips	**102**	**30**	**132**	**38**	**99**	**137**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	102	30	132	38	99	137
Total Trips	Gross Trips	142	42	184	53	137	190
	Mode Split Reduction	40	12	52	15	38	53
	Pass-by	0	0	0	0	0	0
	Net Trips	**102**	**30**	**132**	**38**	**99**	**137**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	102	30	132	38	99	137

2041-withGO Trip Generation Table

Report for TAZ: 12

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
91,000 sq. ft GFA	Gross Trips	53	12	65	20	49	69
	Mode Split Reduction (33%)	17	4	21	7	16	23
	Net Trips	**36**	**8**	**44**	**13**	**33**	**46**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	36	8	44	13	33	46
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
468,000 sq. ft GFA	Gross Trips	147	44	191	53	136	189
	Mode Split Reduction (33%)	49	15	64	17	45	62
	Net Trips	**98**	**29**	**127**	**36**	**91**	**127**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	98	29	127	36	91	127
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	200	56	256	73	185	258
	Mode Split Reduction	66	19	85	24	61	85
	Pass-by	0	0	0	0	0	0
	Net Trips	**134**	**37**	**171**	**49**	**124**	**173**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	134	37	171	49	124	173
Total Trips	Gross Trips	200	56	256	73	185	258
	Mode Split Reduction	66	19	85	24	61	85
	Pass-by	0	0	0	0	0	0
	Net Trips	**134**	**37**	**171**	**49**	**124**	**173**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	134	37	171	49	124	173

2041-withoutGO Trip Generation Table

Report for TAZ: 12

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
91,000 sq. ft GFA	Gross Trips	53	12	65	20	49	69
	Mode Split Reduction (28%)	15	3	18	6	14	20
	Net Trips	**38**	**9**	**47**	**14**	**35**	**49**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	38	9	47	14	35	49
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
468,000 sq. ft GFA	Gross Trips	147	44	191	53	136	189
	Mode Split Reduction (28%)	41	12	53	15	38	53
	Net Trips	**106**	**32**	**138**	**38**	**98**	**136**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	106	32	138	38	98	136
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	200	56	256	73	185	258
	Mode Split Reduction	56	15	71	21	52	73
	Pass-by	0	0	0	0	0	0
	Net Trips	**144**	**41**	**185**	**52**	**133**	**185**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	144	41	185	52	133	185
Total Trips	Gross Trips	200	56	256	73	185	258
	Mode Split Reduction	56	15	71	21	52	73
	Pass-by	0	0	0	0	0	0
	Net Trips	**144**	**41**	**185**	**52**	**133**	**185**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	144	41	185	52	133	185

2051-withGO Trip Generation Table

Report for TAZ: 12

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
166,000 sq. ft GFA	Gross Trips	117	26	143	38	92	130
	Mode Split Reduction (33%)	39	9	48	13	30	43
	Net Trips	**78**	**17**	**95**	**25**	**62**	**87**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	78	17	95	25	62	87
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
850,000 sq. ft GFA	Gross Trips	189	56	245	70	180	250
	Mode Split Reduction (33%)	62	18	80	23	59	82
	Net Trips	**127**	**38**	**165**	**47**	**121**	**168**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	127	38	165	47	121	168
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	306	82	388	108	272	380
	Mode Split Reduction	101	27	128	36	89	125
	Pass-by	0	0	0	0	0	0
	Net Trips	**205**	**55**	**260**	**72**	**183**	**255**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	205	55	260	72	183	255
Total Trips	Gross Trips	306	82	388	108	272	380
	Mode Split Reduction	101	27	128	36	89	125
	Pass-by	0	0	0	0	0	0
	Net Trips	**205**	**55**	**260**	**72**	**183**	**255**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	205	55	260	72	183	255

2051-withoutGO Trip Generation Table

Report for TAZ: 12

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
166,000 sq. ft GFA	Gross Trips	117	26	143	38	92	130
	Mode Split Reduction (28%)	33	7	40	11	26	37
	Net Trips	**84**	**19**	**103**	**27**	**66**	**93**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	84	19	103	27	66	93
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
850,000 sq. ft GFA	Gross Trips	189	56	245	70	180	250
	Mode Split Reduction (28%)	53	16	69	20	50	70
	Net Trips	**136**	**40**	**176**	**50**	**130**	**180**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	136	40	176	50	130	180
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	306	82	388	108	272	380
	Mode Split Reduction	86	23	109	31	76	107
	Pass-by	0	0	0	0	0	0
	Net Trips	**220**	**59**	**279**	**77**	**196**	**273**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	220	59	279	77	196	273
Total Trips	Gross Trips	306	82	388	108	272	380
	Mode Split Reduction	86	23	109	31	76	107
	Pass-by	0	0	0	0	0	0
	Net Trips	**220**	**59**	**279**	**77**	**196**	**273**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	220	59	279	77	196	273

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 13

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
739,000 sq. ft GFA	Gross Trips	177	52	229	65	167	232
	Mode Split Reduction (28%)	50	15	65	18	47	65
	Net Trips	**127**	**37**	**164**	**47**	**120**	**167**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	127	37	164	47	120	167
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	177	52	229	65	167	232
	Mode Split Reduction	50	15	65	18	47	65
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**37**	**164**	**47**	**120**	**167**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	127	37	164	47	120	167
Total Trips	Gross Trips	177	52	229	65	167	232
	Mode Split Reduction	50	15	65	18	47	65
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**37**	**164**	**47**	**120**	**167**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	127	37	164	47	120	167

2041-withGO Trip Generation Table

Report for TAZ: 13

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,356,000 sq. ft GFA	Gross Trips	243	73	316	93	238	331
	Mode Split Reduction (33%)	80	24	104	31	79	110
	Net Trips	**163**	**49**	**212**	**62**	**159**	**221**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	163	49	212	62	159	221
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	243	73	316	93	238	331
	Mode Split Reduction	80	24	104	31	79	110
	Pass-by	0	0	0	0	0	0
	Net Trips	**163**	**49**	**212**	**62**	**159**	**221**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	163	49	212	62	159	221
Total Trips	Gross Trips	243	73	316	93	238	331
	Mode Split Reduction	80	24	104	31	79	110
	Pass-by	0	0	0	0	0	0
	Net Trips	**163**	**49**	**212**	**62**	**159**	**221**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	163	49	212	62	159	221

2041-withoutGO Trip Generation Table

Report for TAZ: 13

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,356,000 sq. ft GFA	Gross Trips	243	73	316	93	239	332
	Mode Split Reduction (28%)	68	20	88	26	67	93
	Net Trips	**175**	**53**	**228**	**67**	**172**	**239**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	175	53	228	67	172	239
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	243	73	316	93	239	332
	Mode Split Reduction	68	20	88	26	67	93
	Pass-by	0	0	0	0	0	0
	Net Trips	**175**	**53**	**228**	**67**	**172**	**239**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	175	53	228	67	172	239
Total Trips	Gross Trips	243	73	316	93	239	332
	Mode Split Reduction	68	20	88	26	67	93
	Pass-by	0	0	0	0	0	0
	Net Trips	**175**	**53**	**228**	**67**	**172**	**239**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	175	53	228	67	172	239

2051-withGO Trip Generation Table

Report for TAZ: 13

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,465,000 sq. ft GFA	Gross Trips	363	108	471	142	367	509
	Mode Split Reduction (33%)	120	36	156	47	121	168
	Net Trips	**243**	**72**	**315**	**95**	**246**	**341**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	243	72	315	95	246	341
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	363	108	471	142	367	509
	Mode Split Reduction	120	36	156	47	121	168
	Pass-by	0	0	0	0	0	0
	Net Trips	**243**	**72**	**315**	**95**	**246**	**341**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	243	72	315	95	246	341
Total Trips	Gross Trips	363	108	471	142	367	509
	Mode Split Reduction	120	36	156	47	121	168
	Pass-by	0	0	0	0	0	0
	Net Trips	**243**	**72**	**315**	**95**	**246**	**341**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	243	72	315	95	246	341

2051-withoutGO Trip Generation Table

Report for TAZ: 13

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,465,000 sq. ft GFA	Gross Trips	363	108	471	142	366	508
	Mode Split Reduction (28%)	102	30	132	40	102	142
	Net Trips	**261**	**78**	**339**	**102**	**264**	**366**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	261	78	339	102	264	366
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	363	108	471	142	366	508
	Mode Split Reduction	102	30	132	40	102	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**261**	**78**	**339**	**102**	**264**	**366**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	261	78	339	102	264	366
Total Trips	Gross Trips	363	108	471	142	366	508
	Mode Split Reduction	102	30	132	40	102	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**261**	**78**	**339**	**102**	**264**	**366**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	261	78	339	102	264	366

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 14

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
734,000 sq. ft GFA	Gross Trips	176	53	229	65	167	232
	Mode Split Reduction (28%)	49	15	64	18	47	65
	Net Trips	**127**	**38**	**165**	**47**	**120**	**167**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	127	38	165	47	120	167
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	176	53	229	65	167	232
	Mode Split Reduction	49	15	64	18	47	65
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**38**	**165**	**47**	**120**	**167**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	127	38	165	47	120	167
Total Trips	Gross Trips	176	53	229	65	167	232
	Mode Split Reduction	49	15	64	18	47	65
	Pass-by	0	0	0	0	0	0
	Net Trips	**127**	**38**	**165**	**47**	**120**	**167**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	127	38	165	47	120	167

2041-withGO Trip Generation Table

Report for TAZ: 14

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,346,000 sq. ft GFA	Gross Trips	242	72	314	92	238	330
	Mode Split Reduction (33%)	80	24	104	30	79	109
	Net Trips	**162**	**48**	**210**	**62**	**159**	**221**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	162	48	210	62	159	221
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	242	72	314	92	238	330
	Mode Split Reduction	80	24	104	30	79	109
	Pass-by	0	0	0	0	0	0
	Net Trips	**162**	**48**	**210**	**62**	**159**	**221**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	162	48	210	62	159	221
Total Trips	Gross Trips	242	72	314	92	238	330
	Mode Split Reduction	80	24	104	30	79	109
	Pass-by	0	0	0	0	0	0
	Net Trips	**162**	**48**	**210**	**62**	**159**	**221**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	162	48	210	62	159	221

2041-withoutGO Trip Generation Table

Report for TAZ: 14

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,346,000 sq. ft GFA	Gross Trips	242	72	314	92	237	329
	Mode Split Reduction (28%)	68	20	88	26	66	92
	Net Trips	**174**	**52**	**226**	**66**	**171**	**237**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	174	52	226	66	171	237
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	242	72	314	92	237	329
	Mode Split Reduction	68	20	88	26	66	92
	Pass-by	0	0	0	0	0	0
	Net Trips	**174**	**52**	**226**	**66**	**171**	**237**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	174	52	226	66	171	237
Total Trips	Gross Trips	242	72	314	92	237	329
	Mode Split Reduction	68	20	88	26	66	92
	Pass-by	0	0	0	0	0	0
	Net Trips	**174**	**52**	**226**	**66**	**171**	**237**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	174	52	226	66	171	237

2051-withGO Trip Generation Table

Report for TAZ: 14

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,447,000 sq. ft GFA	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction (33%)	119	35	154	47	120	167
	Net Trips	**242**	**72**	**314**	**95**	**244**	**339**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	242	72	314	95	244	339
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction	119	35	154	47	120	167
	Pass-by	0	0	0	0	0	0
	Net Trips	**242**	**72**	**314**	**95**	**244**	**339**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	242	72	314	95	244	339
Total Trips	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction	119	35	154	47	120	167
	Pass-by	0	0	0	0	0	0
	Net Trips	**242**	**72**	**314**	**95**	**244**	**339**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	242	72	314	95	244	339

2051-withoutGO Trip Generation Table

Report for TAZ: 14

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,447,000 sq. ft GFA	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction (28%)	101	30	131	40	102	142
	Net Trips	**260**	**77**	**337**	**102**	**262**	**364**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	260	77	337	102	262	364
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction	101	30	131	40	102	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**260**	**77**	**337**	**102**	**262**	**364**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	260	77	337	102	262	364
Total Trips	Gross Trips	361	107	468	142	364	506
	Mode Split Reduction	101	30	131	40	102	142
	Pass-by	0	0	0	0	0	0
	Net Trips	**260**	**77**	**337**	**102**	**262**	**364**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	260	77	337	102	262	364

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 15

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
68,000 sq. ft GFA	Gross Trips	34	7	41	15	36	51
	Mode Split Reduction (28%)	10	2	12	4	10	14
	Net Trips	**24**	**5**	**29**	**11**	**26**	**37**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	24	5	29	11	26	37
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	34	7	41	15	36	51
	Mode Split Reduction	10	2	12	4	10	14
	Pass-by	0	0	0	0	0	0
	Net Trips	**24**	**5**	**29**	**11**	**26**	**37**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	24	5	29	11	26	37
Total Trips	Gross Trips	34	7	41	15	36	51
	Mode Split Reduction	10	2	12	4	10	14
	Pass-by	0	0	0	0	0	0
	Net Trips	**24**	**5**	**29**	**11**	**26**	**37**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	24	5	29	11	26	37

2041-withGO Trip Generation Table

Report for TAZ: 15

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
124,000 sq. ft GFA	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction (33%)	27	6	33	9	22	31
	Net Trips	**55**	**11**	**66**	**19**	**46**	**65**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	55	11	66	19	46	65
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction	27	6	33	9	22	31
	Pass-by	0	0	0	0	0	0
	Net Trips	**55**	**11**	**66**	**19**	**46**	**65**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	55	11	66	19	46	65
Total Trips	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction	27	6	33	9	22	31
	Pass-by	0	0	0	0	0	0
	Net Trips	**55**	**11**	**66**	**19**	**46**	**65**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	55	11	66	19	46	65

2041-withoutGO Trip Generation Table

Report for TAZ: 15

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
124,000 sq. ft GFA	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction (28%)	23	5	28	8	19	27
	Net Trips	**59**	**12**	**71**	**20**	**49**	**69**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	59	12	71	20	49	69
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction	23	5	28	8	19	27
	Pass-by	0	0	0	0	0	0
	Net Trips	**59**	**12**	**71**	**20**	**49**	**69**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	59	12	71	20	49	69
Total Trips	Gross Trips	82	17	99	28	68	96
	Mode Split Reduction	23	5	28	8	19	27
	Pass-by	0	0	0	0	0	0
	Net Trips	**59**	**12**	**71**	**20**	**49**	**69**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	59	12	71	20	49	69

2051-withGO Trip Generation Table

Report for TAZ: 15

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
226,000 sq. ft GFA	Gross Trips	168	37	205	52	126	178
	Mode Split Reduction (33%)	55	12	67	17	42	59
	Net Trips	**113**	**25**	**138**	**35**	**84**	**119**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	113	25	138	35	84	119
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	168	37	205	52	126	178
	Mode Split Reduction	55	12	67	17	42	59
	Pass-by	0	0	0	0	0	0
	Net Trips	**113**	**25**	**138**	**35**	**84**	**119**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	113	25	138	35	84	119
Total Trips	Gross Trips	168	37	205	52	126	178
	Mode Split Reduction	55	12	67	17	42	59
	Pass-by	0	0	0	0	0	0
	Net Trips	**113**	**25**	**138**	**35**	**84**	**119**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	113	25	138	35	84	119

2051-withoutGO Trip Generation Table

Report for TAZ: 15

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
226,000 sq. ft GFA	Gross Trips	168	37	205	52	127	179
	Mode Split Reduction (28%)	47	10	57	15	36	51
	Net Trips	**121**	**27**	**148**	**37**	**91**	**128**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	121	27	148	37	91	128
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	168	37	205	52	127	179
	Mode Split Reduction	47	10	57	15	36	51
	Pass-by	0	0	0	0	0	0
	Net Trips	**121**	**27**	**148**	**37**	**91**	**128**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	121	27	148	37	91	128
Total Trips	Gross Trips	168	37	205	52	127	179
	Mode Split Reduction	47	10	57	15	36	51
	Pass-by	0	0	0	0	0	0
	Net Trips	**121**	**27**	**148**	**37**	**91**	**128**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	121	27	148	37	91	128

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 16

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
34,000 sq. ft GFA	Gross Trips	5	1	6	7	16	23
	Mode Split Reduction (28%)	1	0	1	2	4	6
	Net Trips	**4**	**1**	**5**	**5**	**12**	**17**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	4	1	5	5	12	17
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
744,000 sq. ft GFA	Gross Trips	177	53	230	65	168	233
	Mode Split Reduction (28%)	50	15	65	18	47	65
	Net Trips	**127**	**38**	**165**	**47**	**121**	**168**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	127	38	165	47	121	168
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	182	54	236	72	184	256
	Mode Split Reduction	51	15	66	20	51	71
	Pass-by	0	0	0	0	0	0
	Net Trips	**131**	**39**	**170**	**52**	**133**	**185**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	131	39	170	52	133	185
Total Trips	Gross Trips	182	54	236	72	184	256
	Mode Split Reduction	51	15	66	20	51	71
	Pass-by	0	0	0	0	0	0
	Net Trips	**131**	**39**	**170**	**52**	**133**	**185**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	131	39	170	52	133	185

2041-withGO Trip Generation Table

Report for TAZ: 16

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
63,000 sq. ft GFA	Gross Trips	29	7	36	13	33	46
	Mode Split Reduction (33%)	10	2	12	4	11	15
	Net Trips	**19**	**5**	**24**	**9**	**22**	**31**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	19	5	24	9	22	31
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,365,000 sq. ft GFA	Gross Trips	244	73	317	93	240	333
	Mode Split Reduction (33%)	81	24	105	31	79	110
	Net Trips	**163**	**49**	**212**	**62**	**161**	**223**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	163	49	212	62	161	223
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	273	80	353	106	273	379
	Mode Split Reduction	91	26	117	35	90	125
	Pass-by	0	0	0	0	0	0
	Net Trips	**182**	**54**	**236**	**71**	**183**	**254**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	182	54	236	71	183	254
Total Trips	Gross Trips	273	80	353	106	273	379
	Mode Split Reduction	91	26	117	35	90	125
	Pass-by	0	0	0	0	0	0
	Net Trips	**182**	**54**	**236**	**71**	**183**	**254**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	182	54	236	71	183	254

2041-withoutGO Trip Generation Table

Report for TAZ: 16

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
63,000 sq. ft GFA	Gross Trips	29	7	36	13	33	46
	Mode Split Reduction (28%)	8	2	10	4	9	13
	Net Trips	**21**	**5**	**26**	**9**	**24**	**33**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	21	5	26	9	24	33
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,365,000 sq. ft GFA	Gross Trips	244	73	317	93	240	333
	Mode Split Reduction (28%)	68	20	88	26	67	93
	Net Trips	**176**	**53**	**229**	**67**	**173**	**240**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	176	53	229	67	173	240
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	273	80	353	106	273	379
	Mode Split Reduction	76	22	98	30	76	106
	Pass-by	0	0	0	0	0	0
	Net Trips	**197**	**58**	**255**	**76**	**197**	**273**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	197	58	255	76	197	273
Total Trips	Gross Trips	273	80	353	106	273	379
	Mode Split Reduction	76	22	98	30	76	106
	Pass-by	0	0	0	0	0	0
	Net Trips	**197**	**58**	**255**	**76**	**197**	**273**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	197	58	255	76	197	273

2051-withGO Trip Generation Table

Report for TAZ: 16

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
115,000 sq. ft GFA	Gross Trips	74	16	90	26	62	88
	Mode Split Reduction (33%)	24	5	29	9	20	29
	Net Trips	**50**	**11**	**61**	**17**	**42**	**59**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	50	11	61	17	42	59
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,481,000 sq. ft GFA	Gross Trips	364	109	473	143	368	511
	Mode Split Reduction (33%)	120	36	156	47	121	168
	Net Trips	**244**	**73**	**317**	**96**	**247**	**343**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	244	73	317	96	247	343
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	438	125	563	169	430	599
	Mode Split Reduction	144	41	185	56	141	197
	Pass-by	0	0	0	0	0	0
	Net Trips	**294**	**84**	**378**	**113**	**289**	**402**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	294	84	378	113	289	402
Total Trips	Gross Trips	438	125	563	169	430	599
	Mode Split Reduction	144	41	185	56	141	197
	Pass-by	0	0	0	0	0	0
	Net Trips	**294**	**84**	**378**	**113**	**289**	**402**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	294	84	378	113	289	402

2051-withoutGO Trip Generation Table

Report for TAZ: 16

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
115,000 sq. ft GFA	Gross Trips	74	16	90	26	63	89
	Mode Split Reduction (28%)	21	4	25	7	18	25
	Net Trips	**53**	**12**	**65**	**19**	**45**	**64**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	53	12	65	19	45	64
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,481,000 sq. ft GFA	Gross Trips	364	109	473	143	368	511
	Mode Split Reduction (28%)	102	31	133	40	103	143
	Net Trips	**262**	**78**	**340**	**103**	**265**	**368**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	262	78	340	103	265	368
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	438	125	563	169	431	600
	Mode Split Reduction	123	35	158	47	121	168
	Pass-by	0	0	0	0	0	0
	Net Trips	**315**	**90**	**405**	**122**	**310**	**432**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	315	90	405	122	310	432
Total Trips	Gross Trips	438	125	563	169	431	600
	Mode Split Reduction	123	35	158	47	121	168
	Pass-by	0	0	0	0	0	0
	Net Trips	**315**	**90**	**405**	**122**	**310**	**432**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	315	90	405	122	310	432

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 17

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
100,000 sq. ft GFA	Gross Trips	61	13	74	22	54	76
	Mode Split Reduction (28%)	17	4	21	6	15	21
	Net Trips	**44**	**9**	**53**	**16**	**39**	**55**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	44	9	53	16	39	55
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
990,000 sq. ft GFA	Gross Trips	204	60	264	76	196	272
	Mode Split Reduction (28%)	57	17	74	21	55	76
	Net Trips	**147**	**43**	**190**	**55**	**141**	**196**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	147	43	190	55	141	196
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	265	73	338	98	250	348
	Mode Split Reduction	74	21	95	27	70	97
	Pass-by	0	0	0	0	0	0
	Net Trips	**191**	**52**	**243**	**71**	**180**	**251**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	191	52	243	71	180	251
Total Trips	Gross Trips	265	73	338	98	250	348
	Mode Split Reduction	74	21	95	27	70	97
	Pass-by	0	0	0	0	0	0
	Net Trips	**191**	**52**	**243**	**71**	**180**	**251**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	191	52	243	71	180	251

2041-withGO Trip Generation Table

Report for TAZ: 17

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
184,000 sq. ft GFA	Gross Trips	133	29	162	42	102	144
	Mode Split Reduction (33%)	44	10	54	14	34	48
	Net Trips	**89**	**19**	**108**	**28**	**68**	**96**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	89	19	108	28	68	96
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,815,000 sq. ft GFA	Gross Trips	293	87	380	113	292	405
	Mode Split Reduction (33%)	97	29	126	37	96	133
	Net Trips	**196**	**58**	**254**	**76**	**196**	**272**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	196	58	254	76	196	272
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	426	116	542	155	394	549
	Mode Split Reduction	141	39	180	51	130	181
	Pass-by	0	0	0	0	0	0
	Net Trips	**285**	**77**	**362**	**104**	**264**	**368**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	285	77	362	104	264	368
Total Trips	Gross Trips	426	116	542	155	394	549
	Mode Split Reduction	141	39	180	51	130	181
	Pass-by	0	0	0	0	0	0
	Net Trips	**285**	**77**	**362**	**104**	**264**	**368**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	285	77	362	104	264	368

2041-withoutGO Trip Generation Table

Report for TAZ: 17

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
184,000 sq. ft GFA	Gross Trips	133	29	162	42	102	144
	Mode Split Reduction (28%)	37	8	45	12	29	41
	Net Trips	**96**	**21**	**117**	**30**	**73**	**103**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	96	21	117	30	73	103
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
1,815,000 sq. ft GFA	Gross Trips	293	87	380	113	291	404
	Mode Split Reduction (28%)	82	24	106	32	81	113
	Net Trips	**211**	**63**	**274**	**81**	**210**	**291**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	211	63	274	81	210	291
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	426	116	542	155	393	548
	Mode Split Reduction	119	32	151	44	110	154
	Pass-by	0	0	0	0	0	0
	Net Trips	**307**	**84**	**391**	**111**	**283**	**394**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	307	84	391	111	283	394
Total Trips	Gross Trips	426	116	542	155	393	548
	Mode Split Reduction	119	32	151	44	110	154
	Pass-by	0	0	0	0	0	0
	Net Trips	**307**	**84**	**391**	**111**	**283**	**394**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	307	84	391	111	283	394

2051-withGO Trip Generation Table

Report for TAZ: 17

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
335,000 sq. ft GFA	Gross Trips	261	58	319	77	190	267
	Mode Split Reduction (33%)	86	19	105	25	63	88
	Net Trips	**175**	**39**	**214**	**52**	**127**	**179**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	175	39	214	52	127	179
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
3,299,000 sq. ft GFA	Gross Trips	453	135	588	180	462	642
	Mode Split Reduction (33%)	149	45	194	59	152	211
	Net Trips	**304**	**90**	**394**	**121**	**310**	**431**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	304	90	394	121	310	431
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	714	193	907	257	652	909
	Mode Split Reduction	235	64	299	84	215	299
	Pass-by	0	0	0	0	0	0
	Net Trips	**479**	**129**	**608**	**173**	**437**	**610**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	479	129	608	173	437	610
Total Trips	Gross Trips	714	193	907	257	652	909
	Mode Split Reduction	235	64	299	84	215	299
	Pass-by	0	0	0	0	0	0
	Net Trips	**479**	**129**	**608**	**173**	**437**	**610**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	479	129	608	173	437	610

2051-withoutGO Trip Generation Table

Report for TAZ: 17

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
335,000 sq. ft GFA	Gross Trips	261	58	319	77	189	266
	Mode Split Reduction (28%)	73	16	89	22	53	75
	Net Trips	**188**	**42**	**230**	**55**	**136**	**191**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	188	42	230	55	136	191
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
3,299,000 sq. ft GFA	Gross Trips	453	135	588	180	462	642
	Mode Split Reduction (28%)	127	38	165	50	129	179
	Net Trips	**326**	**97**	**423**	**130**	**333**	**463**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	326	97	423	130	333	463
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	714	193	907	257	651	908
	Mode Split Reduction	200	54	254	72	182	254
	Pass-by	0	0	0	0	0	0
	Net Trips	**514**	**139**	**653**	**185**	**469**	**654**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	514	139	653	185	469	654
Total Trips	Gross Trips	714	193	907	257	651	908
	Mode Split Reduction	200	54	254	72	182	254
	Pass-by	0	0	0	0	0	0
	Net Trips	**514**	**139**	**653**	**185**	**469**	**654**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	514	139	653	185	469	654

With GO scenario not applicable for 2031 since GO station not in place.

2031-withoutGO Trip Generation Table

Report for TAZ: 18

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
2,724,000 sq. ft GFA	Gross Trips	391	116	507	154	396	550
	Mode Split Reduction (28%)	109	32	141	43	111	154
	Net Trips	**282**	**84**	**366**	**111**	**285**	**396**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	282	84	366	111	285	396
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	391	116	507	154	396	550
	Mode Split Reduction	109	32	141	43	111	154
	Pass-by	0	0	0	0	0	0
	Net Trips	**282**	**84**	**366**	**111**	**285**	**396**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	282	84	366	111	285	396
Total Trips	Gross Trips	391	116	507	154	396	550
	Mode Split Reduction	109	32	141	43	111	154
	Pass-by	0	0	0	0	0	0
	Net Trips	**282**	**84**	**366**	**111**	**285**	**396**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	282	84	366	111	285	396

2041-withGO Trip Generation Table

Report for TAZ: 18

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
4,995,000 sq. ft GFA	Gross Trips	635	190	825	256	657	913
	Mode Split Reduction (33%)	210	63	273	84	217	301
	Net Trips	**425**	**127**	**552**	**172**	**440**	**612**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	425	127	552	172	440	612
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	635	190	825	256	657	913
	Mode Split Reduction	210	63	273	84	217	301
	Pass-by	0	0	0	0	0	0
	Net Trips	**425**	**127**	**552**	**172**	**440**	**612**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	425	127	552	172	440	612
Total Trips	Gross Trips	635	190	825	256	657	913
	Mode Split Reduction	210	63	273	84	217	301
	Pass-by	0	0	0	0	0	0
	Net Trips	**425**	**127**	**552**	**172**	**440**	**612**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	425	127	552	172	440	612

2041-withoutGO Trip Generation Table

Report for TAZ: 18

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
4,995,000 sq. ft GFA	Gross Trips	635	190	825	256	658	914
	Mode Split Reduction (28%)	178	53	231	72	184	256
	Net Trips	**457**	**137**	**594**	**184**	**474**	**658**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	457	137	594	184	474	658
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	635	190	825	256	658	914
	Mode Split Reduction	178	53	231	72	184	256
	Pass-by	0	0	0	0	0	0
	Net Trips	**457**	**137**	**594**	**184**	**474**	**658**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	457	137	594	184	474	658
Total Trips	Gross Trips	635	190	825	256	658	914
	Mode Split Reduction	178	53	231	72	184	256
	Pass-by	0	0	0	0	0	0
	Net Trips	**457**	**137**	**594**	**184**	**474**	**658**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	457	137	594	184	474	658

2051-withGO Trip Generation Table

Report for TAZ: 18

Mode Split Reduction: 33%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.87 Ln(X) - 0.44			Ln(T) = 0.88 Ln(X) - 0.57		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	0.25			T = 0.24 (X) + 2		
ITE LUC 221	Directional Split	15%	85%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	Ln(T) = 0.93 Ln(X) - 1.17			Ln(T) = 0.87 Ln(X) - 0.96		
ITE LUC 222	Directional Split	11%	89%	-	69%	31%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
9,082,000 sq. ft GFA	Gross Trips	1076	321	1397	439	1128	1567
	Mode Split Reduction (33%)	355	106	461	145	372	517
	Net Trips	**721**	**215**	**936**	**294**	**756**	**1050**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	721	215	936	294	756	1050
Community Centre + Library	Trip Generation Equation or Average Rate	-			-		
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0.00 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (33%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	1076	321	1397	439	1128	1567
	Mode Split Reduction	355	106	461	145	372	517
	Pass-by	0	0	0	0	0	0
	Net Trips	**721**	**215**	**936**	**294**	**756**	**1050**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	721	215	936	294	756	1050
Total Trips	Gross Trips	1076	321	1397	439	1128	1567
	Mode Split Reduction	355	106	461	145	372	517
	Pass-by	0	0	0	0	0	0
	Net Trips	**721**	**215**	**936**	**294**	**756**	**1050**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	721	215	936	294	756	1050

2051-withoutGO Trip Generation Table

Report for TAZ: 18

Mode Split Reduction: 28%

Land Use	Parameter	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	Trip Generation Equation or Average Rate	T = 0.24 (X) + 9.56			T = 0.24 (X) + 3.25		
ITE LUC 220	Directional Split	10%	90%	-	90%	10%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (Mid-Rise)	Trip Generation Equation or Average Rate	T = 0.25 (X) + 5.35			0.26		
ITE LUC 221	Directional Split	14%	86%	-	74%	26%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
Multifamily Housing (High-Rise)	Trip Generation Equation or Average Rate	0.24			Ln(T) = 0.95 Ln(X) - 1.36		
ITE LUC 222	Directional Split	25%	75%	-	73%	27%	-
0 Units	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Gross Trips	0	0	0	0	0	0
Total Residential	Mode Split Reduction (0%)	0	0	0	0	0	0
0 Units	**Net Trips**	**0**	**0**	**0**	**0**	**0**	**0**
Shopping Center	Trip Generation Equation or Average Rate	0.88			Ln(T) = 0.66 Ln(X) + 3.23		
ITE LUC 820	Directional Split	62%	38%	-	49%	51%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Pass-by (34% PM)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (90% Internal)	0	0	0	0	0	0
	Net Trips (10% External)	0	0	0	0	0	0
Office	Trip Generation Equation or Average Rate	T = 0.72 (X) + 25.14			T = 0.83 (X) + 7.46		
ITE LUC 710	Directional Split	87%	13%	-	16%	84%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (0%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Business Park	Trip Generation Equation or Average Rate	T = 1.04 (X) - 29.56			T = 0.81 (X) - 4.84		
ITE LUC 770	Directional Split	82%	18%	-	29%	71%	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Industrial Park	Trip Generation Equation or Average Rate	T = 0.14 (X) + 125.84			T = 0.16 (X) + 114.29		
ITE LUC 130	Directional Split	77%	23%	-	28%	72%	-
9,082,000 sq. ft GFA	Gross Trips	1076	321	1397	439	1129	1568
	Mode Split Reduction (28%)	301	90	391	123	316	439
	Net Trips	**775**	**231**	**1006**	**316**	**813**	**1129**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	775	231	1006	316	813	1129
Community Centre + Library	Trip Generation Equation or Average Rate		-			-	
ITE LUC CUSTOM (495 + 590)	Directional Split	-	-	-	-	-	-
0 sq. ft GFA	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (20% Internal)	0	0	0	0	0	0
	Net Trips (80% External)	0	0	0	0	0	0
Public Park - District Park	Trip Generation Equation or Average Rate	0.05			0.15		
ITE LUC 411	Directional Split	62%	38%	-	57%	43%	-
0 acres	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (0% Internal)	0	0	0	0	0	0
	Net Trips (100% External)	0	0	0	0	0	0
Elementary School	Trip Generation Equation or Average Rate	0.73			0.16		
ITE LUC 520	Directional Split	54%	46%	-	46%	54%	-
0 Students	Gross Trips	0	0	0	0	0	0
	Mode Split Reduction (28%)	0	0	0	0	0	0
	Net Trips	**0**	**0**	**0**	**0**	**0**	**0**
	Net Trips (85% Internal)	0	0	0	0	0	0
	Net Trips (15% External)	0	0	0	0	0	0
Total Non-Residential	Gross Trips	1076	321	1397	439	1129	1568
	Mode Split Reduction	301	90	391	123	316	439
	Pass-by	0	0	0	0	0	0
	Net Trips	**775**	**231**	**1006**	**316**	**813**	**1129**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	775	231	1006	316	813	1129
Total Trips	Gross Trips	1076	321	1397	439	1129	1568
	Mode Split Reduction	301	90	391	123	316	439
	Pass-by	0	0	0	0	0	0
	Net Trips	**775**	**231**	**1006**	**316**	**813**	**1129**
	Net Trips (Internal)	0	0	0	0	0	0
	Net Trips (External)	775	231	1006	316	813	1129

Appendix G
Excerpt of 2022 TMP and Trip Distribution Calculations

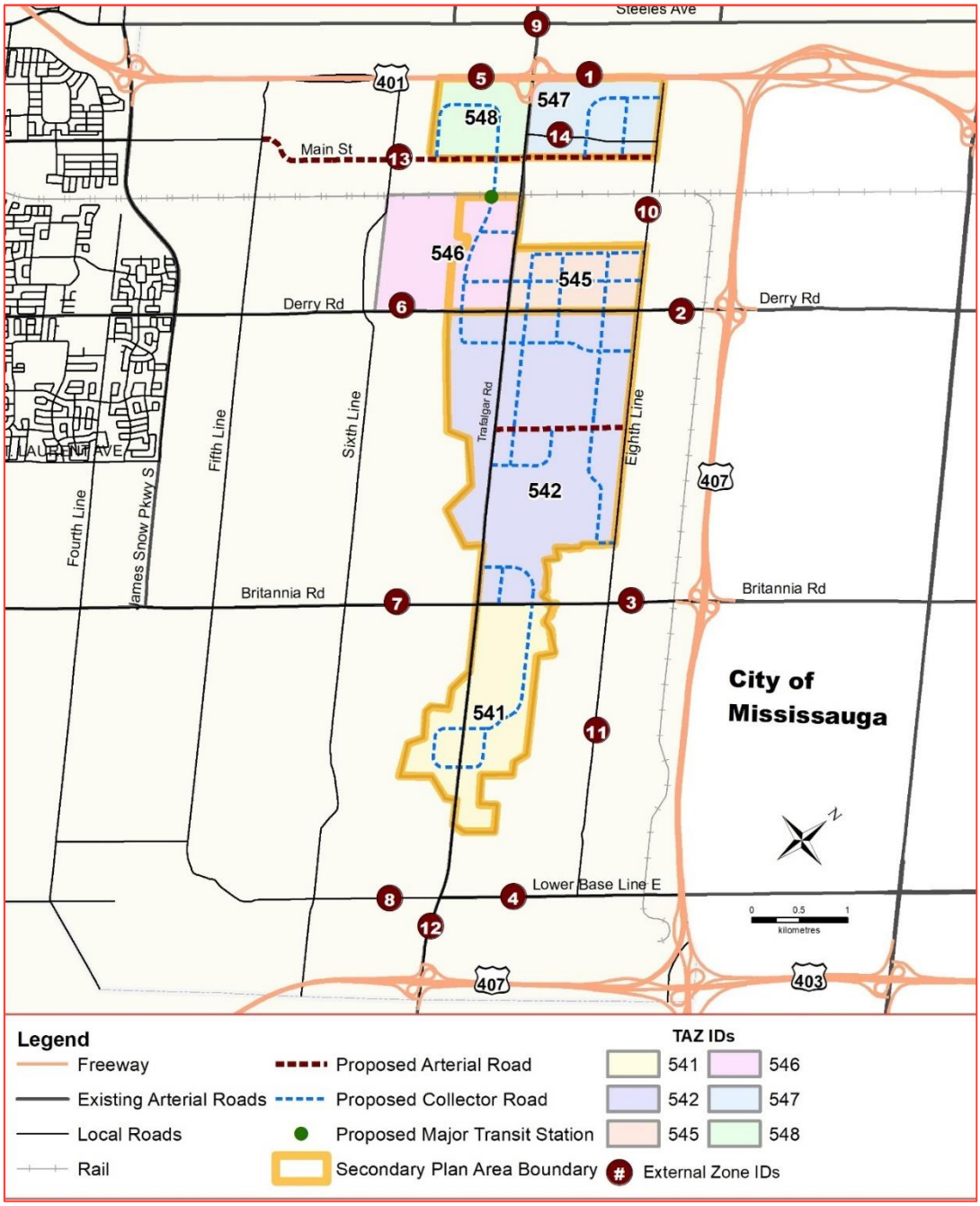
APPENDIX

F TRIP ASSIGNMENT OF FUTURE TOTAL TRAFFIC

APPENDIX

To conduct the trip distribution and trip assignment of future total traffic on the proposed roadway network in the Trafalgar Corridor, a trip assignment model was used that distributes the traffic on the roadway network based on travel times and shortest distances. The input of the trips to the model is done using origin and destination matrices. **Figure F-1** shows the zones identified in the study area along with the future roadway network in the Trafalgar Corridor Development area. The figure shows the external gates (gate IDs 1 through 14) that act as the gateways to the region-wide trip distribution. Gate ID #14 is coded to account for the background trips that are attributed to the current development existing in this area. Zones 541, 542, 545, 546, 547 and 548 are the zones within the Trafalgar Corridor Development area. These zones facilitate the distribution of external and internal traffic.

Figure F-1: Future Roadway Network and Origin and Destination Zones



APPENDIX

Table F-1 below shows the trips by type and scenario for the a.m. and p.m. peak period which are estimated using the trip generation data discussed in section 4.1 in the report. The trips shown in this table are then distributed between the origins and destination according to the trip distribution discussed in section 4.2.

Table F-1: Trips by Type by Zone

Zone	AM Peak Trips								PM Peak Trips							
	External Trips		Interzonal Trips		Intrazonal Trips		Total Trips		External Trips		Interzonal Trips		Intrazonal Trips		Total Trips	
	E-I	I-E	IN	OUT	IN	OUT	IN	OUT	E-I	I-E	IN	OUT	IN	OUT	IN	OUT
Scenario A																
541	333	663	74	121	19	19	426	803	639	533	154	107	22	22	815	661
542	634	1,364	126	256	74	74	834	1,694	1,263	1,085	329	190	92	92	1,684	1,366
545	278	239	67	56	5	5	350	300	223	408	83	89	5	5	311	502
546	610	441	169	82	24	24	803	547	545	1,219	133	227	36	36	714	1,481
547	283	56	68	15	2	2	353	72	94	425	33	90	2	2	129	518
548	180	33	34	11	1	1	215	44	46	219	20	47	1	1	67	267
Total	2,319	2,796	538	540	124	124	2,980	3,460	2,810	3,889	752	750	158	158	3,720	4,796
Scenario B																
541	344	710	62	73	20	20	426	803	698	553	94	85	23	23	815	661
542	678	1,508	70	100	86	86	834	1,694	1,443	1,167	137	95	104	104	1,684	1,366
545	115	22	13	4	1	1	129	26	27	119	7	19	1	1	35	139
546	116	23	13	3	0	0	129	26	30	120	5	19	0	0	35	139
547	115	23	14	4	0	0	129	26	30	119	5	19	0	0	35	139
548	115	22	13	4	1	1	129	26	29	119	5	19	1	1	35	139
Total	1,485	2,308	185	187	107	107	1,777	2,602	2,256	2,197	253	256	129	129	2,638	2,582

Note:
E-I - External Origin & Destination within Trafalgar Corridor Development Area
I-E - Origin within Trafalgar Corridor Development Area & External Destination

Tables F-2 thru **F-5** shows the development trip distribution matrices between various zones for both the scenarios A and B and the two peak periods. In the matrices, the grey colour highlighted cells refer to background trips, the green colour highlighted cells are the external to internal (E-I) trips, the yellow colour highlighted cells are internal to external trips, the orange colour highlighted cells are the interzonal trips and the blue colour highlighted cells are the intrazonal trips.

The future background traffic volumes estimated in section 3 of the report and shown in Figures 3-3 and 3-4 for scenarios A and B were used to estimate the trips between the external zones using Origin-Destination Matrix Estimation tool. Tables F-6 thru F-9 show the trip distribution matrices between the external zones. It should be noted that there are volume imbalances between the intersections in the estimated background traffic volumes indicating that there are trips that are attracted and generated from the existing developments. Therefore, we also see trips to/from various internal zones in these matrices.

Finally, a trip assignment model that assigns the trips based on travel times and shortest distance is used to assign the total trips. The total trips are obtained by summing up the respective development trips (Tables F-2 through F-5) and the background trips (Tables F-6 through F-9). Figures F-2 through F-5 show the trip assignment of the total traffic volumes for scenarios A and B for both the peak periods. Note that in the trip assignment figures, all the volumes are not visible due to the limitations of the display with the scale of the map. The turning movement volumes were extracted from these trip assignment models for the study and additional intersections. The turning movement volumes and capacity analysis for the study and additional intersections are discussed in Section 5.

APPENDIX

Table F-2: AM Scenario A - Development Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1															17	51	26	57	33	21
2															14	35	17	38	12	8
3															18	20	7	14	6	4
4															19	20	6	13	5	4
5															31	87	40	87	67	43
6															24	45	40	87	28	18
7															45	120	33	72	20	13
8															6	2	0	0	5	3
9															37	57	25	55	43	28
10															0	0	0	0	0	0
11															0	11	5	11	5	3
12															110	156	68	148	29	18
13															17	36	16	34	36	23
14																				
541	34	21	33	39	74	56	79	14	113	0	0	165	40		19	54	12	36	13	6
542	111	61	38	45	221	114	206	4	201	0	28	253	90		53	74	39	107	37	19
545	23	13	5	6	40	32	25	0	36	0	5	44	16		6	21	6	19	6	3
546	41	23	9	11	74	58	46	0	65	0	10	81	29		12	41	13	24	11	5
547	6	3	2	2	15	4	3	1	13	0	2	5	7		2	6	2	4	2	1
548	4	2	1	1	9	3	2	1	8	0	1	3	4		1	4	1	3	1	1

Table F-3: PM Scenario A - Development Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1															33	102	21	51	10	5
2															20	56	12	28	4	2
3															32	35	5	10	2	1
4															37	41	6	13	2	1
5															72	204	38	91	25	12
6															54	106	30	72	7	4
7															76	190	23	56	5	3
8															14	4	0	0	2	1
9															109	186	33	80	21	11
10															0	0	0	0	0	0
11															0	26	5	12	2	1
12															159	234	41	100	9	4
13															39	83	15	36	11	6
14																				
541	26	22	29	31	50	38	71	10	59	0	0	175	27		23	72	9	20	4	2
542	87	59	34	34	148	77	204	3	98	0	19	266	61		70	92	32	67	14	8
545	38	25	9	9	58	58	48	0	37	0	7	99	23		15	49	6	20	4	2
546	114	74	27	24	173	174	143	0	110	0	21	295	68		45	138	28	36	9	6
547	49	18	9	8	100	42	30	8	65	0	7	43	53		16	46	9	17	3	2
548	25	10	5	4	52	22	16	4	33	0	4	22	28		8	24	5	9	2	1

APPENDIX

Table F-4: AM Scenario B - Development Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1															17	53	11	11	13	13
2															14	36	7	7	5	5
3															18	20	3	3	3	3
4															19	21	3	3	3	3
5															36	100	18	18	29	29
6															26	51	17	17	11	11
7															45	126	14	14	8	8
8															7	2	0	0	2	2
9															39	62	11	11	18	18
10															0	0	0	0	0	0
11															0	12	2	2	2	2
12															110	161	28	28	12	12
13															19	40	7	7	15	15
14																				
541	36	22	35	41	80	60	85	15	123	0	0	175	43		20	59	3	3	3	3
542	123	67	42	49	245	127	227	5	224	0	30	276	99		58	86	10	10	10	10
545	3	2	1	1	4	3	3	0	4	0	1	4	2		1	3	1	0	0	0
546	3	2	1	1	4	4	3	0	4	0	1	5	2		1	2	0	0	1	0
547	3	1	1	1	6	2	2	1	6	0	1	2	3		1	3	0	0	0	0
548	3	1	1	1	6	2	1	1	5	0	1	2	3		1	3	0	0	0	1

Table F-5: PM Scenario B - Development Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1															36	118	3	3	3	3
2															22	64	2	2	2	2
3															35	40	1	1	1	1
4															40	46	1	1	1	1
5															79	234	5	5	8	8
6															59	121	4	4	3	3
7															84	217	3	4	2	2
8															15	4	0	0	1	1
9															121	215	4	5	7	7
10															0	0	0	0	0	0
11															0	29	1	1	1	1
12															172	264	5	6	3	3
13															42	95	2	2	4	4
14																				
541	27	22	28	31	57	42	73	11	62	0	0	176	30		24	81	2	1	1	1
542	90	61	35	36	171	88	217	3	106	0	20	277	69		78	105	5	3	4	4
545	12	8	3	3	17	17	14	0	11	0	3	29	7		4	14	1	0	0	0
546	12	8	3	3	17	18	14	0	11	0	3	29	7		4	14	0	0	0	0
547	14	5	3	3	28	12	9	2	18	0	2	12	15		4	14	0	1	0	0
548	14	5	3	3	28	12	9	2	18	0	2	12	15		4	14	0	0	0	1

APPENDIX

Table F-6: AM Scenario A - Background Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1	0	9	1	9	0	13	3	1	530	0	0	67	7	58	7	13	0	100	4	0
2	10	0	5	7	89	498	16	1	28	3	31	53	4	1	2	110	140	0	3	0
3	1	3	0	16	6	7	265	2	2	0	13	118	0	0	6	47	1	0	0	0
4	2	8	21	0	21	5	9	88	7	0	0	125	1	0	1	9	5	0	1	0
5	44	25	3	26	0	36	8	3	126	0	1	183	18	158	19	36	0	273	11	0
6	39	1858	29	49	364	0	16	6	112	2	6	354	17	4	37	358	92	0	12	0
7	2	37	800	43	14	3	0	5	4	0	4	310	1	0	18	12	3	0	0	0
8	2	8	21	449	22	5	10	0	7	0	0	133	1	0	1	9	5	0	1	0
9	1761	39	5	40	0	56	13	5	0	0	1	286	28	247	30	57	0	0	17	0
10	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	17	30	0	2	2	3	0	1	0	0	1	0	0	0	0	3	0	0	0
12	33	110	297	191	306	70	132	28	94	0	1	0	14	4	12	129	74	0	10	0
13	6	9	1	9	59	12	3	1	18	0	0	63	0	1	7	12	0	93	82	0
14	1	0	0	0	13	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
541	7	27	105	0	67	16	35	0	20	0	0	3	3	0	0	0	0	0	0	0
542	4	14	23	5	37	10	67	1	12	0	0	36	2	0	0	0	0	0	0	0
545	1	8	0	1	7	2	0	0	2	0	0	4	0	0	0	0	0	0	0	0
546	0	1	0	1	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0
547	4	4	0	4	37	6	1	0	11	0	0	29	305	0	0	0	0	0	0	0
548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table F-7: PM Scenario A - Background Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1	0	14	1	10	0	41	2	6	583	0	1	58	42	46	4	8	0	1	7	0
2	14	0	0	20	13	1957	49	12	55	6	32	121	17	1	3	168	275	0	3	0
3	1	0	0	26	1	24	862	16	4	0	11	157	1	0	14	21	1	0	0	0
4	12	12	17	0	11	31	35	534	46	0	0	190	15	1	0	3	8	0	3	0
5	69	36	2	26	0	110	5	16	261	0	3	157	113	122	10	19	1	4	18	0
6	19	755	5	23	17	0	5	14	71	0	15	135	22	1	9	24	12	0	5	0
7	3	28	416	31	3	7	0	19	11	0	2	185	3	0	4	1	2	0	1	0
8	0	0	1	90	0	1	1	0	2	0	0	20	1	0	0	0	0	0	0	0
9	273	52	2	38	1	158	8	23	0	0	6	225	162	176	14	28	1	0	25	0
10	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1	23	16	0	1	18	5	0	3	1	0	1	1	0	0	2	8	0	0	0
12	99	100	133	176	88	253	280	243	372	0	1	0	117	5	1	29	60	0	24	0
13	11	21	1	15	10	62	3	9	40	0	2	90	0	1	6	10	0	2	94	0
14	47	1	0	0	43	2	0	0	180	0	0	2	2	0	0	0	0	0	0	0
541	15	15	30	18	13	37	42	11	55	0	0	105	17	0	0	0	0	0	0	0
542	28	27	68	2	25	74	63	1	108	0	0	12	35	0	0	0	0	0	0	0
545	6	35	0	4	6	36	1	3	26	0	0	29	8	0	0	0	0	0	0	0
546	0	5	0	4	0	15	1	2	1	0	0	21	0	0	0	0	0	0	0	0
547	4	2	0	2	4	7	0	1	15	0	0	10	366	0	0	0	0	0	0	0
548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX

Table F-8: AM Scenario B - Background Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1	0	11	1	16	0	14	3	1	585	0	0	70	12	37	8	10	0	132	6	0
2	11	0	5	10	87	507	15	1	28	3	29	46	5	0	2	112	147	0	3	0
3	1	3	0	27	6	7	271	2	2	0	13	118	0	0	5	39	1	0	0	0
4	2	9	20	0	20	5	9	88	7	0	0	129	1	0	1	6	6	0	1	0
5	49	30	3	43	0	37	9	3	127	0	1	180	30	96	20	26	0	339	17	0
6	43	2201	26	81	354	0	17	6	112	2	6	344	20	1	39	53	106	0	11	0
7	2	40	812	71	14	3	0	5	4	0	5	301	1	0	15	5	4	0	0	0
8	2	9	22	422	23	5	10	0	7	0	0	143	1	0	1	6	6	0	1	0
9	1810	49	5	70	0	61	15	5	0	0	1	297	49	158	34	45	0	0	27	0
10	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	17	30	0	2	2	3	0	1	0	0	1	0	0	0	0	3	0	0	0
12	38	123	302	180	309	73	135	30	97	0	1	0	17	1	7	91	101	0	9	0
13	5	7	1	10	39	8	2	1	12	0	0	42	0	0	5	6	0	78	29	0
14	5	0	0	0	53	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0
541	8	25	99	0	66	17	32	0	21	0	0	2	4	0	0	0	0	0	0	0
542	4	41	33	7	33	8	68	1	10	0	0	31	2	0	0	0	0	0	0	0
545	1	5	0	0	6	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
546	0	4	0	5	0	3	0	0	0	0	0	15	0	0	0	0	0	0	0	0
547	2	0	0	1	18	1	0	0	6	0	0	2	122	0	0	0	0	0	0	0
548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table F-9: AM Scenario B - Background Trip Distribution

From Zone	To Zone																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	541	542	545	546	547	548
1	0	17	1	12	0	51	2	7	643	0	1	73	55	25	4	5	0	1	11	0
2	15	0	0	21	13	2014	47	12	59	6	30	125	18	0	2	173	287	0	3	0
3	1	0	0	28	1	26	849	17	4	0	12	167	1	0	11	40	2	0	0	0
4	12	12	17	0	10	29	35	535	45	0	0	194	14	0	0	3	11	0	3	0
5	71	41	2	30	0	126	6	18	267	0	4	183	137	61	9	10	1	5	26	0
6	20	774	4	24	16	0	5	14	74	0	16	140	22	0	8	10	16	0	5	0
7	3	27	414	33	3	6	0	20	10	0	0	199	3	0	4	1	3	0	1	0
8	0	0	1	91	0	1	1	0	2	0	0	20	1	0	0	0	0	0	0	0
9	298	58	2	43	1	175	9	25	0	0	8	254	190	85	12	14	1	0	35	0
10	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1	22	16	0	1	17	5	0	3	1	0	1	1	0	0	2	9	0	0	0
12	99	99	132	183	78	242	281	250	367	0	0	0	112	2	1	39	84	0	22	0
13	10	20	1	14	8	59	3	9	36	0	2	87	0	0	5	5	0	2	46	0
14	55	0	0	0	45	1	0	0	210	0	0	1	1	0	0	0	0	0	0	0
541	23	21	40	1	18	54	64	1	83	0	0	6	25	0	0	0	0	0	0	0
542	26	29	73	3	21	65	85	1	100	0	0	18	30	0	0	0	0	0	0	0
545	1	23	0	3	1	9	1	2	4	0	0	22	1	0	0	0	0	0	0	0
546	0	1	0	1	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0	0
547	1	1	0	1	1	5	0	1	5	0	0	7	115	0	0	0	0	0	0	0
548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tables F-2 and F-3 of the WSP 2022 Agerton and Trafalgar TMP Addendum were used as a base to calculate the "with GO Station" site trip distribution

Tables F-4 and F-5 of the WSP 2022 Agerton and Trafalgar TMP Addendum were used as a base to calculate the "without GO Station" site trip distribution

The "with GO" site trip distribution calculations have been provided for the purposes of illustrating TYLin's trip distribution methodology.

Tables F-2 through F-5 are O-D matrices that provide a summary of the Development trips internal and external to the Agerton and Trafalgar Secondary Plan areas. Development trips bound to/from external zones (1 through 14) to the Secondary Plan2 (Zones 541, 542, 545-548) were used to calcualte the distribution of site trips to/from study area gateways.

Based on Figure F-1 of Appendix F, the 14 external zones/study gateways are listed in Table 1 below. Table 1 summarizes the distribution of the total trips bound in and out of the study area during each peak hour, as calculated from the O-D matrices.

Table 1 - External Develpoment Trip Distribution with GO by Zone (1-14)

Zone		AM		PM	
		IN	OUT	IN	OUT
1	**Hwy 401 E**	8.7%	7.7%	7.7%	8.7%
2	**Derry Rd E**	5.3%	4.3%	4.2%	5.3%
3	**Britannia Rd E**	2.9%	3.1%	3.0%	2.9%
4	**LBL E**	2.8%	3.7%	3.5%	2.8%
5	**Hwy 401 W**	15.1%	15.3%	15.4%	14.8%
6	**Derry Rd W**	10.3%	9.4%	9.5%	10.5%
7	**Britannia Rd W**	12.9%	12.7%	12.3%	13.1%
8	**LBL W**	0.7%	0.7%	0.7%	0.6%
9	**Trafalgar Rd N**	10.4%	15.4%	15.3%	10.3%
10	**Eighth Line N**	0.0%	0.0%	0.0%	0.0%
11	**Eighth Line S**	1.5%	1.6%	1.6%	1.5%
12	**Trafalgar Rd S**	22.5%	19.4%	19.5%	23.0%
13	**Main St W**	6.9%	6.6%	7.2%	6.6%
14	**Auburn W**	0.0%	0.0%	0.0%	0.0%
	TOTAL	100%	100%	100%	100%

Table 2 takes the values calculated in Table 1 and applies them to the study road network boundaries/gateways for the purposes of TYLin's site traffic assignment. Of note, Zones 4 and 11 were added together and applied to the "Lower Base Line to/from the east" gateway given that Eighth Line S is a dead end, as per existing conditions.

Table 2 - Trip Distribution: With GO Station by Gateway (2031 and 2041 horizon years)

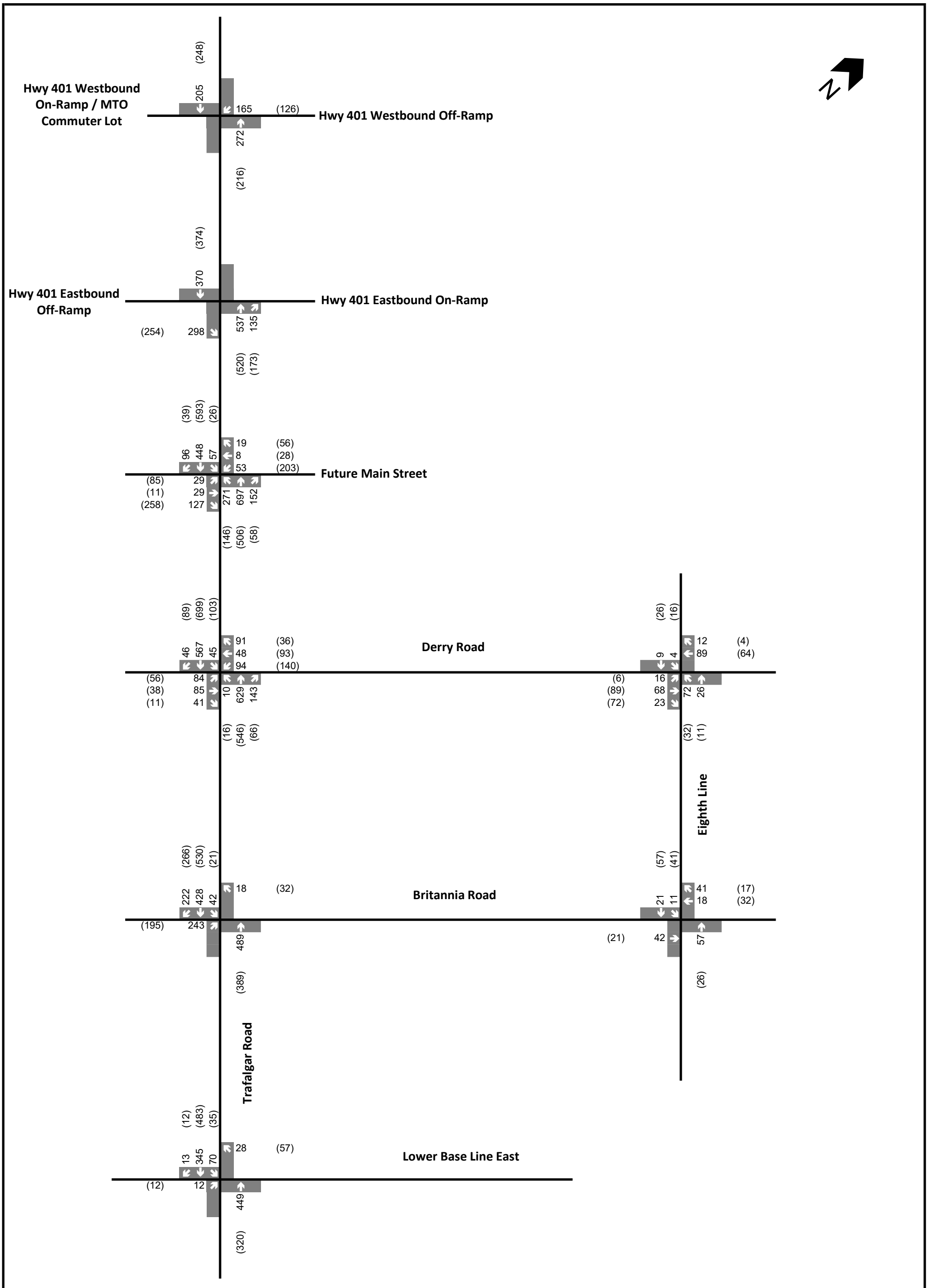
Location/Gateway	AM		PM	
	IN	OUT	IN	OUT
Trafalgar Road to/from north	10.4%	15.4%	15.3%	10.3%
Eighth Line to/from north	0.0%	0.0%	0.0%	0.0%
Derry Road to/from east	5.3%	4.3%	4.2%	5.3%
Britannia Road to/from east	2.9%	3.1%	3.0%	2.9%
Lower Baseline to/from east	4.3%	5.3%	5.1%	4.3%
Trafalgar Road to/from south	22.5%	19.4%	19.5%	23.0%
Lower Baseline to/from west	0.7%	0.7%	0.7%	0.6%
Britannia Road to/from west	12.9%	12.7%	12.3%	13.1%
Derry Road to/from west	10.3%	9.4%	9.5%	10.5%
Highway 401 to/from east	8.7%	7.7%	7.7%	8.7%
Highway 401 to/from west	15.1%	15.3%	15.4%	14.8%
Main Street to/from west	6.9%	6.6%	7.2%	6.6%
Louis St. Laurent to/from west	0.0%	0.0%	0.0%	0.0%
TOTAL	100.00%	100.00%	100.00%	100.00%

By 2051, it is expected that the planned easterly extension of Louis St. Laurent Avenue to Trafalgar Road will be complete, provided a new east-west route into the southwest area of Milton. This extension was not accounted for in the develpoment traffic O-D matrices. To account for the impact of the new connection on site traffic travel patterns, it was assumed that a portion of westbound traffic on Derry Road and Britannia Road would shift to Louis St. Laurent Avenue in 2051.
It was assumed that 20% of the site traffic bound to/from the west via Derry Road and Britannia Road would shift to Louis St. Laurent. Traffic was shifted from each road proportional to the amount of traffic that was distributed for the 2031 and 2041 scenario. For example, the total AM IN distribution for Derry Road and Britannia Road to/from the west is 23.2% in Table 3. 20% of this value is 4.64%, assigned to Louis St. Laurent Ave., as shown in Table 3. The proportional redistribution of the traffic can be seen in Britannia Road's distribution being lowered by 2.6%, while Derry Road's was lowered by the remaining 2.04% (As Britannia Road has a higher percentage of inbound traffic assigned to it during the AM peak hour).

Table 3 - Trip Distribution: With GO Station by Gateway (2051 horizon year)

Location/Gateway	AM		PM	
	IN	OUT	IN	OUT
Trafalgar Road to/from north	10.4%	15.4%	15.3%	10.3%
Eighth Line to/from north	0.0%	0.0%	0.0%	0.0%
Derry Road to/from east	5.3%	4.3%	4.2%	5.3%
Britannia Road to/from east	2.9%	3.1%	3.0%	2.9%
Lower Baseline to/from east	4.3%	5.3%	5.1%	4.3%
Trafalgar Road to/from south	22.5%	19.4%	19.5%	23.0%
Lower Baseline to/from west	0.7%	0.7%	0.7%	0.6%
Britannia Road to/from west	10.3%	10.2%	9.8%	10.5%
Derry Road to/from west	8.2%	7.5%	7.6%	8.4%
Highway 401 to/from east	8.7%	7.7%	7.7%	8.7%
Highway 401 to/from west	15.1%	15.3%	15.4%	14.8%
Main Street to/from west	6.9%	6.6%	7.2%	6.6%
Louis St. Laurent to/from west	4.6%	4.4%	4.4%	4.7%
TOTAL	100.00%	100.00%	100.00%	100.00%

Appendix H
Site Traffic Volume



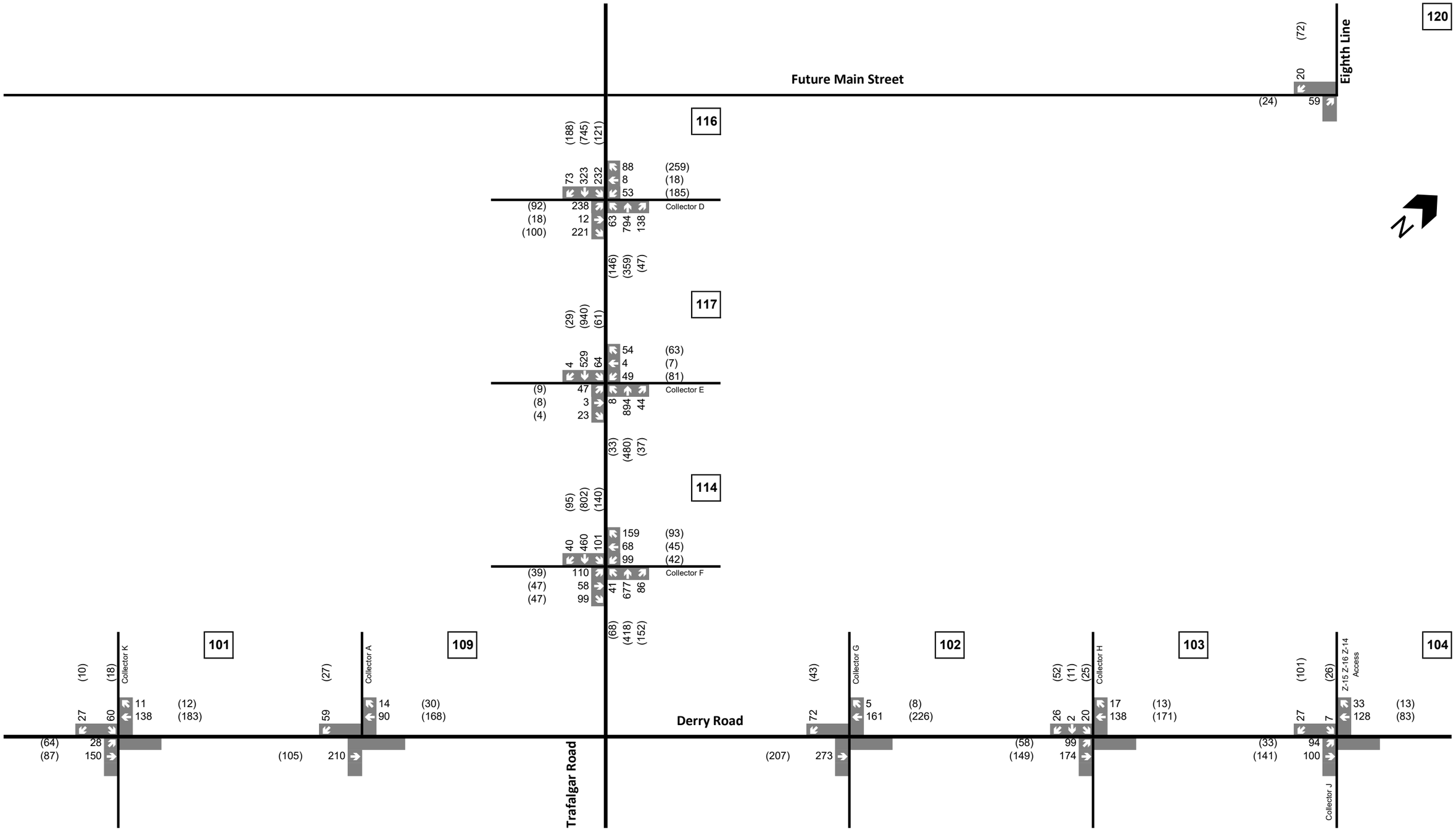
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-withGO-41a

2041 Site Traffic Volumes (with GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



TYLin

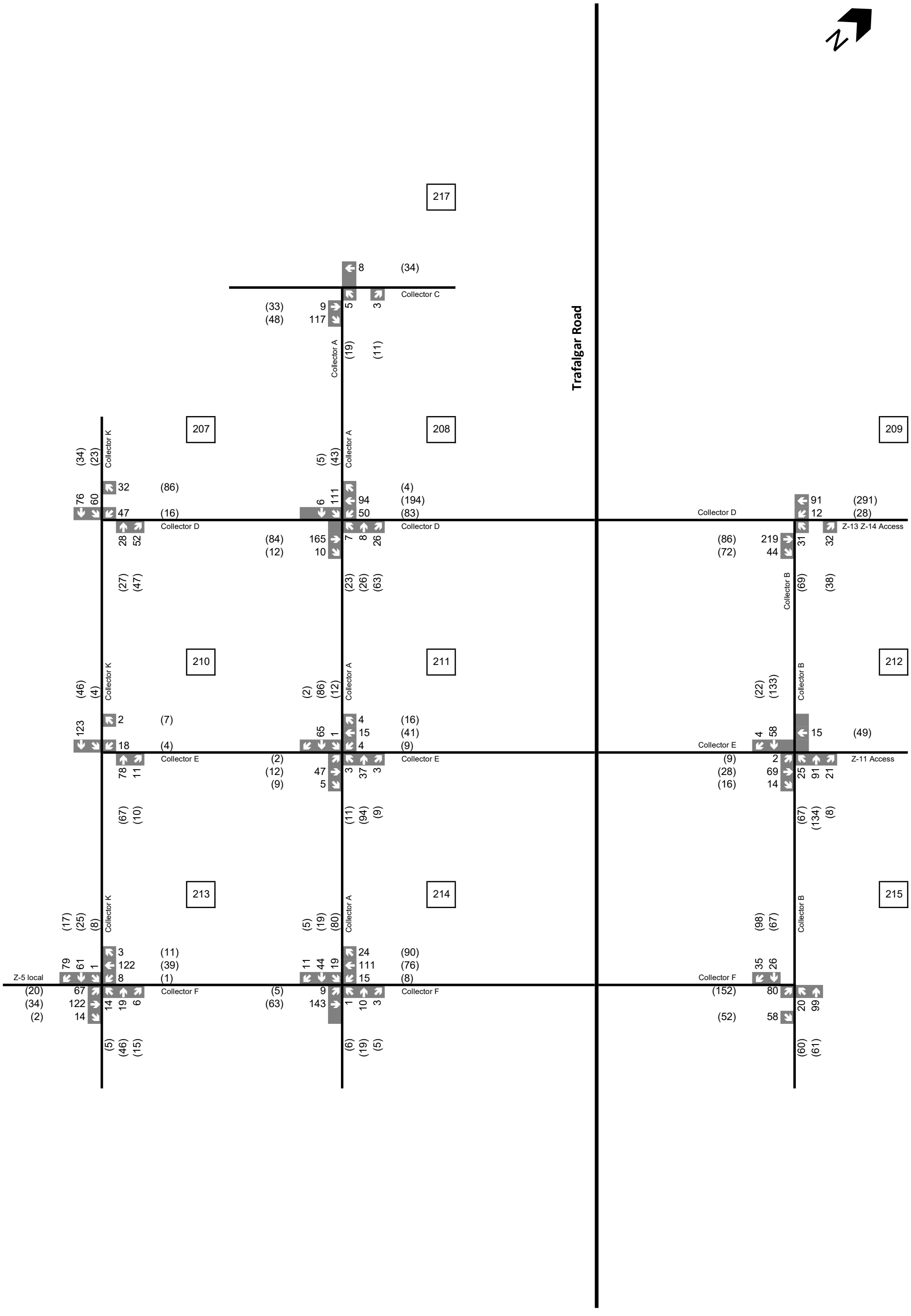
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-withGO-41b

2041 Site Traffic Volumes (with GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



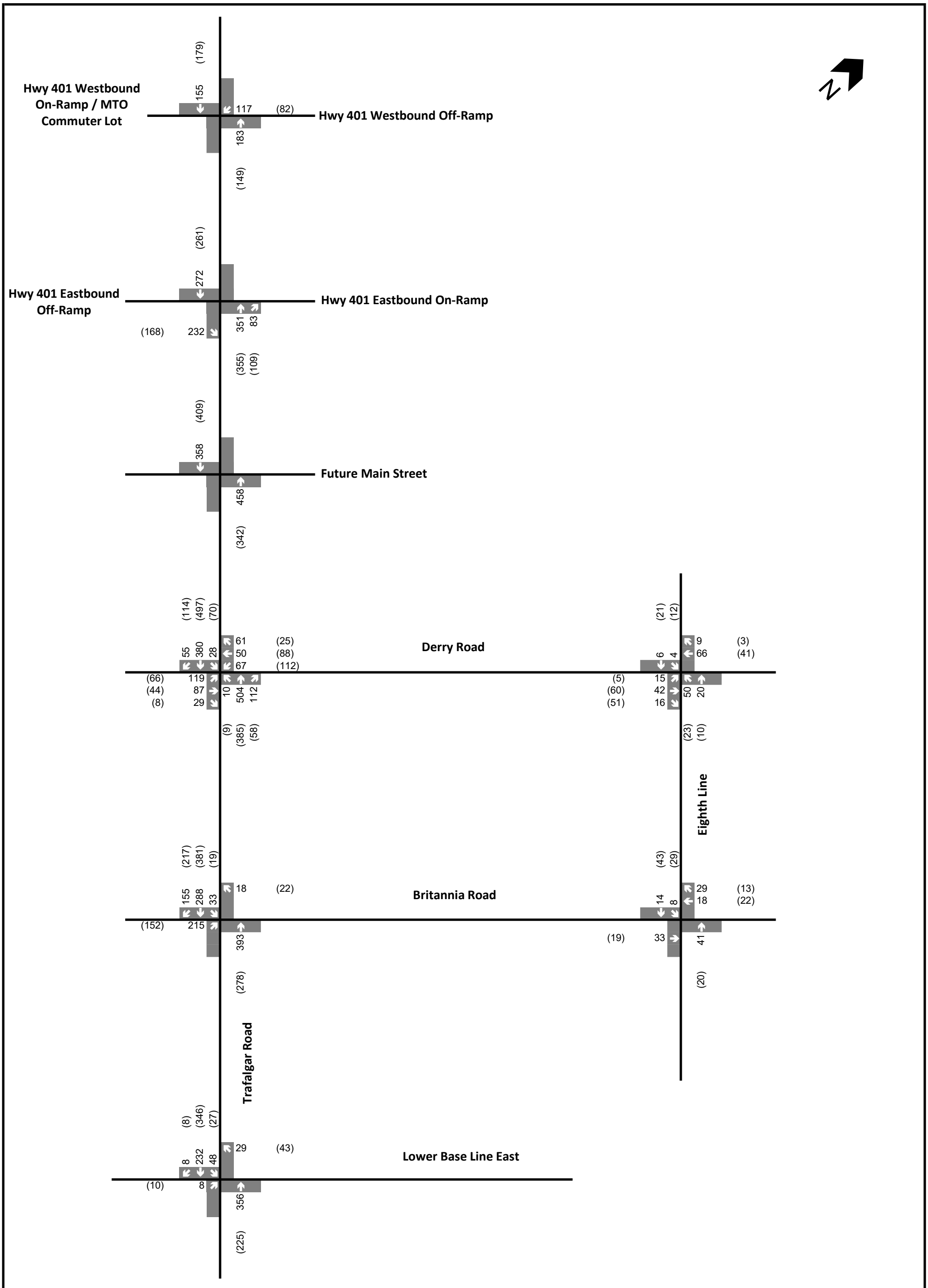
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Appendix-withGO-41c

2041 Site Traffic Volumes (with GO station)
Collector-Collector Intersections



Legend

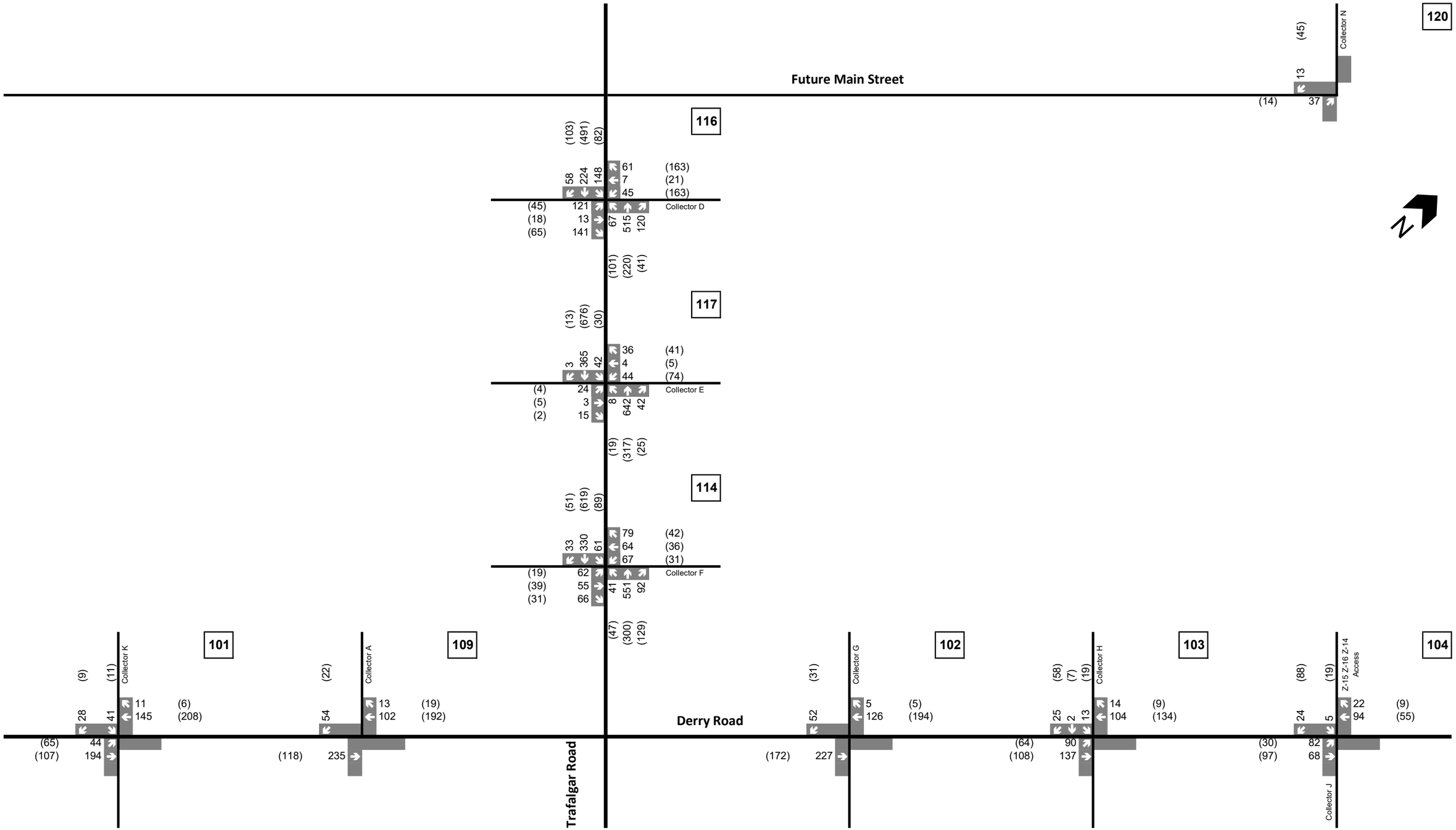
xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Appendix-noGO-31a

2031 Site Traffic Volumes (without GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



TYLin

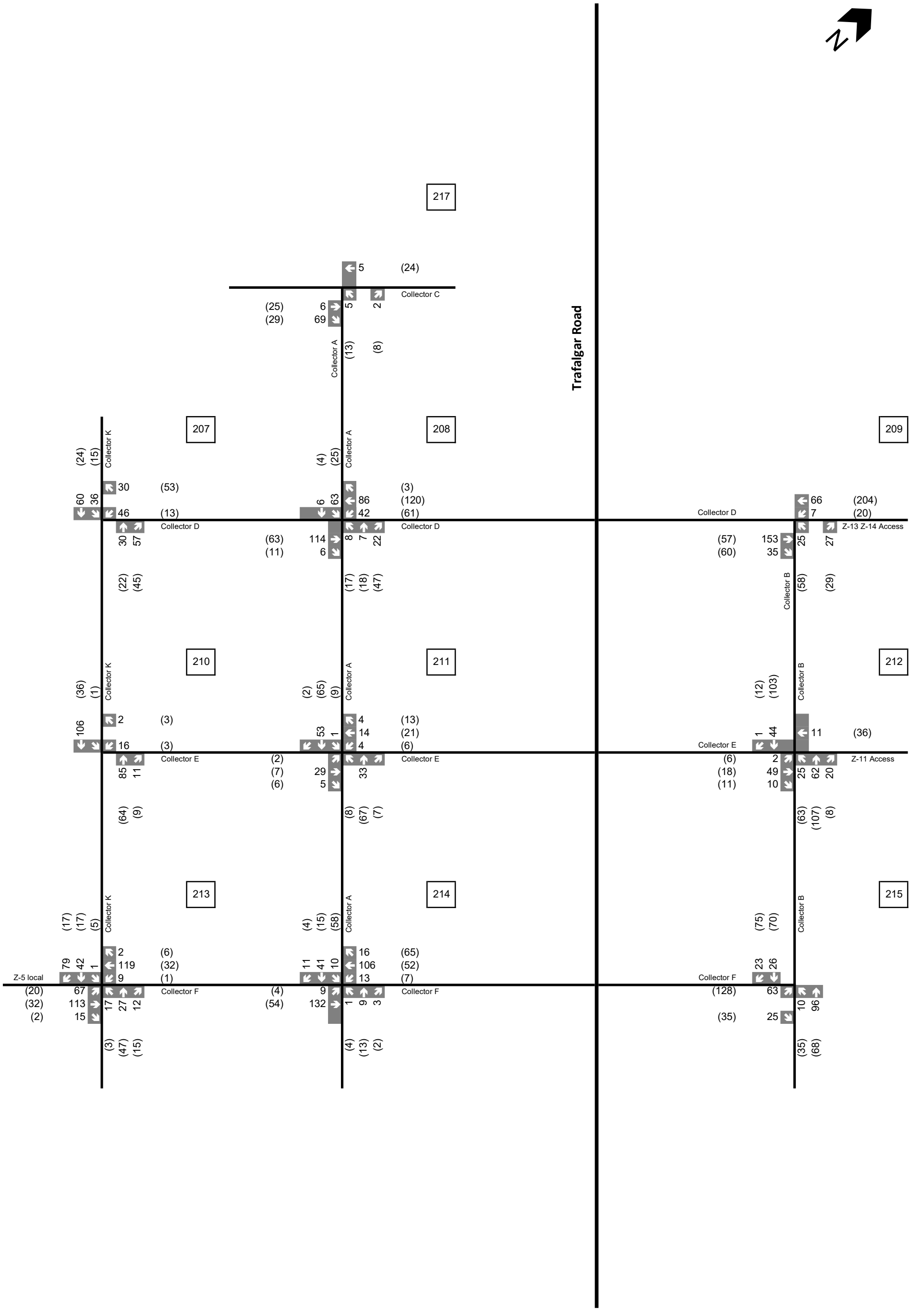
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-noGO-31b

2031 Site Traffic Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



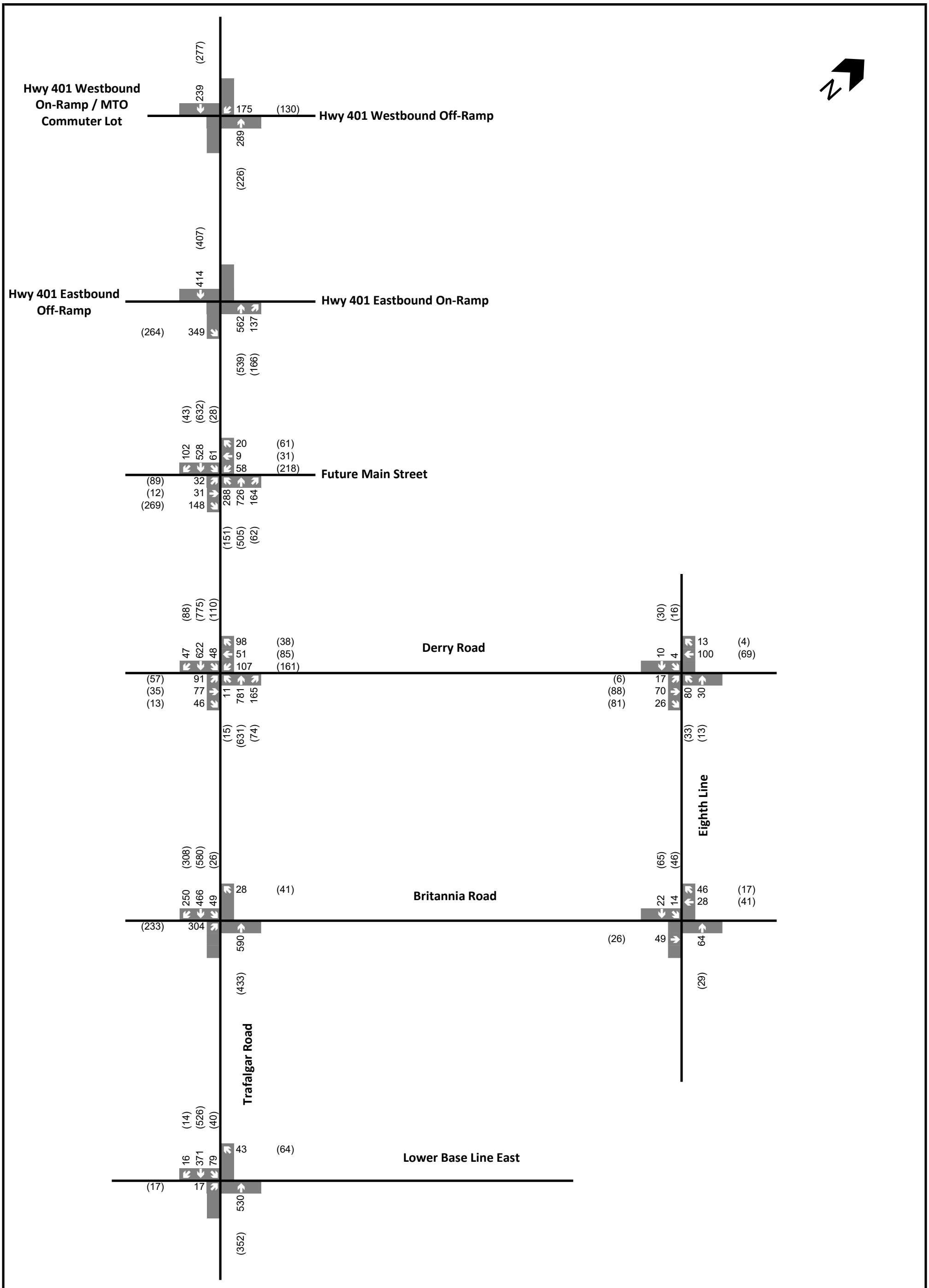
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Appendix-noGO-31c

2031 Site Traffic Volumes (without GO station)
Collector-Collector Intersections



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

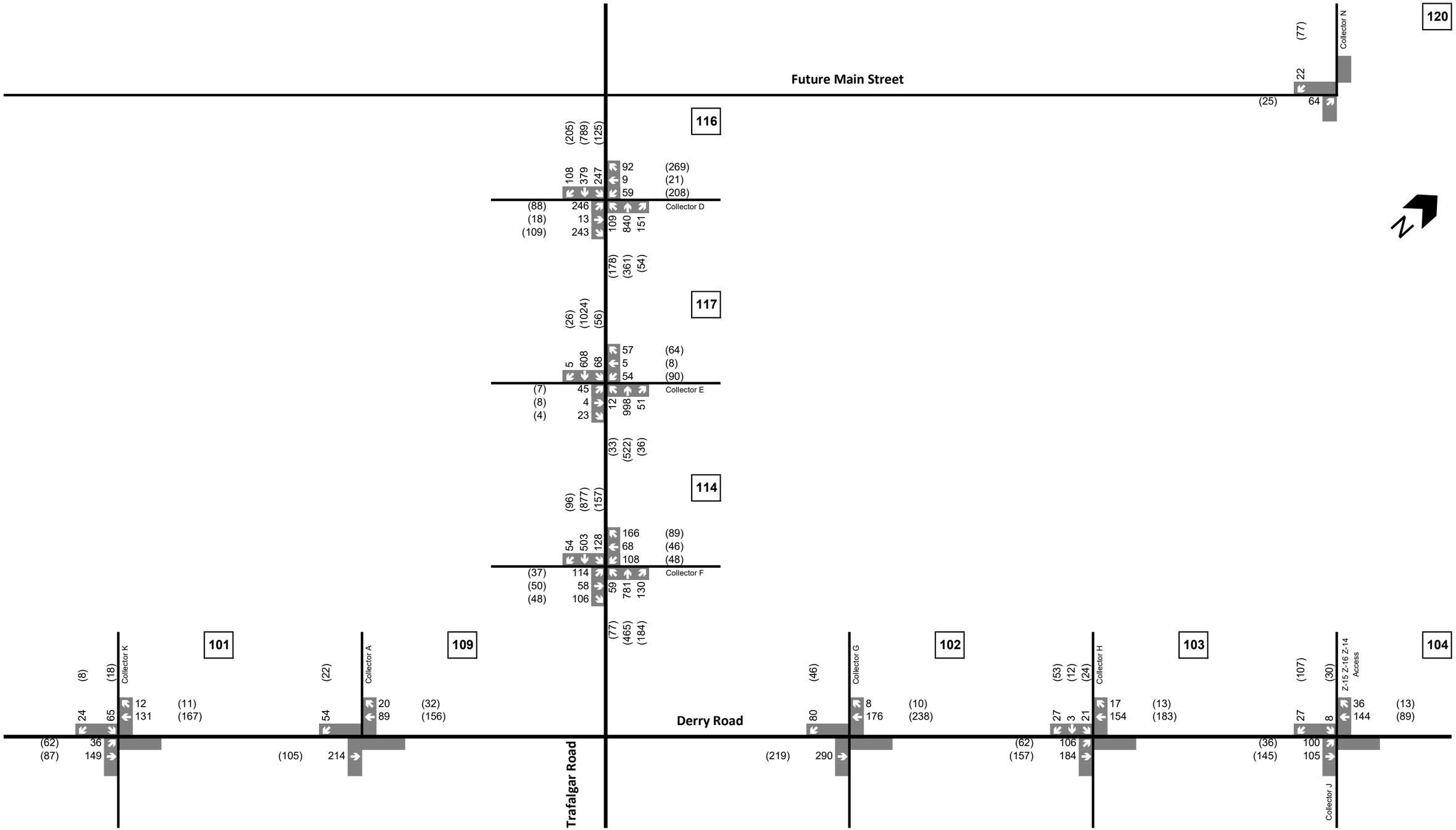
TYLin

Appendix-noGO-41a

2041 Site Traffic Volumes (without GO station)

External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



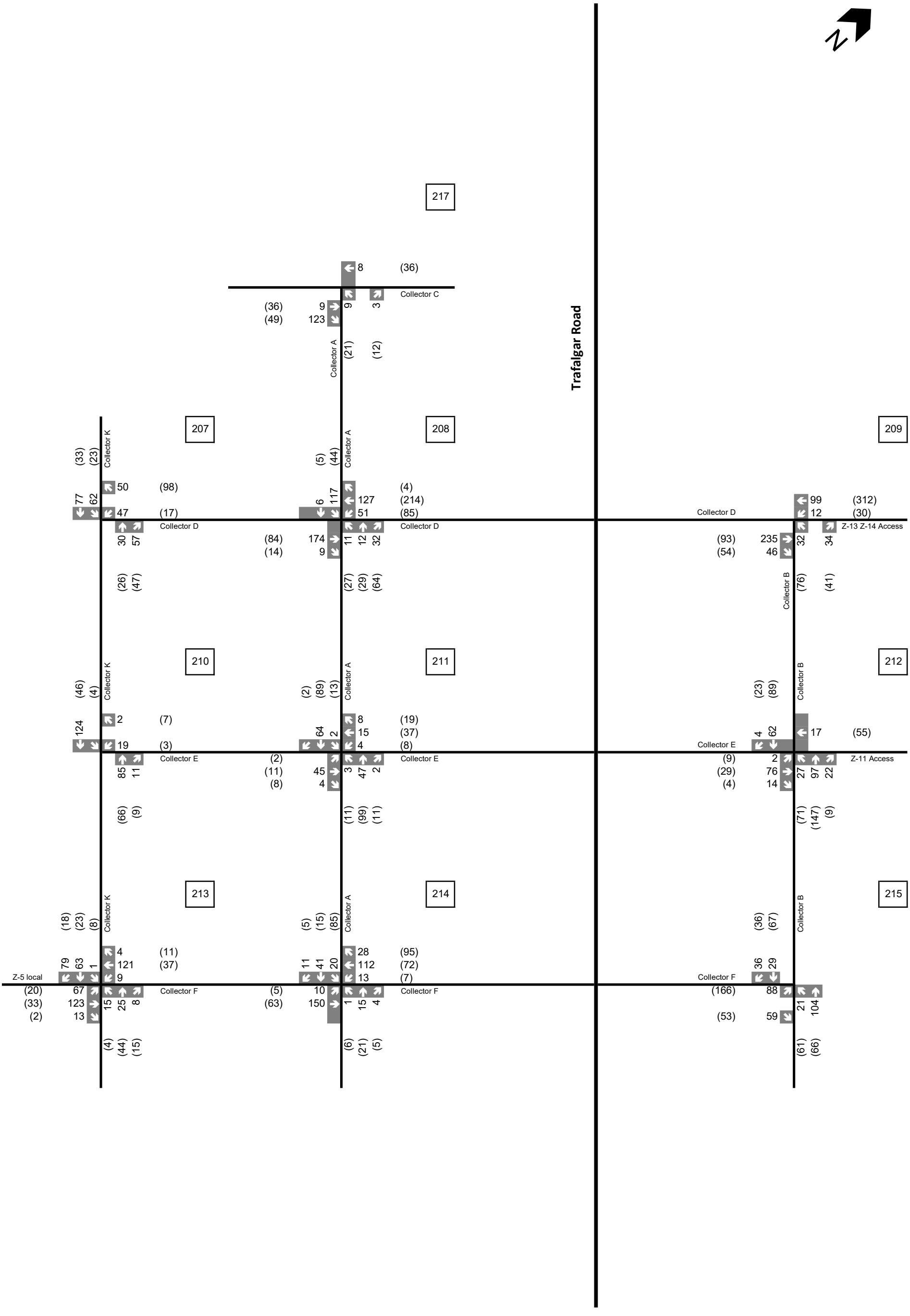
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-noGO-41b

2041 Site Traffic Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



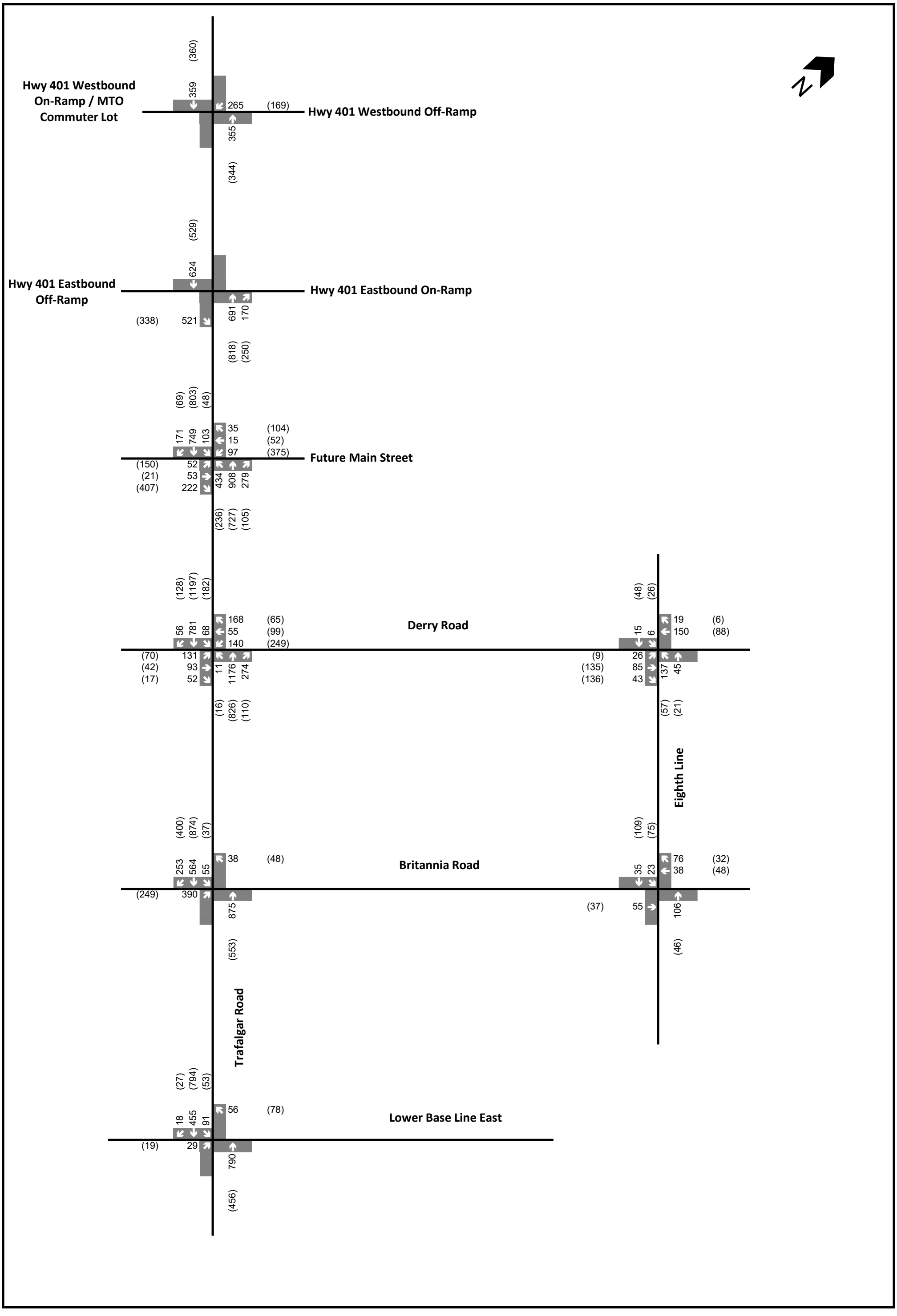
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

Appendix-noGO-41c

2041 Site Traffic Volumes (without GO station)
Collector-Collector Intersections



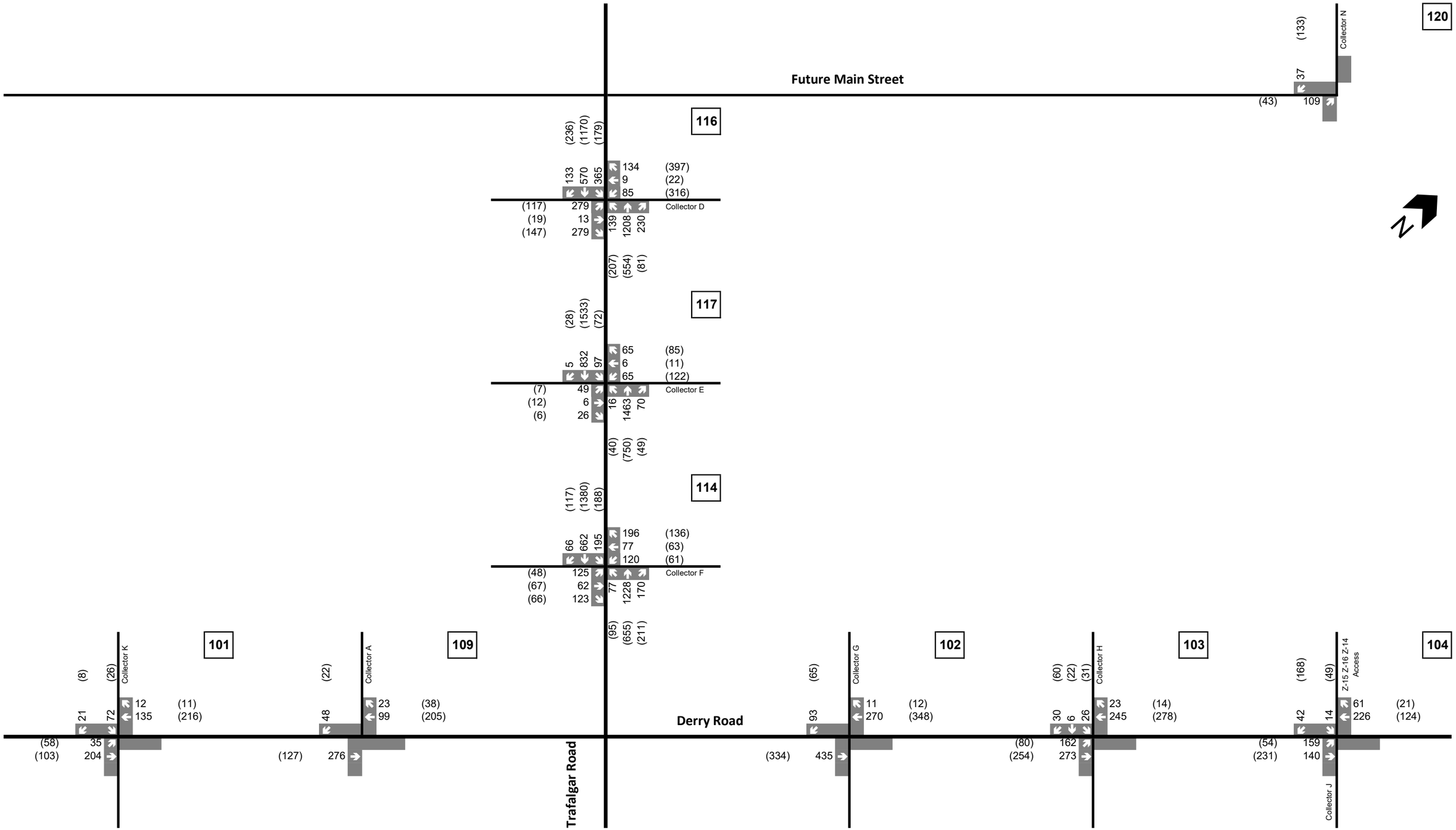
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-noGO-51a

2051 Site Traffic Volumes (without GO station)
External Intersections

FUTURE ARTERIAL-COLLECTOR INTERSECTIONS



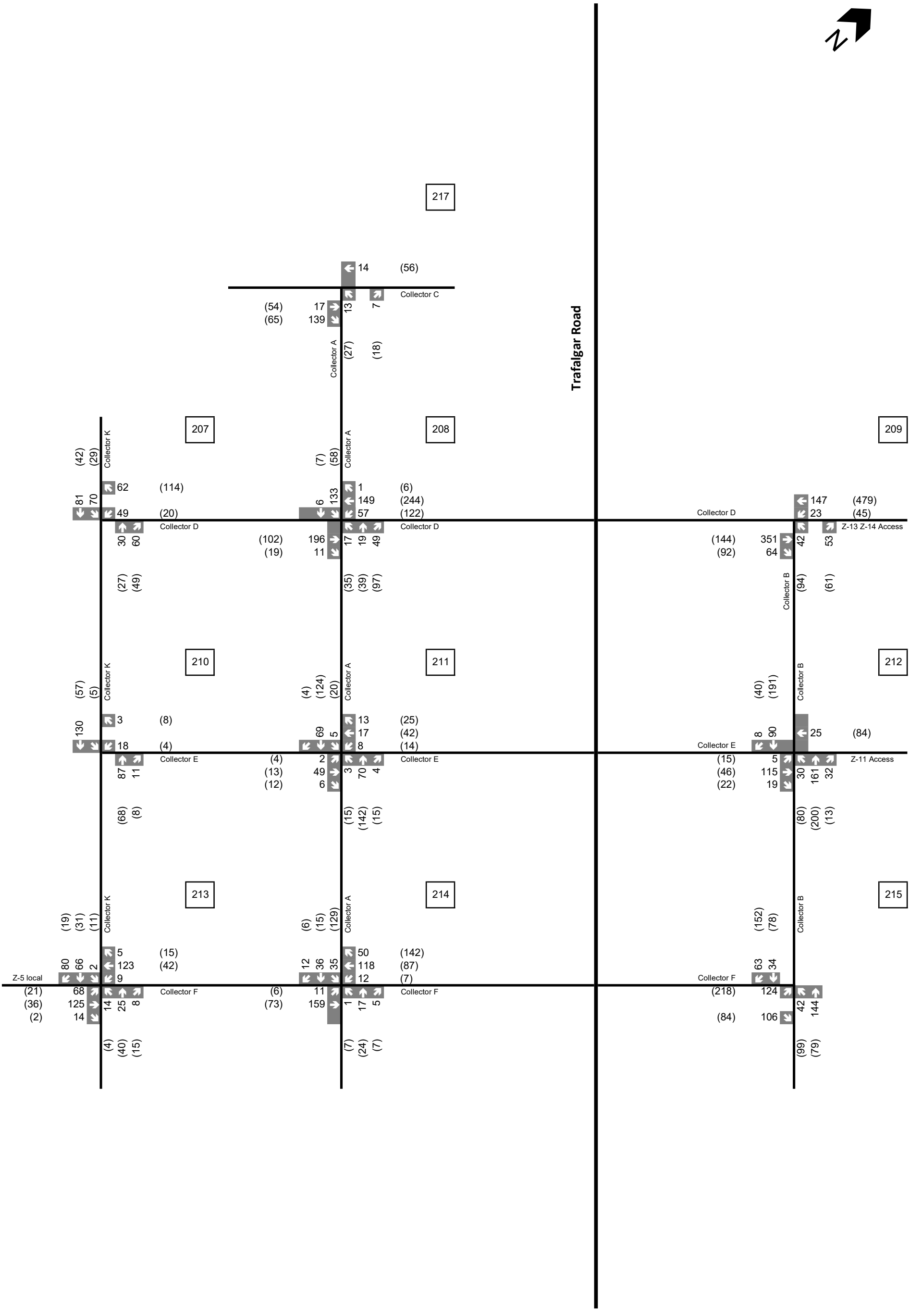
Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-noGO-51b

2051 Site Traffic Volumes (without GO station)
Arterial-Collector Intersections

FUTURE COLLECTOR-COLLECTOR INTERSECTIONS



TYLin

Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

Appendix-noGO-51c

2051 Site Traffic Volumes (without GO station)
Collector-Collector Intersections

Appendix I
Future Total SYNCHRO Capacity and Queuing Analysis Reports

2031 Future Total

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	786	1440	322	299	701	493	300	1763	268	182	1393	121
Future Volume (vph)	786	1440	322	299	701	493	300	1763	268	182	1393	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5142	1585	1789	4902	1633	3054	4749	1566	2918	4794	1268
Flt Permitted	0.950			0.122			0.950			0.950		
Satd. Flow (perm)	3471	5142	1585	230	4902	1633	3054	4749	1566	2918	4794	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179			154			172			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	802	1469	329	305	715	503	306	1799	273	186	1421	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	802	1469	329	305	715	503	306	1799	273	186	1421	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	33.0	49.8	49.8	22.0	38.8	38.8	18.0	56.2	56.2	12.0	50.2	50.2
Total Split (%)	23.6%	35.6%	35.6%	15.7%	27.7%	27.7%	12.9%	40.1%	40.1%	8.6%	35.9%	35.9%
Maximum Green (s)	29.0	42.9	42.9	18.0	31.9	31.9	14.0	49.4	49.4	8.0	43.4	43.4
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.0	44.9	44.9	54.8	33.9	33.9	15.0	51.4	51.4	9.0	45.4	45.4
Actuated g/C Ratio	0.21	0.32	0.32	0.39	0.24	0.24	0.11	0.37	0.37	0.06	0.32	0.32
v/c Ratio	1.08	0.89	0.52	1.01	0.60	0.98	0.94	1.03	0.40	0.99	0.91	0.24
Control Delay (s/veh)	116.4	39.4	14.1	94.7	45.8	68.7	108.7	69.7	13.4	124.1	58.9	9.3
Queue Delay	7.1	0.0	0.0	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	123.5	39.4	14.1	94.7	45.8	108.4	108.7	69.7	13.4	124.1	58.9	9.3
LOS	F	D	B	F	D	F	F	E	B	F	E	A
Approach Delay (s/veh)		62.1			76.3			68.2			62.4	
Approach LOS		E			E			E			E	
Queue Length 50th (m)	~126.7	111.9	19.6	~68.1	74.6	66.1	48.9	~212.7	16.6	30.0	159.9	5.3
Queue Length 95th (m)	m#166.1	146.9	m33.4	#133.9	53.6	#180.2	m#71.1	m#235.5	m24.8	#58.8	#178.0	26.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	743	1649	629	301	1186	512	327	1743	683	187	1554	515
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	12	0	0	0	0	147	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.89	0.52	1.01	0.60	1.38	0.94	1.03	0.40	0.99	0.91	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay (s/veh): 66.6		Intersection LOS: E	
Intersection Capacity Utilization 99.0%		ICU Level of Service F	

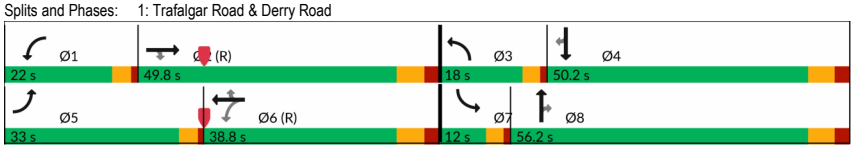
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	802	1469	329	305	715	503	306	1799	273	186	1421	123
v/c Ratio	1.08	0.89	0.52	1.01	0.60	0.98	0.94	1.03	0.40	0.99	0.91	0.24
Control Delay (s/veh)	116.4	39.4	14.1	94.7	45.8	68.7	108.7	69.7	13.4	124.1	58.9	9.3
Queue Delay	7.1	0.0	0.0	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	123.5	39.4	14.1	94.7	45.8	108.4	108.7	69.7	13.4	124.1	58.9	9.3
Queue Length 50th (m)	~126.7	111.9	19.6	~68.1	74.6	66.1	48.9	~212.7	16.6	30.0	159.9	5.3
Queue Length 95th (m)	m#166.1	146.9	m33.4	#133.9	53.6	#180.2	m#71.1	m#235.5	m24.8	#58.8	#178.0	26.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	743	1649	629	301	1186	512	327	1743	683	187	1554	515
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	12	0	0	0	0	147	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.89	0.52	1.01	0.60	1.38	0.94	1.03	0.40	0.99	0.91	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	786	1440	322	299	701	493	300	1763	268	182	1393	121
Future Volume (vph)	786	1440	322	299	701	493	300	1763	268	182	1393	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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	5142	1585	1789	4902	1633	3054	4749	1566	2918	4794	1268
Flt Permitted	0.95	1.00	1.00	0.12	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3471	5142	1585	229	4902	1633	3054	4749	1566	2918	4794	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	802	1469	329	305	715	503	306	1799	273	186	1421	123
RTOR Reduction (vph)	0	0	122	0	0	117	0	0	109	0	0	83
Lane Group Flow (vph)	802	1469	207	305	715	386	306	1799	164	186	1421	40
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Actuated Green, G (s)	29.0	42.9	42.9	49.9	31.9	31.9	14.0	49.4	49.4	8.0	43.4	43.4
Effective Green, g (s)	30.0	44.9	44.9	51.9	33.9	33.9	15.0	51.4	51.4	9.0	45.4	45.4
Actuated g/C Ratio	0.21	0.32	0.32	0.37	0.24	0.24	0.11	0.37	0.37	0.06	0.32	0.32
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	6.8
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)	743	1649	508	296	1186	395	327	1743	574	187	1554	411
v/s Ratio Prot	c0.23	0.29		0.14	0.15		c0.10	c0.38		c0.06	0.30	
v/s Ratio Perm			0.13	c0.24		0.24			0.10			0.03
v/c Ratio	1.08	0.89	0.41	1.03	0.60	0.98	0.94	1.03	0.29	0.99	0.91	0.10
Uniform Delay, d1	55.0	45.2	37.2	42.0	47.1	52.7	62.0	44.3	31.3	65.5	45.4	33.0
Progression Factor	1.39	0.77	0.74	1.02	0.92	0.93	1.31	0.97	1.03	0.97	1.09	3.86
Incremental Delay, d2	47.9	4.1	1.2	58.9	2.1	38.8	28.4	27.6	0.4	60.9	8.4	0.2
Delay (s)	124.2	39.1	28.6	101.5	45.6	87.9	109.4	70.7	32.6	124.6	58.1	127.5
Level of Service	F	D	C	F	D	F	F	E	C	F	E	F
Approach Delay (s/veh)		64.0			70.8			71.3			70.2	
Approach LOS		E			E			E			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	68.7	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.04			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	99.0%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

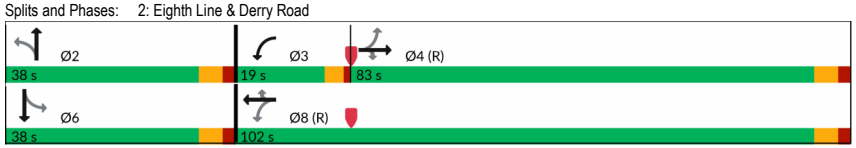
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1513	101	114	870	15	119	20	120	7	6	9
Future Volume (vph)	30	1513	101	114	870	15	119	20	120	7	6	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.872			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	5142	1601	1825	4995	1633	1825	1602	0	1217	1592	0
Flt Permitted	0.302			0.122			0.748			0.480		
Satd. Flow (perm)	409	5142	1601	234	4995	1633	1437	1602	0	615	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			23		125			9	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	31	1576	105	119	906	16	124	21	125	7	6	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	1576	105	119	906	16	124	146	0	7	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		36.0	36.0	
Total Split (s)	83.0	83.0	83.0	19.0	102.0	102.0	38.0	38.0		38.0	38.0	
Total Split (%)	59.3%	59.3%	59.3%	13.6%	72.9%	72.9%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	77.0	77.0	77.0	15.0	96.0	96.0	32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0		23.0	23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	
Act Effct Green (s)	97.0	97.0	97.0	112.6	110.6	110.6	17.4	17.4		17.4	17.4	
Actuated g/C Ratio	0.69	0.69	0.69	0.80	0.79	0.79	0.12	0.12		0.12	0.12	
v/c Ratio	0.11	0.44	0.09	0.40	0.23	0.01	0.70	0.47		0.09	0.07	
Control Delay (s/veh)	14.4	25.8	7.1	7.4	4.2	1.2	56.0	13.9		53.7	32.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.4	25.8	7.1	7.4	4.2	1.2	56.0	13.9		53.7	32.0	
LOS	B	C	A	A	A	A	E	B		D	C	
Approach Delay (s/veh)		24.4			4.6			33.2			38.9	
Approach LOS		C			A			C			D	
Queue Length 50th (m)	8.9	166.7	13.0	5.8	20.8	0.0	34.5	13.7		2.4	1.5	
Queue Length 95th (m)	m13.2	139.1	m17.9	12.6	32.0	1.4	53.3	25.9		8.8	7.9	
Internal Link Dist (m)		339.9			1143.6			359.1			414.8	
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0			35.0		
Base Capacity (vph)	283	3561	1140	358	3946	1295	328	462		140	370	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.11	0.44	0.09	0.33	0.23	0.01	0.38	0.32		0.05	0.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 18.5		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	31	1576	105	119	906	16	124	146	7	15
v/c Ratio	0.11	0.44	0.09	0.40	0.23	0.01	0.70	0.47	0.09	0.07
Control Delay (s/veh)	14.4	25.8	7.1	7.4	4.2	1.2	56.0	13.9	53.7	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.4	25.8	7.1	7.4	4.2	1.2	56.0	13.9	53.7	32.0
Queue Length 50th (m)	8.9	166.7	13.0	5.8	20.8	0.0	34.5	13.7	2.4	1.5
Queue Length 95th (m)	m13.2	139.1	m17.9	12.6	32.0	1.4	53.3	25.9	8.8	7.9
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	283	3561	1140	358	3946	1295	328	462	140	370
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.44	0.09	0.33	0.23	0.01	0.38	0.32	0.05	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1513	101	114	870	15	119	20	120	7	6	9
Future Volume (vph)	30	1513	101	114	870	15	119	20	120	7	6	9
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.87		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	5142	1601	1825	4995	1633	1825	1601		1217	1592	
Flt Permitted	0.30	1.00	1.00	0.12	1.00	1.00	0.75	1.00		0.48	1.00	
Satd. Flow (perm)	409	5142	1601	235	4995	1633	1436	1601		615	1592	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	1576	105	119	906	16	124	21	125	7	6	9
RTOR Reduction (vph)	0	0	32	0	0	3	0	109	0	0	8	0
Lane Group Flow (vph)	31	1576	73	119	906	13	124	37	0	7	7	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	96.9	96.9	96.9	110.6	110.6	110.6	17.4	17.4		17.4	17.4	
Effective Green, g (s)	96.9	96.9	96.9	110.6	110.6	110.6	17.4	17.4		17.4	17.4	
Actuated g/C Ratio	0.69	0.69	0.69	0.79	0.79	0.79	0.12	0.12		0.12	0.12	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	3558	1108	295	3946	1290	178	198		76	197	
v/s Ratio Prot		c0.31		c0.03	0.18			0.02			0.00	
v/s Ratio Perm	0.08		0.05	0.29		0.01	c0.09			0.01		
v/c Ratio	0.11	0.44	0.07	0.40	0.23	0.01	0.70	0.18		0.09	0.04	
Uniform Delay, d1	7.2	9.6	6.9	5.4	3.8	3.1	58.8	54.9		54.3	53.9	
Progression Factor	1.41	2.44	3.82	1.00	1.00	1.00	0.63	0.71		1.00	1.00	
Incremental Delay, d2	0.7	0.3	0.1	0.9	0.1	0.0	10.9	0.4		0.5	0.1	
Delay (s)	10.8	23.7	26.6	6.3	3.9	3.1	47.8	39.6		54.8	54.0	
Level of Service	B	C	C	A	A	A	D	D		D	D	
Approach Delay (s/veh)		23.6			4.2			43.3			54.3	
Approach LOS		C			A			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	18.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	62.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	536	820	346	215	703	234	173	1379	205	125	1766	718
Future Volume (vph)	536	820	346	215	703	234	173	1379	205	125	1766	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	5092	1555	3506	5043	1633	1478	4839	1566	1491	4885	1365
Flt Permitted	0.950			0.950			0.070			0.114		
Satd. Flow (perm)	3372	5092	1555	3506	5043	1633	109	4839	1566	179	4885	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			143			176			352
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	541	828	349	217	710	236	175	1393	207	126	1784	725
Shared Lane Traffic (%)												
Lane Group Flow (vph)	541	828	349	217	710	236	175	1393	207	126	1784	725
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	41.0
Total Split (s)	26.0	49.0	49.0	17.0	40.0	40.0	14.0	60.0	60.0	14.0	60.0	60.0
Total Split (%)	18.6%	35.0%	35.0%	12.1%	28.6%	28.6%	10.0%	42.9%	42.9%	10.0%	42.9%	42.9%
Maximum Green (s)	22.0	43.0	43.0	13.0	34.0	34.0	10.0	53.0	53.0	10.0	53.0	53.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	37.8	37.8	13.3	28.1	28.1	77.7	61.2	61.2	69.8	55.2	55.2
Actuated g/C Ratio	0.16	0.27	0.27	0.10	0.20	0.20	0.56	0.44	0.44	0.50	0.39	0.39
v/c Ratio	0.98	0.60	0.65	0.65	0.70	0.54	0.72	0.66	0.26	0.61	0.93	0.97
Control Delay (s/veh)	91.1	46.3	30.3	59.8	55.4	23.8	59.7	56.1	26.2	31.1	39.2	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.1	46.3	30.3	59.8	55.4	23.8	59.7	56.1	26.2	31.1	39.2	36.1
LOS	F	D	C	E	E	C	E	E	C	C	D	D
Approach Delay (s/veh)		57.2			49.8			53.0			37.9	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	80.9	76.1	50.8	31.0	73.6	27.0	51.3	126.1	25.2	8.7	189.0	166.6
Queue Length 95th (m)	#118.5	85.3	82.0	32.4	85.9	53.5	m#63.4	143.3	m33.5	m17.8	m208.0	m#212.9
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	553	1636	605	350	1296	526	243	2116	784	211	1925	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.51	0.58	0.62	0.55	0.45	0.72	0.66	0.26	0.60	0.93	0.97

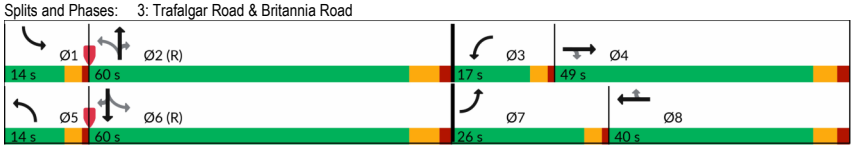
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 48.0		Intersection LOS: D	
Intersection Capacity Utilization 86.7%		ICU Level of Service E	

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	541	828	349	217	710	236	175	1393	207	126	1784	725
v/c Ratio	0.98	0.60	0.65	0.65	0.70	0.54	0.72	0.66	0.26	0.61	0.93	0.97
Control Delay (s/veh)	91.1	46.3	30.3	59.8	55.4	23.8	59.7	56.1	26.2	31.1	39.2	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.1	46.3	30.3	59.8	55.4	23.8	59.7	56.1	26.2	31.1	39.2	36.1
Queue Length 50th (m)	80.9	76.1	50.8	31.0	73.6	27.0	51.3	126.1	25.2	8.7	189.0	166.6
Queue Length 95th (m)	#118.5	85.3	82.0	32.4	85.9	53.5	m#63.4	143.3	m33.5	m17.8	m208.0	m#212.9
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	553	1636	605	350	1296	526	243	2116	784	211	1925	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.51	0.58	0.62	0.55	0.45	0.72	0.66	0.26	0.60	0.93	0.97

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	536	820	346	215	703	234	173	1379	205	125	1766	718
Future Volume (vph)	536	820	346	215	703	234	173	1379	205	125	1766	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	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
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)	3372	5092	1555	3506	5043	1633	1478	4839	1566	1491	4885	1365
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	3372	5092	1555	3506	5043	1633	109	4839	1566	179	4885	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	541	828	349	217	710	236	175	1393	207	126	1784	725
RTOR Reduction (vph)	0	0	113	0	0	114	0	0	99	0	0	213
Lane Group Flow (vph)	541	828	236	217	710	122	175	1393	108	126	1784	512
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	22.0	35.8	35.8	12.3	26.1	26.1	74.9	59.2	59.2	64.9	53.2	53.2
Effective Green, g (s)	23.0	37.8	37.8	13.3	28.1	28.1	75.9	61.2	61.2	66.9	55.2	55.2
Actuated g/C Ratio	0.16	0.27	0.27	0.10	0.20	0.20	0.54	0.44	0.44	0.48	0.39	0.39
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	553	1374	419	333	1012	327	241	2115	684	204	1926	538
v/s Ratio Prot	c0.16	0.16		0.06	c0.14		c0.10	0.29		0.06	0.37	
v/s Ratio Perm			0.15			0.07	0.30		0.07	0.24		c0.37
v/c Ratio	0.98	0.60	0.56	0.65	0.70	0.37	0.73	0.66	0.16	0.62	0.93	0.95
Uniform Delay, d1	58.3	44.6	44.0	61.1	52.0	48.3	38.4	31.1	23.8	23.5	40.5	41.1
Progression Factor	1.00	1.00	1.00	0.82	1.00	1.03	1.52	1.71	4.35	1.18	0.78	0.65
Incremental Delay, d2	32.4	0.8	1.7	4.5	2.2	0.7	6.4	1.0	0.3	4.0	7.1	23.2
Delay (s)	90.6	45.3	45.7	54.8	54.0	50.3	64.9	54.2	103.8	31.6	38.7	49.7
Level of Service	F	D	D	D	D	D	E	D	F	C	D	D
Approach Delay (s/veh)		59.7			53.4			61.0			41.4	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	52.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

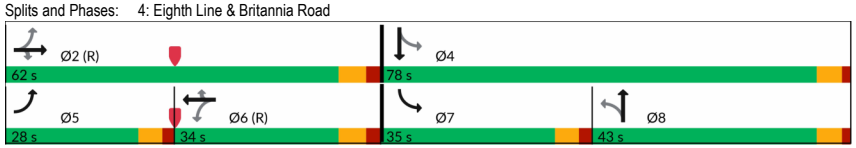
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	961	52	19	554	109	36	187	22	186	303	195
Future Volume (vph)	158	961	52	19	554	109	36	187	22	186	303	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.985			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1306	1825	5092	1633	1674	1796	0	1825	1806	0
Flt Permitted	0.377			0.280			0.249			0.263		
Satd. Flow (perm)	724	5092	1306	538	5092	1633	439	1796	0	505	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			115		4			36	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	161	981	53	19	565	111	37	191	22	190	309	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	161	981	53	19	565	111	37	213	0	190	516	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

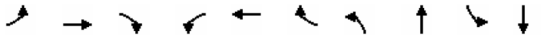
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	28.0	62.0	62.0	34.0	34.0	34.0	43.0	43.0		35.0	78.0	
Total Split (%)	20.0%	44.3%	44.3%	24.3%	24.3%	24.3%	30.7%	30.7%		25.0%	55.7%	
Maximum Green (s)	22.0	55.2	55.2	27.2	27.2	27.2	37.3	37.3		29.0	72.3	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	84.0	83.2	83.2	65.9	65.9	65.9	21.9	21.9		44.0	44.3	
Actuated g/C Ratio	0.60	0.59	0.59	0.47	0.47	0.47	0.16	0.16		0.31	0.32	
v/c Ratio	0.31	0.32	0.07	0.08	0.24	0.13	0.54	0.75		0.61	0.87	
Control Delay (s/veh)	29.6	29.4	14.5	27.1	24.2	4.8	71.8	62.4		41.1	54.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.6	29.4	14.5	27.1	24.2	4.8	71.8	62.4		41.1	54.3	
LOS	C	C	B	C	C	A	E	E		D	D	
Approach Delay (s/veh)		28.8			21.2			63.8			50.7	
Approach LOS		C			C			E			D	
Queue Length 50th (m)	27.3	66.4	2.7	2.8	34.0	0.0	8.3	51.8		42.6	129.9	
Queue Length 95th (m)	50.9	87.6	m12.4	9.8	52.9	11.8	m17.0	70.0		47.6	151.9	
Internal Link Dist (m)		1337.0			1384.0			3065.7			2676.9	
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0			120.0		
Base Capacity (vph)	607	3025	803	253	2398	829	116	481		432	950	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.27	0.32	0.07	0.08	0.24	0.13	0.32	0.44		0.44	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay (s/veh): 35.5		Intersection LOS: D	
Intersection Capacity Utilization 96.4%		ICU Level of Service F	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Eighth Line & Britannia Road

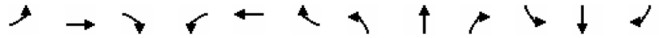




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	161	981	53	19	565	111	37	213	190	516
v/c Ratio	0.31	0.32	0.07	0.08	0.24	0.13	0.54	0.75	0.61	0.87
Control Delay (s/veh)	29.6	29.4	14.5	27.1	24.2	4.8	71.8	62.4	41.1	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	29.4	14.5	27.1	24.2	4.8	71.8	62.4	41.1	54.3
Queue Length 50th (m)	27.3	66.4	2.7	2.8	34.0	0.0	8.3	51.8	42.6	129.9
Queue Length 95th (m)	50.9	87.6	m12.4	9.8	52.9	11.8	m17.0	70.0	47.6	151.9
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	607	3025	803	253	2398	829	116	481	432	950
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.32	0.07	0.08	0.24	0.13	0.32	0.44	0.44	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	961	52	19	554	109	36	187	22	186	303	195
Future Volume (vph)	158	961	52	19	554	109	36	187	22	186	303	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5092	1306	1825	5092	1633	1674	1795		1825	1806	
Flt Permitted	0.38	1.00	1.00	0.28	1.00	1.00	0.25	1.00		0.26	1.00	
Satd. Flow (perm)	724	5092	1306	538	5092	1633	439	1795		505	1806	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	161	981	53	19	565	111	37	191	22	190	309	207
RTOR Reduction (vph)	0	0	22	0	0	59	0	3	0	0	25	0
Lane Group Flow (vph)	161	981	31	19	565	52	37	210	0	190	491	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	83.2	83.2	83.2	66.0	66.0	66.0	21.9	21.9		44.3	44.3	
Effective Green, g (s)	83.2	83.2	83.2	66.0	66.0	66.0	21.9	21.9		44.3	44.3	
Actuated g/C Ratio	0.59	0.59	0.59	0.47	0.47	0.47	0.16	0.16		0.32	0.32	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	5.7	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	518	3026	776	253	2400	769	68	280		314	571	
v/s Ratio Prot	0.02	c0.19			0.11			0.12		0.07	c0.27	
v/s Ratio Perm	0.16		0.02	0.04		0.03	0.08			0.12		
v/c Ratio	0.31	0.32	0.04	0.08	0.24	0.07	0.54	0.75		0.61	0.86	
Uniform Delay, d1	13.0	14.3	11.8	20.3	22.0	20.2	54.4	56.4		37.6	44.9	
Progression Factor	2.01	1.90	6.29	1.00	1.00	1.00	0.87	0.86		0.93	0.95	
Incremental Delay, d2	0.3	0.3	0.1	0.6	0.2	0.2	7.8	9.5		3.3	12.6	
Delay (s)	26.4	27.4	74.3	20.9	22.2	20.4	54.9	58.3		38.1	55.1	
Level of Service	C	C	E	C	C	C	D	E		D	E	
Approach Delay (s/veh)		29.4			21.9			57.8			50.5	
Approach LOS		C			C			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	35.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.5	
Intersection Capacity Utilization	96.4%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	323	63	320	143	142	35	1404	213	353	1948	113
Future Volume (vph)	136	323	63	320	143	142	35	1404	213	353	1948	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	45.0		70.0	110.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.975			0.925				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1852	0	1789	1709	0	1631	4794	1551	1711	4885	1521
Flt Permitted	0.514			0.118			0.089			0.083		
Satd. Flow (perm)	940	1852	0	222	1709	0	153	4794	1551	149	4885	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			37				162			130
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	142	336	66	333	149	148	35	1404	213	368	2029	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	402	0	333	297	0	35	1404	213	368	2029	118
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2		11.5	24.2		9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	14.5	35.1		26.2	46.8		9.5	50.7	50.7	28.0	69.2	69.2
Total Split (%)	10.4%	25.1%		18.7%	33.4%		6.8%	36.2%	36.2%	20.0%	49.4%	49.4%
Maximum Green (s)	10.0	28.9		21.7	40.6		5.0	44.1	44.1	24.0	62.6	62.6
Yellow Time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0							
Flash Don't Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	42.7	31.3		57.8	42.9		53.2	46.1	46.1	75.7	66.5	66.5
Actuated g/C Ratio	0.31	0.22		0.41	0.31		0.38	0.33	0.33	0.54	0.48	0.48
v/c Ratio	0.41	0.96		0.98	0.54		0.29	0.89	0.34	1.03	0.87	0.15
Control Delay (s/veh)	31.4	88.2		81.9	49.7		24.2	52.7	11.1	86.7	65.6	18.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.4	88.2		81.9	49.7		24.2	52.7	11.1	86.7	65.6	18.3
LOS	C	F		F	D		C	D	B	F	E	B
Approach Delay (s/veh)		73.4			66.7			46.7			66.4	
Approach LOS		E			E			D			E	
Queue Length 50th (m)	25.9	110.9		81.8	64.1		4.7	142.4	10.0	~104.2	222.9	11.7
Queue Length 95th (m)	41.5	#176.2		#139.7	92.1		10.5	163.7	30.5	m#126.6	239.3	m17.1
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	45.0			110.0			100.0		70.0	170.0		70.0
Base Capacity (vph)	351	418		345	548		121	1578	619	359	2320	790
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.96		0.97	0.54		0.29	0.89	0.34	1.03	0.87	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay (s/veh): 61.1		Intersection LOS: E	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	

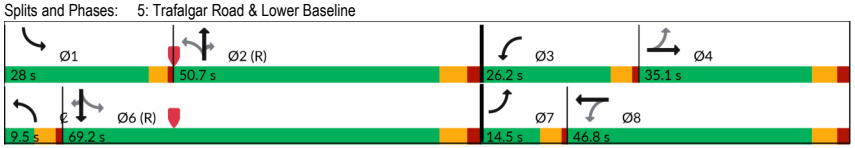
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	142	402	333	297	35	1404	213	368	2029	118
v/c Ratio	0.41	0.96	0.98	0.54	0.29	0.89	0.34	1.03	0.87	0.15
Control Delay (s/veh)	31.4	88.2	81.9	49.7	24.2	52.7	11.1	86.7	65.6	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.4	88.2	81.9	49.7	24.2	52.7	11.1	86.7	65.6	18.3
Queue Length 50th (m)	25.9	110.9	81.8	64.1	4.7	142.4	10.0	~104.2	222.9	11.7
Queue Length 95th (m)	41.5	#176.2	#139.7	92.1	10.5	163.7	30.5	m#126.6	239.3	m17.1
Internal Link Dist (m)		1293.1		1410.4		889.5			3062.5	
Turn Bay Length (m)	45.0		110.0		100.0		70.0	170.0		70.0
Base Capacity (vph)	351	418	345	548	121	1578	619	359	2320	790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.96	0.97	0.54	0.29	0.89	0.34	1.03	0.87	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	323	63	320	143	142	35	1404	213	353	1948	113
Future Volume (vph)	136	323	63	320	143	142	35	1404	213	353	1948	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2		3.5	4.2		3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.93		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)	1738	1852		1789	1709		1631	4794	1551	1711	4885	1521
Flt Permitted	0.51	1.00		0.12	1.00		0.09	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	940	1852		223	1709		152	4794	1551	150	4885	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	142	336	66	333	149	148	35	1404	213	368	2029	118
RTOR Reduction (vph)	0	5	0	0	26	0	0	0	109	0	0	63
Lane Group Flow (vph)	142	397	0	333	271	0	35	1404	104	368	2029	55
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.0	29.3		55.1	40.9		48.1	44.1	44.1	72.1	63.6	63.6
Effective Green, g (s)	41.0	31.3		56.1	42.9		50.1	46.1	46.1	73.1	65.6	65.6
Actuated g/C Ratio	0.29	0.22		0.40	0.31		0.36	0.33	0.33	0.52	0.47	0.47
Clearance Time (s)	4.5	6.2		4.5	6.2		4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Lane Grp Cap (vph)	336	414		338	523		107	1578	510	357	2288	712
v/s Ratio Prot	0.03	0.21		c0.16	0.16		0.01	0.29		c0.18	0.42	
v/s Ratio Perm	0.09			c0.24			0.10		0.07	c0.35		0.04
v/c Ratio	0.42	0.96		0.99	0.52		0.33	0.89	0.20	1.03	0.89	0.08
Uniform Delay, d1	38.2	53.7		43.0	40.0		32.6	44.5	33.8	45.2	33.8	20.5
Progression Factor	1.00	1.00		1.11	1.30		1.00	1.00	1.00	1.08	1.86	6.65
Incremental Delay, d2	0.9	34.1		39.9	1.4		0.7	7.9	0.9	44.6	3.4	0.1
Delay (s)	39.0	87.9		87.6	53.7		33.3	52.5	34.7	93.3	66.4	136.6
Level of Service	D	F		F	D		C	D	C	F	E	F
Approach Delay (s/veh)		75.1			71.6			49.8			73.6	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	66.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

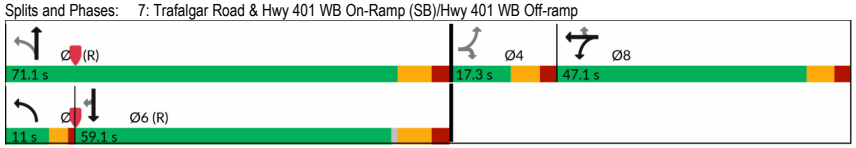
c Critical Lane Group

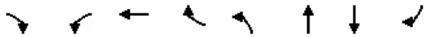
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Future Volume (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	4483	0	0	4902	1276
Flt Permitted				0.950			0.136					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	261	4483	0	0	4902	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			332						138
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	22.6	22.6	22.6	98.4	94.3			89.9	89.9
Actuated g/C Ratio			0.07	0.17	0.17	0.17	0.73	0.70			0.66	0.66
v/c Ratio			0.02	0.79	0.03	0.48	0.04	0.33			0.44	0.16
Control Delay (s/veh)			0.2	66.1	44.3	7.0	8.8	9.8			13.9	3.2
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.2	66.1	44.3	7.0	8.8	9.8			13.9	3.2
LOS			A	E	D	A	A	A			B	A
Approach Delay (s/veh)		0.2			38.5			9.8			13.0	
Approach LOS		A			D			A			B	
Queue Length 50th (m)			0.0	60.0	1.8	0.0	0.7	37.2			52.6	0.1
Queue Length 95th (m)			0.0	76.1	6.2	15.0	4.1	78.2			127.9	14.2
Internal Link Dist (m)		558.9			384.0			211.1			230.2	
Turn Bay Length (m)			10.0	90.0		80.0	60.0					85.0
Base Capacity (vph)			271	849	567	959	270	3119			3251	892
Starvation Cap Reductn			0	0	0	0	0	0			0	0
Spillback Cap Reductn			0	0	0	0	0	0			0	0
Storage Cap Reductn			0	0	0	0	0	0			0	0
Reduced v/c Ratio			0.02	0.45	0.01	0.35	0.04	0.33			0.44	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 17.4		Intersection LOS: B	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

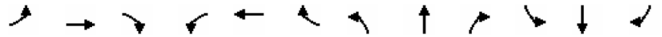
Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp





Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	378	8	332	12	1034	1441	139
v/c Ratio	0.02	0.79	0.03	0.48	0.04	0.33	0.44	0.16
Control Delay (s/veh)	0.2	66.1	44.3	7.0	8.8	9.8	13.9	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.2	66.1	44.3	7.0	8.8	9.8	13.9	3.2
Queue Length 50th (m)	0.0	60.0	1.8	0.0	0.7	37.2	52.6	0.1
Queue Length 95th (m)	0.0	76.1	6.2	15.0	4.1	78.2	127.9	14.2
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	271	849	567	959	270	3119	3251	892
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.45	0.01	0.35	0.04	0.33	0.44	0.16

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Future Volume (vph)	0	0	5	378	8	332	12	1034	0	0	1441	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	0.91			0.91	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	4483			4902	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.14	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	261	4483			4902	1276
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	5	378	8	332	12	1034	0	0	1441	139
RTOR Reduction (vph)	0	0	5	0	0	277	0	0	0	0	0	55
Lane Group Flow (vph)	0	0	0	378	8	55	12	1034	0	0	1441	84
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	22.6	22.6	22.6	88.4	88.4			81.6	81.6
Effective Green, g (s)			2.0	22.6	22.6	22.6	88.4	88.4			81.6	81.6
Actuated g/C Ratio			0.01	0.17	0.17	0.17	0.65	0.65			0.60	0.60
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	480	320	409	202	2924			2952	768
v/s Ratio Prot				c0.13	0.00		0.00	c0.23			c0.29	
v/s Ratio Perm			c0.00			0.02	0.04					0.07
v/c Ratio			0.00	0.79	0.03	0.14	0.06	0.35			0.49	0.11
Uniform Delay, d1			65.8	54.1	47.2	48.1	9.5	10.6			15.2	11.5
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	7.7	0.0	0.1	0.0	0.3			0.6	0.3
Delay (s)			65.8	61.9	47.2	48.2	9.6	11.0			15.8	11.8
Level of Service			E	E	D	D	A	B			B	B
Approach Delay (s/veh)		65.8			55.4			11.0			15.4	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	22.7	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	65.7%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

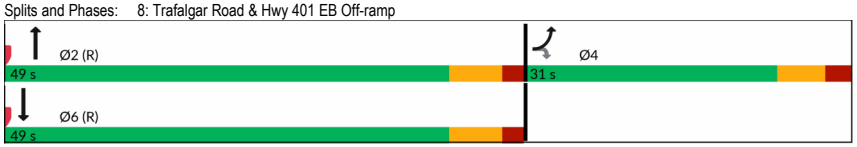
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	817	0	1834	1012	0
Future Volume (vph)	135	817	0	1834	1012	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.91	0.91	1.00
Frt	0.887	0.850				
Flt Protected	0.988					
Satd. Flow (prot)	2823	1339	0	4725	4683	0
Flt Permitted	0.988					
Satd. Flow (perm)	2823	1339	0	4725	4683	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	84	84				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	135	817	0	1834	1012	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	544	408	0	1834	1012	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	23.0	23.0		43.0	43.0	
Actuated g/C Ratio	0.29	0.29		0.54	0.54	
v/c Ratio	0.62	0.92		0.72	0.40	
Control Delay (s/veh)	24.0	49.7		16.5	11.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.0	49.7		16.5	11.8	
LOS	C	D		B	B	
Approach Delay (s/veh)	35.0			16.5	11.8	
Approach LOS	D			B	B	
Queue Length 50th (m)	36.5	55.4		84.2	36.5	
Queue Length 95th (m)	56.8	#118.9		99.8	45.0	
Internal Link Dist (m)	507.7			52.4	180.2	
Turn Bay Length (m)		125.0				
Base Capacity (vph)	915	464		2553	2531	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.59	0.88		0.72	0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 19.9		Intersection LOS: B	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	544	408	1834	1012
v/c Ratio	0.62	0.92	0.72	0.40
Control Delay (s/veh)	24.0	49.7	16.5	11.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.0	49.7	16.5	11.8
Queue Length 50th (m)	36.5	55.4	84.2	36.5
Queue Length 95th (m)	56.8	#118.9	99.8	45.0
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	915	464	2553	2531
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.88	0.72	0.40

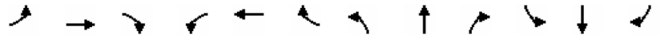
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	817	0	1834	1012	0
Future Volume (vph)	135	817	0	1834	1012	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.91	0.91	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2823	1339		4725	4683	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2823	1339		4725	4683	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	817	0	1834	1012	0
RTOR Reduction (vph)	60	60	0	0	0	0
Lane Group Flow (vph)	484	348	0	1834	1012	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	23.0	23.0		43.0	43.0	
Effective Green, g (s)	23.0	23.0		43.0	43.0	
Actuated g/C Ratio	0.29	0.29		0.54	0.54	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	811	384		2539	2517	
v/s Ratio Prot	0.17			c0.39	0.22	
v/s Ratio Perm		c0.26				
v/c Ratio	0.60	0.91		0.72	0.40	
Uniform Delay, d1	24.5	27.5		14.0	10.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	24.2		1.8	0.5	
Delay (s)	25.7	51.7		15.8	11.4	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	36.8			15.8	11.4	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



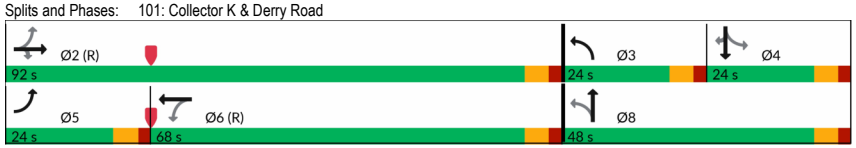
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2507	26	0	1151	11	146	0	0	41	0	28
Future Volume (vph)	44	2507	26	0	1151	11	146	0	0	41	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		0.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		0	0		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999							0.850
Flt Protected	0.950							0.950		0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5137	0	0	1789	0	1789	1883	1601
Flt Permitted	0.148							0.757		0.717		
Satd. Flow (perm)	279	5142	1601	1883	5137	0	0	1426	0	1350	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70		1							308
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	2725	28	0	1251	12	159	0	0	45	0	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	2725	28	0	1263	0	0	159	0	45	0	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2			2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru			Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0			10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6			0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA		Perm		Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2		2	6			8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6		3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0		10.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0		24.0	24.0		24.0	24.0	24.0
Total Split (s)	24.0	92.0	92.0	68.0	68.0		24.0	48.0		24.0	24.0	24.0
Total Split (%)	17.1%	65.7%	65.7%	48.6%	48.6%		17.1%	34.3%		17.1%	17.1%	17.1%
Maximum Green (s)	18.0	86.0	86.0	62.0	62.0		18.0	42.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min		None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	0
Act Effct Green (s)	85.5	85.5	85.5		74.8			42.5		42.5		42.5
Actuated g/C Ratio	0.61	0.61	0.61		0.53			0.30		0.30		0.30
v/c Ratio	0.20	0.87	0.03		0.46			0.37		0.11		0.04
Control Delay (s/veh)	12.6	26.5	0.0		19.4			41.5		36.6		0.1
Queue Delay	0.0	0.0	0.0		0.0			0.0		0.0		0.0
Total Delay (s/veh)	12.6	26.5	0.0		19.4			41.5		36.6		0.1
LOS	B	C	A		B			D		D		A
Approach Delay (s/veh)		25.9			19.4			41.5			22.0	
Approach LOS		C			B			D			C	
Queue Length 50th (m)	5.1	218.9	0.0		48.6			35.3		9.2		0.0
Queue Length 95th (m)	10.3	240.3	0.0		m57.5			56.4		19.3		0.0
Internal Link Dist (m)		1030.4			235.0			320.0			125.6	
Turn Bay Length (m)	100.0		50.0							30.0		30.0
Base Capacity (vph)	364	3158	1010		2745			433		410		700
Starvation Cap Reductn	0	0	0		0			0		0		0
Spillback Cap Reductn	0	0	0		0			0		0		0
Storage Cap Reductn	0	0	0		0			0		0		0
Reduced v/c Ratio	0.13	0.86	0.03		0.46			0.37		0.11		0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 73.2%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	48	2725	28	1263	159	45	30
v/c Ratio	0.20	0.87	0.03	0.46	0.37	0.11	0.04
Control Delay (s/veh)	12.6	26.5	0.0	19.4	41.5	36.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.6	26.5	0.0	19.4	41.5	36.6	0.1
Queue Length 50th (m)	5.1	218.9	0.0	48.6	35.3	9.2	0.0
Queue Length 95th (m)	10.3	240.3	0.0	m57.5	56.4	19.3	0.0
Internal Link Dist (m)		1030.4		235.0	320.0		
Turn Bay Length (m)	100.0		50.0			30.0	30.0
Base Capacity (vph)	364	3158	1010	2745	433	410	700
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.86	0.03	0.46	0.37	0.11	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2507	26	0	1151	11	146	0	0	41	0	28
Future Volume (vph)	44	2507	26	0	1151	11	146	0	0	41	0	28
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
Lane Util. Factor	1.00	0.91	1.00		0.91			1.00		1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00		1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.95		0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5134			1789		1789		1601
Flt Permitted	0.15	1.00	1.00		1.00			0.76		0.72		1.00
Satd. Flow (perm)	279	5142	1601		5134			1426		1350		1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	2725	28	0	1251	12	159	0	0	45	0	30
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	0	0	0	21
Lane Group Flow (vph)	48	2725	17	0	1263	0	0	159	0	45	0	9
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA		Perm		Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	85.5	85.5	85.5		73.7			42.5		42.5		42.5
Effective Green, g (s)	85.5	85.5	85.5		73.7			42.5		42.5		42.5
Actuated g/C Ratio	0.61	0.61	0.61		0.53			0.30		0.30		0.30
Clearance Time (s)	6.0	6.0	6.0		6.0			6.0		6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0		3.0
Lane Grp Cap (vph)	232	3140	977		2702			432		409		486
v/s Ratio Prot	0.01	c0.53			0.25							
v/s Ratio Perm	0.12		0.01					c0.11		0.03		0.01
v/c Ratio	0.21	0.87	0.02		0.47			0.37		0.11		0.02
Uniform Delay, d1	13.0	22.6	10.7		20.8			38.2		35.1		34.1
Progression Factor	1.00	1.00	1.00		0.92			1.00		1.00		1.00
Incremental Delay, d2	0.4	3.6	0.0		0.5			0.5		0.5		0.1
Delay (s)	13.5	26.1	10.8		19.6			38.8		35.7		34.2
Level of Service	B	C	B		B			D		D		C
Approach Delay (s/veh)		25.8			19.6			38.8			35.1	
Approach LOS		C			B			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	24.6	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	73.2%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1845	44	0	1441	5	0	0	21	0	0	52
Future Volume (vph)	0	1845	44	0	1441	5	0	0	21	0	0	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5142	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5142	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2005	48	0	1566	5	0	0	23	0	0	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2005	48	0	1571	0	0	0	23	0	0	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.6%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1845	44	0	1441	5	0	0	21	0	0	52
Future Volume (Veh/h)	0	1845	44	0	1441	5	0	0	21	0	0	52
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2005	48	0	1566	5	0	0	23	0	0	57
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.90			0.73			0.78	0.78	0.73	0.78	0.78	0.90
vC, conflicting volume	1571			2053			2584	3576	668	2260	3622	525
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1252			1148			1190	2463	0	774	2521	91
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	97	100	100	93
cM capacity (veh/h)	497			441			104	23	792	218	21	855

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	668	668	668	48	626	626	318	23	57
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	48	0	0	5	23	57
cSH	1700	1700	1700	1700	1700	1700	1700	792	855
Volume to Capacity	0.39	0.39	0.39	0.03	0.37	0.37	0.19	0.03	0.07
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.6
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	9.5
Lane LOS								A	A
Approach Delay (s/veh)	0.0				0.0			9.7	9.5
Approach LOS								A	A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

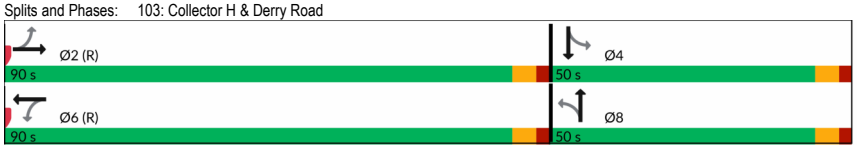
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1725	51	14	1212	14	207	0	18	13	2	25
Future Volume (vph)	90	1725	51	14	1212	14	207	0	18	13	2	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.998			0.989			0.915	
Flt Protected	0.950			0.950				0.956			0.984	
Satd. Flow (prot)	1789	5121	0	1789	5132	0	0	1781	0	0	1696	0
Flt Permitted	0.175			0.081				0.712			0.900	
Satd. Flow (perm)	330	5121	0	153	5132	0	0	1326	0	0	1551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			2			23			27	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	1875	55	15	1317	15	225	0	20	14	2	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	1930	0	15	1332	0	0	245	0	0	43	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	90.0	90.0		90.0	90.0		50.0	50.0		50.0	50.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%		35.7%	35.7%		35.7%	35.7%	
Maximum Green (s)	84.0	84.0		84.0	84.0		44.0	44.0		44.0	44.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	9.0	9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	98.7	98.7		98.7	98.7			29.3			29.3	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.21			0.21	
v/c Ratio	0.42	0.53		0.14	0.37			0.83			0.12	
Control Delay (s/veh)	21.2	20.7		8.4	5.4			69.6			19.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	21.2	20.7		8.4	5.4			69.6			19.1	
LOS	C	C		A	A			E			B	
Approach Delay (s/veh)		20.8			5.4			69.6			19.1	
Approach LOS		C			A			E			B	
Queue Length 50th (m)	20.0	148.6		0.8	32.0			60.7			3.1	
Queue Length 95th (m)	m6.5	m41.2		m2.7	38.3			84.9			m11.0	
Internal Link Dist (m)		335.6			419.2			340.0			345.5	
Turn Bay Length (m)	50.0			50.0								
Base Capacity (vph)	232	3611		107	3618			432			505	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.42	0.53		0.14	0.37			0.57			0.09	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 18.4		Intersection LOS: B	
Intersection Capacity Utilization 85.4%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	98	1930	15	1332	245	43
v/c Ratio	0.42	0.53	0.14	0.37	0.83	0.12
Control Delay (s/veh)	21.2	20.7	8.4	5.4	69.6	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.2	20.7	8.4	5.4	69.6	19.1
Queue Length 50th (m)	20.0	148.6	0.8	32.0	60.7	3.1
Queue Length 95th (m)	m6.5	m41.2	m2.7	38.3	84.9	m11.0
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	232	3611	107	3618	432	505
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.53	0.14	0.37	0.57	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1725	51	14	1212	14	207	0	18	13	2	25
Future Volume (vph)	90	1725	51	14	1212	14	207	0	18	13	2	25
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1789	5120		1789	5133			1781			1696	
Flt Permitted	0.18	1.00		0.08	1.00			0.71			0.90	
Satd. Flow (perm)	330	5120		152	5133			1327			1551	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	1875	55	15	1317	15	225	0	20	14	2	27
RTOR Reduction (vph)	0	1	0	0	1	0	0	18	0	0	21	0
Lane Group Flow (vph)	98	1929	0	15	1331	0	0	227	0	0	22	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	98.7	98.7		98.7	98.7			29.3			29.3	
Effective Green, g (s)	98.7	98.7		98.7	98.7			29.3			29.3	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.21			0.21	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	232	3609		107	3618			277			324	
v/s Ratio Prot		c0.38			0.26							
v/s Ratio Perm	0.30			0.10				c0.17			0.01	
v/c Ratio	0.42	0.53		0.14	0.37			0.82			0.07	
Uniform Delay, d1	8.7	9.8		6.8	8.2			52.8			44.4	
Progression Factor	1.46	1.90		0.57	0.57			1.00			0.93	
Incremental Delay, d2	3.4	0.4		2.6	0.3			16.9			0.1	
Delay (s)	16.1	18.9		6.4	4.9			69.7			41.4	
Level of Service	B	B		A	A			E			D	
Approach Delay (s/veh)		18.8			5.0			69.7			41.4	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

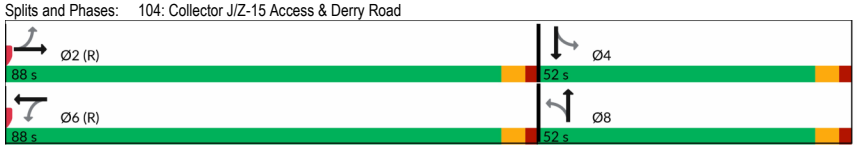
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	1607	67	8	945	22	271	0	24	5	0	24
Future Volume (vph)	82	1607	67	8	945	22	271	0	24	5	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.997			0.989			0.887	
Flt Protected	0.950			0.950				0.956			0.992	
Satd. Flow (prot)	1789	5111	0	1789	5126	0	0	1781	0	0	1657	0
Flt Permitted	0.239			0.086				0.721			0.945	
Satd. Flow (perm)	450	5111	0	162	5126	0	0	1343	0	0	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			4			23			26	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	1747	73	9	1027	24	295	0	26	5	0	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1820	0	9	1051	0	0	321	0	0	31	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	88.0	88.0		88.0	88.0		52.0	52.0		52.0	52.0	
Total Split (%)	62.9%	62.9%		62.9%	62.9%		37.1%	37.1%		37.1%	37.1%	
Maximum Green (s)	82.0	82.0		82.0	82.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	9.0	9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	91.2	91.2		91.2	91.2			36.8			36.8	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.26			0.26	
v/c Ratio	0.30	0.55		0.09	0.31			0.87			0.07	
Control Delay (s/veh)	19.7	15.7		13.5	10.1			67.7			13.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	19.7	15.7		13.5	10.1			67.7			13.8	
LOS	B	B		B	B			E			B	
Approach Delay (s/veh)		15.9			10.2			67.7			13.8	
Approach LOS		B			B			E			B	
Queue Length 50th (m)	6.5	48.2		0.8	38.3			80.9			1.1	
Queue Length 95th (m)	24.5	116.5		m3.8	55.2			107.4			8.2	
Internal Link Dist (m)		419.2			339.9			350.0			259.5	
Turn Bay Length (m)	50.0			50.0								
Base Capacity (vph)	294	3344		105	3352			460			540	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.30	0.54		0.09	0.31			0.70			0.06	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay (s/veh): 19.1		Intersection LOS: B	
Intersection Capacity Utilization 87.3%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	89	1820	9	1051	321	31
v/c Ratio	0.30	0.55	0.09	0.31	0.87	0.07
Control Delay (s/veh)	19.7	15.7	13.5	10.1	67.7	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.7	15.7	13.5	10.1	67.7	13.8
Queue Length 50th (m)	6.5	48.2	0.8	38.3	80.9	1.1
Queue Length 95th (m)	24.5	116.5	m3.8	55.2	107.4	8.2
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	294	3344	105	3352	460	540
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.54	0.09	0.31	0.70	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	1607	67	8	945	22	271	0	24	5	0	24
Future Volume (vph)	82	1607	67	8	945	22	271	0	24	5	0	24
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	5111		1789	5124			1781			1657	
Flt Permitted	0.24	1.00		0.09	1.00			0.72			0.94	
Satd. Flow (perm)	451	5111		163	5124			1343			1578	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	1747	73	9	1027	24	295	0	26	5	0	26
RTOR Reduction (vph)	0	3	0	0	1	0	0	17	0	0	19	0
Lane Group Flow (vph)	89	1817	0	9	1050	0	0	304	0	0	12	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	91.2	91.2		91.2	91.2			36.8			36.8	
Effective Green, g (s)	91.2	91.2		91.2	91.2			36.8			36.8	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.26			0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	293	3329		106	3337			353			414	
v/s Ratio Prot		c0.36			0.20							
v/s Ratio Perm	0.20			0.06				c0.23			0.01	
v/c Ratio	0.30	0.55		0.08	0.31			0.86			0.03	
Uniform Delay, d1	10.6	13.2		9.0	10.7			49.2			38.3	
Progression Factor	1.27	1.06		0.91	0.85			1.00			1.00	
Incremental Delay, d2	2.3	0.6		1.5	0.2			18.9			0.0	
Delay (s)	15.7	14.5		9.7	9.4			68.0			38.4	
Level of Service	B	B		A	A			E			D	
Approach Delay (s/veh)		14.6			9.4			68.0			38.4	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	2548	1108	13	0	54
Future Volume (vph)	0	2548	1108	13	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2770	1204	14	0	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2770	1204	14	0	59
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	2548	1108	13	0	54
Future Volume (Veh/h)	0	2548	1108	13	0	54
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2770	1204	14	0	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.86				0.60	0.86
vC, conflicting volume	1218				2127	602
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	923				0	205
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	91
cM capacity (veh/h)	631				613	688

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	923	923	923	602	602	14	59
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	14	59
cSH	1700	1700	1700	1700	1700	1700	688
Volume to Capacity	0.54	0.54	0.54	0.35	0.35	0.00*	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	10.7
Lane LOS							B
Approach Delay (s/veh)	0.0			0.0			10.7
Approach LOS							B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		52.6%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

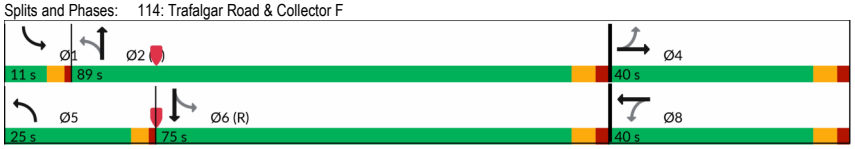
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	55	66	67	64	79	41	2909	92	61	1562	33
Future Volume (vph)	62	55	66	67	64	79	41	2909	92	61	1562	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		0.0	70.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.918			0.917			0.995			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1653	0	1652	1651	0	1711	5004	0	1711	5014	0
Flt Permitted	0.413			0.507			0.110			0.039		
Satd. Flow (perm)	718	1653	0	881	1651	0	198	5004	0	70	5014	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			42			6			3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	60	72	73	70	86	45	3162	100	66	1698	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	132	0	73	156	0	45	3262	0	66	1734	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	15.6	15.6		15.6	15.6		110.3	102.6		112.1	103.5	
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.79	0.73		0.80	0.74	
v/c Ratio	0.84	0.60		0.74	0.71		0.19	0.89		0.44	0.47	
Control Delay (s/veh)	123.8	50.8		99.6	60.1		3.3	24.4		35.7	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	3.0		0.0	0.0	
Total Delay (s/veh)	123.8	50.8		99.6	60.1		3.3	27.4		35.7	7.0	
LOS	F	D		F	E		A	C		D	A	
Approach Delay (s/veh)		75.4			72.7			27.1			8.1	
Approach LOS		E			E			C			A	
Queue Length 50th (m)	18.7	24.7		20.3	31.5		1.5	330.8		6.1	56.9	
Queue Length 95th (m)	#38.0	44.3		36.6	53.0		m2.7	m337.2		0.0	43.9	
Internal Link Dist (m)		200.2			176.3			308.8			241.5	
Turn Bay Length (m)	60.0			50.0			50.0			70.0		
Base Capacity (vph)	174	432		213	432		388	3669		149	3708	
Starvation Cap Reductn	0	0		0	0		0	313		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.31		0.34	0.36		0.12	0.97		0.44	0.47	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 89.9%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

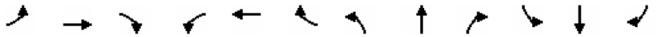
Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	132	73	156	45	3262	66	1734
v/c Ratio	0.84	0.60	0.74	0.71	0.19	0.89	0.44	0.47
Control Delay (s/veh)	123.8	50.8	99.6	60.1	3.3	24.4	35.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Total Delay (s/veh)	123.8	50.8	99.6	60.1	3.3	27.4	35.7	7.0
Queue Length 50th (m)	18.7	24.7	20.3	31.5	1.5	330.8	6.1	56.9
Queue Length 95th (m)	#38.0	44.3	36.6	53.0	m2.7	m337.2	0.0	43.9
Internal Link Dist (m)		200.2		176.3		308.8		241.5
Turn Bay Length (m)	60.0		50.0		50.0		70.0	
Base Capacity (vph)	174	432	213	432	388	3669	149	3708
Starvation Cap Reductn	0	0	0	0	0	313	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.31	0.34	0.36	0.12	0.97	0.44	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	55	66	67	64	79	41	2909	92	61	1562	33
Future Volume (vph)	62	55	66	67	64	79	41	2909	92	61	1562	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.92		1.00	0.92		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)	1652	1653		1652	1652		1711	5006		1711	5013	
Flt Permitted	0.41	1.00		0.51	1.00		0.11	1.00		0.04	1.00	
Satd. Flow (perm)	718	1653		881	1652		198	5006		70	5013	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	60	72	73	70	86	45	3162	100	66	1698	36
RTOR Reduction (vph)	0	36	0	0	37	0	0	2	0	0	1	0
Lane Group Flow (vph)	67	96	0	73	119	0	45	3260	0	66	1733	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.6	15.6		15.6	15.6		107.4	101.8		109.4	102.8	
Effective Green, g (s)	15.6	15.6		15.6	15.6		107.4	101.8		109.4	102.8	
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.77	0.73		0.78	0.73	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	80	184		98	184		212	3640		132	3680	
v/s Ratio Prot		0.06			0.07		0.01	c0.65		c0.02	0.35	
v/s Ratio Perm	c0.09			0.08			0.15			0.37		
v/c Ratio	0.84	0.52		0.74	0.65		0.21	0.90		0.50	0.47	
Uniform Delay, d1	61.0	58.7		60.3	59.5		4.7	14.9		28.7	7.6	
Progression Factor	1.00	0.99		1.00	1.00		0.85	1.46		1.69	0.82	
Incremental Delay, d2	50.1	2.5		26.1	7.5		0.1	1.2		2.8	0.4	
Delay (s)	111.0	60.8		86.3	67.1		4.1	23.0		51.2	6.6	
Level of Service	F	E		F	E		A	C		D	A	
Approach Delay (s/veh)		77.7			73.2			22.7			8.2	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



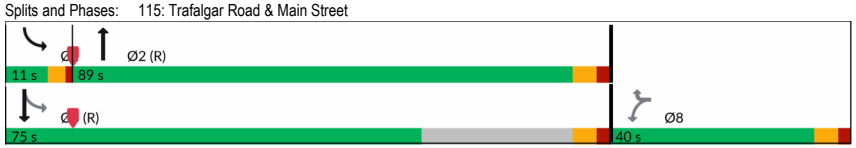
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	12	2816	112	38	1590
Future Volume (vph)	40	12	2816	112	38	1590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.5	3.5	3.3	3.5
Storage Length (m)	90.0	0.0		0.0	50.0	
Storage Lanes	0	1		0	1	
Taper Length (m)	50.0				50.0	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt		0.850	0.994			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	1601	4999	0	1711	5029
Flt Permitted	0.950				0.035	
Satd. Flow (perm)	1789	1601	4999	0	63	5029
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		12	7			
Link Speed (k/h)	48		60			60
Link Distance (m)	627.0		712.8			236.3
Travel Time (s)	47.0		42.8			14.2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	12	2844	113	38	1606
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	12	2957	0	38	1606
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.3			3.3
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	1.04	1.01
Turning Speed (k/h)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		7.0	20.0
Minimum Split (s)	40.0	40.0	26.0		11.0	26.0
Total Split (s)	40.0	40.0	89.0		11.0	75.0
Total Split (%)	28.6%	28.6%	63.6%		7.9%	53.6%
Maximum Green (s)	34.0	34.0	83.0		7.0	69.0
Yellow Time (s)	4.0	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.0	2.0		1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		None	C-Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Don't Walk (s)	27.0	27.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	10.3	10.3	113.3		122.9	122.1
Actuated g/C Ratio	0.07	0.07	0.81		0.88	0.87
v/c Ratio	0.31	0.09	0.73		0.28	0.37
Control Delay (s/veh)	67.6	28.4	10.3		20.9	2.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	67.6	28.4	10.3		20.9	2.3
LOS	E	C	B		C	A
Approach Delay (s/veh)	58.6		10.3			2.7
Approach LOS	E		B			A
Queue Length 50th (m)	10.9	0.0	119.0		1.2	29.7
Queue Length 95th (m)	23.1	6.7	m116.9		11.0	33.2
Internal Link Dist (m)	603.0		688.8			212.3
Turn Bay Length (m)	90.0				50.0	
Base Capacity (vph)	434	397	4045		137	4384
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.09	0.03	0.73		0.28	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 8.1		Intersection LOS: A	
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 115: Trafalgar Road & Main Street



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	40	12	2957	38	1606
v/c Ratio	0.31	0.09	0.73	0.28	0.37
Control Delay (s/veh)	67.6	28.4	10.3	20.9	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	28.4	10.3	20.9	2.3
Queue Length 50th (m)	10.9	0.0	119.0	1.2	29.7
Queue Length 95th (m)	23.1	6.7	m116.9	11.0	33.2
Internal Link Dist (m)	603.0		688.8		212.3
Turn Bay Length (m)	90.0			50.0	
Base Capacity (vph)	434	397	4045	137	4384
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.03	0.73	0.28	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	12	2816	112	38	1590
Future Volume (vph)	40	12	2816	112	38	1590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.5	3.5	3.3	3.5
Total Lost time (s)	6.0	6.0	6.0		4.0	6.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	5000		1711	5029
Flt Permitted	0.95	1.00	1.00		0.04	1.00
Satd. Flow (perm)	1789	1601	5000		63	5029
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	12	2844	113	38	1606
RTOR Reduction (vph)	0	11	1	0	0	0
Lane Group Flow (vph)	40	1	2956	0	38	1606
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	8.3	8.3	110.1		119.7	119.7
Effective Green, g (s)	8.3	8.3	110.1		119.7	119.7
Actuated g/C Ratio	0.06	0.06	0.79		0.86	0.86
Clearance Time (s)	6.0	6.0	6.0		4.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	106	94	3932		119	4299
v/s Ratio Prot			c0.59		0.01	c0.32
v/s Ratio Perm	c0.02	0.00			0.26	
v/c Ratio	0.38	0.01	0.75		0.32	0.37
Uniform Delay, d1	63.4	62.0	7.8		12.1	2.2
Progression Factor	1.00	1.00	1.19		2.51	0.92
Incremental Delay, d2	2.2	0.0	0.1		1.5	0.2
Delay (s)	65.6	62.0	9.4		32.0	2.2
Level of Service	E	E	A		C	A
Approach Delay (s/veh)	64.8		9.4			2.9
Approach LOS	E		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

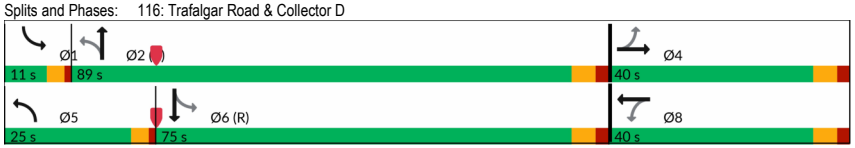
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	13	141	45	7	61	67	2873	120	148	1456	58
Future Volume (vph)	121	13	141	45	7	61	67	2873	120	148	1456	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		0.0	100.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.863			0.866			0.994			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1554	0	1652	1559	0	1711	4999	0	1711	4999	0
Flt Permitted	0.709			0.451			0.133			0.044		
Satd. Flow (perm)	1233	1554	0	784	1559	0	239	4999	0	79	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		153			66			8			6	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	14	153	49	8	66	73	3123	130	161	1583	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	167	0	49	74	0	73	3253	0	161	1646	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	20.3	20.3		20.3	20.3		95.6	86.1		109.6	98.4	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.68	0.62		0.78	0.70	
v/c Ratio	0.74	0.47		0.43	0.26		0.30	1.06		0.60	0.47	
Control Delay (s/veh)	80.3	13.7		64.3	15.5		5.5	45.6		40.6	10.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	3.3		0.0	0.0	
Total Delay (s/veh)	80.3	13.7		64.3	15.5		5.5	48.9		40.6	10.1	
LOS	F	B		E	B		A	D		D	B	
Approach Delay (s/veh)		43.1			34.9			47.9			12.8	
Approach LOS		D			C			D			B	
Queue Length 50th (m)	36.1	3.5		12.7	2.0		2.7	~364.8		28.1	69.5	
Queue Length 95th (m)	55.5	23.2		24.7	15.3		m3.3	#397.5		#66.5	83.5	
Internal Link Dist (m)		84.9			331.4			200.5			688.8	
Turn Bay Length (m)	50.0			80.0			50.0			100.0		
Base Capacity (vph)	299	493		190	428		405	3075		267	3515	
Starvation Cap Reductn	0	0		0	0		0	23		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.44	0.34		0.26	0.17		0.18	1.07		0.60	0.47	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay (s/veh): 36.0		Intersection LOS: D	
Intersection Capacity Utilization 102.4%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	132	167	49	74	73	3253	161	1646
v/c Ratio	0.74	0.47	0.43	0.26	0.30	1.06	0.60	0.47
Control Delay (s/veh)	80.3	13.7	64.3	15.5	5.5	45.6	40.6	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
Total Delay (s/veh)	80.3	13.7	64.3	15.5	5.5	48.9	40.6	10.1
Queue Length 50th (m)	36.1	3.5	12.7	2.0	2.7	~364.8	28.1	69.5
Queue Length 95th (m)	55.5	23.2	24.7	15.3	m3.3	#397.5	#66.5	83.5
Internal Link Dist (m)		84.9		331.4		200.5		688.8
Turn Bay Length (m)	50.0		80.0		50.0		100.0	
Base Capacity (vph)	299	493	190	428	405	3075	267	3515
Starvation Cap Reductn	0	0	0	0	0	23	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.34	0.26	0.17	0.18	1.07	0.60	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	13	141	45	7	61	67	2873	120	148	1456	58
Future Volume (vph)	121	13	141	45	7	61	67	2873	120	148	1456	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.86		1.00	0.87		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)	1652	1553		1652	1560		1711	4999		1711	5000	
Flt Permitted	0.71	1.00		0.45	1.00		0.13	1.00		0.04	1.00	
Satd. Flow (perm)	1232	1553		784	1560		239	4999		80	5000	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	14	153	49	8	66	73	3123	130	161	1583	63
RTOR Reduction (vph)	0	131	0	0	56	0	0	3	0	0	2	0
Lane Group Flow (vph)	132	36	0	49	18	0	73	3250	0	161	1644	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.3	20.3		20.3	20.3		92.1	86.0		107.7	97.6	
Effective Green, g (s)	20.3	20.3		20.3	20.3		92.1	86.0		107.7	97.6	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.66	0.61		0.77	0.70	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	225		113	226		221	3070		267	3485	
v/s Ratio Prot		0.02			0.01		0.01	c0.65		c0.08	0.33	
v/s Ratio Perm	c0.11			0.06			0.20			0.39		
v/c Ratio	0.74	0.16		0.43	0.08		0.33	1.06		0.60	0.47	
Uniform Delay, d1	57.3	52.4		54.6	51.8		8.6	27.0		44.7	9.6	
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.44		0.96	0.93	
Incremental Delay, d2	15.3	0.3		2.7	0.1		0.5	31.4		3.7	0.4	
Delay (s)	72.6	52.7		57.3	51.9		6.7	43.3		46.6	9.3	
Level of Service	E	D		E	D		A	D		D	A	
Approach Delay (s/veh)		61.5			54.0			42.5			12.6	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

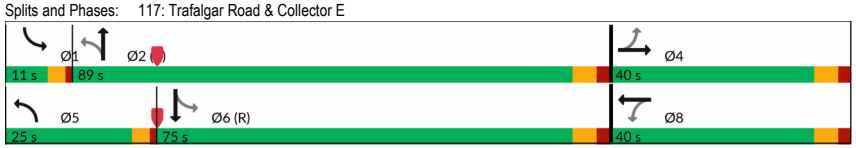
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	3	15	44	4	36	8	3000	42	42	1597	3
Future Volume (vph)	24	3	15	44	4	36	8	3000	42	42	1597	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.874			0.864			0.998				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1646	0	1789	1627	0	1711	5019	0	1711	5029	0
Flt Permitted	0.729			0.745			0.121			0.035		
Satd. Flow (perm)	1373	1646	0	1403	1627	0	218	5019	0	63	5029	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			39			2				
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	3	16	48	4	39	9	3261	46	46	1736	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	19	0	48	43	0	9	3307	0	46	1739	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.3	11.3		11.3	11.3		118.0	112.0		121.4	119.0	
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.84	0.80		0.87	0.85	
v/c Ratio	0.23	0.13		0.42	0.26		0.04	0.82		0.33	0.41	
Control Delay (s/veh)	64.8	29.1		72.6	23.7		2.3	5.8		29.0	2.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.9		0.0	0.0	
Total Delay (s/veh)	64.8	29.1		72.6	23.7		2.3	6.7		29.0	2.4	
LOS	E	C		E	C		A	A		C	A	
Approach Delay (s/veh)		49.7			49.5			6.7			3.1	
Approach LOS		D			D			A			A	
Queue Length 50th (m)	7.1	0.8		13.0	1.0		0.1	35.4		1.8	20.6	
Queue Length 95th (m)	16.6	8.9		m25.6	m12.9		m0.5	78.8		16.5	32.2	
Internal Link Dist (m)		209.9			172.8			241.5			200.5	
Turn Bay Length (m)	50.0			50.0			50.0			50.0		
Base Capacity (vph)	333	411		340	424		413	4015		140	4273	
Starvation Cap Reductn	0	0		0	0		0	43		0	160	
Spillback Cap Reductn	0	0		0	3		0	402		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.05		0.14	0.10		0.02	0.92		0.33	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 6.6		Intersection LOS: A	
Intersection Capacity Utilization 78.0%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	19	48	43	9	3307	46	1739
v/c Ratio	0.23	0.13	0.42	0.26	0.04	0.82	0.33	0.41
Control Delay (s/veh)	64.8	29.1	72.6	23.7	2.3	5.8	29.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
Total Delay (s/veh)	64.8	29.1	72.6	23.7	2.3	6.7	29.0	2.4
Queue Length 50th (m)	7.1	0.8	13.0	1.0	0.1	35.4	1.8	20.6
Queue Length 95th (m)	16.6	8.9	m25.6	m12.9	m0.5	78.8	16.5	32.2
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	333	411	340	424	413	4015	140	4273
Starvation Cap Reductn	0	0	0	0	0	43	0	160
Spillback Cap Reductn	0	0	0	3	0	402	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.14	0.10	0.02	0.92	0.33	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	3	15	44	4	36	8	3000	42	42	1597	3
Future Volume (vph)	24	3	15	44	4	36	8	3000	42	42	1597	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.87		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)	1789	1646		1789	1627		1711	5018		1711	5027	
Flt Permitted	0.73	1.00		0.75	1.00		0.12	1.00		0.04	1.00	
Satd. Flow (perm)	1373	1646		1403	1627		218	5018		64	5027	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	3	16	48	4	39	9	3261	46	46	1736	3
RTOR Reduction (vph)	0	15	0	0	36	0	0	0	0	0	0	0
Lane Group Flow (vph)	26	4	0	48	7	0	9	3307	0	46	1739	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	9.3	9.3		9.3	9.3		110.1	108.8		118.7	113.4	
Effective Green, g (s)	9.3	9.3		9.3	9.3		110.1	108.8		118.7	113.4	
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.79	0.78		0.85	0.81	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	109		93	108		185	3899		123	4071	
v/s Ratio Prot		0.00			0.00		0.00	c0.66		c0.02	0.35	
v/s Ratio Perm	0.02			c0.03			0.04			0.30		
v/c Ratio	0.29	0.04		0.52	0.06		0.05	0.85		0.37	0.43	
Uniform Delay, d1	62.2	61.2		63.2	61.3		3.3	10.2		22.1	3.9	
Progression Factor	1.00	1.00		1.01	1.02		1.04	0.40		2.35	0.59	
Incremental Delay, d2	1.7	0.1		4.8	0.2		0.1	1.2		1.7	0.3	
Delay (s)	63.9	61.3		68.3	62.8		3.4	5.3		53.7	2.6	
Level of Service	E	E		E	E		A	A		D	A	
Approach Delay (s/veh)		62.8			65.7			5.3			3.9	
Approach LOS		E			E			A			A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	6.3	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	78.0%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	0	0	0	0	13
Future Volume (vph)	37	0	0	0	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			39.5	161.7	
Travel Time (s)	55.9			3.0	12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	0	0	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	37	0	0	0	0	13
Future Volume (vph)	37	0	0	0	0	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	0	0	0	0	14

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	40	0	14
Volume Left (vph)	40	0	0
Volume Right (vph)	0	0	14
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.1	4.5	3.4
Degree Utilization, x	0.06	0.00	0.01
Capacity (veh/h)	705	800	1030
Control Delay (s/veh)	7.2	6.3	6.5
Approach Delay (s/veh)	7.2		6.5
Approach LOS	A		A

Intersection Summary					
Delay		7.0			
Level of Service		A			
Intersection Capacity Utilization		6.7%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	30	30	57	36	60
Future Volume (vph)	46	30	30	57	36	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946		0.912			
Flt Protected	0.971					0.982
Satd. Flow (prot)	1654	0	1642	0	0	1768
Flt Permitted	0.971					0.982
Satd. Flow (perm)	1654	0	1642	0	0	1768
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	33	33	62	39	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	0	95	0	0	104
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	30	30	57	36	60
Future Volume (Veh/h)	46	30	30	57	36	60
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	33	33	62	39	65
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	207	64			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	64			95	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	97			97	
cM capacity (veh/h)	761	1000			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	83	95	104
Volume Left	50	0	39
Volume Right	33	62	0
cSH	841	1700	1499
Volume to Capacity	0.10	0.06	0.03
Queue Length 95th (m)	2.5	0.0	0.6
Control Delay (s/veh)	9.7	0.0	2.9
Lane LOS	A		A
Approach Delay (s/veh)	9.7	0.0	2.9
Approach LOS	A		

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		22.9%	ICU Level of Service	A
Analysis Period (min)		15		

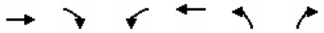
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	114	6	42	86	0	8	7	22	63	6	0
Future Volume (vph)	0	114	6	42	86	0	8	7	22	63	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.921				
Flt Protected					0.984			0.989			0.957	
Satd. Flow (prot)	0	1870	0	0	1772	0	0	1716	0	0	1802	0
Flt Permitted					0.984			0.989			0.957	
Satd. Flow (perm)	0	1870	0	0	1772	0	0	1716	0	0	1802	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	124	7	46	93	0	9	8	24	68	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	131	0	0	139	0	0	41	0	0	75	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	114	6	42	86	0	8	7	22	63	6	0
Future Volume (Veh/h)	0	114	6	42	86	0	8	7	22	63	6	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	124	7	46	93	0	9	8	24	68	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	93			131			316	313	128	341	316	93
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	93			131			316	313	128	341	316	93
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			99	99	97	88	99	100
cM capacity (veh/h)	1501			1454			616	584	923	577	581	964

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	131	139	41	75
Volume Left	0	46	9	68
Volume Right	7	0	24	0
cSH	1501	1454	754	577
Volume to Capacity	0.00	0.03	0.05	0.13
Queue Length 95th (m)	0.0	0.7	1.3	3.4
Control Delay (s/veh)	0.0	2.7	10.0	12.2
Lane LOS		A	B	B
Approach Delay (s/veh)	0.0	2.7	10.0	12.2
Approach LOS			B	B

Intersection Summary				
Average Delay		4.4		
Intersection Capacity Utilization		30.7%	ICU Level of Service	A
Analysis Period (min)		15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	35	7	66	25	27
Future Volume (vph)	153	35	7	66	25	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.930	
Flt Protected				0.995	0.976	
Satd. Flow (prot)	1836	0	0	1874	1710	0
Flt Permitted				0.995	0.976	
Satd. Flow (perm)	1836	0	0	1874	1710	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	38	8	72	27	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	0	80	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	2	85	11	0	106
Future Volume (vph)	16	2	85	11	0	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.984			
Flt Protected	0.957					
Satd. Flow (prot)	1641	0	1772	0	0	1801
Flt Permitted	0.957					
Satd. Flow (perm)	1641	0	1772	0	0	1801
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	2	92	12	0	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	104	0	0	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	2	85	11	0	106
Future Volume (Veh/h)	16	2	85	11	0	106
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	2	92	12	0	115
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	213	98			104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	213	98			104	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	775	958			1488	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	19	104	115
Volume Left	17	0	0
Volume Right	2	12	0
cSH	791	1700	1488
Volume to Capacity	0.02	0.06	0.00
Queue Length 95th (m)	0.6	0.0	0.0
Control Delay (s/veh)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	29	5	4	14	4	0	33	0	1	53	0
Future Volume (vph)	0	29	5	4	14	4	0	33	0	1	53	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.977							
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	1707	0	0	1683	0	0	1801	0	0	1799	0
Flt Permitted					0.991						0.999	
Satd. Flow (perm)	0	1707	0	0	1683	0	0	1801	0	0	1799	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	32	5	4	15	4	0	36	0	1	58	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	23	0	0	36	0	0	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.8%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	29	5	4	14	4	0	33	0	1	53	0
Future Volume (Veh/h)	0	29	5	4	14	4	0	33	0	1	53	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	32	5	4	15	4	0	36	0	1	58	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	108	96	58	117	96	36	58			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	108	96	58	117	96	36	58			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	96	100	100	98	100	100			100		
cM capacity (veh/h)	855	794	1008	828	794	1037	1546			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	37	23	36	59
Volume Left	0	4	0	1
Volume Right	5	4	0	0
cSH	817	834	1546	1575
Volume to Capacity	0.05	0.03	0.00	0.00*
Queue Length 95th (m)	1.1	0.6	0.0	0.0
Control Delay (s/veh)	9.6	9.4	0.0	0.1
Lane LOS	A	A		A
Approach Delay (s/veh)	9.6	9.4	0.0	0.1
Approach LOS	A	A		

Intersection Summary				
Average Delay		3.7		
Intersection Capacity Utilization		14.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	49	10	0	11	0	25	62	20	0	44	1
Future Volume (vph)	2	49	10	0	11	0	25	62	20	0	44	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977						0.974			0.997	
Flt Protected		0.998						0.988				
Satd. Flow (prot)	0	1836	0	0	1883	0	0	1733	0	0	1795	0
Flt Permitted		0.998						0.988				
Satd. Flow (perm)	0	1836	0	0	1883	0	0	1733	0	0	1795	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	53	11	0	12	0	27	67	22	0	48	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	12	0	0	116	0	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.0%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	49	10	0	11	0	25	62	20	0	44	1
Future Volume (Veh/h)	2	49	10	0	11	0	25	62	20	0	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	53	11	0	12	0	27	67	22	0	48	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	187	192	49	218	181	78	49			89		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	187	192	49	218	181	78	49			89		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	92	99	100	98	100	98			100		
cM capacity (veh/h)	754	691	1020	678	701	983	1558			1506		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	66	12	116	49
Volume Left	2	0	27	0
Volume Right	11	0	22	1
cSH	732	701	1558	1506
Volume to Capacity	0.09	0.02	0.02	0.00
Queue Length 95th (m)	2.2	0.4	0.4	0.0
Control Delay (s/veh)	10.4	10.2	1.8	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	10.4	10.2	1.8	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	113	15	9	119	2	17	27	12	1	42	79
Future Volume (vph)	67	113	15	9	119	2	17	27	12	1	42	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.998			0.971			0.913	
Flt Protected		0.983			0.996			0.985				
Satd. Flow (prot)	0	1692	0	0	1790	0	0	1722	0	0	1644	0
Flt Permitted		0.983			0.996			0.985				
Satd. Flow (perm)	0	1692	0	0	1790	0	0	1722	0	0	1644	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	123	16	10	129	2	18	29	13	1	46	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	141	0	0	60	0	0	133	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	113	15	9	119	2	17	27	12	1	42	79
Future Volume (Veh/h)	67	113	15	9	119	2	17	27	12	1	42	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	123	16	10	129	2	18	29	13	1	46	86
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	229	169	89	240	206	36	132			42		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229	169	89	240	206	36	132			42		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	83	98	98	81	100	99			100		
cM capacity (veh/h)	613	714	969	604	682	1037	1453			1567		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	212	141	60	133
Volume Left	73	10	18	1
Volume Right	16	2	13	86
cSH	689	679	1453	1567
Volume to Capacity	0.31	0.21	0.01	0.00*
Queue Length 95th (m)	9.9	5.9	0.3	0.0
Control Delay (s/veh)	12.5	11.7	2.3	0.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	12.5	11.7	2.3	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	132	0	13	106	16	1	9	3	10	41	11
Future Volume (vph)	9	132	0	13	106	16	1	9	3	10	41	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.984			0.971			0.976	
Flt Protected		0.997			0.995			0.996			0.992	
Satd. Flow (prot)	0	1795	0	0	1763	0	0	1741	0	0	1743	0
Flt Permitted		0.997			0.995			0.996			0.992	
Satd. Flow (perm)	0	1795	0	0	1763	0	0	1741	0	0	1743	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	143	0	14	115	17	1	10	3	11	45	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	146	0	0	14	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	132	0	13	106	16	1	9	3	10	41	11
Future Volume (Veh/h)	9	132	0	13	106	16	1	9	3	10	41	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	143	0	14	115	17	1	10	3	11	45	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	132			143			349	323	143	323	315	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132			143			349	323	143	323	315	124
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	98	100	98	92	99
cM capacity (veh/h)	1453			1440			556	585	905	612	591	927

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	153	146	14	68
Volume Left	10	14	1	11
Volume Right	0	17	3	12
cSH	1453	1440	630	635
Volume to Capacity	0.00*	0.00*	0.02	0.11
Queue Length 95th (m)	0.2	0.2	0.5	2.7
Control Delay (s/veh)	0.5	0.8	10.8	11.3
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.5	0.8	10.8	11.3
Approach LOS			B	B

Intersection Summary					
Average Delay	2.9				
Intersection Capacity Utilization	23.0%	ICU Level of Service		A	
Analysis Period (min)	15				

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	25	10	96	26	23
Future Volume (vph)	63	25	10	96	26	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962				0.936	
Flt Protected	0.965			0.995		
Satd. Flow (prot)	1672	0	0	1792	1685	0
Flt Permitted	0.965			0.995		
Satd. Flow (perm)	1672	0	0	1792	1685	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	27	11	104	28	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	0	115	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	63	25	10	96	26	23
Future Volume (Veh/h)	63	25	10	96	26	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	68	27	11	104	28	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	167	41	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	167	41	53			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	97	99			
cM capacity (veh/h)	818	1031	1553			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	95	115	53
Volume Left	68	11	0
Volume Right	27	0	25
cSH	869	1553	1700
Volume to Capacity	0.11	0.00*	0.03
Queue Length 95th (m)	2.8	0.2	0.0
Control Delay (s/veh)	9.7	0.8	0.0
Lane LOS	A	A	
Approach Delay (s/veh)	9.7	0.8	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		3.8		
Intersection Capacity Utilization		24.0%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	6	69	0	5	5	2
Future Volume (vph)	6	69	0	5	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.877				0.961	
Flt Protected					0.966	
Satd. Flow (prot)	1579	0	0	1801	1672	0
Flt Permitted					0.966	
Satd. Flow (perm)	1579	0	0	1801	1672	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	75	0	5	5	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	0	5	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	6	69	0	5	5	2
Future Volume (Veh/h)	6	69	0	5	5	2
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	75	0	5	5	2
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	12	0	90	11	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	12	0	90	11	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	99	93	100	99	100	
cM capacity (veh/h)	880	1085	826	881	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	82	5	7
Volume Left	0	0	5
Volume Right	75	0	2
cSH	1064	881	1623
Volume to Capacity	0.08	0.00*	0.00*
Queue Length 95th (m)	1.9	0.1	0.1
Control Delay (s/veh)	8.7	9.1	5.2
Lane LOS	A	A	A
Approach Delay (s/veh)	8.7	9.1	5.2
Approach LOS	A	A	

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	14.6%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Future Volume (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	5092	1570	1807	5193	1601	3173	4839	1566	3204	4839	1566
Flt Permitted	0.950			0.108			0.950			0.950		
Satd. Flow (perm)	3372	5092	1570	205	5193	1601	3173	4839	1566	3204	4839	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			235			164			139			139
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Shared Lane Traffic (%)												
Lane Group Flow (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	12.0	40.0	40.0	23.0	51.0	51.0	20.0	55.0	55.0	22.0	57.0	57.0
Total Split (%)	8.6%	28.6%	28.6%	16.4%	36.4%	36.4%	14.3%	39.3%	39.3%	15.7%	40.7%	40.7%
Maximum Green (s)	8.0	33.1	33.1	19.0	44.1	44.1	16.0	48.2	48.2	18.0	50.2	50.2
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	9.0	35.1	35.1	60.0	46.1	46.1	17.0	50.2	50.2	19.0	52.2	52.2
Actuated g/C Ratio	0.06	0.25	0.25	0.43	0.33	0.33	0.12	0.36	0.36	0.14	0.37	0.37
v/c Ratio	0.99	0.77	0.53	1.12	0.99	0.41	1.05	0.89	0.29	0.90	1.05	0.88
Control Delay (s/veh)	134.3	48.0	10.8	133.2	60.0	14.4	98.3	27.1	7.2	67.5	84.7	53.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	134.3	48.0	10.8	133.2	60.0	14.4	98.3	27.1	7.2	67.5	84.7	53.9
LOS	F	D	B	F	E	B	F	C	A	E	F	D
Approach Delay (s/veh)		52.9			66.0			38.9			76.0	
Approach LOS		D			E			D			E	
Queue Length 50th (m)	34.0	95.7	9.8	~99.4	160.4	8.0	~62.8	143.0	17.4	53.6	~221.7	147.9
Queue Length 95th (m)	#61.3	112.7	26.3	#161.9	#207.7	32.1	m#67.1	m148.3	m17.3	#83.7	#256.0	#199.8
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	216	1276	569	316	1709	637	385	1735	650	434	1804	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.77	0.53	1.12	0.99	0.41	1.05	0.89	0.29	0.90	1.05	0.88

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay (s/veh): 60.5		Intersection LOS: E	
Intersection Capacity Utilization 101.8%		ICU Level of Service G	

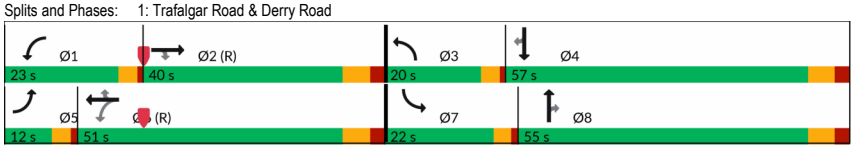
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
v/c Ratio	0.99	0.77	0.53	1.12	0.99	0.41	1.05	0.89	0.29	0.90	1.05	0.88
Control Delay (s/veh)	134.3	48.0	10.8	133.2	60.0	14.4	98.3	27.1	7.2	67.5	84.7	53.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	134.3	48.0	10.8	133.2	60.0	14.4	98.3	27.1	7.2	67.5	84.7	53.9
Queue Length 50th (m)	34.0	95.7	9.8	~99.4	160.4	8.0	~62.8	143.0	17.4	53.6	~221.7	147.9
Queue Length 95th (m)	#61.3	112.7	26.3	#161.9	#207.7	32.1	m#67.1	m148.3	m17.3	#83.7	#256.0	#199.8
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	216	1276	569	316	1709	637	385	1735	650	434	1804	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.77	0.53	1.12	0.99	0.41	1.05	0.89	0.29	0.90	1.05	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Future Volume (vph)	214	986	299	354	1699	261	405	1537	191	390	1893	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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)	3372	5092	1570	1807	5193	1601	3173	4839	1566	3204	4839	1566
Flt Permitted	0.95	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)	3372	5092	1570	205	5193	1601	3173	4839	1566	3204	4839	1566
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)	214	986	299	354	1699	261	405	1537	191	390	1893	589
RTOR Reduction (vph)	0	0	176	0	0	110	0	0	89	0	0	87
Lane Group Flow (vph)	214	986	123	354	1699	151	405	1537	102	390	1893	502
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6			8			4
Actuated Green, G (s)	8.0	33.1	33.1	56.1	44.1	44.1	16.0	48.2	48.2	18.0	50.2	50.2
Effective Green, g (s)	9.0	35.1	35.1	57.1	46.1	46.1	17.0	50.2	50.2	19.0	52.2	52.2
Actuated g/C Ratio	0.06	0.25	0.25	0.41	0.33	0.33	0.12	0.36	0.36	0.14	0.37	0.37
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	6.8
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)	216	1276	393	312	1709	527	385	1735	561	434	1804	583
v/s Ratio Prot	0.06	0.19		c0.16	0.33		c0.13	0.32		0.12	c0.39	
v/s Ratio Perm			0.08	c0.30		0.09			0.07			0.32
v/c Ratio	0.99	0.77	0.31	1.13	0.99	0.29	1.05	0.89	0.18	0.90	1.05	0.86
Uniform Delay, d1	65.5	48.7	42.6	42.7	46.8	34.8	61.5	42.2	30.8	59.6	43.9	40.5
Progression Factor	1.22	0.89	0.70	1.43	0.87	0.96	0.99	0.57	0.71	0.83	1.27	1.38
Incremental Delay, d2	57.0	4.4	2.0	89.5	19.1	1.2	41.2	2.2	0.1	16.2	32.1	9.5
Delay (s)	136.8	47.7	31.7	150.4	59.9	34.5	101.9	26.5	21.8	65.5	87.7	65.6
Level of Service	F	D	C	F	E	C	F	C	C	E	F	E
Approach Delay (s/veh)		57.3			70.9			40.4			80.2	
Approach LOS		E			E			D			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	64.2	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.10			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	101.8%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

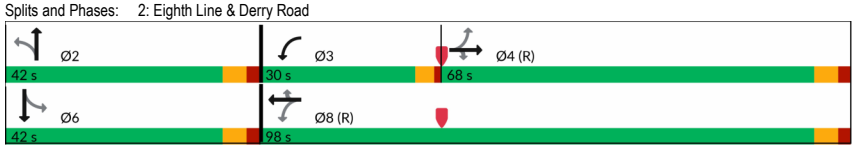
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	947	114	149	1858	6	93	10	114	15	25	6
Future Volume (vph)	8	947	114	149	1858	6	93	10	114	15	25	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.862			0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5142	1555	1825	5193	1633	1825	1653	0	1825	1865	0
Flt Permitted	0.110			0.270			0.737			0.529		
Satd. Flow (perm)	211	5142	1555	519	5193	1633	1416	1653	0	1016	1865	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			23		114			6	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	8	947	114	149	1858	6	93	10	114	15	25	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	947	114	149	1858	6	93	124	0	15	31	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		36.0	36.0	
Total Split (s)	68.0	68.0	68.0	30.0	98.0	98.0	42.0	42.0		42.0	42.0	
Total Split (%)	48.6%	48.6%	48.6%	21.4%	70.0%	70.0%	30.0%	30.0%		30.0%	30.0%	
Maximum Green (s)	62.0	62.0	62.0	26.0	92.0	92.0	36.0	36.0		36.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0		23.0	23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	
Act Effct Green (s)	101.0	101.0	101.0	115.1	113.1	113.1	14.9	14.9		14.9	14.9	
Actuated g/C Ratio	0.72	0.72	0.72	0.82	0.81	0.81	0.11	0.11		0.11	0.11	
v/c Ratio	0.05	0.26	0.10	0.30	0.44	0.00	0.62	0.45		0.14	0.15	
Control Delay (s/veh)	18.0	16.9	9.5	4.3	4.7	0.0	81.3	23.7		57.3	47.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	18.0	16.9	9.5	4.3	4.7	0.0	81.3	23.7		57.3	47.9	
LOS	B	B	A	A	A	A	F	C		E	D	
Approach Delay (s/veh)		16.1			4.6			48.4			51.0	
Approach LOS		B			A			D			D	
Queue Length 50th (m)	1.4	69.1	9.3	6.4	46.5	0.0	22.1	4.2		3.8	6.4	
Queue Length 95th (m)	m6.0	98.4	34.1	13.5	67.7	0.0	m32.8	m17.1		10.5	15.6	
Internal Link Dist (m)		339.9			1143.6			359.1			414.8	
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0			35.0		
Base Capacity (vph)	152	3710	1153	669	4195	1323	364	509		261	484	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.26	0.10	0.22	0.44	0.00	0.26	0.24		0.06	0.06	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 11.8		Intersection LOS: B	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	947	114	149	1858	6	93	124	15	31
v/c Ratio	0.05	0.26	0.10	0.30	0.44	0.00	0.62	0.45	0.14	0.15
Control Delay (s/veh)	18.0	16.9	9.5	4.3	4.7	0.0	81.3	23.7	57.3	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.0	16.9	9.5	4.3	4.7	0.0	81.3	23.7	57.3	47.9
Queue Length 50th (m)	1.4	69.1	9.3	6.4	46.5	0.0	22.1	4.2	3.8	6.4
Queue Length 95th (m)	m6.0	98.4	34.1	13.5	67.7	0.0	m32.8	m17.1	10.5	15.6
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	152	3710	1153	669	4195	1323	364	509	261	484
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.26	0.10	0.22	0.44	0.00	0.26	0.24	0.06	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	947	114	149	1858	6	93	10	114	15	25	6
Future Volume (vph)	8	947	114	149	1858	6	93	10	114	15	25	6
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.86		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5142	1555	1825	5193	1633	1825	1654		1825	1865	
Flt Permitted	0.11	1.00	1.00	0.27	1.00	1.00	0.74	1.00		0.53	1.00	
Satd. Flow (perm)	212	5142	1555	518	5193	1633	1416	1654		1017	1865	
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)	8	947	114	149	1858	6	93	10	114	15	25	6
RTOR Reduction (vph)	0	0	32	0	0	1	0	102	0	0	5	0
Lane Group Flow (vph)	8	947	82	149	1858	5	93	22	0	15	26	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	101.0	101.0	101.0	113.1	113.1	113.1	14.9	14.9		14.9	14.9	
Effective Green, g (s)	101.0	101.0	101.0	113.1	113.1	113.1	14.9	14.9		14.9	14.9	
Actuated g/C Ratio	0.72	0.72	0.72	0.81	0.81	0.81	0.11	0.11		0.11	0.11	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	152	3709	1121	494	4195	1319	150	176		108	198	
v/s Ratio Prot		0.18		0.02	c0.36			0.01			0.01	
v/s Ratio Perm	0.04		0.05	0.23		0.00	c0.07			0.01		
v/c Ratio	0.05	0.26	0.07	0.30	0.44	0.00	0.62	0.13		0.14	0.13	
Uniform Delay, d1	5.6	6.7	5.7	3.1	4.0	2.6	59.8	56.7		56.7	56.7	
Progression Factor	2.21	2.34	6.87	1.00	1.00	1.00	1.13	1.68		1.00	1.00	
Incremental Delay, d2	0.6	0.2	0.1	0.3	0.3	0.0	6.4	0.3		0.6	0.3	
Delay (s)	13.1	15.7	39.5	3.4	4.4	2.6	73.8	95.4		57.3	57.0	
Level of Service	B	B	D	A	A	A	E	F		E	E	
Approach Delay (s/veh)		18.3			4.3			86.2			57.1	
Approach LOS		B			A			F			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	14.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	80.0%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

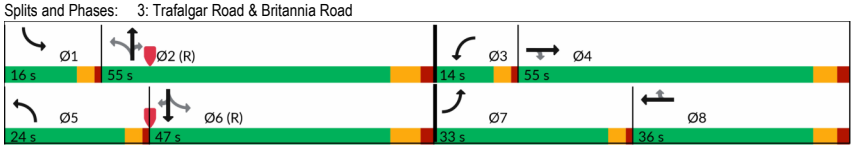
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Future Volume (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	5092	1585	3541	5193	1541	1652	4932	1566	1604	4885	1536
Flt Permitted	0.950			0.950			0.091			0.098		
Satd. Flow (perm)	3052	5092	1585	3541	5193	1541	158	4932	1566	166	4885	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			166			133			398
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Shared Lane Traffic (%)												
Lane Group Flow (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	41.0
Total Split (s)	33.0	55.0	55.0	14.0	36.0	36.0	24.0	55.0	55.0	16.0	47.0	47.0
Total Split (%)	23.6%	39.3%	39.3%	10.0%	25.7%	25.7%	17.1%	39.3%	39.3%	11.4%	33.6%	33.6%
Maximum Green (s)	29.0	49.0	49.0	10.0	30.0	30.0	20.0	48.0	48.0	12.0	40.0	40.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.0	50.7	50.7	10.7	31.4	31.4	68.6	50.0	50.0	57.6	42.0	42.0
Actuated g/C Ratio	0.21	0.36	0.36	0.08	0.22	0.22	0.49	0.36	0.36	0.41	0.30	0.30
v/c Ratio	1.09	0.49	0.30	0.61	0.85	0.40	1.31	0.95	0.31	1.05	1.02	1.03
Control Delay (s/veh)	111.9	35.8	4.9	90.0	41.3	3.5	189.2	80.6	37.6	94.9	48.0	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	111.9	35.8	4.9	90.0	41.3	3.5	189.2	80.6	37.6	94.9	48.0	44.7
LOS	F	D	A	F	D	A	F	F	D	F	D	D
Approach Delay (s/veh)		61.8			42.0			96.1			51.1	
Approach LOS		E			D			F			D	
Queue Length 50th (m)	~128.2	72.8	0.0	24.8	99.0	0.6	~134.2	186.4	34.0	~52.4	~168.3	~195.0
Queue Length 95th (m)	#171.3	86.5	16.7	36.8	78.3	2.4	m#149.6	m#196.9	m37.4	m#52.1	m154.1	m#169.2
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	654	1854	710	278	1186	480	307	1761	644	208	1465	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.49	0.30	0.59	0.83	0.39	1.31	0.95	0.31	1.05	1.02	1.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay (s/veh): 64.9		Intersection LOS: E	
Intersection Capacity Utilization 104.8%		ICU Level of Service G	

Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
v/c Ratio	1.09	0.49	0.30	0.61	0.85	0.40	1.31	0.95	0.31	1.05	1.02	1.03
Control Delay (s/veh)	111.9	35.8	4.9	90.0	41.3	3.5	189.2	80.6	37.6	94.9	48.0	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	111.9	35.8	4.9	90.0	41.3	3.5	189.2	80.6	37.6	94.9	48.0	44.7
Queue Length 50th (m)	~128.2	72.8	0.0	24.8	99.0	0.6	~134.2	186.4	34.0	~52.4	~168.3	~195.0
Queue Length 95th (m)	#171.3	86.5	16.7	36.8	78.3	2.4	m#149.6	m#196.9	m37.4	m#52.1	m154.1	m#169.2
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	654	1854	710	278	1186	480	307	1761	644	208	1465	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.49	0.30	0.59	0.83	0.39	1.31	0.95	0.31	1.05	1.02	1.03

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Future Volume (vph)	711	910	210	165	985	189	403	1669	199	218	1498	762
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	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
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	5092	1585	3541	5193	1541	1652	4932	1566	1604	4885	1536
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	3052	5092	1585	3541	5193	1541	158	4932	1566	165	4885	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)	711	910	210	165	985	189	403	1669	199	218	1498	762
RTOR Reduction (vph)	0	0	134	0	0	129	0	0	86	0	0	279
Lane Group Flow (vph)	711	910	76	165	985	60	403	1669	114	218	1498	483
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	29.0	48.7	48.7	9.7	29.4	29.4	64.6	48.0	48.0	52.6	40.0	40.0
Effective Green, g (s)	30.0	50.7	50.7	10.7	31.4	31.4	65.6	50.0	50.0	54.6	42.0	42.0
Actuated g/C Ratio	0.21	0.36	0.36	0.08	0.22	0.22	0.47	0.36	0.36	0.39	0.30	0.30
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	654	1844	573	270	1164	345	304	1761	559	204	1465	460
v/s Ratio Prot	c0.23	0.18		0.05	c0.19		c0.20	0.34		0.10	0.31	
v/s Ratio Perm			0.05			0.04	c0.42		0.07	0.31		0.31
v/c Ratio	1.09	0.49	0.13	0.61	0.85	0.17	1.33	0.95	0.20	1.07	1.02	1.05
Uniform Delay, d1	55.0	34.7	29.9	62.6	52.0	43.8	44.9	43.7	31.2	40.5	49.0	49.0
Progression Factor	1.00	1.00	1.00	1.29	0.65	0.13	1.28	1.74	3.30	1.53	0.61	0.84
Incremental Delay, d2	61.2	0.2	0.1	3.8	5.5	0.2	154.5	5.2	0.3	50.3	17.5	35.0
Delay (s)	116.2	34.9	30.0	84.3	39.5	6.0	212.2	81.5	103.4	112.2	47.3	76.2
Level of Service	F	C	C	F	D	A	F	F	F	F	D	E
Approach Delay (s/veh)		65.9			40.3			106.6			61.9	
Approach LOS		E			D			F			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	72.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.16			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	104.8%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

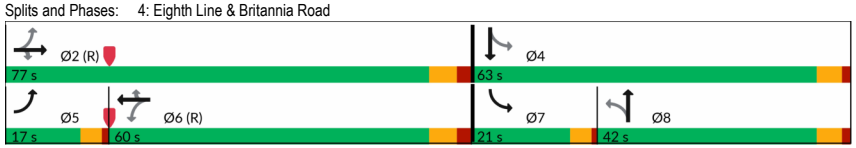
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	773	46	22	982	178	72	318	36	164	227	174
Future Volume (vph)	231	773	46	22	982	178	72	318	36	164	227	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
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	1.00
Frt			0.850			0.850		0.985			0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1328	1825	5142	1633	1825	1885	0	1825	1756	0
Flt Permitted	0.204			0.347			0.511			0.146		
Satd. Flow (perm)	392	5092	1328	667	5142	1633	982	1885	0	280	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			178		4			33	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	231	773	46	22	982	178	72	318	36	164	227	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	231	773	46	22	982	178	72	354	0	164	401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	17.0	77.0	77.0	60.0	60.0	60.0	42.0	42.0		21.0	63.0	
Total Split (%)	12.1%	55.0%	55.0%	42.9%	42.9%	42.9%	30.0%	30.0%		15.0%	45.0%	
Maximum Green (s)	12.5	70.2	70.2	53.2	53.2	53.2	36.3	36.3		16.5	57.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	80.1	77.8	77.8	60.7	60.7	60.7	30.4	30.4		50.9	49.7	
Actuated g/C Ratio	0.57	0.56	0.56	0.43	0.43	0.43	0.22	0.22		0.36	0.36	
v/c Ratio	0.65	0.27	0.06	0.08	0.44	0.22	0.34	0.86		0.62	0.62	
Control Delay (s/veh)	39.3	11.8	1.7	28.1	29.8	4.5	37.0	50.7		44.7	41.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	39.3	11.8	1.7	28.1	29.8	4.5	37.0	50.7		44.7	41.7	
LOS	D	B	A	C	C	A	D	D		D	D	
Approach Delay (s/veh)		17.4			26.0			48.4			42.6	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	23.1	22.1	0.3	3.7	74.0	0.0	16.3	91.8		33.0	88.4	
Queue Length 95th (m)	m46.0	m27.3	m2.1	10.2	90.8	14.7	m17.0	m98.0		51.2	120.1	
Internal Link Dist (m)		1337.0			1384.0			3065.7			2676.9	
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0			120.0		
Base Capacity (vph)	360	2830	762	289	2228	808	254	491		283	738	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.64	0.27	0.06	0.08	0.44	0.22	0.28	0.72		0.58	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 29.1		Intersection LOS: C	
Intersection Capacity Utilization 89.2%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	231	773	46	22	982	178	72	354	164	401
v/c Ratio	0.65	0.27	0.06	0.08	0.44	0.22	0.34	0.86	0.62	0.62
Control Delay (s/veh)	39.3	11.8	1.7	28.1	29.8	4.5	37.0	50.7	44.7	41.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.3	11.8	1.7	28.1	29.8	4.5	37.0	50.7	44.7	41.7
Queue Length 50th (m)	23.1	22.1	0.3	3.7	74.0	0.0	16.3	91.8	33.0	88.4
Queue Length 95th (m)	m46.0	m27.3	m2.1	10.2	90.8	14.7	m17.0	m98.0	51.2	120.1
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	360	2830	762	289	2228	808	254	491	283	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.27	0.06	0.08	0.44	0.22	0.28	0.72	0.58	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	773	46	22	982	178	72	318	36	164	227	174
Future Volume (vph)	231	773	46	22	982	178	72	318	36	164	227	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	5092	1328	1825	5142	1633	1825	1884		1825	1756	
Flt Permitted	0.20	1.00	1.00	0.35	1.00	1.00	0.51	1.00		0.15	1.00	
Satd. Flow (perm)	393	5092	1328	667	5142	1633	981	1884		280	1756	
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)	231	773	46	22	982	178	72	318	36	164	227	174
RTOR Reduction (vph)	0	0	20	0	0	101	0	3	0	0	21	0
Lane Group Flow (vph)	231	773	26	22	982	77	72	351	0	164	380	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	77.8	77.8	77.8	60.7	60.7	60.7	30.4	30.4		49.7	49.7	
Effective Green, g (s)	77.8	77.8	77.8	60.7	60.7	60.7	30.4	30.4		49.7	49.7	
Actuated g/C Ratio	0.56	0.56	0.56	0.43	0.43	0.43	0.22	0.22		0.36	0.36	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	347	2829	737	289	2229	708	213	409		262	623	
v/s Ratio Prot	c0.06	0.15			0.19			c0.19		0.07	c0.22	
v/s Ratio Perm	c0.31		0.02	0.03		0.05	0.07			0.16		
v/c Ratio	0.67	0.27	0.03	0.08	0.44	0.11	0.34	0.86		0.63	0.61	
Uniform Delay, d1	17.7	16.3	14.1	23.2	27.8	23.6	46.3	52.7		34.8	37.2	
Progression Factor	1.88	0.67	0.50	1.00	1.00	1.00	0.78	0.81		1.14	1.12	
Incremental Delay, d2	4.0	0.2	0.1	0.5	0.6	0.3	0.4	7.1		4.6	1.7	
Delay (s)	37.4	11.2	7.1	23.7	28.4	23.9	36.6	49.6		44.3	43.2	
Level of Service	D	B	A	C	C	C	D	D		D	D	
Approach Delay (s/veh)		16.8			27.6			47.4			43.5	
Approach LOS		B			C			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	29.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5	
Intersection Capacity Utilization	89.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	228	35	270	336	274	194	1975	366	199	1564	84
Future Volume (vph)	85	228	35	270	336	274	194	1975	366	199	1564	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	45.0		70.0	110.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.980			0.933				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1841	0	1807	1759	0	1745	4980	1581	1711	4885	1551
Flt Permitted	0.114			0.334			0.069			0.070		
Satd. Flow (perm)	211	1841	0	635	1759	0	127	4980	1581	126	4885	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			32				229			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	85	228	35	270	336	274	194	1975	366	199	1564	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	263	0	270	610	0	194	1975	366	199	1564	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		6.1	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2		11.5	24.2		11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	9.6	37.9		22.8	51.1		19.0	63.3	63.3	16.0	60.3	60.3
Total Split (%)	6.9%	27.1%		16.3%	36.5%		13.6%	45.2%	45.2%	11.4%	43.1%	43.1%
Maximum Green (s)	5.1	31.7		18.3	44.9		15.0	56.7	56.7	12.0	53.7	53.7
Yellow Time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0							
Flash Don't Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	43.0	36.2		57.2	46.9		74.2	58.9	58.9	72.3	58.1	58.1
Actuated g/C Ratio	0.31	0.26		0.41	0.34		0.53	0.42	0.42	0.52	0.42	0.42
v/c Ratio	0.64	0.55		0.68	1.00		0.86	0.94	0.46	0.95	0.77	0.12
Control Delay (s/veh)	51.5	49.8		48.2	83.6		66.9	49.2	12.2	83.4	60.8	16.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.5	49.8		48.2	83.6		66.9	49.2	12.2	83.4	60.8	16.5
LOS	D	D		D	F		E	D	B	F	E	B
Approach Delay (s/veh)		50.2			72.8			45.2			61.3	
Approach LOS		D			E			D			E	
Queue Length 50th (m)	15.0	64.0		73.8	~175.2		36.5	195.2	24.8	53.9	137.1	6.3
Queue Length 95th (m)	#32.6	94.3		m77.9	m#190.9		#71.3	#222.8	51.7	m#59.4	m138.5	m8.0
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	45.0			110.0			100.0		70.0	170.0		70.0
Base Capacity (vph)	132	478		421	610		254	2096	797	212	2025	716
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.55		0.64	1.00		0.76	0.94	0.46	0.94	0.77	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay (s/veh): 55.1		Intersection LOS: E	
Intersection Capacity Utilization 102.3%		ICU Level of Service G	

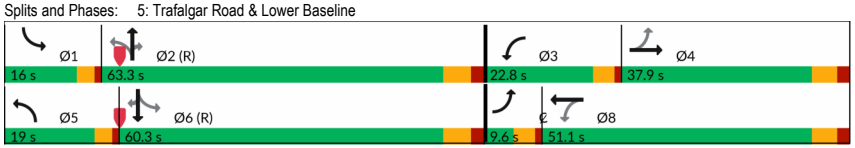
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	263	270	610	194	1975	366	199	1564	84
v/c Ratio	0.64	0.55	0.68	1.00	0.86	0.94	0.46	0.95	0.77	0.12
Control Delay (s/veh)	51.5	49.8	48.2	83.6	66.9	49.2	12.2	83.4	60.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.5	49.8	48.2	83.6	66.9	49.2	12.2	83.4	60.8	16.5
Queue Length 50th (m)	15.0	64.0	73.8	~175.2	36.5	195.2	24.8	53.9	137.1	6.3
Queue Length 95th (m)	#32.6	94.3	m77.9	m#190.9	#71.3	#222.8	51.7	m#59.4	m138.5	m8.0
Internal Link Dist (m)		1293.1		1410.4		889.5			3062.5	
Turn Bay Length (m)	45.0		110.0		100.0		70.0	170.0		70.0
Base Capacity (vph)	132	478	421	610	254	2096	797	212	2025	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.55	0.64	1.00	0.76	0.94	0.46	0.94	0.77	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	228	35	270	336	274	194	1975	366	199	1564	84
Future Volume (vph)	85	228	35	270	336	274	194	1975	366	199	1564	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2		3.5	4.2		3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.93		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)	1755	1841		1807	1758		1745	4980	1581	1711	4885	1551
Flt Permitted	0.11	1.00		0.33	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	210	1841		635	1758		127	4980	1581	126	4885	1551
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)	85	228	35	270	336	274	194	1975	366	199	1564	84
RTOR Reduction (vph)	0	4	0	0	21	0	0	0	133	0	0	49
Lane Group Flow (vph)	85	259	0	270	589	0	194	1975	233	199	1564	35
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.3	34.2		54.5	44.9		69.5	56.9	56.9	67.9	56.1	56.1
Effective Green, g (s)	41.3	36.2		55.5	46.9		71.5	58.9	58.9	69.9	58.1	58.1
Actuated g/C Ratio	0.30	0.26		0.40	0.34		0.51	0.42	0.42	0.50	0.42	0.42
Clearance Time (s)	4.5	6.2		4.5	6.2		4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0		0.2	5.0		0.2	5.0	5.0	0.2	5.0	5.0
Lane Grp Cap (vph)	129	476		392	588		222	2095	665	207	2027	643
v/s Ratio Prot	0.03	0.14		c0.08	c0.33		c0.08	c0.40		c0.09	0.32	
v/s Ratio Perm	0.17			0.19			0.36		0.15	0.39		0.02
v/c Ratio	0.66	0.54		0.69	1.00		0.87	0.94	0.35	0.96	0.77	0.05
Uniform Delay, d1	40.2	44.8		31.3	46.6		38.9	38.9	27.6	42.5	35.2	24.5
Progression Factor	1.00	1.00		1.53	1.44		1.00	1.00	1.00	1.58	1.66	14.91
Incremental Delay, d2	11.5	2.2		1.5	23.1		28.6	10.1	1.5	30.1	1.2	0.1
Delay (s)	51.7	47.0		49.4	90.1		67.5	49.1	29.0	97.1	59.6	365.6
Level of Service	D	D		D	F		E	D	C	F	E	F
Approach Delay (s/veh)		48.2			77.6			47.6			77.6	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	62.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

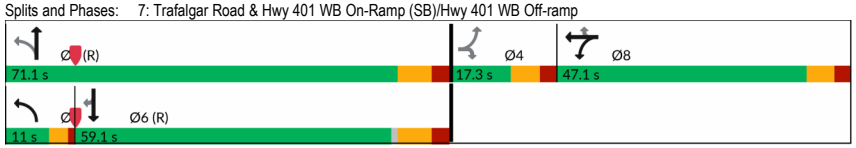
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Future Volume (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4902	0	0	4948	1306
Flt Permitted	0.645			0.950			0.081					
Satd. Flow (perm)	1239	0	1633	3372	1921	2737	156	4902	0	0	4948	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			238						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.2		10.2	55.2	55.2	55.2	58.6	54.5			52.3	52.3
Actuated g/C Ratio	0.08		0.08	0.41	0.41	0.41	0.43	0.40			0.39	0.39
v/c Ratio	0.23		0.07	0.68	0.04	1.32	0.04	0.63			0.70	0.09
Control Delay (s/veh)	65.1		0.5	38.5	30.6	176.6	19.7	33.5			37.1	0.3
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	65.1		0.5	38.5	30.6	176.6	19.7	33.5			37.1	0.3
LOS	E		A	D	C	F	B	C			D	A
Approach Delay (s/veh)		36.2			125.7			33.5			35.7	
Approach LOS		D			F			C			D	
Queue Length 50th (m)	5.4		0.0	116.3	5.5	~331.0	0.9	101.9			111.7	0.0
Queue Length 95th (m)	14.3		0.0	#169.5	14.1	#405.1	3.2	104.4			132.5	0.0
Internal Link Dist (m)		558.9			384.0			211.1			230.2	
Turn Bay Length (m)			10.0	90.0		80.0	60.0					85.0
Base Capacity (vph)	93		243	1373	782	1255	153	2279			1948	589
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.23		0.07	0.68	0.04	1.32	0.04	0.54			0.68	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay (s/veh): 79.7		Intersection LOS: E	
Intersection Capacity Utilization 101.0%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



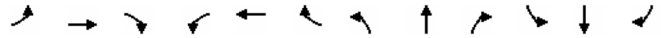


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	21	17	927	32	1651	6	1235	1333	54
v/c Ratio	0.23	0.07	0.68	0.04	1.32	0.04	0.63	0.70	0.09
Control Delay (s/veh)	65.1	0.5	38.5	30.6	176.6	19.7	33.5	37.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.1	0.5	38.5	30.6	176.6	19.7	33.5	37.1	0.3
Queue Length 50th (m)	5.4	0.0	116.3	5.5	~331.0	0.9	101.9	111.7	0.0
Queue Length 95th (m)	14.3	0.0	#169.5	14.1	#405.1	3.2	104.4	132.5	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	93	243	1373	782	1255	153	2279	1948	589
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.07	0.68	0.04	1.32	0.04	0.54	0.68	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Future Volume (vph)	21	0	17	927	32	1651	6	1235	0	0	1333	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4902			4948	1306
Flt Permitted	0.65		1.00	0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)	1239		1633	3372	1921	2737	156	4902			4948	1306
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	0	17	927	32	1651	6	1235	0	0	1333	54
RTOR Reduction (vph)	0	0	16	0	0	141	0	0	0	0	0	36
Lane Group Flow (vph)	21	0	1	927	32	1510	6	1235	0	0	1333	18
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	6.2		6.2	55.2	55.2	55.2	51.6	51.6			46.2	46.2
Effective Green, g (s)	6.2		6.2	55.2	55.2	55.2	51.6	51.6			46.2	46.2
Actuated g/C Ratio	0.05		0.05	0.41	0.41	0.41	0.38	0.38			0.34	0.34
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		74	1373	782	1114	76	1866			1687	445
v/s Ratio Prot				0.27	0.02		0.00	c0.25			c0.27	
v/s Ratio Perm	c0.02		0.00			c0.55	0.03					0.01
v/c Ratio	0.38		0.01	0.68	0.04	1.36	0.08	0.66			0.79	0.04
Uniform Delay, d1	62.8		61.7	32.8	24.2	40.2	29.2	34.7			40.3	29.8
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	4.2		0.1	1.0	0.0	165.9	0.2	1.9			3.9	0.2
Delay (s)	66.9		61.8	33.9	24.2	206.0	29.4	36.6			44.1	30.0
Level of Service	E		E	C	C	F	C	D			D	C
Approach Delay (s/veh)		64.6			142.7			36.6			43.6	
Approach LOS		E			F			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	91.1	HCM 2000 Level of Service		F	
HCM 2000 Volume to Capacity ratio	1.06				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	101.0%	ICU Level of Service		G	
Analysis Period (min)	15				
c Critical Lane Group					

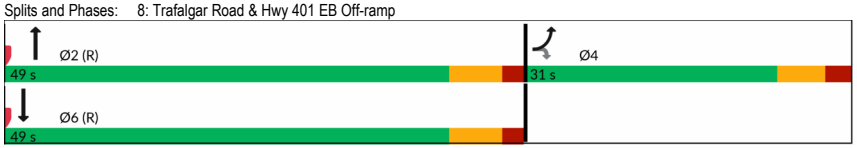
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	881	0	1670	1804	0
Future Volume (vph)	174	881	0	1670	1804	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	0.91	0.91	1.00
Frt	0.892	0.850				
Flt Protected	0.986					
Satd. Flow (prot)	2927	1327	0	4902	4948	0
Flt Permitted	0.986					
Satd. Flow (perm)	2927	1327	0	4902	4948	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10	10				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	174	881	0	1670	1804	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	615	440	0	1670	1804	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	27.8	27.8		38.2	38.2	
Actuated g/C Ratio	0.35	0.35		0.48	0.48	
v/c Ratio	0.86dr	0.94		0.71	0.76	
Control Delay (s/veh)	25.0	58.1		18.3	19.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.0	58.1		18.3	19.4	
LOS	C	E		B	B	
Approach Delay (s/veh)	38.8			18.3	19.4	
Approach LOS	D			B	B	
Queue Length 50th (m)	42.7	76.5		72.6	80.8	
Queue Length 95th (m)	64.7	#155.9		81.7	90.4	
Internal Link Dist (m)	507.7			52.4	180.2	
Turn Bay Length (m)		125.0				
Base Capacity (vph)	1025	468		2573	2597	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.60	0.94		0.65	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay (s/veh): 23.5		Intersection LOS: C	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	615	440	1670	1804
v/c Ratio	0.86dr	0.94	0.71	0.76
Control Delay (s/veh)	25.0	58.1	18.3	19.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.0	58.1	18.3	19.4
Queue Length 50th (m)	42.7	76.5	72.6	80.8
Queue Length 95th (m)	64.7	#155.9	81.7	90.4
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	1025	468	2573	2597
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.94	0.65	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	881	0	1670	1804	0
Future Volume (vph)	174	881	0	1670	1804	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		0.91	0.91	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2928	1327		4902	4948	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2928	1327		4902	4948	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	174	881	0	1670	1804	0
RTOR Reduction (vph)	7	7	0	0	0	0
Lane Group Flow (vph)	608	433	0	1670	1804	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	27.8	27.8		38.2	38.2	
Effective Green, g (s)	27.8	27.8		38.2	38.2	
Actuated g/C Ratio	0.35	0.35		0.48	0.48	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1017	461		2340	2362	
v/s Ratio Prot	0.21			0.34	c0.36	
v/s Ratio Perm		c0.33				
v/c Ratio	0.86dr	0.94		0.71	0.76	
Uniform Delay, d1	21.5	25.3		16.6	17.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	27.5		1.9	2.4	
Delay (s)	22.5	52.8		18.5	19.6	
Level of Service	C	D		B	B	
Approach Delay (s/veh)	35.1			18.5	19.6	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	1488	96	0	2688	6	80	0	0	11	0	9
Future Volume (vph)	65	1488	96	0	2688	6	80	0	0	11	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		0.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		0	0		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected	0.950							0.950		0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5142	0	0	1789	0	1789	1883	1601
Flt Permitted	0.039							0.757		0.758		
Satd. Flow (perm)	73	5142	1601	1883	5142	0	0	1426	0	1428	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		1							70
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
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
Adj. Flow (vph)	65	1488	96	0	2688	6	80	0	0	11	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	1488	96	0	2694	0	0	80	0	11	0	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2			2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru			Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0			10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6			0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6			8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0		24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	116.0	116.0	105.0	105.0		24.0	24.0		24.0	24.0	24.0
Total Split (%)	7.9%	82.9%	82.9%	75.0%	75.0%		17.1%	17.1%		17.1%	17.1%	17.1%
Maximum Green (s)	5.0	110.0	110.0	99.0	99.0		18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min		None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	0
Act Effct Green (s)	106.7	106.7	106.7		97.9			21.3		21.3		21.3
Actuated g/C Ratio	0.76	0.76	0.76		0.70			0.15		0.15		0.15
v/c Ratio	0.56	0.38	0.08		0.75			0.37		0.05		0.03
Control Delay (s/veh)	32.8	5.8	0.8		6.0			61.2		54.5		0.2
Queue Delay	0.0	0.0	0.0		0.0			0.0		0.0		0.0
Total Delay (s/veh)	32.8	5.8	0.8		6.0			61.2		54.5		0.2
LOS	C	A	A		A			E		D		A
Approach Delay (s/veh)		6.6			6.0			61.2			30.1	
Approach LOS		A			A			E			C	
Queue Length 50th (m)	3.5	39.5	0.0		46.7			21.1		2.8		0.0
Queue Length 95th (m)	#17.8	44.9	3.4		m49.4			38.6		8.9		0.0
Internal Link Dist (m)		1030.4			235.0			320.0			125.6	
Turn Bay Length (m)	100.0		50.0							30.0		30.0
Base Capacity (vph)	116	4040	1278		3636			217		217		303
Starvation Cap Reductn	0	0	0		0			0		0		0
Spillback Cap Reductn	0	0	0		0			0		0		0
Storage Cap Reductn	0	0	0		0			0		0		0
Reduced v/c Ratio	0.56	0.37	0.08		0.74			0.37		0.05		0.03

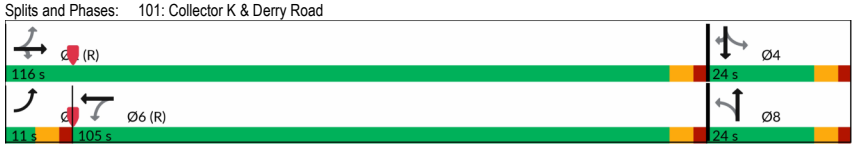
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 7.3		Intersection LOS: A	
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	65	1488	96	2694	80	11	9
v/c Ratio	0.56	0.38	0.08	0.75	0.37	0.05	0.03
Control Delay (s/veh)	32.8	5.8	0.8	6.0	61.2	54.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.8	5.8	0.8	6.0	61.2	54.5	0.2
Queue Length 50th (m)	3.5	39.5	0.0	46.7	21.1	2.8	0.0
Queue Length 95th (m)	#17.8	44.9	3.4	m49.4	38.6	8.9	0.0
Internal Link Dist (m)		1030.4		235.0	320.0		
Turn Bay Length (m)	100.0		50.0			30.0	30.0
Base Capacity (vph)	116	4040	1278	3636	217	217	303
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.37	0.08	0.74	0.37	0.05	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	1488	96	0	2688	6	80	0	0	11	0	9
Future Volume (vph)	65	1488	96	0	2688	6	80	0	0	11	0	9
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
Lane Util. Factor	1.00	0.91	1.00		0.91			1.00		1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00		1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.95		0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5140			1789		1789		1601
Flt Permitted	0.04	1.00	1.00		1.00			0.76		0.76		1.00
Satd. Flow (perm)	73	5142	1601		5140			1426		1428		1601
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)	65	1488	96	0	2688	6	80	0	0	11	0	9
RTOR Reduction (vph)	0	0	23	0	0	0	0	0	0	0	0	8
Lane Group Flow (vph)	65	1488	73	0	2694	0	0	80	0	11	0	1
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	106.7	106.7	106.7		96.7			21.3		21.3		21.3
Effective Green, g (s)	106.7	106.7	106.7		96.7			21.3		21.3		21.3
Actuated g/C Ratio	0.76	0.76	0.76		0.69			0.15		0.15		0.15
Clearance Time (s)	6.0	6.0	6.0		6.0			6.0		6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0		3.0
Lane Grp Cap (vph)	104	3918	1220		3550			216		217		243
v/s Ratio Prot	0.02	c0.29			c0.52							
v/s Ratio Perm	0.45		0.05					c0.06		0.01		0.00
v/c Ratio	0.63	0.38	0.06		0.76			0.37		0.05		0.01
Uniform Delay, d1	21.5	5.6	4.2		14.1			53.3		50.7		50.4
Progression Factor	1.00	1.00	1.00		0.42			1.00		1.00		1.00
Incremental Delay, d2	11.1	0.3	0.1		0.5			1.1		0.4		0.0
Delay (s)	32.6	5.9	4.2		6.4			54.4		51.2		50.4
Level of Service	C	A	A		A			D		D		D
Approach Delay (s/veh)		6.8			6.4			54.4			50.8	
Approach LOS		A			A			D			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	7.6	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.69				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	75.7%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1345	222	0	2282	5	0	0	92	0	0	31
Future Volume (vph)	0	1345	222	0	2282	5	0	0	92	0	0	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5142	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5142	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
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
Adj. Flow (vph)	0	1345	222	0	2282	5	0	0	92	0	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1345	222	0	2287	0	0	0	92	0	0	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1345	222	0	2282	5	0	0	92	0	0	31
Future Volume (Veh/h)	0	1345	222	0	2282	5	0	0	92	0	0	31
Sign Control		Free			Free			Stop			Stop	
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)	0	1345	222	0	2282	5	0	0	92	0	0	31
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.85			0.83			0.91	0.91	0.83	0.91	0.91	0.85
vC, conflicting volume	2287			1567			2137	3632	448	2825	3852	763
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1883			983			763	2404	0	1518	2645	81
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	96
cM capacity (veh/h)	266			582			257	30	904	67	21	814

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	448	448	448	222	913	913	461	92	31
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	222	0	0	5	92	31
cSH	1700	1700	1700	1700	1700	1700	1700	904	814
Volume to Capacity	0.26	0.26	0.26	0.13	0.54	0.54	0.27	0.10	0.04
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.9
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	9.6
Lane LOS								A	A
Approach Delay (s/veh)	0.0				0.0			9.4	9.6
Approach LOS								A	A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

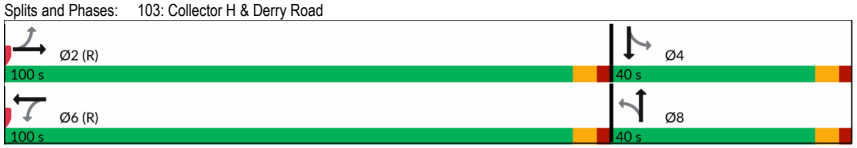
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1244	129	29	2114	9	108	0	14	19	7	58
Future Volume (vph)	64	1244	129	29	2114	9	108	0	14	19	7	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.999			0.985			0.907	
Flt Protected	0.950			0.950				0.958			0.989	
Satd. Flow (prot)	1789	5070	0	1789	5137	0	0	1777	0	0	1689	0
Flt Permitted	0.071			0.177				0.647			0.932	
Satd. Flow (perm)	134	5070	0	333	5137	0	0	1200	0	0	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			1			23			15	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
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
Adj. Flow (vph)	64	1244	129	29	2114	9	108	0	14	19	7	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1373	0	29	2123	0	0	122	0	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	100.0	100.0		100.0	100.0		40.0	40.0		40.0	40.0	
Total Split (%)	71.4%	71.4%		71.4%	71.4%		28.6%	28.6%		28.6%	28.6%	
Maximum Green (s)	94.0	94.0		94.0	94.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	9.0	9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	111.4	111.4		111.4	111.4			16.6			16.6	
Actuated g/C Ratio	0.80	0.80		0.80	0.80			0.12			0.12	
v/c Ratio	0.60	0.34		0.11	0.52			0.75			0.42	
Control Delay (s/veh)	38.7	3.3		6.5	8.3			74.3			50.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	38.7	3.3		6.5	8.3			74.3			50.5	
LOS	D	A		A	A			E			D	
Approach Delay (s/veh)		4.9			8.3			74.3			50.5	
Approach LOS		A			A			E			D	
Queue Length 50th (m)	4.5	10.6		2.5	80.3			27.5			17.8	
Queue Length 95th (m)	m15.4	17.8		m5.1	101.6			47.4			32.5	
Internal Link Dist (m)		335.6			419.2			340.0			345.5	
Turn Bay Length (m)	50.0			50.0								
Base Capacity (vph)	106	4039		264	4086			308			397	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.60	0.34		0.11	0.52			0.40			0.21	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay (s/veh): 10.1	Intersection LOS: B	
Intersection Capacity Utilization 76.7%	ICU Level of Service D	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	64	1373	29	2123	122	84
v/c Ratio	0.60	0.34	0.11	0.52	0.75	0.42
Control Delay (s/veh)	38.7	3.3	6.5	8.3	74.3	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.7	3.3	6.5	8.3	74.3	50.5
Queue Length 50th (m)	4.5	10.6	2.5	80.3	27.5	17.8
Queue Length 95th (m)	m15.4	17.8	m5.1	101.6	47.4	32.5
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	106	4039	264	4086	308	397
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.34	0.11	0.52	0.40	0.21

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1244	129	29	2114	9	108	0	14	19	7	58
Future Volume (vph)	64	1244	129	29	2114	9	108	0	14	19	7	58
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.98			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	5069		1789	5139			1776			1689	
Flt Permitted	0.07	1.00		0.18	1.00			0.65			0.93	
Satd. Flow (perm)	134	5069		333	5139			1200			1592	
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)	64	1244	129	29	2114	9	108	0	14	19	7	58
RTOR Reduction (vph)	0	6	0	0	0	0	0	20	0	0	13	0
Lane Group Flow (vph)	64	1367	0	29	2123	0	0	102	0	0	71	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	111.4	111.4		111.4	111.4			16.6			16.6	
Effective Green, g (s)	111.4	111.4		111.4	111.4			16.6			16.6	
Actuated g/C Ratio	0.80	0.80		0.80	0.80			0.12			0.12	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	106	4033		264	4089			142			188	
v/s Ratio Prot		0.27			0.41							
v/s Ratio Perm	c0.48			0.09				c0.08			0.04	
v/c Ratio	0.60	0.34		0.11	0.52			0.72			0.38	
Uniform Delay, d1	5.6	4.0		3.2	5.0			59.4			56.9	
Progression Factor	1.94	0.74		1.29	1.44			1.00			0.98	
Incremental Delay, d2	16.7	0.2		0.7	0.4			15.8			1.3	
Delay (s)	27.6	3.1		4.9	7.6			75.2			57.0	
Level of Service	C	A		A	A			E			E	
Approach Delay (s/veh)		4.2			7.6			75.2			57.0	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

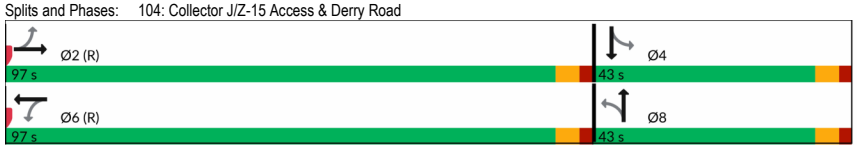
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1034	213	18	1920	9	144	0	20	19	0	88
Future Volume (vph)	30	1034	213	18	1920	9	144	0	20	19	0	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.999			0.984			0.889	
Flt Protected	0.950			0.950				0.958			0.991	
Satd. Flow (prot)	1789	5008	0	1789	5137	0	0	1775	0	0	1659	0
Flt Permitted	0.087			0.201				0.604			0.943	
Satd. Flow (perm)	164	5008	0	379	5137	0	0	1119	0	0	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			1			23			23	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
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
Adj. Flow (vph)	30	1034	213	18	1920	9	144	0	20	19	0	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	1247	0	18	1929	0	0	164	0	0	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	97.0	97.0		97.0	97.0		43.0	43.0		43.0	43.0	
Total Split (%)	69.3%	69.3%		69.3%	69.3%		30.7%	30.7%		30.7%	30.7%	
Maximum Green (s)	91.0	91.0		91.0	91.0		37.0	37.0		37.0	37.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	9.0	9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	106.2	106.2		106.2	106.2			21.8			21.8	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
v/c Ratio	0.24	0.33		0.06	0.50			0.85			0.40	
Control Delay (s/veh)	21.1	8.8		6.3	7.0			82.7			44.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	21.1	8.8		6.3	7.0			82.7			44.1	
LOS	C	A		A	A			F			D	
Approach Delay (s/veh)		9.1			7.0			82.7			44.1	
Approach LOS		A			A			F			D	
Queue Length 50th (m)	2.0	48.1		1.1	62.7			39.4			21.4	
Queue Length 95th (m)	17.4	124.2		m3.5	85.9			61.8			37.0	
Internal Link Dist (m)		419.2			339.9			350.0			259.5	
Turn Bay Length (m)	50.0			50.0								
Base Capacity (vph)	124	3813		287	3895			312			434	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.24	0.33		0.06	0.50			0.53			0.25	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 12.5		Intersection LOS: B	
Intersection Capacity Utilization 63.2%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	30	1247	18	1929	164	107
v/c Ratio	0.24	0.33	0.06	0.50	0.85	0.40
Control Delay (s/veh)	21.1	8.8	6.3	7.0	82.7	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.1	8.8	6.3	7.0	82.7	44.1
Queue Length 50th (m)	2.0	48.1	1.1	62.7	39.4	21.4
Queue Length 95th (m)	17.4	124.2	m3.5	85.9	61.8	37.0
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	124	3813	287	3895	312	434
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.33	0.06	0.50	0.53	0.25

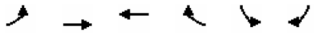
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1034	213	18	1920	9	144	0	20	19	0	88
Future Volume (vph)	30	1034	213	18	1920	9	144	0	20	19	0	88
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.97		1.00	1.00			0.98			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	5010		1789	5138			1775			1660	
Flt Permitted	0.09	1.00		0.20	1.00			0.60			0.94	
Satd. Flow (perm)	164	5010		378	5138			1119			1578	
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)	30	1034	213	18	1920	9	144	0	20	19	0	88
RTOR Reduction (vph)	0	15	0	0	0	0	0	19	0	0	19	0
Lane Group Flow (vph)	30	1232	0	18	1929	0	0	145	0	0	88	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	106.2	106.2		106.2	106.2			21.8			21.8	
Effective Green, g (s)	106.2	106.2		106.2	106.2			21.8			21.8	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	124	3800		286	3897			174			245	
v/s Ratio Prot		0.25			c0.38							
v/s Ratio Perm	0.18			0.05				c0.13			0.06	
v/c Ratio	0.24	0.32		0.06	0.49			0.83			0.36	
Uniform Delay, d1	5.0	5.4		4.3	6.5			57.3			52.8	
Progression Factor	2.06	1.52		0.97	0.91			1.00			1.00	
Incremental Delay, d2	4.4	0.2		0.4	0.4			27.3			0.9	
Delay (s)	14.7	8.4		4.5	6.3			84.6			53.7	
Level of Service	B	A		A	A			F			D	
Approach Delay (s/veh)		8.6			6.3			84.6			53.7	
Approach LOS		A			A			F			D	

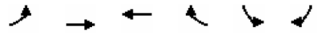
Intersection Summary					
HCM 2000 Control Delay (s/veh)	12.3	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.55				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	63.2%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	1499	2672	19	0	22
Future Volume (vph)	0	1499	2672	19	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1499	2672	19	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1499	2672	19	0	22
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	1499	2672	19	0	22
Future Volume (Veh/h)	0	1499	2672	19	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1499	2672	19	0	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.66				0.71	0.66
vC, conflicting volume	2691				3172	1336
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2534				2430	493
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	115				19	346

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	500	500	500	1336	1336	19	22
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	19	22
cSH	1700	1700	1700	1700	1700	1700	346
Volume to Capacity	0.29	0.29	0.29	0.79	0.79	0.01	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	16.1
Lane LOS							C
Approach Delay (s/veh)	0.0			0.0			16.1
Approach LOS							C

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	83.9%	ICU Level of Service		E
Analysis Period (min)	15			

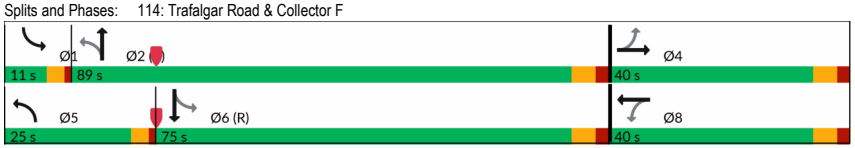
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	39	31	31	36	42	47	1835	129	89	2808	51
Future Volume (vph)	19	39	31	31	36	42	47	1835	129	89	2808	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		0.0	70.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.934			0.919			0.990			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1682	0	1652	1655	0	1711	4979	0	1711	5014	0
Flt Permitted	0.706			0.711			0.038			0.080		
Satd. Flow (perm)	1227	1682	0	1236	1655	0	68	4979	0	144	5014	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			40			14			3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
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
Adj. Flow (vph)	19	39	31	31	36	42	47	1835	129	89	2808	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	70	0	31	78	0	47	1964	0	89	2859	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	10.9	10.9		10.9	10.9		113.7	104.7		117.1	108.3	
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.81	0.75		0.84	0.77	
v/c Ratio	0.20	0.45		0.32	0.47		0.34	0.53		0.42	0.74	
Control Delay (s/veh)	65.5	48.3		71.5	43.0		35.7	10.2		12.8	5.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.5	48.3		71.5	43.0		35.7	10.2		12.8	5.5	
LOS	E	D		E	D		D	B		B	A	
Approach Delay (s/veh)		52.0			51.1			10.8			5.7	
Approach LOS		D			D			B			A	
Queue Length 50th (m)	5.2	11.6		8.6	10.4		3.8	166.9		2.3	39.0	
Queue Length 95th (m)	m12.9	m27.5		m18.8	m26.8		m6.0	m208.1		m9.6	64.8	
Internal Link Dist (m)		200.2			176.3			308.8			241.5	
Turn Bay Length (m)	60.0			50.0			50.0			70.0		
Base Capacity (vph)	297	428		300	432		304	3725		214	3879	
Starvation Cap Reductn	0	0		0	0		0	0		0	41	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.06	0.16		0.10	0.18		0.15	0.53		0.42	0.74	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 9.4		Intersection LOS: A	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	70	31	78	47	1964	89	2859
v/c Ratio	0.20	0.45	0.32	0.47	0.34	0.53	0.42	0.74
Control Delay (s/veh)	65.5	48.3	71.5	43.0	35.7	10.2	12.8	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.5	48.3	71.5	43.0	35.7	10.2	12.8	5.5
Queue Length 50th (m)	5.2	11.6	8.6	10.4	3.8	166.9	2.3	39.0
Queue Length 95th (m)	m12.9	m27.5	m18.8	m26.8	m6.0	m208.1	m9.6	64.8
Internal Link Dist (m)		200.2		176.3		308.8		241.5
Turn Bay Length (m)	60.0		50.0		50.0		70.0	
Base Capacity (vph)	297	428	300	432	304	3725	214	3879
Starvation Cap Reductn	0	0	0	0	0	0	0	41
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.16	0.10	0.18	0.15	0.53	0.42	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	39	31	31	36	42	47	1835	129	89	2808	51
Future Volume (vph)	19	39	31	31	36	42	47	1835	129	89	2808	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.93		1.00	0.92		1.00	0.99		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)	1652	1681		1652	1655		1711	4979		1711	5015	
Flt Permitted	0.71	1.00		0.71	1.00		0.04	1.00		0.08	1.00	
Satd. Flow (perm)	1228	1681		1237	1655		69	4979		144	5015	
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)	19	39	31	31	36	42	47	1835	129	89	2808	51
RTOR Reduction (vph)	0	25	0	0	37	0	0	4	0	0	1	0
Lane Group Flow (vph)	19	45	0	31	41	0	47	1960	0	89	2858	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	10.9	10.9		10.9	10.9		110.3	104.7		115.9	107.5	
Effective Green, g (s)	10.9	10.9		10.9	10.9		110.3	104.7		115.9	107.5	
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.79	0.75		0.83	0.77	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	95	130		96	128		120	3723		213	3850	
v/s Ratio Prot		c0.03			0.02		0.02	0.39		c0.03	c0.57	
v/s Ratio Perm	0.02			0.03			0.29			0.32		
v/c Ratio	0.20	0.35		0.32	0.32		0.39	0.53		0.42	0.74	
Uniform Delay, d1	60.5	61.2		61.1	61.1		11.8	7.3		5.1	8.8	
Progression Factor	1.01	0.99		1.03	1.03		2.79	1.29		3.39	0.50	
Incremental Delay, d2	1.0	1.6		2.0	1.5		1.1	0.3		0.9	0.9	
Delay (s)	62.1	62.2		64.7	64.0		34.0	9.8		18.3	5.3	
Level of Service	E	E		E	E		C	A		B	A	
Approach Delay (s/veh)		62.2			64.2			10.3			5.7	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	9.7	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	82.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

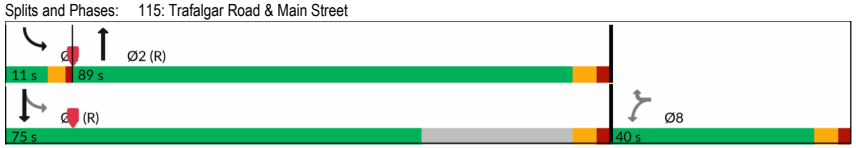
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	37	1877	42	16	2598
Future Volume (vph)	145	37	1877	42	16	2598
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.5	3.5	3.3	3.5
Storage Length (m)	90.0	0.0		0.0	50.0	
Storage Lanes	0	1		0	1	
Taper Length (m)	50.0				50.0	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt		0.850	0.997			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	1601	5014	0	1711	5029
Flt Permitted	0.950				0.084	
Satd. Flow (perm)	1789	1601	5014	0	151	5029
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		37	4			
Link Speed (k/h)	48		60			60
Link Distance (m)	627.0		712.8			236.3
Travel Time (s)	47.0		42.8			14.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	37	1877	42	16	2598
Shared Lane Traffic (%)						
Lane Group Flow (vph)	145	37	1919	0	16	2598
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.3			3.3
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.01	1.01	1.04	1.01
Turning Speed (k/h)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		7.0	20.0
Minimum Split (s)	40.0	40.0	26.0		11.0	26.0
Total Split (s)	40.0	40.0	89.0		11.0	75.0
Total Split (%)	28.6%	28.6%	63.6%		7.9%	53.6%
Maximum Green (s)	34.0	34.0	83.0		7.0	69.0
Yellow Time (s)	4.0	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.0	2.0		1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		None	C-Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Don't Walk (s)	27.0	27.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	16.7	16.7	106.9		113.3	111.3
Actuated g/C Ratio	0.12	0.12	0.76		0.81	0.80
v/c Ratio	0.68	0.17	0.50		0.08	0.65
Control Delay (s/veh)	74.5	16.8	19.6		3.8	5.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	74.5	16.8	19.6		3.8	5.0
LOS	E	B	B		A	A
Approach Delay (s/veh)	62.8		19.6			5.0
Approach LOS	E		B			A
Queue Length 50th (m)	39.7	0.0	152.5		0.7	48.4
Queue Length 95th (m)	60.2	10.3	128.5		m1.5	85.1
Internal Link Dist (m)	603.0		688.8			212.3
Turn Bay Length (m)	90.0				50.0	
Base Capacity (vph)	434	416	3829		200	3998
Starvation Cap Reductn	0	0	0		0	29
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.33	0.09	0.50		0.08	0.65

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay (s/veh): 13.2		Intersection LOS: B	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 115: Trafalgar Road & Main Street



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	145	37	1919	16	2598
v/c Ratio	0.68	0.17	0.50	0.08	0.65
Control Delay (s/veh)	74.5	16.8	19.6	3.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.5	16.8	19.6	3.8	5.0
Queue Length 50th (m)	39.7	0.0	152.5	0.7	48.4
Queue Length 95th (m)	60.2	10.3	128.5	m1.5	85.1
Internal Link Dist (m)	603.0		688.8		212.3
Turn Bay Length (m)	90.0			50.0	
Base Capacity (vph)	434	416	3829	200	3998
Starvation Cap Reductn	0	0	0	0	29
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.09	0.50	0.08	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	37	1877	42	16	2598
Future Volume (vph)	145	37	1877	42	16	2598
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.5	3.5	3.3	3.5
Total Lost time (s)	6.0	6.0	6.0		4.0	6.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	5012		1711	5029
Flt Permitted	0.95	1.00	1.00		0.08	1.00
Satd. Flow (perm)	1789	1601	5012		151	5029
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	37	1877	42	16	2598
RTOR Reduction (vph)	0	33	1	0	0	0
Lane Group Flow (vph)	145	4	1918	0	16	2598
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	16.7	16.7	104.5		111.3	111.3
Effective Green, g (s)	16.7	16.7	104.5		111.3	111.3
Actuated g/C Ratio	0.12	0.12	0.75		0.80	0.80
Clearance Time (s)	6.0	6.0	6.0		4.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	213	190	3741		151	3998
v/s Ratio Prot			0.38		0.00	c0.52
v/s Ratio Perm	c0.08	0.00			0.08	
v/c Ratio	0.68	0.02	0.51		0.11	0.65
Uniform Delay, d1	59.1	54.4	7.3		4.7	6.1
Progression Factor	1.00	1.00	2.58		0.95	0.66
Incremental Delay, d2	8.6	0.0	0.4		0.2	0.7
Delay (s)	67.7	54.5	19.2		4.7	4.7
Level of Service	E	D	B		A	A
Approach Delay (s/veh)	65.0		19.2			4.7
Approach LOS	E		B			A

Intersection Summary				
HCM 2000 Control Delay (s/veh)	12.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	68.5%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

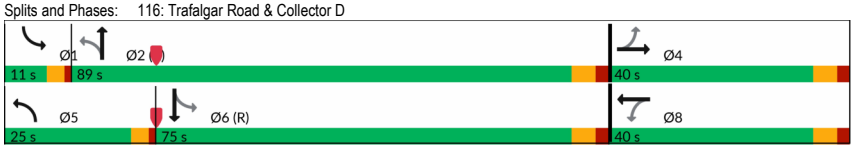
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	18	65	163	21	163	101	1755	41	82	2680	103
Future Volume (vph)	45	18	65	163	21	163	101	1755	41	82	2680	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		0.0	100.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.883			0.867			0.997			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1590	0	1652	1561	0	1711	5014	0	1711	4999	0
Flt Permitted	0.448			0.703			0.043			0.093		
Satd. Flow (perm)	779	1590	0	1222	1561	0	77	5014	0	167	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			107			4			6	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
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
Adj. Flow (vph)	45	18	65	163	21	163	101	1755	41	82	2680	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	83	0	163	184	0	101	1796	0	82	2783	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	23.9	23.9		23.9	23.9		103.6	92.7		100.2	90.8	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.74	0.66		0.72	0.65	
v/c Ratio	0.34	0.26		0.78	0.52		0.61	0.54		0.41	0.86	
Control Delay (s/veh)	55.6	16.7		79.4	26.2		65.8	1.9		12.5	19.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	55.6	16.7		79.4	26.2		65.8	1.9		12.5	19.2	
LOS	E	B		E	C		E	A		B	B	
Approach Delay (s/veh)		30.3			51.2			5.3			19.0	
Approach LOS		C			D			A			B	
Queue Length 50th (m)	11.3	4.3		44.4	19.1		17.6	6.1		3.4	221.1	
Queue Length 95th (m)	22.3	17.8		65.3	40.2		36.1	8.6		m14.2	#321.3	
Internal Link Dist (m)		84.9			331.4			200.5			688.8	
Turn Bay Length (m)	50.0			80.0			50.0			100.0		
Base Capacity (vph)	189	435		296	460		303	3321		201	3244	
Starvation Cap Reductn	0	0		0	0		0	72		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.19		0.55	0.40		0.33	0.55		0.41	0.86	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 16.5		Intersection LOS: B	
Intersection Capacity Utilization 97.7%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	45	83	163	184	101	1796	82	2783
v/c Ratio	0.34	0.26	0.78	0.52	0.61	0.54	0.41	0.86
Control Delay (s/veh)	55.6	16.7	79.4	26.2	65.8	1.9	12.5	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.6	16.7	79.4	26.2	65.8	1.9	12.5	19.2
Queue Length 50th (m)	11.3	4.3	44.4	19.1	17.6	6.1	3.4	221.1
Queue Length 95th (m)	22.3	17.8	65.3	40.2	36.1	8.6	m14.2	#321.3
Internal Link Dist (m)		84.9		331.4		200.5		688.8
Turn Bay Length (m)	50.0		80.0		50.0		100.0	
Base Capacity (vph)	189	435	296	460	303	3321	201	3244
Starvation Cap Reductn	0	0	0	0	0	72	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.19	0.55	0.40	0.33	0.55	0.41	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	18	65	163	21	163	101	1755	41	82	2680	103
Future Volume (vph)	45	18	65	163	21	163	101	1755	41	82	2680	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.88		1.00	0.87		1.00	1.00		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)	1652	1589		1652	1561		1711	5012		1711	5001	
Flt Permitted	0.45	1.00		0.70	1.00		0.04	1.00		0.09	1.00	
Satd. Flow (perm)	778	1589		1222	1561		78	5012		167	5001	
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)	45	18	65	163	21	163	101	1755	41	82	2680	103
RTOR Reduction (vph)	0	54	0	0	89	0	0	1	0	0	2	0
Lane Group Flow (vph)	45	29	0	163	95	0	101	1795	0	82	2781	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.9	23.9		23.9	23.9		102.0	92.7		98.2	90.8	
Effective Green, g (s)	23.9	23.9		23.9	23.9		102.0	92.7		98.2	90.8	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.73	0.66		0.70	0.65	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	132	271		208	266		165	3318		198	3243	
v/s Ratio Prot		0.02			0.06		c0.04	0.36		0.02	c0.56	
v/s Ratio Perm	0.06			c0.13			0.41			0.27		
v/c Ratio	0.34	0.11		0.78	0.36		0.61	0.54		0.41	0.86	
Uniform Delay, d1	51.1	49.0		55.6	51.3		34.2	12.4		8.7	19.5	
Progression Factor	1.00	1.00		1.00	1.00		2.11	0.10		1.22	0.77	
Incremental Delay, d2	1.5	0.2		17.3	0.8		5.9	0.6		1.1	2.6	
Delay (s)	52.7	49.2		72.9	52.1		77.8	1.8		11.8	17.5	
Level of Service	D	D		E	D		E	A		B	B	
Approach Delay (s/veh)		50.4			61.9			5.9			17.3	
Approach LOS		D			E			A			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	16.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	97.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

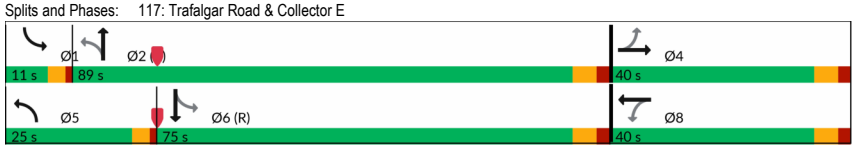
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	2	74	5	41	19	1852	25	30	2865	13
Future Volume (vph)	4	5	2	74	5	41	19	1852	25	30	2865	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.957			0.866			0.998			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1802	0	1789	1631	0	1711	5019	0	1711	5024	0
Flt Permitted	0.727			0.753			0.038			0.093		
Satd. Flow (perm)	1369	1802	0	1418	1631	0	68	5019	0	167	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			41			2			1	
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
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
Adj. Flow (vph)	4	5	2	74	5	41	19	1852	25	30	2865	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	7	0	74	46	0	19	1877	0	30	2878	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	89.0		11.0	75.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		17.9%	63.6%		7.9%	53.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		21.0	83.0		7.0	69.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.2	13.2		13.2	13.2		114.1	108.2		114.7	108.5	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.82	0.77		0.82	0.78	
v/c Ratio	0.03	0.04		0.55	0.24		0.15	0.48		0.14	0.74	
Control Delay (s/veh)	56.3	49.9		75.4	21.3		10.3	1.1		3.1	6.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	56.3	49.9		75.4	21.3		10.3	1.1		3.1	6.5	
LOS	E	D		E	C		B	A		A	A	
Approach Delay (s/veh)		52.2			54.7			1.2			6.4	
Approach LOS		D			D			A			A	
Queue Length 50th (m)	1.0	1.3		20.5	1.4		0.1	6.7		0.7	46.9	
Queue Length 95th (m)	m3.5	m4.9		36.1	m13.2		m1.3	9.9		m1.8	78.0	
Internal Link Dist (m)		209.9			172.8			241.5			200.5	
Turn Bay Length (m)	50.0			50.0			50.0			50.0		
Base Capacity (vph)	332	439		344	427		303	3877		213	3892	
Starvation Cap Reductn	0	0		0	0		0	0		0	81	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.02		0.22	0.11		0.06	0.48		0.14	0.76	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 5.7		Intersection LOS: A	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	7	74	46	19	1877	30	2878
v/c Ratio	0.03	0.04	0.55	0.24	0.15	0.48	0.14	0.74
Control Delay (s/veh)	56.3	49.9	75.4	21.3	10.3	1.1	3.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.3	49.9	75.4	21.3	10.3	1.1	3.1	6.5
Queue Length 50th (m)	1.0	1.3	20.5	1.4	0.1	6.7	0.7	46.9
Queue Length 95th (m)	m3.5	m4.9	36.1	m13.2	m1.3	9.9	m1.8	78.0
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	332	439	344	427	303	3877	213	3892
Starvation Cap Reductn	0	0	0	0	0	0	0	81
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.02	0.22	0.11	0.06	0.48	0.14	0.76

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	2	74	5	41	19	1852	25	30	2865	13
Future Volume (vph)	4	5	2	74	5	41	19	1852	25	30	2865	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	0.87		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)	1789	1803		1789	1632		1711	5019		1711	5025	
Flt Permitted	0.73	1.00		0.75	1.00		0.04	1.00		0.09	1.00	
Satd. Flow (perm)	1369	1803		1418	1632		68	5019		168	5025	
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)	4	5	2	74	5	41	19	1852	25	30	2865	13
RTOR Reduction (vph)	0	2	0	0	37	0	0	0	0	0	0	0
Lane Group Flow (vph)	4	5	0	74	9	0	19	1877	0	30	2878	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.2	13.2		13.2	13.2		110.5	106.6		111.1	106.9	
Effective Green, g (s)	13.2	13.2		13.2	13.2		110.5	106.6		111.1	106.9	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.79	0.76		0.79	0.76	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	129	169		133	153		99	3821		179	3836	
v/s Ratio Prot		0.00			0.01		c0.01	0.37		0.01	c0.57	
v/s Ratio Perm	0.00			c0.05			0.15			0.13		
v/c Ratio	0.03	0.03		0.56	0.06		0.19	0.49		0.17	0.75	
Uniform Delay, d1	57.6	57.6		60.6	57.7		10.2	6.4		4.0	9.2	
Progression Factor	1.01	1.04		1.00	0.99		3.19	0.11		0.97	0.59	
Incremental Delay, d2	0.1	0.1		5.0	0.2		0.8	0.4		0.2	0.7	
Delay (s)	58.4	59.8		65.5	57.3		33.5	1.1		4.1	6.1	
Level of Service	E	E		E	E		C	A		A	A	
Approach Delay (s/veh)		59.3			62.4			1.4			6.1	
Approach LOS		E			E			A			A	

Intersection Summary

HCM 2000 Control Delay (s/veh)	5.8	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	76.4%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	0	0	0	0	45
Future Volume (vph)	14	0	0	0	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			39.5	161.7	
Travel Time (s)	55.9			3.0	12.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	0	0	0	0	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	0	0	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	14	0	0	0	0	45
Future Volume (vph)	14	0	0	0	0	45
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	14	0	0	0	0	45

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	14	0	45
Volume Left (vph)	14	0	0
Volume Right (vph)	0	0	45
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.1	4.6	3.4
Degree Utilization, x	0.02	0.00	0.04
Capacity (veh/h)	693	786	1059
Control Delay (s/veh)	7.0	6.4	6.5
Approach Delay (s/veh)	7.0		6.5
Approach LOS	A		A

Intersection Summary			
Delay	6.6		
Level of Service	A		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	53	22	45	15	24
Future Volume (vph)	13	53	22	45	15	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892		0.909			
Flt Protected	0.990					0.981
Satd. Flow (prot)	1590	0	1637	0	0	1766
Flt Permitted	0.990					0.981
Satd. Flow (perm)	1590	0	1637	0	0	1766
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	53	22	45	15	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	67	0	0	39
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	53	22	45	15	24
Future Volume (Veh/h)	13	53	22	45	15	24
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)	13	53	22	45	15	24
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	99	45			67	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99	45			67	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	95			99	
cM capacity (veh/h)	892	1025			1535	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	66	67	39
Volume Left	13	0	15
Volume Right	53	45	0
cSH	996	1700	1535
Volume to Capacity	0.07	0.04	0.00*
Queue Length 95th (m)	1.6	0.0	0.2
Control Delay (s/veh)	8.9	0.0	2.9
Lane LOS	A		A
Approach Delay (s/veh)	8.9	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	63	11	61	120	3	17	18	47	25	4	0
Future Volume (vph)	0	63	11	61	120	3	17	18	47	25	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.998			0.923				
Flt Protected					0.984			0.990			0.959	
Satd. Flow (prot)	0	1846	0	0	1768	0	0	1721	0	0	1806	0
Flt Permitted					0.984			0.990			0.959	
Satd. Flow (perm)	0	1846	0	0	1768	0	0	1721	0	0	1806	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
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
Adj. Flow (vph)	0	63	11	61	120	3	17	18	47	25	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	184	0	0	82	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	63	11	61	120	3	17	18	47	25	4	0
Future Volume (Veh/h)	0	63	11	61	120	3	17	18	47	25	4	0
Sign Control		Free			Free			Stop			Stop	
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)	0	63	11	61	120	3	17	18	47	25	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	123			74			314	314	69	368	318	122
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	123			74			314	314	69	368	318	122
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			97	97	95	95	99	100
cM capacity (veh/h)	1464			1526			616	578	995	531	575	930

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	74	184	82	29
Volume Left	0	61	17	25
Volume Right	11	3	47	0
cSH	1464	1526	773	536
Volume to Capacity	0.00	0.04	0.11	0.05
Queue Length 95th (m)	0.0	0.9	2.7	1.3
Control Delay (s/veh)	0.0	2.7	10.2	12.1
Lane LOS		A	B	B
Approach Delay (s/veh)	0.0	2.7	10.2	12.1
Approach LOS			B	B

Intersection Summary				
Average Delay		4.6		
Intersection Capacity Utilization		28.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	57	60	20	204	58	29
Future Volume (vph)	57	60	20	204	58	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.955	
Flt Protected				0.996	0.968	
Satd. Flow (prot)	1753	0	0	1876	1741	0
Flt Permitted				0.996	0.968	
Satd. Flow (perm)	1753	0	0	1876	1741	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	60	20	204	58	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	0	0	224	87	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	3	64	9	1	36
Future Volume (vph)	3	3	64	9	1	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.983			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1581	0	1770	0	0	1799
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1581	0	1770	0	0	1799
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	3	64	9	1	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	73	0	0	37
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	3	64	9	1	36
Future Volume (Veh/h)	3	3	64	9	1	36
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	3	64	9	1	36
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	107	69			73	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107	69			73	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	891	995			1527	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	6	73	37
Volume Left	3	0	1
Volume Right	3	9	0
cSH	940	1700	1527
Volume to Capacity	0.00*	0.04	0.00*
Queue Length 95th (m)	0.1	0.0	0.0
Control Delay (s/veh)	8.9	0.0	0.2
Lane LOS	A		A
Approach Delay (s/veh)	8.9	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	7	6	6	21	13	8	67	7	9	65	2
Future Volume (vph)	2	7	6	6	21	13	8	67	7	9	65	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.956			0.988			0.996	
Flt Protected		0.993			0.993			0.995			0.994	
Satd. Flow (prot)	0	1633	0	0	1650	0	0	1770	0	0	1783	0
Flt Permitted		0.993			0.993			0.995			0.994	
Satd. Flow (perm)	0	1633	0	0	1650	0	0	1770	0	0	1783	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
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
Adj. Flow (vph)	2	7	6	6	21	13	8	67	7	9	65	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	40	0	0	82	0	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	7	6	6	21	13	8	67	7	9	65	2
Future Volume (Veh/h)	2	7	6	6	21	13	8	67	7	9	65	2
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)	2	7	6	6	21	13	8	67	7	9	65	2
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	194	174	66	180	172	71	67			74		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	194	174	66	180	172	71	67			74		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	99	97	99	99			99		
cM capacity (veh/h)	732	711	998	765	714	992	1535			1526		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	40	82	76
Volume Left	2	6	8	9
Volume Right	6	13	7	2
cSH	807	794	1535	1526
Volume to Capacity	0.02	0.05	0.00*	0.00*
Queue Length 95th (m)	0.4	1.2	0.1	0.1
Control Delay (s/veh)	9.5	9.8	0.8	0.9
Lane LOS	A	A	A	A
Approach Delay (s/veh)	9.5	9.8	0.8	0.9
Approach LOS	A	A		

Intersection Summary				
Average Delay		3.1		
Intersection Capacity Utilization		15.7%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	18	11	0	36	0	63	107	8	0	103	12
Future Volume (vph)	6	18	11	0	36	0	63	107	8	0	103	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958						0.994			0.986	
Flt Protected		0.992						0.983				
Satd. Flow (prot)	0	1790	0	0	1883	0	0	1759	0	0	1775	0
Flt Permitted		0.992						0.983				
Satd. Flow (perm)	0	1790	0	0	1883	0	0	1759	0	0	1775	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
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
Adj. Flow (vph)	6	18	11	0	36	0	63	107	8	0	103	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	36	0	0	178	0	0	115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	97		97	24		97	97		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	18	11	0	36	0	63	107	8	0	103	12
Future Volume (Veh/h)	6	18	11	0	36	0	63	107	8	0	103	12
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)	6	18	11	0	36	0	63	107	8	0	103	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	364	350	109	366	352	111	115			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	364	350	109	366	352	111	115			115		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	97	99	100	93	100	96			100		
cM capacity (veh/h)	544	550	945	550	548	942	1474			1474		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	35	36	178	115
Volume Left	6	0	63	0
Volume Right	11	0	8	12
cSH	632	548	1474	1474
Volume to Capacity	0.06	0.07	0.04	0.00
Queue Length 95th (m)	1.3	1.6	1.0	0.0
Control Delay (s/veh)	11.0	12.0	2.9	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	11.0	12.0	2.9	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		3.7		
Intersection Capacity Utilization	29.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	32	2	1	32	6	3	47	15	5	17	17
Future Volume (vph)	20	32	2	1	32	6	3	47	15	5	17	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.979			0.969			0.941	
Flt Protected		0.982			0.999			0.998			0.994	
Satd. Flow (prot)	0	1699	0	0	1761	0	0	1741	0	0	1684	0
Flt Permitted		0.982			0.999			0.998			0.994	
Satd. Flow (perm)	0	1699	0	0	1761	0	0	1741	0	0	1684	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
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
Adj. Flow (vph)	20	32	2	1	32	6	3	47	15	5	17	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	39	0	0	65	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	32	2	1	32	6	3	47	15	5	17	17
Future Volume (Veh/h)	20	32	2	1	32	6	3	47	15	5	17	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)	20	32	2	1	32	6	3	47	15	5	17	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	118	104	26	114	105	55	34			62		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	118	104	26	114	105	55	34			62		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	96	100	100	96	99	100			100		
cM capacity (veh/h)	823	783	1050	831	782	1012	1578			1541		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	54	39	65	39
Volume Left	20	1	3	5
Volume Right	2	6	15	17
cSH	805	811	1578	1541
Volume to Capacity	0.07	0.05	0.00*	0.00*
Queue Length 95th (m)	1.6	1.1	0.0	0.1
Control Delay (s/veh)	9.8	9.7	0.4	1.0
Lane LOS	A	A	A	A
Approach Delay (s/veh)	9.8	9.7	0.4	1.0
Approach LOS	A	A		

Intersection Summary				
Average Delay		4.9		
Intersection Capacity Utilization		20.2%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	54	0	7	52	65	4	13	2	58	15	4
Future Volume (vph)	4	54	0	7	52	65	4	13	2	58	15	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.929			0.986			0.993	
Flt Protected		0.997			0.997			0.990			0.964	
Satd. Flow (prot)	0	1795	0	0	1668	0	0	1758	0	0	1724	0
Flt Permitted		0.997			0.997			0.990			0.964	
Satd. Flow (perm)	0	1795	0	0	1668	0	0	1758	0	0	1724	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
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
Adj. Flow (vph)	4	54	0	7	52	65	4	13	2	58	15	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	124	0	0	19	0	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	54	0	7	52	65	4	13	2	58	15	4
Future Volume (Veh/h)	4	54	0	7	52	65	4	13	2	58	15	4
Sign Control		Free			Free			Stop			Stop	
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)	4	54	0	7	52	65	4	13	2	58	15	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	117			54			172	193	54	169	161	85
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	117			54			172	193	54	169	161	85
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	98	100	93	98	100
cM capacity (veh/h)	1471			1551			771	697	1013	778	726	975

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	58	124	19	77
Volume Left	4	7	4	58
Volume Right	0	65	2	4
cSH	1471	1551	736	775
Volume to Capacity	0.00*	0.00*	0.03	0.10
Queue Length 95th (m)	0.1	0.1	0.6	2.5
Control Delay (s/veh)	0.5	0.4	10.0	10.2
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.5	0.4	10.0	10.2
Approach LOS			B	B

Intersection Summary				
Average Delay		3.8		
Intersection Capacity Utilization		26.4%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	35	35	68	70	75
Future Volume (vph)	128	35	35	68	70	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.971				0.930	
Flt Protected	0.962			0.983		
Satd. Flow (prot)	1682	0	0	1770	1675	0
Flt Permitted	0.962			0.983		
Satd. Flow (perm)	1682	0	0	1770	1675	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	35	35	68	70	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	163	0	0	103	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	128	35	35	68	70	75
Future Volume (Veh/h)	128	35	35	68	70	75
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)	128	35	35	68	70	75
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	246	108	145			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	246	108	145			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	96	98			
cM capacity (veh/h)	725	946	1437			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	163	103	145
Volume Left	128	35	0
Volume Right	35	0	75
cSH	763	1437	1700
Volume to Capacity	0.21	0.02	0.09
Queue Length 95th (m)	6.1	0.6	0.0
Control Delay (s/veh)	11.0	2.7	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	11.0	2.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	29	0	24	13	8
Future Volume (vph)	25	29	0	24	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927				0.949	
Flt Protected					0.970	
Satd. Flow (prot)	1669	0	0	1801	1658	0
Flt Permitted					0.970	
Satd. Flow (perm)	1669	0	0	1801	1658	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	29	0	24	13	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	24	21	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	29	0	24	13	8
Future Volume (Veh/h)	25	29	0	24	13	8
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	29	0	24	13	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	34	0	72	30	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	0	72	30	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	97	97	100	97	99	
cM capacity (veh/h)	852	1085	870	856	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	54	24	21
Volume Left	0	0	13
Volume Right	29	0	8
cSH	963	856	1623
Volume to Capacity	0.06	0.03	0.00*
Queue Length 95th (m)	1.4	0.7	0.2
Control Delay (s/veh)	9.0	9.3	4.5
Lane LOS	A	A	A
Approach Delay (s/veh)	9.0	9.3	4.5
Approach LOS	A	A	

Intersection Summary				
Average Delay		8.1		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

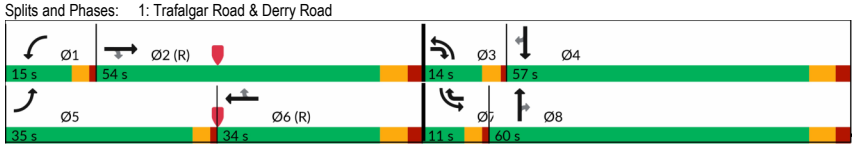
2041 Future Total

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	781	1632	372	372	741	545	300	1819	289	208	1622	71
Future Volume (vph)	781	1632	372	372	741	545	300	1819	289	208	1622	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			165			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	797	1665	380	380	756	556	306	1856	295	212	1655	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	797	1665	380	380	756	556	306	1856	295	212	1655	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	35.0	54.0	14.0	15.0	34.0	11.0	14.0	60.0	60.0	11.0	57.0	57.0
Total Split (%)	25.0%	38.6%	10.0%	10.7%	24.3%	7.9%	10.0%	42.9%	42.9%	7.9%	40.7%	40.7%
Maximum Green (s)	31.0	47.1	10.0	11.0	27.1	7.0	10.0	53.2	53.2	7.0	50.2	50.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	32.0	49.1	66.0	12.0	29.1	43.0	11.0	55.2	55.2	8.0	52.2	52.2
Actuated g/C Ratio	0.23	0.35	0.47	0.09	0.21	0.31	0.08	0.39	0.39	0.06	0.37	0.37
v/c Ratio	1.01	1.05	0.49	1.28	0.84	0.98	1.28	1.13	0.41	1.28	1.05	0.13
Control Delay (s/veh)	94.1	79.5	23.9	198.3	63.1	74.2	201.0	96.3	12.5	213.3	80.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.1	79.5	23.9	198.3	63.1	74.2	201.0	96.3	12.5	213.3	80.5	0.7
LOS	F	E	C	F	E	E	F	F	B	F	F	A
Approach Delay (s/veh)		76.2			97.1			99.3			92.1	
Approach LOS		E			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.28		
Intersection Signal Delay (s/veh): 89.9	Intersection LOS: F	
Intersection Capacity Utilization 101.8%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	797	1665	380	380	756	556	306	1856	295	212	1655	72
v/c Ratio	1.01	1.05	0.49	1.28	0.84	0.98	1.28	1.13	0.41	1.28	1.05	0.13
Control Delay (s/veh)	94.1	79.5	23.9	198.3	63.1	74.2	201.0	96.3	12.5	213.3	80.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.1	79.5	23.9	198.3	63.1	74.2	201.0	96.3	12.5	213.3	80.5	0.7
Queue Length 50th (m)	~123.9	~209.7	47.7	~69.5	89.2	133.3	~59.7	~258.3	14.2	~41.7	~219.7	0.0
Queue Length 95th (m)	m#159.9	#245.0	m63.8	#102.3	108.9	#209.2	m#84.0	#295.2	m32.0	#70.3	#255.1	1.1
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	793	1585	779	297	895	565	239	1646	717	166	1571	550
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.05	0.49	1.28	0.84	0.98	1.28	1.13	0.41	1.28	1.05	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	781	1632	372	372	741	545	300	1819	289	208	1622	71
Future Volume (vph)	781	1632	372	372	741	545	300	1819	289	208	1622	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	797	1665	380	380	756	556	306	1856	295	212	1655	72
RTOR Reduction (vph)	0	0	34	0	0	67	0	0	100	0	0	45
Lane Group Flow (vph)	797	1665	346	380	756	489	306	1856	195	212	1655	27
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	31.0	47.1	57.1	11.0	27.1	34.1	10.0	53.2	53.2	7.0	50.2	50.2
Effective Green, g (s)	32.0	49.1	61.1	12.0	29.1	38.1	11.0	55.2	55.2	8.0	52.2	52.2
Actuated g/C Ratio	0.23	0.35	0.44	0.09	0.21	0.27	0.08	0.39	0.39	0.06	0.37	0.37
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	793	1585	691	297	895	444	239	1646	617	166	1571	472
v/s Ratio Prot	c0.23	c0.37	c0.04	c0.11	0.18	0.07	c0.10	c0.44		0.07	0.39	
v/s Ratio Perm			0.18			0.23			0.12			0.02
v/c Ratio	1.01	1.05	0.50	1.28	0.84	1.10	1.28	1.13	0.32	1.28	1.05	0.06
Uniform Delay, d1	54.0	45.4	28.4	64.0	53.3	50.9	64.5	42.4	29.3	66.0	43.9	28.1
Progression Factor	1.35	1.12	1.08	1.00	1.00	1.00	1.15	0.81	0.88	1.00	1.00	1.00
Incremental Delay, d2	23.4	31.0	0.6	149.2	9.6	73.1	146.1	63.3	0.4	162.9	38.3	0.1
Delay (s)	96.4	81.9	31.2	213.2	62.9	124.1	220.0	97.6	26.1	228.9	82.2	28.2
Level of Service	F	F	C	F	E	F	F	F	C	F	F	C
Approach Delay (s/veh)		79.2			116.7			104.2			96.2	
Approach LOS		E			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	96.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.14			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	101.8%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

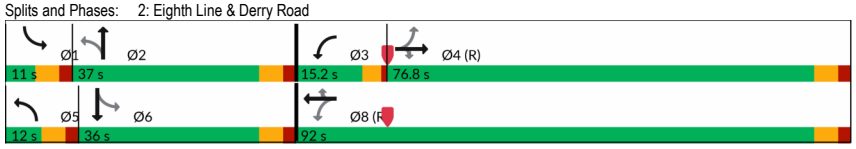
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1758	123	129	955	20	147	26	133	8	9	12
Future Volume (vph)	35	1758	123	129	955	20	147	26	133	8	9	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.874			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1607	0	1217	1596	0
Flt Permitted	0.239			0.047			0.454			0.652		
Satd. Flow (perm)	323	4520	1601	90	4391	1633	872	1607	0	835	1596	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		139			13	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	36	1831	128	134	995	21	153	27	139	8	9	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1831	128	134	995	21	153	166	0	8	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	87.6	87.6	87.6	105.7	103.7	103.7	23.3	22.1		12.8	11.0	
Actuated g/C Ratio	0.63	0.63	0.63	0.76	0.74	0.74	0.17	0.16		0.09	0.08	
v/c Ratio	0.18	0.65	0.12	0.61	0.31	0.02	0.64	0.45		0.09	0.16	
Control Delay (s/veh)	17.5	19.8	4.4	38.4	7.2	0.1	64.5	16.2		45.9	37.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.5	19.8	4.4	38.4	7.2	0.1	64.5	16.2		45.9	37.0	
LOS	B	B	A	D	A	A	E	B		D	D	
Approach Delay (s/veh)		18.7			10.7			39.3			39.3	
Approach LOS		B			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 18.2		Intersection LOS: B
Intersection Capacity Utilization 69.3%		ICU Level of Service C
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	1831	128	134	995	21	153	166	8	22
v/c Ratio	0.18	0.65	0.12	0.61	0.31	0.02	0.64	0.45	0.09	0.16
Control Delay (s/veh)	17.5	19.8	4.4	38.4	7.2	0.1	64.5	16.2	45.9	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.5	19.8	4.4	38.4	7.2	0.1	64.5	16.2	45.9	37.0
Queue Length 50th (m)	6.4	153.2	3.3	19.8	46.2	0.0	35.6	6.0	2.4	2.4
Queue Length 95th (m)	15.1	165.3	12.0	39.8	46.0	0.0	#76.4	29.9	9.4	11.0
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	201	2827	1039	228	3252	1228	238	479	92	352
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.65	0.12	0.59	0.31	0.02	0.64	0.35	0.09	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1758	123	129	955	20	147	26	133	8	9	12
Future Volume (vph)	35	1758	123	129	955	20	147	26	133	8	9	12
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.87		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1607		1217	1596	
Flt Permitted	0.24	1.00	1.00	0.05	1.00	1.00	0.45	1.00		0.65	1.00	
Satd. Flow (perm)	323	4520	1601	90	4391	1633	871	1607		835	1596	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	36	1831	128	134	995	21	153	27	139	8	9	12
RTOR Reduction (vph)	0	0	41	0	0	6	0	117	0	0	12	0
Lane Group Flow (vph)	36	1831	87	134	995	15	153	49	0	8	10	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	82.8	82.8	82.8	98.9	98.9	98.9	29.1	22.1		10.4	9.4	
Effective Green, g (s)	82.8	82.8	82.8	98.9	98.9	98.9	29.1	22.1		10.4	9.4	
Actuated g/C Ratio	0.59	0.59	0.59	0.71	0.71	0.71	0.21	0.16		0.07	0.07	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	191	2673	946	213	3101	1153	274	253		64	107	
v/s Ratio Prot		c0.41		c0.05	0.23		c0.05	0.03		0.00	0.01	
v/s Ratio Perm	0.11		0.05	0.39		0.01	c0.06			0.01		
v/c Ratio	0.19	0.68	0.09	0.63	0.32	0.01	0.56	0.19		0.13	0.09	
Uniform Delay, d1	13.2	19.6	12.4	33.1	7.8	6.1	48.1	51.2		60.4	61.3	
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	0.2	5.7	0.3	0.0	2.5	0.4		0.9	0.4	
Delay (s)	15.3	21.1	12.5	38.8	8.1	6.1	50.5	51.6		61.3	61.7	
Level of Service	B	C	B	D	A	A	D	D		E	E	
Approach Delay (s/veh)		20.4			11.6			51.1			61.6	
Approach LOS		C			B			D			E	

Intersection Summary

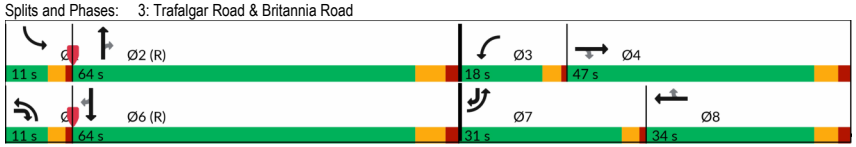
HCM 2000 Control Delay (s/veh)	20.7	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.67				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		22.0	
Intersection Capacity Utilization	69.3%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	612	1035	456	249	764	249	188	1378	223	138	1929	794
Future Volume (vph)	612	1035	456	249	764	249	188	1378	223	138	1929	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			125			176			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	618	1045	461	252	772	252	190	1392	225	139	1948	802
Shared Lane Traffic (%)												
Lane Group Flow (vph)	618	1045	461	252	772	252	190	1392	225	139	1948	802
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	31.0	47.0	11.0	18.0	34.0	34.0	11.0	64.0	64.0	11.0	64.0	31.0
Total Split (%)	22.1%	33.6%	7.9%	12.9%	24.3%	24.3%	7.9%	45.7%	45.7%	7.9%	45.7%	22.1%
Maximum Green (s)	27.0	41.0	7.0	14.0	28.0	28.0	7.0	57.0	57.0	7.0	57.0	27.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	27.9	42.8	56.6	14.4	29.3	29.3	8.8	59.3	59.3	8.5	59.0	92.9
Actuated g/C Ratio	0.20	0.31	0.40	0.10	0.21	0.21	0.06	0.42	0.42	0.06	0.42	0.66
v/c Ratio	0.92	0.76	0.69	0.70	0.83	0.57	1.06	0.77	0.29	0.79	1.08	0.87
Control Delay (s/veh)	74.8	48.3	36.2	71.6	61.8	29.9	144.8	38.3	7.6	84.5	72.0	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.8	48.3	36.2	71.6	61.8	29.9	144.8	38.3	7.6	84.5	72.0	35.6
LOS	E	D	D	E	E	C	F	D	A	F	E	D
Approach Delay (s/veh)		53.4			57.4			45.7			62.5	
Approach LOS		D			E			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay (s/veh): 55.6		Intersection LOS: E	
Intersection Capacity Utilization 89.5%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	618	1045	461	252	772	252	190	1392	225	139	1948	802
v/c Ratio	0.92	0.76	0.69	0.70	0.83	0.57	1.06	0.77	0.29	0.79	1.08	0.87
Control Delay (s/veh)	74.8	48.3	36.2	71.6	61.8	29.9	144.8	38.3	7.6	84.5	72.0	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.8	48.3	36.2	71.6	61.8	29.9	144.8	38.3	7.6	84.5	72.0	35.6
Queue Length 50th (m)	90.8	111.7	96.0	35.4	88.2	31.1	~35.6	143.0	8.2	21.1	~266.2	247.1
Queue Length 95th (m)	#125.0	132.0	138.6	50.1	107.2	59.5	#63.6	165.8	25.2	m23.4	m#245.0	m245.2
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	674	1375	665	375	949	448	179	1801	764	175	1810	925
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.76	0.69	0.67	0.81	0.56	1.06	0.77	0.29	0.79	1.08	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	612	1035	456	249	764	249	188	1378	223	138	1929	794
Future Volume (vph)	612	1035	456	249	764	249	188	1378	223	138	1929	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	618	1045	461	252	772	252	190	1392	225	139	1948	802
RTOR Reduction (vph)	0	0	39	0	0	99	0	0	101	0	0	20
Lane Group Flow (vph)	618	1045	422	252	772	153	190	1392	124	139	1948	782
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.9	40.8	48.6	13.4	27.3	27.3	7.8	57.3	57.3	7.5	57.0	83.9
Effective Green, g (s)	27.9	42.8	52.6	14.4	29.3	29.3	8.8	59.3	59.3	8.5	59.0	87.9
Actuated g/C Ratio	0.20	0.31	0.38	0.10	0.21	0.21	0.06	0.42	0.42	0.06	0.42	0.63
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	671	1368	584	360	927	341	180	1801	663	175	1810	857
v/s Ratio Prot	c0.18	0.23	0.05	0.07	c0.17		c0.07	0.33		0.05	c0.45	c0.19
v/s Ratio Perm			0.22			0.09			0.08			0.38
v/c Ratio	0.92	0.76	0.72	0.70	0.83	0.45	1.06	0.77	0.19	0.79	1.08	0.91
Uniform Delay, d1	55.0	44.0	37.5	60.7	53.0	48.3	65.6	34.6	25.3	64.9	40.5	22.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.78	1.63
Incremental Delay, d2	18.1	2.6	4.4	6.0	6.5	0.9	82.5	3.3	0.6	12.2	40.5	8.1
Delay (s)	73.0	46.6	41.9	66.7	59.5	49.3	148.1	37.9	25.9	79.5	72.3	45.1
Level of Service	E	D	D	E	E	D	F	D	C	E	E	D
Approach Delay (s/veh)		53.3			58.9			48.0			65.1	
Approach LOS		D			E			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	57.2	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.99			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	89.5%	ICU Level of Service	E	
Analysis Period (min)	15			

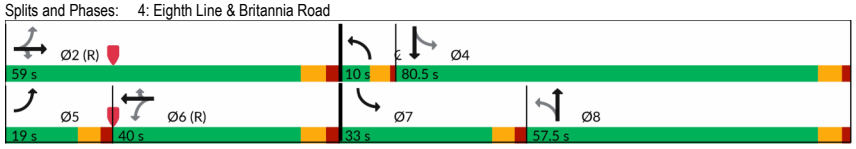
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	1146	55	24	657	123	41	214	29	198	332	201
Future Volume (vph)	162	1146	55	24	657	123	41	214	29	198	332	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792	0	1825	1810	0
Flt Permitted	0.259			0.189			0.177			0.365		
Satd. Flow (perm)	498	4476	1306	363	4476	1633	312	1792	0	701	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		5			30	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	165	1169	56	24	670	126	42	218	30	202	339	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	1169	56	24	670	126	42	248	0	202	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	77.3	76.5	76.5	57.3	57.3	57.3	45.0	38.3		60.2	52.5	
Actuated g/C Ratio	0.52	0.51	0.51	0.38	0.38	0.38	0.30	0.26		0.40	0.35	
v/c Ratio	0.44	0.51	0.08	0.17	0.39	0.18	0.29	0.54		0.50	0.84	
Control Delay (s/veh)	26.1	27.2	0.9	44.3	37.6	5.4	28.5	49.6		32.5	53.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.1	27.2	0.9	44.3	37.6	5.4	28.5	49.6		32.5	53.8	
LOS	C	C	A	D	D	A	C	D		C	D	
Approach Delay (s/veh)		26.0			32.9			46.5			48.1	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 34.7		Intersection LOS: C	
Intersection Capacity Utilization 92.5%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	165	1169	56	24	670	126	42	248	202	553
v/c Ratio	0.44	0.51	0.08	0.17	0.39	0.18	0.29	0.54	0.50	0.84
Control Delay (s/veh)	26.1	27.2	0.9	44.3	37.6	5.4	28.5	49.6	32.5	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.1	27.2	0.9	44.3	37.6	5.4	28.5	49.6	32.5	53.8
Queue Length 50th (m)	26.3	99.0	0.0	4.8	62.7	0.0	7.7	64.1	38.8	143.4
Queue Length 95th (m)	48.0	136.0	1.7	15.7	92.9	12.9	13.5	84.6	48.5	165.7
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	387	2290	715	139	1714	712	144	624	485	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.51	0.08	0.17	0.39	0.18	0.29	0.40	0.42	0.60

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	1146	55	24	657	123	41	214	29	198	332	201
Future Volume (vph)	162	1146	55	24	657	123	41	214	29	198	332	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792		1825	1810	
Flt Permitted	0.26	1.00	1.00	0.19	1.00	1.00	0.18	1.00		0.37	1.00	
Satd. Flow (perm)	498	4476	1306	364	4476	1633	312	1792		701	1810	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	165	1169	56	24	670	126	42	218	30	202	339	214
RTOR Reduction (vph)	0	0	28	0	0	78	0	4	0	0	19	0
Lane Group Flow (vph)	165	1169	28	24	670	48	42	244	0	202	534	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	75.6	75.6	75.6	56.4	56.4	56.4	43.6	39.2		61.4	52.5	
Effective Green, g (s)	75.6	75.6	75.6	56.4	56.4	56.4	43.6	39.2		61.4	52.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.38	0.38	0.38	0.29	0.26		0.41	0.35	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	2263	660	137	1688	616	131	469		409	635	
v/s Ratio Prot	0.04	c0.26			0.15		0.01	0.14		c0.05	c0.29	
v/s Ratio Perm	0.19		0.02	0.07		0.03	0.08			0.15		
v/c Ratio	0.45	0.52	0.04	0.18	0.40	0.08	0.32	0.52		0.49	0.84	
Uniform Delay, d1	21.3	24.7	18.7	31.0	34.1	29.9	40.5	47.1		30.5	44.6	
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	0.9	0.8	0.1	2.8	0.7	0.2	1.4	1.0		0.9	9.8	
Delay (s)	22.1	25.6	18.8	33.8	34.8	30.1	41.9	48.2		31.4	54.4	
Level of Service	C	C	B	C	C	C	D	D		C	D	
Approach Delay (s/veh)		24.9			34.0			47.3			48.3	
Approach LOS		C			C			D			D	

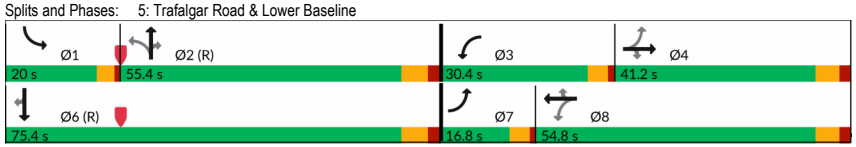
Intersection Summary				
HCM 2000 Control Delay (s/veh)	34.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5	
Intersection Capacity Utilization	92.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	493	98	408	195	185	38	1413	228	404	2101	123
Future Volume (vph)	200	493	98	408	195	185	38	1413	228	404	2101	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.630			0.101			0.080			0.950		
Satd. Flow (perm)	1153	1902	1601	190	1883	1541	137	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			193			148			91
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	208	514	102	425	203	193	38	1413	228	421	2189	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	208	514	102	425	203	193	38	1413	228	421	2189	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	25.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	9.5	24.2	24.2	31.6	31.6	31.6	11.0	31.6	31.6
Total Split (s)	16.8	41.2	41.2	30.4	54.8	54.8	55.4	55.4	55.4	20.0	75.4	75.4
Total Split (%)	11.4%	28.0%	28.0%	20.7%	37.3%	37.3%	37.7%	37.7%	37.7%	13.6%	51.3%	51.3%
Maximum Green (s)	12.3	35.0	35.0	25.9	48.6	48.6	48.8	48.8	48.8	16.0	68.8	68.8
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	4.6	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	50.8	37.0	37.0	68.1	50.8	50.8	49.8	50.8	50.8	17.0	70.8	70.8
Actuated g/C Ratio	0.35	0.25	0.25	0.46	0.35	0.35	0.34	0.35	0.35	0.12	0.48	0.48
v/c Ratio	0.46	1.08	0.21	1.12	0.31	0.29	0.83	0.97	0.36	1.10	1.06	0.16
Control Delay (s/veh)	29.7	113.9	4.9	122.9	37.0	5.4	136.5	64.7	14.2	133.6	74.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.7	113.9	4.9	122.9	37.0	5.4	136.5	64.7	14.2	133.6	74.4	7.6
LOS	C	F	A	F	D	A	F	E	B	F	E	A
Approach Delay (s/veh)		79.2			74.0			59.5			80.4	
Approach LOS		E			E			E			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 147		
Actuated Cycle Length: 147		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 110		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.12		
Intersection Signal Delay (s/veh): 73.6		Intersection LOS: E
Intersection Capacity Utilization 125.3%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	208	514	102	425	203	193	38	1413	228	421	2189	128
v/c Ratio	0.46	1.08	0.21	1.12	0.31	0.29	0.83	0.97	0.36	1.10	1.06	0.16
Control Delay (s/veh)	29.7	113.9	4.9	122.9	37.0	5.4	136.5	64.7	14.2	133.6	74.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.7	113.9	4.9	122.9	37.0	5.4	136.5	64.7	14.2	133.6	74.4	7.6
Queue Length 50th (m)	37.8	~167.2	0.0	~127.6	44.2	0.0	10.7	178.2	16.5	~72.4	~302.2	5.9
Queue Length 95th (m)	56.4	#237.2	9.9	#195.4	65.7	17.3	#35.6	#217.6	38.7	#106.6	#334.7	17.8
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	452	478	495	380	651	659	46	1456	632	383	2068	779
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	1.08	0.21	1.12	0.31	0.29	0.83	0.97	0.36	1.10	1.06	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	493	98	408	195	185	38	1413	228	404	2101	123
Future Volume (vph)	200	493	98	408	195	185	38	1413	228	404	2101	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.63	1.00	1.00	0.10	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1154	1902	1601	191	1883	1541	138	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	208	514	102	425	203	193	38	1413	228	421	2189	128
RTOR Reduction (vph)	0	0	76	0	0	126	0	0	97	0	0	47
Lane Group Flow (vph)	208	514	26	425	203	67	38	1413	131	421	2189	81
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	47.1	35.0	35.0	65.4	48.8	48.8	48.8	48.8	48.8	16.0	68.8	68.8
Effective Green, g (s)	49.1	37.0	37.0	66.4	50.8	50.8	49.8	50.8	50.8	17.0	70.8	70.8
Actuated g/C Ratio	0.33	0.25	0.25	0.45	0.35	0.35	0.34	0.35	0.35	0.12	0.48	0.48
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	6.6	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	437	478	402	378	650	532	46	1456	535	383	2068	732
v/s Ratio Prot	0.04	0.27		c0.21	0.11			0.34		c0.13	c0.51	
v/s Ratio Perm	0.12		0.02	c0.30		0.04	0.28		0.08			0.05
v/c Ratio	0.48	1.08	0.06	1.12	0.31	0.13	0.83	0.97	0.25	1.10	1.06	0.11
Uniform Delay, d1	37.0	55.0	41.8	47.0	35.3	32.9	44.6	47.4	34.4	65.0	38.1	20.9
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	0.8	62.9	0.1	84.5	0.6	0.2	87.7	17.5	1.1	75.5	37.4	0.3
Delay (s)	37.9	117.9	42.0	131.5	35.9	33.1	132.3	64.9	35.5	140.5	75.5	21.2
Level of Service	D	F	D	F	D	C	F	E	D	F	E	C
Approach Delay (s/veh)		88.3			84.7			62.4			83.0	
Approach LOS		F			F			E			F	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	78.2	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	1.13				
Actuated Cycle Length (s)	147.0	Sum of lost time (s)	15.3		
Intersection Capacity Utilization	125.3%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

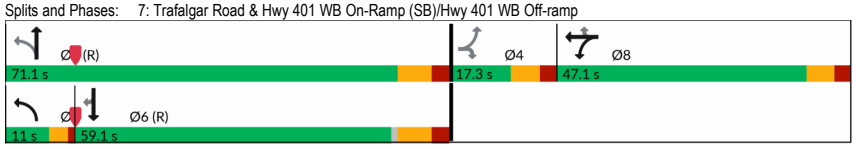
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Future Volume (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.084					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	161	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			330						139
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

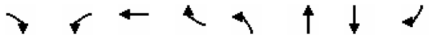
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	26.9	26.9	26.9	94.1	90.0			85.6	85.6
Actuated g/C Ratio			0.07	0.20	0.20	0.20	0.69	0.66			0.63	0.63
v/c Ratio			0.03	0.82	0.03	0.53	0.08	0.45			0.56	0.20
Control Delay (s/veh)			0.3	63.8	40.6	11.6	10.8	13.3			18.3	5.1
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.3	63.8	40.6	11.6	10.8	13.3			18.3	5.1
LOS			A	E	D	B	B	B			B	A
Approach Delay (s/veh)		0.3			39.7			13.3			17.0	
Approach LOS		A			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 21.0		Intersection LOS: C	
Intersection Capacity Utilization 69.8%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

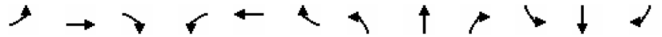
Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp





Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	7	467	10	400	15	1190	1523	168
v/c Ratio	0.03	0.82	0.03	0.53	0.08	0.45	0.56	0.20
Control Delay (s/veh)	0.3	63.8	40.6	11.6	10.8	13.3	18.3	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.3	63.8	40.6	11.6	10.8	13.3	18.3	5.1
Queue Length 50th (m)	0.0	73.9	2.2	10.1	1.0	60.9	78.4	2.8
Queue Length 95th (m)	0.0	90.4	6.8	26.7	5.3	122.0	180.8	22.9
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	244	849	567	957	197	2616	2720	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.55	0.02	0.42	0.08	0.45	0.56	0.20

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Future Volume (vph)	0	0	7	467	10	400	15	1190	0	0	1523	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	161	3941			4309	1276
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	7	467	10	400	15	1190	0	0	1523	168
RTOR Reduction (vph)	0	0	7	0	0	264	0	0	0	0	0	60
Lane Group Flow (vph)	0	0	0	467	10	136	15	1190	0	0	1523	108
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	26.9	26.9	26.9	84.1	84.1			77.3	77.3
Effective Green, g (s)			2.0	26.9	26.9	26.9	84.1	84.1			77.3	77.3
Actuated g/C Ratio			0.01	0.20	0.20	0.20	0.62	0.62			0.57	0.57
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	571	381	487	134	2446			2458	727
v/s Ratio Prot				c0.16	0.01		0.00	c0.30			c0.35	
v/s Ratio Perm			c0.00			0.06	0.07					0.08
v/c Ratio			0.00	0.82	0.03	0.28	0.11	0.49			0.62	0.15
Uniform Delay, d1			65.8	52.0	43.7	46.1	12.8	14.0			19.3	13.7
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	8.4	0.0	0.1	0.1	0.7			1.2	0.4
Delay (s)			65.8	60.4	43.8	46.2	13.0	14.7			20.5	14.1
Level of Service			E	E	D	D	B	B			C	B
Approach Delay (s/veh)		65.8			53.7			14.6			19.9	
Approach LOS		E			D			B			B	

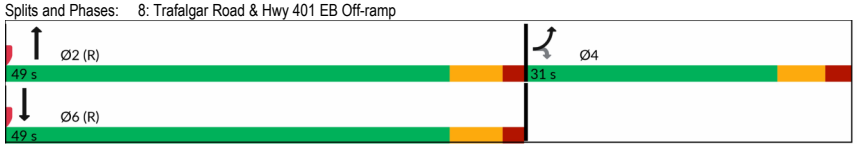
Intersection Summary					
HCM 2000 Control Delay (s/veh)	26.1	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.66				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	69.8%	ICU Level of Service	C		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	164	834	0	2137	1017	0
Future Volume (vph)	164	834	0	2137	1017	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.892	0.850				
Flt Protected	0.986					
Satd. Flow (prot)	2817	1339	0	4154	4117	0
Flt Permitted	0.986					
Satd. Flow (perm)	2817	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	83	83				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	164	834	0	2137	1017	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	581	417	0	2137	1017	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	23.0	23.0		43.0	43.0	
Actuated g/C Ratio	0.29	0.29		0.54	0.54	
v/c Ratio	0.87dr	0.94		0.96	0.46	
Control Delay (s/veh)	25.4	54.3		30.7	12.5	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	25.4	54.3		30.7	12.5	
LOS	C	D		C	B	
Approach Delay (s/veh)	37.5			30.7	12.5	
Approach LOS	D			C	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 27.8		Intersection LOS: C	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	581	417	2137	1017
v/c Ratio	0.87dr	0.94	0.96	0.46
Control Delay (s/veh)	25.4	54.3	30.7	12.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.4	54.3	30.7	12.5
Queue Length 50th (m)	41.5	59.4	134.9	41.7
Queue Length 95th (m)	62.0	#123.0	#188.0	54.3
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	903	459	2231	2211
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.91	0.96	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	164	834	0	2137	1017	0
Future Volume (vph)	164	834	0	2137	1017	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2818	1339		4154	4117	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2818	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	164	834	0	2137	1017	0
RTOR Reduction (vph)	59	59	0	0	0	0
Lane Group Flow (vph)	522	358	0	2137	1017	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	23.0	23.0		43.0	43.0	
Effective Green, g (s)	23.0	23.0		43.0	43.0	
Actuated g/C Ratio	0.29	0.29		0.54	0.54	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	810	384		2232	2212	
v/s Ratio Prot	0.19			c0.51	0.25	
v/s Ratio Perm		c0.27				
v/c Ratio	0.87dr	0.93		0.96	0.46	
Uniform Delay, d1	24.9	27.7		17.6	11.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	29.2		11.4	0.7	
Delay (s)	26.7	56.9		29.0	12.1	
Level of Service	C	E		C	B	
Approach Delay (s/veh)	39.3			29.0	12.1	
Approach LOS	D			C	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

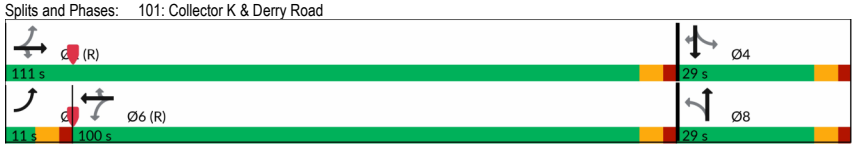
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

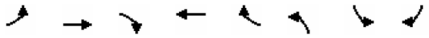
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	2723	26	0	1241	11	146	0	0	60	0	27
Future Volume (vph)	28	2723	26	0	1241	11	146	0	0	60	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	4520	1601	1883	4520	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.126						0.757			0.757		
Satd. Flow (perm)	237	4520	1601	1883	4520	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23			70						126
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	2960	28	0	1349	12	159	0	0	65	0	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	2960	28	0	1349	12	159	0	0	65	0	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	111.0	111.0	100.0	100.0	100.0	29.0	29.0		29.0	29.0	29.0
Total Split (%)	7.9%	79.3%	79.3%	71.4%	71.4%	71.4%	20.7%	20.7%		20.7%	20.7%	20.7%
Maximum Green (s)	5.0	105.0	105.0	94.0	94.0	94.0	23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	105.0	105.0	105.0		98.4	98.4	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.70	0.70	0.16			0.16		0.16
v/c Ratio	0.13	0.87	0.02		0.42	0.01	0.68			0.28		0.08
Control Delay (s/veh)	5.6	16.6	2.0		2.0	0.0	70.7			54.9		0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	5.6	16.6	2.0		2.0	0.0	70.7			54.9		0.4
LOS	A	B	A		A	A	E			D		A
Approach Delay (s/veh)		16.4			2.0			70.7			38.1	
Approach LOS		B			A			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay (s/veh): 14.4		Intersection LOS: B	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

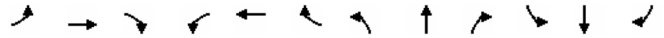
Splits and Phases: 101: Collector K & Derry Road





Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	30	2960	28	1349	12	159	65	29
v/c Ratio	0.13	0.87	0.02	0.42	0.01	0.68	0.28	0.08
Control Delay (s/veh)	5.6	16.6	2.0	2.0	0.0	70.7	54.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.6	16.6	2.0	2.0	0.0	70.7	54.9	0.4
Queue Length 50th (m)	1.9	222.8	0.3	11.8	0.0	42.6	16.2	0.0
Queue Length 95th (m)	4.4	248.9	2.7	m12.2	m0.0	#70.6	30.9	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	30.0	30.0
Base Capacity (vph)	233	3390	1206	3176	1145	234	234	368
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.87	0.02	0.42	0.01	0.68	0.28	0.08

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	2723	26	0	1241	11	146	0	0	60	0	27
Future Volume (vph)	28	2723	26	0	1241	11	146	0	0	60	0	27
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	*0.80	1.00		*0.80	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	4520	1601		4520	1601	1789			1789		1601
Flt Permitted	0.13	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	237	4520	1601		4520	1601	1426			1426		1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	2960	28	0	1349	12	159	0	0	65	0	29
RTOR Reduction (vph)	0	0	6	0	0	4	0	0	0	0	0	24
Lane Group Flow (vph)	30	2960	22	0	1349	8	159	0	0	65	0	5
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	105.0	105.0	105.0		96.0	96.0	23.0			23.0		23.0
Effective Green, g (s)	105.0	105.0	105.0		96.0	96.0	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.69	0.69	0.16			0.16		0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	211	3390	1200		3099	1097	234			234		263
v/s Ratio Prot	0.00	c0.65			0.30							
v/s Ratio Perm	0.10		0.01			0.01	c0.11			0.05		0.00
v/c Ratio	0.14	0.87	0.02		0.44	0.01	0.68			0.28		0.02
Uniform Delay, d1	6.0	12.7	4.4		9.9	7.0	55.0			51.2		49.0
Progression Factor	1.00	1.00	1.00		0.18	1.00	1.00			1.00		1.00
Incremental Delay, d2	0.3	3.4	0.0		0.3	0.0	7.6			2.9		0.1
Delay (s)	6.3	16.1	4.5		2.1	7.0	62.7			54.2		49.2
Level of Service	A	B	A		A	A	E			D		D
Approach Delay (s/veh)		15.9			2.1			62.7			52.6	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2013	44	0	1584	5	0	0	21	0	0	72
Future Volume (vph)	0	2013	44	0	1584	5	0	0	21	0	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	4520	1601	0	4520	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	4520	1601	0	4520	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2188	48	0	1722	5	0	0	23	0	0	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2188	48	0	1727	0	0	0	23	0	0	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

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

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2013	44	0	1584	5	0	0	21	0	0	72
Future Volume (Veh/h)	0	2013	44	0	1584	5	0	0	21	0	0	72
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2188	48	0	1722	5	0	0	23	0	0	78
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.85			0.66			0.74	0.74	0.66	0.74	0.74	0.85
vC, conflicting volume	1727			2236			2840	3915	729	2477	3961	577
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1220			1088			850	2301	0	360	2363	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	97	100	100	91
cM capacity (veh/h)	480			423			172	28	719	409	26	917

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	729	729	729	48	689	689	349	23	78
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	48	0	0	5	23	78
cSH	1700	1700	1700	1700	1700	1700	1700	719	917
Volume to Capacity	0.43	0.43	0.43	0.03	0.41	0.41	0.21	0.03	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.1
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.3
Lane LOS								B	A
Approach Delay (s/veh)	0.0				0.0			10.2	9.3
Approach LOS								B	A

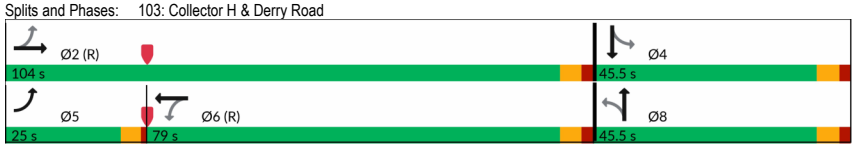
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	1942	51	14	1338	17	207	0	18	20	2	26
Future Volume (vph)	99	1942	51	14	1338	17	207	0	18	20	2	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.998			0.989			0.927	
Flt Protected	0.950			0.950				0.956			0.979	
Satd. Flow (prot)	1789	4502	0	1789	4511	0	0	1781	0	0	1709	0
Flt Permitted	0.101			0.045				0.739			0.897	
Satd. Flow (perm)	190	4502	0	85	4511	0	0	1377	0	0	1566	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			1			55			28	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	2111	55	15	1454	18	225	0	20	22	2	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	2166	0	15	1472	0	0	245	0	0	52	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	25.0	104.0		79.0	79.0		45.5	45.5		45.5	45.5	
Total Split (%)	16.7%	69.6%		52.8%	52.8%		30.4%	30.4%		30.4%	30.4%	
Maximum Green (s)	20.5	98.0		73.0	73.0		39.5	39.5		39.5	39.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	112.0	110.5		97.4	97.4			27.0			27.0	
Actuated g/C Ratio	0.75	0.74		0.65	0.65			0.18			0.18	
v/c Ratio	0.46	0.65		0.27	0.50			0.84			0.17	
Control Delay (s/veh)	12.5	12.0		25.2	11.0			68.2			26.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	12.5	12.0		25.2	11.0			68.2			26.2	
LOS	B	B		C	B			E			C	
Approach Delay (s/veh)		12.0			11.1			68.2			26.2	
Approach LOS		B			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 15.2		Intersection LOS: B	
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	108	2166	15	1472	245	52
v/c Ratio	0.46	0.65	0.27	0.50	0.84	0.17
Control Delay (s/veh)	12.5	12.0	25.2	11.0	68.2	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.5	12.0	25.2	11.0	68.2	26.2
Queue Length 50th (m)	7.8	123.2	1.3	61.0	56.9	6.5
Queue Length 95th (m)	17.4	181.8	m4.3	85.7	82.6	m12.8
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	361	3329	55	2938	404	434
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.65	0.27	0.50	0.61	0.12

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	1942	51	14	1338	17	207	0	18	20	2	26
Future Volume (vph)	99	1942	51	14	1338	17	207	0	18	20	2	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1789	4503		1789	4512			1781			1710	
Flt Permitted	0.10	1.00		0.05	1.00			0.74			0.90	
Satd. Flow (perm)	190	4503		85	4512			1376			1566	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	2111	55	15	1454	18	225	0	20	22	2	28
RTOR Reduction (vph)	0	1	0	0	0	0	0	45	0	0	23	0
Lane Group Flow (vph)	108	2165	0	15	1472	0	0	200	0	0	29	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	110.5	110.5		97.3	97.3			27.0			27.0	
Effective Green, g (s)	110.5	110.5		97.3	97.3			27.0			27.0	
Actuated g/C Ratio	0.74	0.74		0.65	0.65			0.18			0.18	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	233	3328		55	2936			248			282	
v/s Ratio Prot	0.03	c0.48			0.33							
v/s Ratio Perm	0.31			0.18				c0.15			0.02	
v/c Ratio	0.46	0.65		0.27	0.50			0.81			0.10	
Uniform Delay, d1	9.2	9.8		11.1	13.5			58.7			51.1	
Progression Factor	1.00	1.00		0.73	0.70			1.00			0.99	
Incremental Delay, d2	1.5	1.0		10.6	0.5			17.2			0.2	
Delay (s)	10.7	10.8		18.6	10.0			75.9			50.8	
Level of Service	B	B		B	B			E			D	
Approach Delay (s/veh)		10.8			10.1			75.9			50.8	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

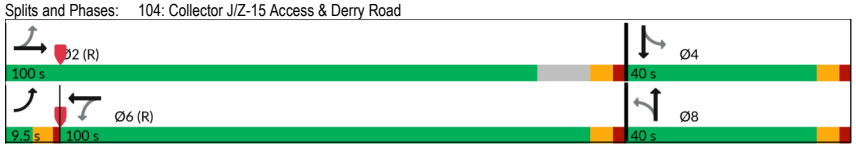
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1876	67	8	1056	33	271	0	24	7	0	27
Future Volume (vph)	94	1876	67	8	1056	33	271	0	24	7	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.995			0.989			0.894	
Flt Protected	0.950			0.950				0.956			0.989	
Satd. Flow (prot)	1789	4498	0	1789	4498	0	0	1781	0	0	1665	0
Flt Permitted	0.146			0.046				0.716			0.923	
Satd. Flow (perm)	275	4498	0	87	4498	0	0	1334	0	0	1554	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			5			55			55	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	2039	73	9	1148	36	295	0	26	8	0	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	2112	0	9	1184	0	0	321	0	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	9.5	100.0		100.0	100.0		40.0	40.0		40.0	40.0	
Total Split (%)	6.4%	66.9%		66.9%	66.9%		26.8%	26.8%		26.8%	26.8%	
Maximum Green (s)	5.0	94.0		94.0	94.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	101.3	99.8		87.9	87.9			37.7			37.7	
Actuated g/C Ratio	0.68	0.67		0.59	0.59			0.25			0.25	
v/c Ratio	0.39	0.70		0.18	0.45			0.85			0.09	
Control Delay (s/veh)	5.9	10.0		26.6	18.4			64.1			4.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	5.9	10.0		26.6	18.4			64.1			4.6	
LOS	A	A		C	B			E			A	
Approach Delay (s/veh)		9.8			18.5			64.1			4.6	
Approach LOS		A			B			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 17.1		Intersection LOS: B	
Intersection Capacity Utilization 92.5%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	102	2112	9	1184	321	37
v/c Ratio	0.39	0.70	0.18	0.45	0.85	0.09
Control Delay (s/veh)	5.9	10.0	26.6	18.4	64.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.9	10.0	26.6	18.4	64.1	4.6
Queue Length 50th (m)	4.4	166.7	1.3	84.0	77.0	0.0
Queue Length 95th (m)	m6.9	229.7	5.7	95.6	#115.8	4.9
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	260	3151	55	2857	387	445
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.67	0.16	0.41	0.83	0.08

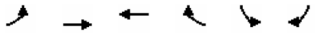
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1876	67	8	1056	33	271	0	24	7	0	27
Future Volume (vph)	94	1876	67	8	1056	33	271	0	24	7	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4497		1789	4500			1781			1666	
Flt Permitted	0.15	1.00		0.05	1.00			0.72			0.92	
Satd. Flow (perm)	275	4497		86	4500			1335			1555	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	2039	73	9	1148	36	295	0	26	8	0	29
RTOR Reduction (vph)	0	2	0	0	2	0	0	41	0	0	28	0
Lane Group Flow (vph)	102	2110	0	9	1182	0	0	280	0	0	9	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	99.8	99.8		87.9	87.9			37.7			37.7	
Effective Green, g (s)	99.8	99.8		87.9	87.9			37.7			37.7	
Actuated g/C Ratio	0.67	0.67		0.59	0.59			0.25			0.25	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	258	3002		50	2645			336			392	
v/s Ratio Prot	0.02	c0.47			0.26							
v/s Ratio Perm	0.24			0.11				c0.21			0.01	
v/c Ratio	0.40	0.70		0.18	0.45			0.83			0.02	
Uniform Delay, d1	11.0	15.6		14.2	17.2			52.9			42.1	
Progression Factor	0.26	0.54		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.8	1.1		7.7	0.5			16.0			0.0	
Delay (s)	3.7	9.5		21.9	17.8			68.9			42.1	
Level of Service	A	A		C	B			E			D	
Approach Delay (s/veh)		9.2			17.8			68.9			42.1	
Approach LOS		A			B			E			D	

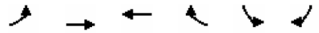
Intersection Summary					
HCM 2000 Control Delay (s/veh)	17.4	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.76				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	92.5%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	2783	1193	14	0	59
Future Volume (vph)	0	2783	1193	14	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	3014	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	3014	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	3025	1297	15	0	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3025	1297	15	0	64
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	2783	1193	14	0	59
Future Volume (Veh/h)	0	2783	1193	14	0	59
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3025	1297	15	0	64
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.82				0.55	0.82
vC, conflicting volume	1312				2305	649
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	950				0	145
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	91
cM capacity (veh/h)	592				562	722

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	1008	1008	1008	649	649	15	64
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	15	64
cSH	1700	1700	1700	1700	1700	1700	722
Volume to Capacity	0.59	0.59	0.59	0.38	0.38	0.00*	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	2.2
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	10.5
Lane LOS							B
Approach Delay (s/veh)	0.0			0.0			10.5
Approach LOS							B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		57.1%	ICU Level of Service	B
Analysis Period (min)		15		

* Value less than 0.01.

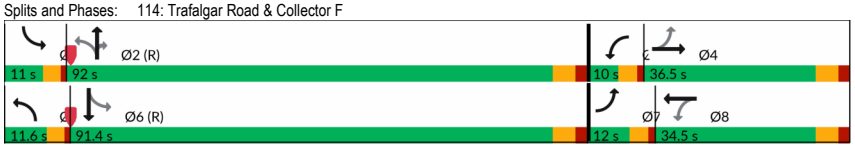
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	58	99	99	68	159	41	2848	86	101	1700	40
Future Volume (vph)	110	58	99	99	68	159	41	2848	86	101	1700	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		50.0	70.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.905			0.895				0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1630	0	1652	1612	0	1711	4421	1566	1711	4408	0
Flt Permitted	0.188			0.493			0.050			0.043		
Satd. Flow (perm)	327	1630	0	857	1612	0	90	4421	1566	77	4408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52			70				84		3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	63	108	108	74	173	45	3096	93	110	1848	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	171	0	108	247	0	45	3096	93	110	1891	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	9.5	40.0		9.5	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	12.0	36.5		10.0	34.5		11.6	92.0	92.0	11.0	91.4	
Total Split (%)	8.0%	24.4%		6.7%	23.1%		7.8%	61.5%	61.5%	7.4%	61.1%	
Maximum Green (s)	7.5	30.5		5.5	28.5		7.6	86.0	86.0	7.0	85.4	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	32.7	23.7		28.7	21.7		99.7	90.5	90.5	104.3	94.8	
Actuated g/C Ratio	0.22	0.16		0.19	0.15		0.67	0.61	0.61	0.70	0.63	
v/c Ratio	0.88	0.57		0.56	0.84		0.33	1.16	0.09	0.71	0.68	
Control Delay (s/veh)	97.5	46.4		59.7	67.9		14.8	103.9	3.6	54.1	20.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	97.5	46.4		59.7	67.9		14.8	103.9	3.6	54.1	20.5	
LOS	F	D		E	E		B	F	A	D	C	
Approach Delay (s/veh)		67.5			65.4			99.8			22.3	
Approach LOS		E			E			F			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.16		
Intersection Signal Delay (s/veh): 69.8	Intersection LOS: E	
Intersection Capacity Utilization 97.4%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	120	171	108	247	45	3096	93	110	1891
v/c Ratio	0.88	0.57	0.56	0.84	0.33	1.16	0.09	0.71	0.68
Control Delay (s/veh)	97.5	46.4	59.7	67.9	14.8	103.9	3.6	54.1	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	97.5	46.4	59.7	67.9	14.8	103.9	3.6	54.1	20.5
Queue Length 50th (m)	29.9	33.2	26.7	53.2	3.8	~470.8	1.1	16.7	152.0
Queue Length 95th (m)	#46.8	55.6	42.1	82.1	9.4	#499.3	9.1	#56.8	193.0
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	60.0		50.0		50.0		50.0	70.0	
Base Capacity (vph)	137	373	193	363	142	2677	981	154	2796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.46	0.56	0.68	0.32	1.16	0.09	0.71	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	58	99	99	68	159	41	2848	86	101	1700	40
Future Volume (vph)	110	58	99	99	68	159	41	2848	86	101	1700	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.91		1.00	0.89		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)	1652	1630		1652	1611		1711	4421	1566	1711	4406	
Flt Permitted	0.19	1.00		0.49	1.00		0.05	1.00	1.00	0.04	1.00	
Satd. Flow (perm)	328	1630		858	1611		91	4421	1566	77	4406	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	63	108	108	74	173	45	3096	93	110	1848	43
RTOR Reduction (vph)	0	44	0	0	60	0	0	0	33	0	1	0
Lane Group Flow (vph)	120	127	0	108	187	0	45	3096	60	110	1890	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.2	23.7		27.2	21.7		96.3	90.5	90.5	103.3	94.0	
Effective Green, g (s)	31.2	23.7		27.2	21.7		96.3	90.5	90.5	103.3	94.0	
Actuated g/C Ratio	0.21	0.16		0.18	0.15		0.64	0.61	0.61	0.69	0.63	
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	134	258		185	233		121	2676	947	154	2770	
v/s Ratio Prot	c0.04	0.08		0.02	0.12		0.01	c0.70		c0.04	0.43	
v/s Ratio Perm	c0.14			0.08			0.22		0.04	0.45		
v/c Ratio	0.90	0.49		0.58	0.80		0.37	1.16	0.06	0.71	0.68	
Uniform Delay, d1	54.3	57.4		55.5	61.8		15.2	29.5	12.1	45.9	18.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	47.3	1.5		4.6	17.8		1.9	75.3	0.1	14.5	1.4	
Delay (s)	101.6	58.9		60.2	79.7		17.2	104.8	12.2	60.5	19.4	
Level of Service	F	E		E	E		B	F	B	E	B	
Approach Delay (s/veh)		76.5			73.7			100.9			21.7	
Approach LOS		E			E			F			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	71.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	97.4%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

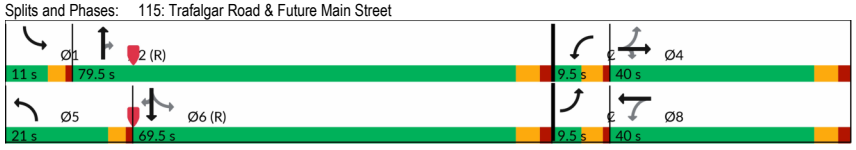
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	65	327	58	113	47	313	2868	179	107	1520	170
Future Volume (vph)	99	65	327	58	113	47	313	2868	179	107	1520	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.956				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3421	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.585			0.714			0.950			0.048		
Satd. Flow (perm)	1102	1883	2818	1345	3421	0	3319	4421	1566	86	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			330		42				90			137
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	100	66	330	59	114	47	316	2897	181	108	1535	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	66	330	59	161	0	316	2897	181	108	1535	172
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		21.0	79.5	79.5	11.0	69.5	69.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		15.0%	56.8%	56.8%	7.9%	49.6%	49.6%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		17.0	73.5	73.5	7.0	63.5	63.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	18.7	13.2	13.2	17.8	11.3		18.7	92.4	92.4	97.4	84.5	84.5
Actuated g/C Ratio	0.13	0.09	0.09	0.13	0.08		0.13	0.66	0.66	0.70	0.60	0.60
v/c Ratio	0.58	0.37	0.59	0.32	0.51		0.71	0.99	0.17	0.58	0.58	0.17
Control Delay (s/veh)	68.4	66.8	10.4	56.1	51.1		67.1	39.0	5.4	50.5	16.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.4	66.8	10.4	56.1	51.1		67.1	39.0	5.4	50.5	16.5	2.8
LOS	E	E	B	E	D		E	D	A	D	B	A
Approach Delay (s/veh)		29.6			52.4			39.8			17.2	
Approach LOS		C			D			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 32.5		Intersection LOS: C	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	100	66	330	59	161	316	2897	181	108	1535	172
v/c Ratio	0.58	0.37	0.59	0.32	0.51	0.71	0.99	0.17	0.58	0.58	0.17
Control Delay (s/veh)	68.4	66.8	10.4	56.1	51.1	67.1	39.0	5.4	50.5	16.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.4	66.8	10.4	56.1	51.1	67.1	39.0	5.4	50.5	16.5	2.8
Queue Length 50th (m)	25.6	18.2	0.0	14.8	17.2	44.4	304.3	8.4	16.0	102.1	4.8
Queue Length 95th (m)	42.4	33.2	15.7	27.6	28.5	58.6	#405.0	20.6	31.3	137.2	15.3
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	171	457	934	186	862	458	2916	1063	185	2668	999
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.14	0.35	0.32	0.19	0.69	0.99	0.17	0.58	0.58	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	65	327	58	113	47	313	2868	179	107	1520	170
Future Volume (vph)	99	65	327	58	113	47	313	2868	179	107	1520	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.96		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	1883	2818	1789	3422		3319	4421	1566	1711	4421	1566
Flt Permitted	0.59	1.00	1.00	0.71	1.00		0.95	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1102	1883	2818	1345	3422		3319	4421	1566	86	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	100	66	330	59	114	47	316	2897	181	108	1535	172
RTOR Reduction (vph)	0	0	299	0	38	0	0	0	31	0	0	55
Lane Group Flow (vph)	100	66	31	59	123	0	316	2897	150	108	1535	117
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	18.2	13.2	13.2	16.2	12.2		18.7	91.4	91.4	94.5	83.6	83.6
Effective Green, g (s)	18.2	13.2	13.2	16.2	12.2		18.7	91.4	91.4	94.5	83.6	83.6
Actuated g/C Ratio	0.13	0.09	0.09	0.12	0.09		0.13	0.65	0.65	0.68	0.60	0.60
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	167	177	265	168	298		443	2886	1022	184	2639	935
v/s Ratio Prot	c0.02	0.04		0.01	0.04		c0.10	c0.66		0.05	0.35	
v/s Ratio Perm	c0.06		0.01	0.03					0.10	0.35		0.07
v/c Ratio	0.60	0.37	0.12	0.35	0.41		0.71	1.00	0.15	0.59	0.58	0.12
Uniform Delay, d1	56.7	59.5	58.1	56.6	60.5		58.1	24.3	9.3	37.8	17.4	12.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.41	0.88	0.67
Incremental Delay, d2	5.7	1.3	0.2	1.3	0.9		5.4	17.7	0.3	4.5	0.9	0.3
Delay (s)	62.3	60.8	58.3	57.9	61.4		63.5	42.0	9.6	57.8	16.3	8.5
Level of Service	E	E	E	E	E		E	D	A	E	B	A
Approach Delay (s/veh)		59.4			60.5			42.2			18.0	
Approach LOS		E			E			D			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	36.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	92.2%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

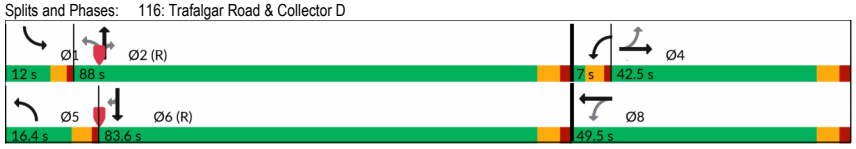
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	12	221	53	8	88	63	2965	138	232	1451	73
Future Volume (vph)	238	12	221	53	8	88	63	2965	138	232	1451	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		50.0	100.0		50.0
Storage Lanes	1		0	1		0	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt		0.858			0.863				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1545	0	1652	1554	0	1711	4421	1566	3319	4421	1566
Flt Permitted	0.689			0.336			0.079			0.950		
Satd. Flow (perm)	1198	1545	0	584	1554	0	142	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		131			96				84			84
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	259	13	240	58	9	96	68	3223	150	252	1577	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	259	253	0	58	105	0	68	3223	150	252	1577	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		9.5	26.0	26.0	11.0	26.0	26.0
Total Split (s)	42.5	42.5		7.0	49.5		16.4	88.0	88.0	12.0	83.6	83.6
Total Split (%)	28.4%	28.4%		4.7%	33.1%		11.0%	58.9%	58.9%	8.0%	55.9%	55.9%
Maximum Green (s)	36.5	36.5		2.5	43.5		11.9	82.0	82.0	8.0	77.6	77.6
Yellow Time (s)	4.0	4.0		3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	34.6	34.6		41.7	40.2		91.3	82.0	82.0	11.3	87.0	87.0
Actuated g/C Ratio	0.23	0.23		0.28	0.27		0.61	0.55	0.55	0.08	0.58	0.58
v/c Ratio	0.94	0.55		0.32	0.22		0.40	1.33	0.17	1.00	0.61	0.08
Control Delay (s/veh)	95.7	28.2		44.7	9.7		17.2	181.5	7.9	123.4	23.1	3.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	95.7	28.2		44.7	9.7		17.2	181.7	7.9	123.4	23.1	3.1
LOS	F	C		D	A		B	F	A	F	C	A
Approach Delay (s/veh)		62.4			22.2			170.8			35.5	
Approach LOS		E			C			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.33		
Intersection Signal Delay (s/veh): 114.7	Intersection LOS: F	
Intersection Capacity Utilization 103.8%	ICU Level of Service G	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	259	253	58	105	68	3223	150	252	1577	79
v/c Ratio	0.94	0.55	0.32	0.22	0.40	1.33	0.17	1.00	0.61	0.08
Control Delay (s/veh)	95.7	28.2	44.7	9.7	17.2	181.5	7.9	123.4	23.1	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	95.7	28.2	44.7	9.7	17.2	181.7	7.9	123.4	23.1	3.1
Queue Length 50th (m)	75.9	31.5	12.7	1.9	7.3	~523.0	9.1	~52.5	135.2	0.0
Queue Length 95th (m)	#127.2	60.4	24.2	16.4	13.5	#546.5	20.3	#81.4	160.2	7.4
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	50.0		80.0		50.0		50.0	100.0		50.0
Base Capacity (vph)	292	476	180	520	215	2424	896	251	2574	946
Starvation Cap Reductn	0	0	0	0	0	135	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.53	0.32	0.20	0.32	1.41	0.17	1.00	0.61	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	12	221	53	8	88	63	2965	138	232	1451	73
Future Volume (vph)	238	12	221	53	8	88	63	2965	138	232	1451	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.86		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)	1652	1544		1652	1554		1711	4421	1566	3319	4421	1566
Flt Permitted	0.69	1.00		0.34	1.00		0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1198	1544		584	1554		143	4421	1566	3319	4421	1566
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	259	13	240	58	9	96	68	3223	150	252	1577	79
RTOR Reduction (vph)	0	101	0	0	70	0	0	0	38	0	0	34
Lane Group Flow (vph)	259	152	0	58	35	0	68	3223	112	252	1577	45
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2			6
Actuated Green, G (s)	34.6	34.6		41.1	41.1		87.8	81.1	81.1	11.3	85.2	85.2
Effective Green, g (s)	34.6	34.6		41.1	41.1		87.8	81.1	81.1	11.3	85.2	85.2
Actuated g/C Ratio	0.23	0.23		0.27	0.27		0.59	0.54	0.54	0.08	0.57	0.57
Clearance Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	277	357		174	427		154	2398	849	250	2519	892
v/s Ratio Prot		0.10		c0.00	0.02		0.02	c0.73		c0.08	0.36	
v/s Ratio Perm	c0.22			0.09			0.24		0.07			0.03
v/c Ratio	0.94	0.43		0.33	0.08		0.44	1.34	0.13	1.01	0.63	0.05
Uniform Delay, d1	56.3	49.0		48.5	40.2		16.8	34.2	16.8	69.1	21.5	14.2
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	36.8	0.8		1.1	0.1		2.0	157.7	0.3	59.0	1.2	0.1
Delay (s)	93.1	49.8		49.7	40.3		18.8	191.9	17.2	128.1	22.7	14.3
Level of Service	F	D		D	D		B	F	B	F	C	B
Approach Delay (s/veh)		71.7			43.6			180.9			36.3	
Approach LOS		E			D			F			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	122.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

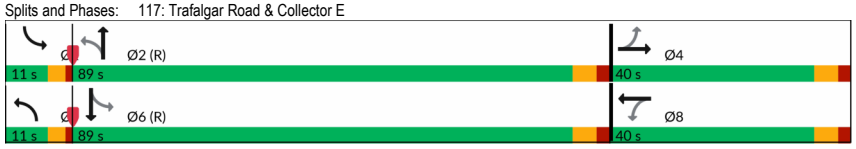
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	3	23	49	4	54	8	3065	44	64	1713	4
Future Volume (vph)	47	3	23	49	4	54	8	3065	44	64	1713	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.866			0.860			0.998				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1631	0	1789	1620	0	1711	4412	0	1711	4421	0
Flt Permitted	0.716			0.739			0.076			0.036		
Satd. Flow (perm)	1349	1631	0	1392	1620	0	137	4412	0	65	4421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			59			2				
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	3	25	53	4	59	9	3332	48	70	1862	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	28	0	53	63	0	9	3380	0	70	1866	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.0	89.0		11.0	89.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		7.9%	63.6%		7.9%	63.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.0	83.0		7.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.7	11.7		11.7	11.7		116.7	110.7		121.5	118.6	
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.83	0.79		0.87	0.85	
v/c Ratio	0.45	0.18		0.46	0.33		0.05	0.97		0.46	0.50	
Control Delay (s/veh)	73.4	24.8		73.2	20.3		2.8	26.6		27.5	4.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	10.7		0.0	0.2	
Total Delay (s/veh)	73.4	24.8		73.2	20.3		2.8	37.2		27.5	5.0	
LOS	E	C		E	C		A	D		C	A	
Approach Delay (s/veh)		56.2			44.5			37.2			5.8	
Approach LOS		E			D			D			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.97		
Intersection Signal Delay (s/veh): 26.6	Intersection LOS: C	
Intersection Capacity Utilization 79.6%	ICU Level of Service D	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	28	53	63	9	3380	70	1866
v/c Ratio	0.45	0.18	0.46	0.33	0.05	0.97	0.46	0.50
Control Delay (s/veh)	73.4	24.8	73.2	20.3	2.8	26.6	27.5	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.2
Total Delay (s/veh)	73.4	24.8	73.2	20.3	2.8	37.2	27.5	5.0
Queue Length 50th (m)	14.0	0.8	14.6	1.1	0.3	~373.8	3.6	48.2
Queue Length 95th (m)	27.5	10.4	28.3	15.1	1.3	#473.7	20.3	104.4
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	327	415	338	438	193	3490	151	3744
Starvation Cap Reductn	0	0	0	0	0	178	0	865
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.07	0.16	0.14	0.05	1.02	0.46	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	3	23	49	4	54	8	3065	44	64	1713	4
Future Volume (vph)	47	3	23	49	4	54	8	3065	44	64	1713	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.87		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)	1789	1631		1789	1619		1711	4411		1711	4419	
Flt Permitted	0.72	1.00		0.74	1.00		0.08	1.00		0.04	1.00	
Satd. Flow (perm)	1348	1631		1392	1619		137	4411		65	4419	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	3	25	53	4	59	9	3332	48	70	1862	4
RTOR Reduction (vph)	0	23	0	0	55	0	0	0	0	0	0	0
Lane Group Flow (vph)	51	5	0	53	8	0	9	3380	0	70	1866	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	9.7	9.7		9.7	9.7		108.9	107.6		118.3	113.0	
Effective Green, g (s)	9.7	9.7		9.7	9.7		108.9	107.6		118.3	113.0	
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.78	0.77		0.85	0.81	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	93	113		96	112		121	3390		133	3566	
v/s Ratio Prot		0.00			0.00		0.00	c0.77		c0.03	0.42	
v/s Ratio Perm	0.04			c0.04			0.06			0.42		
v/c Ratio	0.55	0.04		0.55	0.07		0.07	1.00		0.53	0.52	
Uniform Delay, d1	63.0	60.8		63.0	60.9		3.8	16.0		46.2	4.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.5	0.2		6.7	0.3		0.3	14.8		3.7	0.6	
Delay (s)	69.5	61.0		69.8	61.2		4.1	30.8		49.9	5.1	
Level of Service	E	E		E	E		A	C		D	A	
Approach Delay (s/veh)		66.5			65.1			30.7			6.7	
Approach LOS		E			E			C			A	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	23.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	79.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	172	0	0	0	0	158
Future Volume (vph)	172	0	0	0	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			80.2	161.7	
Travel Time (s)	55.9			6.0	12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	0	0	0	0	172
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	0	0	0	0	172
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	172	0	0	0	0	158
Future Volume (vph)	172	0	0	0	0	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	187	0	0	0	0	172

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	187	0	172
Volume Left (vph)	187	0	0
Volume Right (vph)	0	0	172
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.4	4.9	3.9
Degree Utilization, x	0.28	0.00	0.19
Capacity (veh/h)	641	733	885
Control Delay (s/veh)	9.3	6.7	7.8
Approach Delay (s/veh)	9.3		7.8
Approach LOS	A		A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	13.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	47	32	28	52	60	76
Future Volume (vph)	47	32	28	52	60	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.945		0.912			
Flt Protected	0.971					0.979
Satd. Flow (prot)	1652	0	1642	0	0	1763
Flt Permitted	0.971					0.979
Satd. Flow (perm)	1652	0	1642	0	0	1763
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	35	30	57	65	83
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	87	0	0	148
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	47	32	28	52	60	76
Future Volume (Veh/h)	47	32	28	52	60	76
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	35	30	57	65	83
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	272	59			87	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272	59			87	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	97			96	
cM capacity (veh/h)	687	1007			1509	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	86	87	148
Volume Left	51	0	65
Volume Right	35	57	0
cSH	789	1700	1509
Volume to Capacity	0.11	0.05	0.04
Queue Length 95th (m)	2.8	0.0	1.0
Control Delay (s/veh)	10.1	0.0	3.5
Lane LOS	B		A
Approach Delay (s/veh)	10.1	0.0	3.5
Approach LOS	B		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	165	10	50	94	0	7	8	26	111	6	0
Future Volume (vph)	0	165	10	50	94	0	7	8	26	111	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992						0.916				
Flt Protected					0.983			0.991			0.955	
Satd. Flow (prot)	0	1868	0	0	1770	0	0	1710	0	0	1799	0
Flt Permitted					0.983			0.991			0.955	
Satd. Flow (perm)	0	1868	0	0	1770	0	0	1710	0	0	1799	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	179	11	54	102	0	8	9	28	121	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	156	0	0	45	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	165	10	50	94	0	7	8	26	111	6	0
Future Volume (Veh/h)	0	165	10	50	94	0	7	8	26	111	6	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	179	11	54	102	0	8	9	28	121	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	102			190			398	395	185	427	400	102
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102			190			398	395	185	427	400	102
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			99	98	97	76	99	100
cM capacity (veh/h)	1490			1384			540	521	858	498	517	953

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	190	156	45	128
Volume Left	0	54	8	121
Volume Right	11	0	28	0
cSH	1490	1384	695	499
Volume to Capacity	0.00	0.04	0.06	0.26
Queue Length 95th (m)	0.0	0.9	1.6	7.7
Control Delay (s/veh)	0.0	2.9	10.5	14.7
Lane LOS		A	B	B
Approach Delay (s/veh)	0.0	2.9	10.5	14.7
Approach LOS			B	B

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	219	44	12	91	31	32
Future Volume (vph)	219	44	12	91	31	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977				0.932	
Flt Protected				0.994	0.976	
Satd. Flow (prot)	1840	0	0	1872	1713	0
Flt Permitted				0.994	0.976	
Satd. Flow (perm)	1840	0	0	1872	1713	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	238	48	13	99	34	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	286	0	0	112	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	2	78	11	0	123
Future Volume (vph)	18	2	78	11	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988		0.983			
Flt Protected	0.957					
Satd. Flow (prot)	1644	0	1770	0	0	1801
Flt Permitted	0.957					
Satd. Flow (perm)	1644	0	1770	0	0	1801
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	2	85	12	0	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	97	0	0	134
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	18	2	78	11	0	123
Future Volume (Veh/h)	18	2	78	11	0	123
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	2	85	12	0	134
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	225	91			97	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225	91			97	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	763	967			1496	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	97	134
Volume Left	20	0	0
Volume Right	2	12	0
cSH	778	1700	1496
Volume to Capacity	0.03	0.06	0.00
Queue Length 95th (m)	0.7	0.0	0.0
Control Delay (s/veh)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	47	5	4	15	4	3	37	3	1	65	0
Future Volume (vph)	0	47	5	4	15	4	3	37	3	1	65	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.977			0.991				
Flt Protected					0.992			0.997			0.999	
Satd. Flow (prot)	0	1718	0	0	1685	0	0	1779	0	0	1799	0
Flt Permitted					0.992			0.997			0.999	
Satd. Flow (perm)	0	1718	0	0	1685	0	0	1779	0	0	1799	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	51	5	4	16	4	3	40	3	1	71	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	24	0	0	46	0	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	47	5	4	15	4	3	37	3	1	65	0
Future Volume (Veh/h)	0	47	5	4	15	4	3	37	3	1	65	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	51	5	4	16	4	3	40	3	1	71	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	133	122	71	151	121	42	71			43		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	133	122	71	151	121	42	71			43		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	99	99	98	100	100			100		
cM capacity (veh/h)	821	766	991	770	768	1029	1529			1566		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	56	24	46	72
Volume Left	0	4	3	1
Volume Right	5	4	3	0
cSH	782	802	1529	1566
Volume to Capacity	0.07	0.03	0.00*	0.00*
Queue Length 95th (m)	1.8	0.7	0.0	0.0
Control Delay (s/veh)	10.0	9.6	0.5	0.1
Lane LOS	A	A	A	A
Approach Delay (s/veh)	10.0	9.6	0.5	0.1
Approach LOS	A	A		

Intersection Summary				
Average Delay		4.1		
Intersection Capacity Utilization		15.1%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	69	14	0	15	0	25	91	21	0	58	4
Future Volume (vph)	2	69	14	0	15	0	25	91	21	0	58	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978						0.979			0.992	
Flt Protected		0.999						0.991				
Satd. Flow (prot)	0	1840	0	0	1883	0	0	1747	0	0	1786	0
Flt Permitted		0.999						0.991				
Satd. Flow (perm)	0	1840	0	0	1883	0	0	1747	0	0	1786	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	75	15	0	16	0	27	99	23	0	63	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	16	0	0	149	0	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	69	14	0	15	0	25	91	21	0	58	4
Future Volume (Veh/h)	2	69	14	0	15	0	25	91	21	0	58	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	75	15	0	16	0	27	99	23	0	63	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	238	241	65	282	232	111	67			122		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	238	241	65	282	232	111	67			122		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	88	98	100	98	100	98			100		
cM capacity (veh/h)	694	649	999	594	657	943	1535			1465		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	16	149	67
Volume Left	2	0	27	0
Volume Right	15	0	23	4
cSH	689	657	1535	1465
Volume to Capacity	0.13	0.02	0.02	0.00
Queue Length 95th (m)	3.5	0.6	0.4	0.0
Control Delay (s/veh)	11.0	10.6	1.5	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	11.0	10.6	1.5	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.3		
Intersection Capacity Utilization		26.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	122	14	8	122	3	14	19	6	1	61	79
Future Volume (vph)	67	122	14	8	122	3	14	19	6	1	61	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.997			0.978			0.924	
Flt Protected		0.984			0.997			0.983				
Satd. Flow (prot)	0	1695	0	0	1790	0	0	1731	0	0	1664	0
Flt Permitted		0.984			0.997			0.983				
Satd. Flow (perm)	0	1695	0	0	1790	0	0	1731	0	0	1664	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	133	15	9	133	3	15	21	7	1	66	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	0	0	145	0	0	43	0	0	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.4%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	122	14	8	122	3	14	19	6	1	61	79
Future Volume (Veh/h)	67	122	14	8	122	3	14	19	6	1	61	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	133	15	9	133	3	15	21	7	1	66	86
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	235	169	109	247	209	25	152			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	169	109	247	209	25	152			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	81	98	98	80	100	99			100		
cM capacity (veh/h)	605	716	945	591	681	1052	1429			1585		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	221	145	43	153
Volume Left	73	9	15	1
Volume Right	15	3	7	86
cSH	685	679	1429	1585
Volume to Capacity	0.32	0.21	0.01	0.00*
Queue Length 95th (m)	10.6	6.1	0.2	0.0
Control Delay (s/veh)	12.7	11.7	2.7	0.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	12.7	11.7	2.7	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	8.3			
Intersection Capacity Utilization	40.4%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	143	0	15	111	24	1	10	3	19	44	11
Future Volume (vph)	9	143	0	15	111	24	1	10	3	19	44	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.978			0.973			0.980	
Flt Protected		0.997			0.995			0.997			0.987	
Satd. Flow (prot)	0	1795	0	0	1752	0	0	1747	0	0	1742	0
Flt Permitted		0.997			0.995			0.997			0.987	
Satd. Flow (perm)	0	1795	0	0	1752	0	0	1747	0	0	1742	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	155	0	16	121	26	1	11	3	21	48	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	0	0	163	0	0	15	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	143	0	15	111	24	1	10	3	19	44	11
Future Volume (Veh/h)	9	143	0	15	111	24	1	10	3	19	44	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	155	0	16	121	26	1	11	3	21	48	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	147			155			377	354	155	350	341	134
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	147			155			377	354	155	350	341	134
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	98	100	96	92	99
cM capacity (veh/h)	1435			1425			529	561	891	586	570	915

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	165	163	15	81
Volume Left	10	16	1	21
Volume Right	0	26	3	12
cSH	1435	1425	603	609
Volume to Capacity	0.00*	0.01	0.02	0.13
Queue Length 95th (m)	0.2	0.3	0.6	3.5
Control Delay (s/veh)	0.5	0.8	11.1	11.8
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.5	0.8	11.1	11.8
Approach LOS			B	B

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		28.1%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	58	20	99	26	35
Future Volume (vph)	80	58	20	99	26	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943				0.922	
Flt Protected	0.972		0.950			
Satd. Flow (prot)	1650	0	1711	0	1660	0
Flt Permitted	0.972		0.950			
Satd. Flow (perm)	1650	0	1711	0	1660	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	63	22	108	28	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	22	108	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	58	20	99	26	35
Future Volume (Veh/h)	80	58	20	99	26	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	87	63	22	108	28	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	199	47	66			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	199	47	66			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	94	99			
cM capacity (veh/h)	778	1022	1536			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	150	22	66
Volume Left	87	22	0
Volume Right	63	0	38
cSH	865	1536	1700
Volume to Capacity	0.17	0.01	0.04
Queue Length 95th (m)	4.8	0.3	0.0
Control Delay (s/veh)	10.0	7.4	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	10.0	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	9	117	0	8	5	3
Future Volume (vph)	9	117	0	8	5	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.949	
Flt Protected					0.970	
Satd. Flow (prot)	1576	0	0	1801	1658	0
Flt Permitted					0.970	
Satd. Flow (perm)	1576	0	0	1801	1658	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	127	0	9	5	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	0	0	9	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	9	117	0	8	5	3
Future Volume (Veh/h)	9	117	0	8	5	3
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	127	0	9	5	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	13	0	144	12	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	13	0	144	12	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	99	88	100	99	100	
cM capacity (veh/h)	879	1085	721	880	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	137	9	8
Volume Left	0	0	5
Volume Right	127	0	3
cSH	1067	880	1623
Volume to Capacity	0.13	0.01	0.00*
Queue Length 95th (m)	3.3	0.2	0.1
Control Delay (s/veh)	8.9	9.1	4.5
Lane LOS	A	A	A
Approach Delay (s/veh)	8.9	9.1	4.5
Approach LOS	A	A	

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Future Volume (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			139			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	18.0	60.0	60.0	18.0	60.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	12.9%	42.9%	42.9%	12.9%	42.9%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	14.0	53.2	53.2	14.0	53.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.0	35.2	35.2	18.9	46.1	46.1	15.0	55.2	55.2	15.0	55.2	69.0
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.11	0.39	0.39	0.11	0.39	0.49
v/c Ratio	1.03	0.78	0.64	0.81	1.28	0.46	1.25	0.95	0.27	1.20	1.14	0.64
Control Delay (s/veh)	142.9	49.7	21.1	76.9	168.0	19.5	179.3	38.7	8.1	151.5	115.8	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	142.9	49.7	21.1	76.9	168.0	19.5	179.3	38.7	8.1	151.5	115.8	37.6
LOS	F	D	C	E	F	B	F	D	A	F	F	D
Approach Delay (s/veh)		55.7			138.2			63.1			106.6	
Approach LOS		E			F			E			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.28		
Intersection Signal Delay (s/veh): 97.1	Intersection LOS: F	
Intersection Capacity Utilization 107.0%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
v/c Ratio	1.03	0.78	0.64	0.81	1.28	0.46	1.25	0.95	0.27	1.20	1.14	0.64
Control Delay (s/veh)	142.9	49.7	21.1	76.9	168.0	19.5	179.3	38.7	8.1	151.5	115.8	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	142.9	49.7	21.1	76.9	168.0	19.5	179.3	38.7	8.1	151.5	115.8	37.6
Queue Length 50th (m)	~32.0	98.1	23.6	50.3	~286.0	16.4	~77.1	195.5	7.9	~72.8	~277.6	125.5
Queue Length 95th (m)	#59.5	117.5	73.9	#78.5	#315.2	53.8	m#76.2	m174.6	m7.8	m#93.9	#312.8	m168.5
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	192	1124	539	475	1503	620	339	1677	692	343	1677	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.78	0.64	0.81	1.28	0.46	1.25	0.95	0.27	1.20	1.14	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Future Volume (vph)	197	882	344	385	1929	286	425	1599	186	413	1914	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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)	197	882	344	385	1929	286	425	1599	186	413	1914	521
RTOR Reduction (vph)	0	0	144	0	0	93	0	0	75	0	0	50
Lane Group Flow (vph)	197	882	200	385	1929	193	425	1599	111	413	1914	471
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	33.2	33.2	17.9	44.1	44.1	14.0	53.2	53.2	14.0	53.2	60.2
Effective Green, g (s)	8.0	35.2	35.2	18.9	46.1	46.1	15.0	55.2	55.2	15.0	55.2	64.2
Actuated g/C Ratio	0.06	0.25	0.25	0.13	0.33	0.33	0.11	0.39	0.39	0.11	0.39	0.46
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	192	1125	394	473	1503	527	339	1677	617	343	1677	718
v/s Ratio Prot	c0.06	0.20		0.11	c0.42		c0.13	0.38		0.13	c0.45	0.04
v/s Ratio Perm			0.13			0.12			0.07			0.26
v/c Ratio	1.03	0.78	0.51	0.81	1.28	0.37	1.25	0.95	0.18	1.20	1.14	0.66
Uniform Delay, d1	66.0	48.9	44.9	58.8	47.0	35.8	62.5	41.2	27.6	62.5	42.4	29.3
Progression Factor	1.18	0.90	0.78	1.13	0.92	0.96	1.35	0.89	0.80	0.86	1.28	1.66
Incremental Delay, d2	69.8	5.2	4.3	8.6	131.3	1.4	116.5	1.7	0.0	105.8	67.8	1.5
Delay (s)	147.8	49.4	39.3	74.9	174.7	35.6	200.9	38.3	22.1	159.8	122.0	50.1
Level of Service	F	D	D	E	F	D	F	D	C	F	F	D
Approach Delay (s/veh)		60.6			144.6			68.2			114.3	
Approach LOS		E			F			E			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	103.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

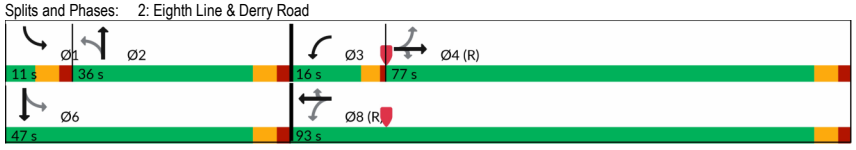
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1060	141	162	2178	8	115	11	130	20	32	8
Future Volume (vph)	10	1060	141	162	2178	8	115	11	130	20	32	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.862			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1653	0	1825	1863	0
Flt Permitted	0.046			0.184			0.731			0.361		
Satd. Flow (perm)	88	4520	1555	353	4565	1633	1404	1653	0	694	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			70		130			8	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	10	1060	141	162	2178	8	115	11	130	20	32	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	1060	141	162	2178	8	115	141	0	20	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	89.6	89.6	89.6	105.2	103.2	103.2	16.8	16.8		24.8	24.8	
Actuated g/C Ratio	0.64	0.64	0.64	0.75	0.74	0.74	0.12	0.12		0.18	0.18	
v/c Ratio	0.18	0.37	0.13	0.44	0.65	0.01	0.68	0.45		0.11	0.12	
Control Delay (s/veh)	26.2	14.1	2.7	10.2	12.1	0.0	62.1	16.2		43.1	36.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.2	14.1	2.7	10.2	12.1	0.0	62.1	16.2		43.1	36.4	
LOS	C	B	A	B	B	A	E	B		D	D	
Approach Delay (s/veh)		12.9			12.0			36.8			38.6	
Approach LOS		B			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.68		
Intersection Signal Delay (s/veh): 14.3		Intersection LOS: B
Intersection Capacity Utilization 90.4%		ICU Level of Service E
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	1060	141	162	2178	8	115	141	20	40
v/c Ratio	0.18	0.37	0.13	0.44	0.65	0.01	0.68	0.45	0.11	0.12
Control Delay (s/veh)	26.2	14.1	2.7	10.2	12.1	0.0	62.1	16.2	43.1	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.2	14.1	2.7	10.2	12.1	0.0	62.1	16.2	43.1	36.4
Queue Length 50th (m)	1.2	60.2	0.0	12.5	130.8	0.0	30.6	10.1	4.5	7.2
Queue Length 95th (m)	6.5	88.7	10.5	24.5	182.2	0.0	m47.7	m29.6	10.6	16.1
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	56	2892	1045	393	3365	1221	300	456	177	551
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.37	0.13	0.41	0.65	0.01	0.38	0.31	0.11	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1060	141	162	2178	8	115	11	130	20	32	8
Future Volume (vph)	10	1060	141	162	2178	8	115	11	130	20	32	8
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.86		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1653		1825	1863	
Flt Permitted	0.05	1.00	1.00	0.18	1.00	1.00	0.73	1.00		0.36	1.00	
Satd. Flow (perm)	88	4520	1555	354	4565	1633	1404	1653		693	1863	
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	1060	141	162	2178	8	115	11	130	20	32	8
RTOR Reduction (vph)	0	0	53	0	0	2	0	114	0	0	6	0
Lane Group Flow (vph)	10	1060	88	162	2178	6	115	27	0	20	34	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	87.2	87.2	87.2	100.8	100.8	100.8	16.8	16.8		27.2	27.2	
Effective Green, g (s)	87.2	87.2	87.2	100.8	100.8	100.8	16.8	16.8		27.2	27.2	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.72	0.72	0.12	0.12		0.19	0.19	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	2815	968	355	3286	1175	168	198		170	361	
v/s Ratio Prot		0.23		0.03	c0.48			0.02		0.00	c0.02	
v/s Ratio Perm	0.11		0.06	0.30		0.00	c0.08			0.02		
v/c Ratio	0.19	0.38	0.09	0.46	0.66	0.00	0.68	0.13		0.12	0.09	
Uniform Delay, d1	11.3	13.0	10.6	7.4	10.5	5.5	59.1	55.1		46.3	46.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.16		1.00	1.00	
Incremental Delay, d2	7.4	0.4	0.2	0.9	1.1	0.0	9.5	0.3		0.3	0.1	
Delay (s)	18.7	13.4	10.7	8.3	11.6	5.5	54.6	64.3		46.7	46.4	
Level of Service	B	B	B	A	B	A	D	E		D	D	
Approach Delay (s/veh)		13.1			11.3			59.9			46.5	
Approach LOS		B			B			E			D	

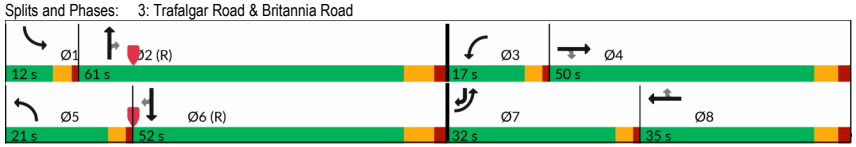
Intersection Summary				
HCM 2000 Control Delay (s/veh)	15.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	90.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Future Volume (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			217			156			135			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Shared Lane Traffic (%)												
Lane Group Flow (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	32.0	50.0	50.0	17.0	35.0	35.0	21.0	61.0	61.0	12.0	52.0	32.0
Total Split (%)	22.9%	35.7%	35.7%	12.1%	25.0%	25.0%	15.0%	43.6%	43.6%	8.6%	37.1%	22.9%
Maximum Green (s)	28.0	44.0	44.0	13.0	29.0	29.0	17.0	54.0	54.0	8.0	45.0	28.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	29.0	47.0	47.0	13.0	31.0	31.0	18.0	56.0	56.0	9.0	47.0	82.0
Actuated g/C Ratio	0.21	0.34	0.34	0.09	0.22	0.22	0.13	0.40	0.40	0.06	0.34	0.59
v/c Ratio	1.25	0.71	0.39	0.59	1.12	0.47	1.07	0.96	0.30	1.14	0.98	0.89
Control Delay (s/veh)	169.1	44.0	9.6	91.1	99.9	7.6	102.2	67.6	28.6	140.7	31.2	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	169.1	44.0	9.6	91.1	99.9	7.6	102.2	67.6	28.6	140.7	31.2	20.6
LOS	F	D	A	F	F	A	F	E	C	F	C	C
Approach Delay (s/veh)		86.0			85.8			70.6			37.7	
Approach LOS		F			F			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.25		
Intersection Signal Delay (s/veh): 67.6	Intersection LOS: E	
Intersection Capacity Utilization 98.5%	ICU Level of Service F	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
v/c Ratio	1.25	0.71	0.39	0.59	1.12	0.47	1.07	0.96	0.30	1.14	0.98	0.89
Control Delay (s/veh)	169.1	44.0	9.6	91.1	99.9	7.6	102.2	67.6	28.6	140.7	31.2	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	169.1	44.0	9.6	91.1	99.9	7.6	102.2	67.6	28.6	140.7	31.2	20.6
Queue Length 50th (m)	~157.6	111.8	9.8	28.8	~152.9	21.3	~70.9	184.4	29.7	~38.7	166.4	229.3
Queue Length 95th (m)	#201.8	131.6	32.4	42.4	#177.8	5.3	m#81.0	m192.7	m34.1	m#38.5	m158.8	m214.9
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	632	1503	676	354	1010	462	411	1734	707	200	1441	935
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.25	0.71	0.39	0.55	1.12	0.47	1.07	0.96	0.30	1.14	0.98	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Future Volume (vph)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	788	1073	267	194	1134	218	440	1660	214	228	1416	831
RTOR Reduction (vph)	0	0	144	0	0	121	0	0	81	0	0	39
Lane Group Flow (vph)	788	1073	123	194	1134	97	440	1660	133	228	1416	792
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	45.0	45.0	12.0	29.0	29.0	17.0	54.0	54.0	8.0	45.0	73.0
Effective Green, g (s)	29.0	47.0	47.0	13.0	31.0	31.0	18.0	56.0	56.0	9.0	47.0	77.0
Actuated g/C Ratio	0.21	0.34	0.34	0.09	0.22	0.22	0.13	0.40	0.40	0.06	0.34	0.55
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	632	1502	532	328	1010	341	411	1734	626	200	1441	844
v/s Ratio Prot	c0.26	0.24		0.05	c0.25		c0.14	c0.38		c0.07	0.33	0.20
v/s Ratio Perm			0.08			0.06			0.08			0.31
v/c Ratio	1.25	0.71	0.23	0.59	1.12	0.28	1.07	0.96	0.21	1.14	0.98	0.94
Uniform Delay, d1	55.5	40.6	33.5	61.0	54.5	45.3	61.0	40.8	27.5	65.5	46.1	29.3
Progression Factor	1.00	1.00	1.00	1.39	0.63	0.33	0.93	1.50	2.65	1.33	0.57	0.82
Incremental Delay, d2	124.0	1.6	0.2	2.3	66.3	0.4	49.0	6.9	0.3	69.0	4.2	2.4
Delay (s)	179.5	42.3	33.7	87.2	100.9	15.2	106.0	68.3	73.3	156.3	30.2	26.4
Level of Service	F	D	C	F	F	B	F	E	E	F	C	C
Approach Delay (s/veh)		92.0			87.1			75.9			40.6	
Approach LOS		F			F			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	71.7	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.10			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	98.5%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

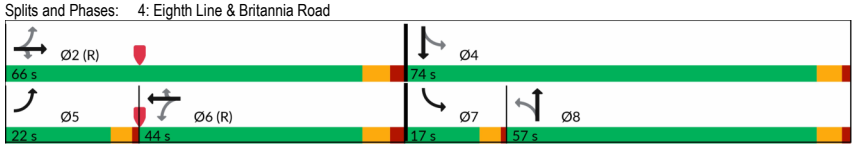
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	919	49	27	1174	187	81	342	47	182	250	183
Future Volume (vph)	233	919	49	27	1174	187	81	342	47	182	250	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.937	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1877	0	1825	1759	0
Flt Permitted	0.095			0.262			0.429			0.153		
Satd. Flow (perm)	183	4476	1328	503	4520	1633	824	1877	0	294	1759	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			137		6			37	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	233	919	49	27	1174	187	81	342	47	182	250	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	919	49	27	1174	187	81	389	0	182	433	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	78.4	76.1	76.1	54.1	54.1	54.1	34.6	34.6		52.6	51.4	
Actuated g/C Ratio	0.56	0.54	0.54	0.39	0.39	0.39	0.25	0.25		0.38	0.37	
v/c Ratio	0.76	0.38	0.07	0.14	0.67	0.26	0.40	0.83		0.74	0.65	
Control Delay (s/veh)	68.0	20.9	8.4	37.3	40.0	12.0	43.3	58.8		49.5	36.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	68.0	20.9	8.4	37.3	40.0	12.0	43.3	58.8		49.5	36.3	
LOS	E	C	A	D	D	B	D	E		D	D	
Approach Delay (s/veh)		29.5			36.1			56.2			40.2	
Approach LOS		C			D			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay (s/veh): 37.2		Intersection LOS: D
Intersection Capacity Utilization 92.1%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	233	919	49	27	1174	187	81	389	182	433
v/c Ratio	0.76	0.38	0.07	0.14	0.67	0.26	0.40	0.83	0.74	0.65
Control Delay (s/veh)	68.0	20.9	8.4	37.3	40.0	12.0	43.3	58.8	49.5	36.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.0	20.9	8.4	37.3	40.0	12.0	43.3	58.8	49.5	36.3
Queue Length 50th (m)	55.6	45.3	0.5	4.8	113.6	8.7	17.7	98.1	35.6	95.5
Queue Length 95th (m)	m77.9	m63.7	m2.1	14.7	#173.5	30.8	m32.0	127.7	46.3	111.4
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	333	2432	747	194	1745	714	301	691	247	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.38	0.07	0.14	0.67	0.26	0.27	0.56	0.74	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	919	49	27	1174	187	81	342	47	182	250	183
Future Volume (vph)	233	919	49	27	1174	187	81	342	47	182	250	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1877		1825	1759	
Flt Permitted	0.10	1.00	1.00	0.26	1.00	1.00	0.43	1.00		0.15	1.00	
Satd. Flow (perm)	183	4476	1328	503	4520	1633	823	1877		294	1759	
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)	233	919	49	27	1174	187	81	342	47	182	250	183
RTOR Reduction (vph)	0	0	22	0	0	84	0	5	0	0	23	0
Lane Group Flow (vph)	233	919	27	27	1174	103	81	384	0	182	410	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	76.1	76.1	76.1	54.1	54.1	54.1	34.6	34.6		51.4	51.4	
Effective Green, g (s)	76.1	76.1	76.1	54.1	54.1	54.1	34.6	34.6		51.4	51.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.39	0.39	0.39	0.25	0.25		0.37	0.37	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	304	2433	721	194	1746	631	203	463		242	645	
v/s Ratio Prot	c0.10	0.21			0.26			c0.20		c0.07	0.23	
v/s Ratio Perm	c0.32		0.02	0.05		0.06	0.10			0.21		
v/c Ratio	0.77	0.38	0.04	0.14	0.67	0.16	0.40	0.83		0.75	0.64	
Uniform Delay, d1	31.0	18.4	14.9	27.9	35.6	28.1	44.0	49.9		34.5	36.6	
Progression Factor	2.11	1.06	2.08	1.00	1.00	1.00	0.89	0.91		1.06	0.97	
Incremental Delay, d2	7.7	0.3	0.1	1.5	2.1	0.6	1.2	11.2		12.3	2.0	
Delay (s)	72.9	19.8	31.0	29.3	37.7	28.7	40.6	56.7		48.9	37.3	
Level of Service	E	B	C	C	D	C	D	E		D	D	
Approach Delay (s/veh)		30.5			36.3			53.9			40.7	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	37.4	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.80				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		21.5	
Intersection Capacity Utilization	92.1%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

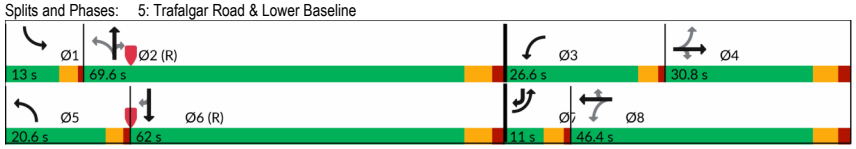
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Future Volume (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.213			0.137			0.066			0.950		
Satd. Flow (perm)	393	1883	1570	261	1902	1585	121	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			158			232			122
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	7.0	25.0	25.0	7.0	25.0	5.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	11.5	31.6	31.6	11.0	31.6	9.5
Total Split (s)	11.0	30.8	30.8	26.6	46.4	46.4	20.6	69.6	69.6	13.0	62.0	11.0
Total Split (%)	7.9%	22.0%	22.0%	19.0%	33.1%	33.1%	14.7%	49.7%	49.7%	9.3%	44.3%	7.9%
Maximum Green (s)	6.5	24.6	24.6	22.1	40.2	40.2	16.6	63.0	63.0	9.0	55.4	6.5
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	2.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	34.8	26.6	26.6	53.9	42.2	42.2	79.3	65.0	65.0	10.0	58.9	72.0
Actuated g/C Ratio	0.25	0.19	0.19	0.39	0.30	0.30	0.57	0.46	0.46	0.07	0.42	0.51
v/c Ratio	0.61	0.96	0.12	0.99	0.82	0.64	0.84	0.97	0.45	0.94	0.82	0.11
Control Delay (s/veh)	47.2	93.9	0.6	104.5	78.8	51.9	61.4	51.4	11.4	82.1	58.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.2	93.9	0.6	104.5	78.8	51.9	61.4	51.4	11.4	82.1	58.9	8.0
LOS	D	F	A	F	E	D	E	D	B	F	E	A
Approach Delay (s/veh)		74.3			77.9			46.2			59.2	
Approach LOS		E			E			D			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 110		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.99		
Intersection Signal Delay (s/veh): 58.6	Intersection LOS: E	
Intersection Capacity Utilization 96.1%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
v/c Ratio	0.61	0.96	0.12	0.99	0.82	0.64	0.84	0.97	0.45	0.94	0.82	0.11
Control Delay (s/veh)	47.2	93.9	0.6	104.5	78.8	51.9	61.4	51.4	11.4	82.1	58.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.2	93.9	0.6	104.5	78.8	51.9	61.4	51.4	11.4	82.1	58.9	8.0
Queue Length 50th (m)	19.3	96.3	0.0	101.8	133.4	78.4	41.6	224.5	26.8	34.3	148.1	3.3
Queue Length 95th (m)	32.9	#155.9	0.0	#149.7	#176.1	118.5	#79.5	#269.2	53.3	m#39.8	m155.7	m4.9
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	170	357	428	355	573	588	272	2032	858	237	1805	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.96	0.12	0.99	0.82	0.64	0.78	0.97	0.45	0.94	0.82	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Future Volume (vph)	104	342	53	352	468	379	213	1979	390	223	1483	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	2.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.21	1.00	1.00	0.14	1.00	1.00	0.07	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	394	1883	1570	261	1902	1585	121	4378	1581	3319	4295	1551
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)	104	342	53	352	468	379	213	1979	390	223	1483	92
RTOR Reduction (vph)	0	0	43	0	0	110	0	0	124	0	0	48
Lane Group Flow (vph)	104	342	10	352	468	269	213	1979	266	223	1483	44
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	31.1	24.6	24.6	51.2	40.2	40.2	76.0	63.0	63.0	9.0	56.9	63.4
Effective Green, g (s)	33.1	26.6	26.6	52.2	42.2	42.2	77.0	65.0	65.0	10.0	58.9	67.4
Actuated g/C Ratio	0.24	0.19	0.19	0.37	0.30	0.30	0.55	0.46	0.46	0.07	0.42	0.48
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.0	6.6	6.6	4.0	6.6	4.5
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	166	357	298	352	573	477	253	2032	734	237	1806	746
v/s Ratio Prot	0.03	0.18		c0.16	0.25		c0.10	c0.45		c0.07	0.35	0.00
v/s Ratio Perm	0.11		0.01	c0.21		0.17	0.37		0.17			0.02
v/c Ratio	0.63	0.96	0.03	1.00	0.82	0.56	0.84	0.97	0.36	0.94	0.82	0.06
Uniform Delay, d1	44.2	56.1	46.2	42.8	45.3	41.1	40.8	36.7	24.1	64.7	35.9	19.4
Progression Factor	1.00	1.00	1.00	1.61	1.48	1.93	1.00	1.00	1.00	0.82	1.55	6.45
Incremental Delay, d2	7.2	37.0	0.1	46.1	9.2	2.3	21.6	14.7	1.4	26.8	2.2	0.0
Delay (s)	51.4	93.1	46.3	114.9	76.2	81.7	62.4	51.4	25.5	79.8	57.8	125.0
Level of Service	D	F	D	F	E	F	E	D	C	E	E	F
Approach Delay (s/veh)		79.5			89.3			48.4			64.0	
Approach LOS		E			F			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	63.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	96.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

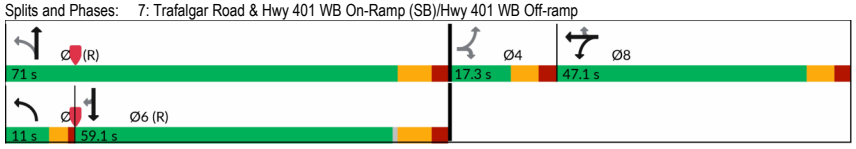
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Future Volume (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.471			0.950			0.075					
Satd. Flow (perm)	905	0	1633	3372	1921	2737	144	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			220						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.5		10.5	49.7	49.7	49.7	60.3	56.2			54.0	54.0
Actuated g/C Ratio	0.08		0.08	0.37	0.37	0.37	0.45	0.42			0.40	0.40
v/c Ratio	0.36		0.09	0.79	0.06	1.74	0.05	0.71			0.74	0.11
Control Delay (s/veh)	74.2		0.7	45.8	33.0	363.8	19.3	34.9			37.8	0.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	74.2		0.7	45.8	33.0	363.8	19.3	34.9			37.8	0.4
LOS	E		A	D	C	F	B	C			D	A
Approach Delay (s/veh)		40.7			255.9			34.8			36.0	
Approach LOS		D			F			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.74			
Intersection Signal Delay (s/veh): 152.3		Intersection LOS: F	
Intersection Capacity Utilization 113.5%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



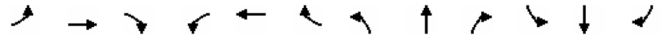


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	21	980	40	1992	8	1269	1286	65
v/c Ratio	0.36	0.09	0.79	0.06	1.74	0.05	0.71	0.74	0.11
Control Delay (s/veh)	74.2	0.7	45.8	33.0	363.8	19.3	34.9	37.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	0.7	45.8	33.0	363.8	19.3	34.9	37.8	0.4
Queue Length 50th (m)	6.5	0.0	129.3	7.1	~455.0	1.2	122.3	123.2	0.0
Queue Length 95th (m)	16.2	0.0	#185.3	16.8	#521.5	3.9	130.1	152.4	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	69	246	1236	704	1143	151	2001	1754	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.09	0.79	0.06	1.74	0.05	0.63	0.73	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Future Volume (vph)	25	0	21	980	40	1992	8	1269	0	0	1286	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.47		1.00	0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)	904		1633	3372	1921	2737	144	4309			4350	1306
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	0	21	980	40	1992	8	1269	0	0	1286	65
RTOR Reduction (vph)	0	0	20	0	0	139	0	0	0	0	0	41
Lane Group Flow (vph)	25	0	1	980	40	1853	8	1269	0	0	1286	24
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	8.5		8.5	49.7	49.7	49.7	54.7	54.7			49.3	49.3
Effective Green, g (s)	8.5		8.5	49.7	49.7	49.7	54.7	54.7			49.3	49.3
Actuated g/C Ratio	0.06		0.06	0.37	0.37	0.37	0.40	0.40			0.36	0.36
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		102	1237	705	1004	75	1740			1583	475
v/s Ratio Prot				0.29	0.02		0.00	c0.29			c0.30	
v/s Ratio Perm	c0.03		0.00			c0.68	0.04					0.02
v/c Ratio	0.45		0.01	0.79	0.06	1.85	0.11	0.73			0.81	0.05
Uniform Delay, d1	61.2		59.5	38.2	27.7	42.9	28.1	34.1			38.9	27.9
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	5.6		0.1	3.3	0.0	384.3	0.2	2.7			4.7	0.2
Delay (s)	66.8		59.6	41.6	27.7	427.1	28.3	36.8			43.5	28.1
Level of Service	E		E	D	C	F	C	D			D	C
Approach Delay (s/veh)		63.5			296.4			36.8			42.8	
Approach LOS		E			F			D			D	

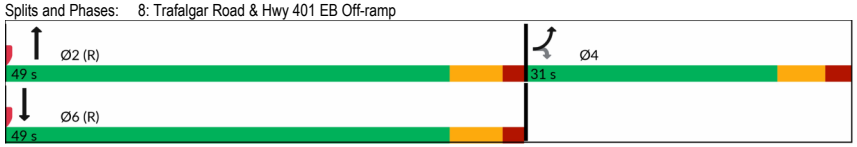
Intersection Summary					
HCM 2000 Control Delay (s/veh)	175.9	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.26				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	113.5%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	986	0	1798	1715	0
Future Volume (vph)	210	986	0	1798	1715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.895	0.850				
Flt Protected	0.985					
Satd. Flow (prot)	2934	1327	0	4309	4350	0
Flt Permitted	0.985					
Satd. Flow (perm)	2934	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	12	12				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	210	986	0	1798	1715	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	703	493	0	1798	1715	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	25.8	25.8		40.2	40.2	
Actuated g/C Ratio	0.32	0.32		0.50	0.50	
v/c Ratio	1.03dr	1.13		0.83	0.78	
Control Delay (s/veh)	30.0	113.6		20.9	19.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.0	113.6		20.9	19.2	
LOS	C	F		C	B	
Approach Delay (s/veh)	64.5			20.9	19.2	
Approach LOS	E			C	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 31.4		Intersection LOS: C	
Intersection Capacity Utilization 85.5%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	703	493	1798	1715
v/c Ratio	1.03dr	1.13	0.83	0.78
Control Delay (s/veh)	30.0	113.6	20.9	19.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	113.6	20.9	19.2
Queue Length 50th (m)	53.8	~110.5	92.2	84.0
Queue Length 95th (m)	#76.8	#179.1	115.2	104.8
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	953	435	2262	2283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	1.13	0.79	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	986	0	1798	1715	0
Future Volume (vph)	210	986	0	1798	1715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2934	1327		4309	4350	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2934	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	210	986	0	1798	1715	0
RTOR Reduction (vph)	8	8	0	0	0	0
Lane Group Flow (vph)	695	485	0	1798	1715	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	25.8	25.8		40.2	40.2	
Effective Green, g (s)	25.8	25.8		40.2	40.2	
Actuated g/C Ratio	0.32	0.32		0.50	0.50	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	946	427		2165	2185	
v/s Ratio Prot	0.24			c0.42	0.39	
v/s Ratio Perm		c0.37				
v/c Ratio	1.03dr	1.14		0.83	0.78	
Uniform Delay, d1	24.1	27.1		17.0	16.3	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.0	86.0		3.9	2.9	
Delay (s)	27.0	113.1		20.9	19.3	
Level of Service	C	F		C	B	
Approach Delay (s/veh)	62.5			20.9	19.3	
Approach LOS	E			C	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

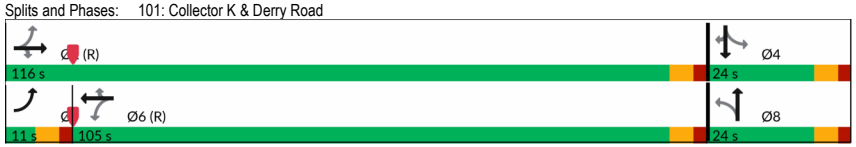
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
Future Volume (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	4520	1601	1883	4520	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.038						0.757			0.757		
Satd. Flow (perm)	72	4520	1601	1883	4520	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			70						70
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
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
Adj. Flow (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	116.0	116.0	105.0	105.0	105.0	24.0	24.0		24.0	24.0	24.0
Total Split (%)	7.9%	82.9%	82.9%	75.0%	75.0%	75.0%	17.1%	17.1%		17.1%	17.1%	17.1%
Maximum Green (s)	5.0	110.0	110.0	99.0	99.0	99.0	18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	110.0	110.0	110.0		101.2	101.2	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.72	0.72	0.13			0.13		0.13
v/c Ratio	0.55	0.39	0.08		0.99	0.01	0.44			0.10		0.04
Control Delay (s/veh)	31.9	5.0	0.7		16.7	0.0	64.6			55.5		0.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	31.9	5.0	0.7		16.7	0.0	64.6			55.5		0.3
LOS	C	A	A		B	A	E			E		A
Approach Delay (s/veh)		5.9			16.6			64.6			35.8	
Approach LOS		A			B			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 140		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.99		
Intersection Signal Delay (s/veh): 14.1	Intersection LOS: B	
Intersection Capacity Utilization 85.9%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	64	1401	96	3225	12	80	18	10
v/c Ratio	0.55	0.39	0.08	0.99	0.01	0.44	0.10	0.04
Control Delay (s/veh)	31.9	5.0	0.7	16.7	0.0	64.6	55.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.9	5.0	0.7	16.7	0.0	64.6	55.5	0.3
Queue Length 50th (m)	3.4	43.6	0.0	~154.0	0.0	21.1	4.6	0.0
Queue Length 95th (m)	#17.7	50.2	3.4	m217.5	m0.0	38.6	12.4	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	30.0	30.0
Base Capacity (vph)	117	3551	1278	3267	1176	183	183	266
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.39	0.08	0.99	0.01	0.44	0.10	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
Future Volume (vph)	64	1401	96	0	3225	12	80	0	0	18	0	10
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	*0.80	1.00		*0.80	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	4520	1601		4520	1601	1789			1789		1601
Flt Permitted	0.04	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	71	4520	1601		4520	1601	1426			1426		1601
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)	64	1401	96	0	3225	12	80	0	0	18	0	10
RTOR Reduction (vph)	0	0	21	0	0	3	0	0	0	0	0	9
Lane Group Flow (vph)	64	1401	75	0	3225	9	80	0	0	18	0	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Effective Green, g (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.71	0.71	0.13			0.13		0.13
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	104	3551	1257		3228	1143	183			183		205
v/s Ratio Prot	0.02	c0.31			c0.71							
v/s Ratio Perm	0.46		0.05			0.01	c0.06			0.01		0.00
v/c Ratio	0.62	0.39	0.06		1.00	0.01	0.44			0.10		0.01
Uniform Delay, d1	41.8	4.7	3.4		20.0	5.7	56.3			53.8		53.2
Progression Factor	1.00	1.00	1.00		0.68	1.00	1.00			1.00		1.00
Incremental Delay, d2	10.3	0.3	0.1		4.5	0.0	1.7			1.1		0.1
Delay (s)	52.1	5.0	3.5		18.1	5.7	58.0			54.9		53.3
Level of Service	D	A	A		B	A	E			D		D
Approach Delay (s/veh)		6.8			18.1			58.0			54.3	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1291	222	0	2577	8	0	0	92	0	0	43
Future Volume (vph)	0	1291	222	0	2577	8	0	0	92	0	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	4520	1601	0	4520	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	4520	1601	0	4520	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
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
Adj. Flow (vph)	0	1291	222	0	2577	8	0	0	92	0	0	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1291	222	0	2585	0	0	0	92	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1291	222	0	2577	8	0	0	92	0	0	43
Future Volume (Veh/h)	0	1291	222	0	2577	8	0	0	92	0	0	43
Sign Control		Free			Free			Stop			Stop	
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)	0	1291	222	0	2577	8	0	0	92	0	0	43
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.69			0.84			0.77	0.77	0.84	0.77	0.77	0.69
vC, conflicting volume	2585			1513			2193	3876	430	3103	4094	863
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1729			953			120	2305	0	1302	2588	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	94
cM capacity (veh/h)	250			604			612	29	913	82	19	749

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	430	430	430	222	1031	1031	523	92	43
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	222	0	0	8	92	43
cSH	1700	1700	1700	1700	1700	1700	1700	913	749
Volume to Capacity	0.25	0.25	0.25	0.13	0.61	0.61	0.31	0.10	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.4
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	10.1
Lane LOS								A	B
Approach Delay (s/veh)	0.0				0.0			9.4	10.1
Approach LOS								A	B

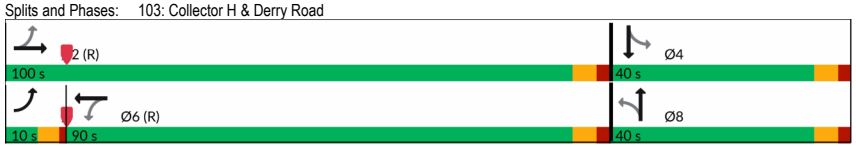
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	60.0%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	1286	129	29	2435	13	108	0	14	25	11	52
Future Volume (vph)	58	1286	129	29	2435	13	108	0	14	25	11	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.999			0.985			0.920	
Flt Protected	0.950			0.950				0.958			0.986	
Satd. Flow (prot)	1789	4457	0	1789	4516	0	0	1777	0	0	1709	0
Flt Permitted	0.037			0.144				0.622			0.924	
Satd. Flow (perm)	70	4457	0	271	4516	0	0	1154	0	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			1			58			49	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
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
Adj. Flow (vph)	58	1286	129	29	2435	13	108	0	14	25	11	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1415	0	29	2448	0	0	122	0	0	88	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	10.0	100.0		90.0	90.0		40.0	40.0		40.0	40.0	
Total Split (%)	7.1%	71.4%		64.3%	64.3%		28.6%	28.6%		28.6%	28.6%	
Maximum Green (s)	5.5	94.0		84.0	84.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	115.6	114.1		104.9	104.9			13.9			13.9	
Actuated g/C Ratio	0.83	0.82		0.75	0.75			0.10			0.10	
v/c Ratio	0.42	0.39		0.14	0.72			0.73			0.43	
Control Delay (s/veh)	29.6	6.8		8.9	12.5			56.5			34.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	29.6	6.8		8.9	12.5			56.5			34.4	
LOS	C	A		A	B			E			C	
Approach Delay (s/veh)		7.7			12.5			56.5			34.4	
Approach LOS		A			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 12.6		Intersection LOS: B	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	58	1415	29	2448	122	88
v/c Ratio	0.42	0.39	0.14	0.72	0.73	0.43
Control Delay (s/veh)	29.6	6.8	8.9	12.5	56.5	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	6.8	8.9	12.5	56.5	34.4
Queue Length 50th (m)	8.1	56.5	2.1	140.5	17.8	10.4
Queue Length 95th (m)	m13.5	m38.2	7.7	216.4	38.4	26.0
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	139	3635	203	3384	324	425
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.39	0.14	0.72	0.38	0.21

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	1286	129	29	2435	13	108	0	14	25	11	52
Future Volume (vph)	58	1286	129	29	2435	13	108	0	14	25	11	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.98			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4458		1789	4517			1776			1709	
Flt Permitted	0.04	1.00		0.14	1.00			0.62			0.92	
Satd. Flow (perm)	69	4458		272	4517			1154			1602	
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	1286	129	29	2435	13	108	0	14	25	11	52
RTOR Reduction (vph)	0	4	0	0	0	0	0	52	0	0	44	0
Lane Group Flow (vph)	58	1411	0	29	2448	0	0	70	0	0	44	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	114.1	114.1		104.1	104.1			13.9			13.9	
Effective Green, g (s)	114.1	114.1		104.1	104.1			13.9			13.9	
Actuated g/C Ratio	0.82	0.82		0.74	0.74			0.10			0.10	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	123	3633		202	3358			114			159	
v/s Ratio Prot	0.02	c0.32			c0.54							
v/s Ratio Perm	0.36			0.11				c0.06			0.03	
v/c Ratio	0.47	0.39		0.14	0.73			0.61			0.28	
Uniform Delay, d1	16.8	3.5		5.2	10.1			60.5			58.4	
Progression Factor	1.91	1.76		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	0.2		1.5	1.4			9.4			0.9	
Delay (s)	34.0	6.4		6.6	11.5			69.8			59.3	
Level of Service	C	A		A	B			E			E	
Approach Delay (s/veh)		7.5			11.4			69.8			59.3	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

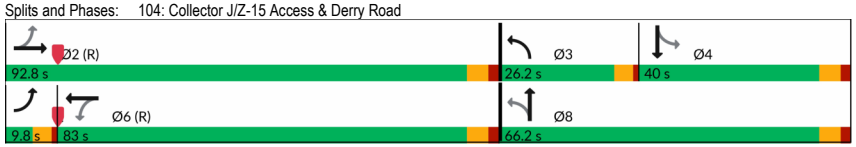
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	1169	213	18	2253	13	144	0	20	26	0	101
Future Volume (vph)	33	1169	213	18	2253	13	144	0	20	26	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.999			0.984			0.893	
Flt Protected	0.950			0.950				0.958			0.990	
Satd. Flow (prot)	1789	4416	0	1789	4516	0	0	1775	0	0	1665	0
Flt Permitted	0.034			0.148				0.541			0.934	
Satd. Flow (perm)	64	4416	0	279	4516	0	0	1003	0	0	1571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			1			51			101	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
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
Adj. Flow (vph)	33	1169	213	18	2253	13	144	0	20	26	0	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	1382	0	18	2266	0	0	164	0	0	127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		9.5	40.0		40.0	40.0	
Total Split (s)	9.8	92.8		83.0	83.0		26.2	66.2		40.0	40.0	
Total Split (%)	6.2%	58.4%		52.2%	52.2%		16.5%	41.6%		25.2%	25.2%	
Maximum Green (s)	5.3	86.8		77.0	77.0		21.7	60.2		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		3.5	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		1.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0			7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0			27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0			0		0	0	
Act Effct Green (s)	123.8	122.3		113.6	113.6			24.7			24.7	
Actuated g/C Ratio	0.78	0.77		0.71	0.71			0.16			0.16	
v/c Ratio	0.28	0.41		0.09	0.70			0.83			0.39	
Control Delay (s/veh)	13.2	7.3		12.1	16.8			73.9			17.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	13.2	7.3		12.1	16.8			73.9			17.7	
LOS	B	A		B	B			E			B	
Approach Delay (s/veh)		7.4			16.8			73.9			17.7	
Approach LOS		A			B			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 159			
Actuated Cycle Length: 159			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 15.9		Intersection LOS: B	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	33	1382	18	2266	164	127
v/c Ratio	0.28	0.41	0.09	0.70	0.83	0.39
Control Delay (s/veh)	13.2	7.3	12.1	16.8	73.9	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.2	7.3	12.1	16.8	73.9	17.7
Queue Length 50th (m)	2.1	53.7	1.7	167.5	36.4	7.3
Queue Length 95th (m)	8.1	88.2	6.6	251.1	59.6	24.7
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	117	3404	199	3226	411	423
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.41	0.09	0.70	0.40	0.30

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	1169	213	18	2253	13	144	0	20	26	0	101
Future Volume (vph)	33	1169	213	18	2253	13	144	0	20	26	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.98			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4416		1789	4516			1775			1664	
Flt Permitted	0.03	1.00		0.15	1.00			0.54			0.93	
Satd. Flow (perm)	64	4416		279	4516			1003			1570	
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)	33	1169	213	18	2253	13	144	0	20	26	0	101
RTOR Reduction (vph)	0	7	0	0	0	0	0	43	0	0	85	0
Lane Group Flow (vph)	33	1375	0	18	2266	0	0	121	0	0	42	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	122.3	122.3		112.6	112.6			24.7			24.7	
Effective Green, g (s)	122.3	122.3		112.6	112.6			24.7			24.7	
Actuated g/C Ratio	0.77	0.77		0.71	0.71			0.16			0.16	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	105	3396		197	3198			155			243	
v/s Ratio Prot	0.01	c0.31			c0.50							
v/s Ratio Perm	0.23			0.06				c0.12			0.03	
v/c Ratio	0.31	0.40		0.09	0.71			0.78			0.17	
Uniform Delay, d1	15.3	6.2		7.2	13.6			64.5			58.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.7	0.4		0.9	1.4			22.0			0.3	
Delay (s)	17.1	6.5		8.2	14.9			86.5			58.6	
Level of Service	B	A		A	B			F			E	
Approach Delay (s/veh)		6.8			14.9			86.5			58.6	
Approach LOS		A			B			F			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	16.3	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.74				
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	21.0		
Intersection Capacity Utilization	69.7%	ICU Level of Service	C		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	1419	3210	30	0	27
Future Volume (vph)	0	1419	3210	30	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	3014	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	3014	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1419	3210	30	0	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1419	3210	30	0	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 98.7%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	1419	3210	30	0	27
Future Volume (Veh/h)	0	1419	3210	30	0	27
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1419	3210	30	0	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.67				0.71	0.67
vC, conflicting volume	3240				3683	1605
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3361				3245	905
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	85
cM capacity (veh/h)	54				5	186

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	473	473	473	1605	1605	30	27
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	30	27
cSH	1700	1700	1700	1700	1700	1700	186
Volume to Capacity	0.28	0.28	0.28	0.94	0.94	0.02	0.15
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	27.6
Lane LOS							D
Approach Delay (s/veh)	0.0			0.0			27.6
Approach LOS							D

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		98.7%	ICU Level of Service	F
Analysis Period (min)		15		

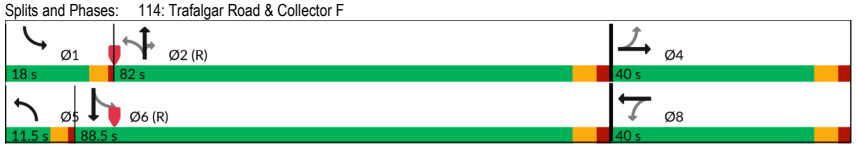
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	47	47	42	45	93	68	1817	152	140	2756	95
Future Volume (vph)	39	47	47	42	45	93	68	1817	152	140	2756	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		50.0	70.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.925			0.899				0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1666	0	1652	1619	0	1711	4421	1566	1711	4399	0
Flt Permitted	0.430			0.641			0.040			0.064		
Satd. Flow (perm)	748	1666	0	1114	1619	0	72	4421	1566	115	4399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			70				86		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
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
Adj. Flow (vph)	39	47	47	42	45	93	68	1817	152	140	2756	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	94	0	42	138	0	68	1817	152	140	2851	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.5	82.0	82.0	18.0	88.5	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		8.2%	58.6%	58.6%	12.9%	63.2%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.5	76.0	76.0	14.0	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	12.8	12.8		12.8	12.8		108.4	98.8	98.8	116.9	105.7	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.77	0.71	0.71	0.84	0.76	
v/c Ratio	0.57	0.51		0.41	0.65		0.47	0.58	0.13	0.59	0.86	
Control Delay (s/veh)	91.2	48.0		71.9	45.2		33.4	23.5	7.2	27.4	17.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	1.3	
Total Delay (s/veh)	91.2	48.0		71.9	45.2		33.4	23.5	7.2	27.4	18.3	
LOS	F	D		E	D		C	C	A	C	B	
Approach Delay (s/veh)		60.7			51.4			22.6			18.7	
Approach LOS		E			D			C			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay (s/veh): 22.3	Intersection LOS: C	
Intersection Capacity Utilization 96.2%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	94	42	138	68	1817	152	140	2851
v/c Ratio	0.57	0.51	0.41	0.65	0.47	0.58	0.13	0.59	0.86
Control Delay (s/veh)	91.2	48.0	71.9	45.2	33.4	23.5	7.2	27.4	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Total Delay (s/veh)	91.2	48.0	71.9	45.2	33.4	23.5	7.2	27.4	18.3
Queue Length 50th (m)	10.6	16.4	11.6	18.8	6.1	208.1	12.3	11.3	206.1
Queue Length 95th (m)	m22.5	33.3	23.2	39.6	m6.1	m227.8	m21.5	34.7	313.7
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	60.0		50.0		50.0		50.0	70.0	
Base Capacity (vph)	181	430	270	446	150	3118	1130	267	3322
Starvation Cap Reductn	0	0	0	0	0	0	0	0	265
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.22	0.16	0.31	0.45	0.58	0.13	0.52	0.93

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	47	47	42	45	93	68	1817	152	140	2756	95
Future Volume (vph)	39	47	47	42	45	93	68	1817	152	140	2756	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.93		1.00	0.90		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)	1652	1666		1652	1619		1711	4421	1566	1711	4399	
Flt Permitted	0.43	1.00		0.64	1.00		0.04	1.00	1.00	0.06	1.00	
Satd. Flow (perm)	748	1666		1115	1619		73	4421	1566	116	4399	
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)	39	47	47	42	45	93	68	1817	152	140	2756	95
RTOR Reduction (vph)	0	31	0	0	64	0	0	0	25	0	1	0
Lane Group Flow (vph)	39	63	0	42	74	0	68	1817	127	140	2850	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	12.8	12.8		12.8	12.8		105.1	98.8	98.8	115.2	104.9	
Effective Green, g (s)	12.8	12.8		12.8	12.8		105.1	98.8	98.8	115.2	104.9	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.75	0.71	0.71	0.82	0.75	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	68	152		101	148		128	3119	1105	236	3296	
v/s Ratio Prot		0.04			0.05		0.02	0.41		c0.05	c0.65	
v/s Ratio Perm	c0.05			0.04			0.37		0.08	0.44		
v/c Ratio	0.57	0.42		0.42	0.50		0.53	0.58	0.11	0.59	0.86	
Uniform Delay, d1	61.0	60.1		60.1	60.6		23.3	10.3	6.6	21.0	12.5	
Progression Factor	1.00	1.00		1.01	1.01		1.43	2.03	1.85	1.00	1.00	
Incremental Delay, d2	11.2	1.8		2.8	2.7		1.8	0.3	0.1	4.0	3.3	
Delay (s)	72.4	61.9		63.6	64.0		35.2	21.3	12.3	25.0	15.8	
Level of Service	E	E		E	E		D	C	B	C	B	
Approach Delay (s/veh)		65.0			63.9			21.1			16.2	
Approach LOS		E			E			C			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	20.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	96.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

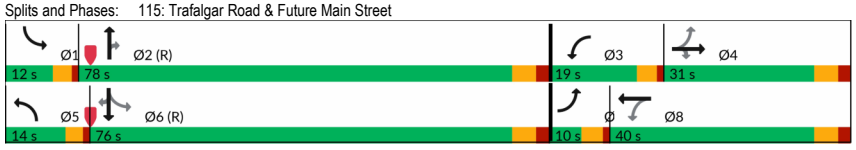
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	57	465	218	143	64	373	1806	103	98	2483	422
Future Volume (vph)	139	57	465	218	143	64	373	1806	103	98	2483	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.954				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3414	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.622			0.572			0.950			0.057		
Satd. Flow (perm)	1172	1883	2818	1077	3414	0	3319	4421	1566	103	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			242		48				125			228
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	139	57	465	218	143	64	373	1806	103	98	2483	422
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	57	465	218	207	0	373	1806	103	98	2483	422
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	10.0	31.0	31.0	19.0	40.0		14.0	78.0	78.0	12.0	76.0	76.0
Total Split (%)	7.1%	22.1%	22.1%	13.6%	28.6%		10.0%	55.7%	55.7%	8.6%	54.3%	54.3%
Maximum Green (s)	5.5	25.0	25.0	14.5	34.0		10.0	72.0	72.0	8.0	70.0	70.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	24.3	17.3	17.3	37.7	26.2		17.8	79.2	79.2	80.6	70.0	70.0
Actuated g/C Ratio	0.17	0.12	0.12	0.27	0.19		0.13	0.57	0.57	0.58	0.50	0.50
v/c Ratio	0.61	0.24	0.83	0.60	0.31		0.88	0.72	0.11	0.62	1.12	0.47
Control Delay (s/veh)	56.7	55.8	41.0	49.2	37.4		81.6	25.4	1.8	36.6	98.8	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	55.8	41.0	49.2	37.4		81.6	25.4	1.8	36.6	98.9	14.4
LOS	E	E	D	D	D		F	C	A	D	F	B
Approach Delay (s/veh)		45.6			43.4			33.6			85.0	
Approach LOS		D			D			C			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.12		
Intersection Signal Delay (s/veh): 59.7		Intersection LOS: E
Intersection Capacity Utilization 96.1%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	139	57	465	218	207	373	1806	103	98	2483	422
v/c Ratio	0.61	0.24	0.83	0.60	0.31	0.88	0.72	0.11	0.62	1.12	0.47
Control Delay (s/veh)	56.7	55.8	41.0	49.2	37.4	81.6	25.4	1.8	36.6	98.8	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	55.8	41.0	49.2	37.4	81.6	25.4	1.8	36.6	98.9	14.4
Queue Length 50th (m)	31.2	14.7	35.9	51.3	20.3	53.9	151.3	0.0	12.0	~343.5	49.5
Queue Length 95th (m)	45.9	26.8	54.5	70.4	30.0	#109.0	192.2	6.0	m25.9	#367.8	67.6
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	227	336	702	363	865	423	2501	940	161	2210	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	36	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.17	0.66	0.60	0.24	0.88	0.72	0.11	0.61	1.14	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	57	465	218	143	64	373	1806	103	98	2483	422
Future Volume (vph)	139	57	465	218	143	64	373	1806	103	98	2483	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.95		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	1883	2818	1789	3413		3319	4421	1566	1711	4421	1566
Flt Permitted	0.62	1.00	1.00	0.57	1.00		0.95	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1171	1883	2818	1077	3413		3319	4421	1566	103	4421	1566
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)	139	57	465	218	143	64	373	1806	103	98	2483	422
RTOR Reduction (vph)	0	0	212	0	39	0	0	0	45	0	0	114
Lane Group Flow (vph)	139	57	253	218	168	0	373	1806	58	98	2483	308
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	22.9	17.4	17.4	36.2	26.2		17.8	79.2	79.2	78.6	70.0	70.0
Effective Green, g (s)	22.9	17.4	17.4	36.2	26.2		17.8	79.2	79.2	78.6	70.0	70.0
Actuated g/C Ratio	0.16	0.12	0.12	0.26	0.19		0.13	0.57	0.57	0.56	0.50	0.50
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	215	234	350	351	638		421	2501	885	156	2210	783
v/s Ratio Prot	0.03	0.03		c0.06	0.05		c0.11	0.41		0.04	c0.56	
v/s Ratio Perm	0.08		c0.09	0.10					0.04	0.31		0.20
v/c Ratio	0.65	0.24	0.72	0.62	0.26		0.89	0.72	0.07	0.63	1.12	0.39
Uniform Delay, d1	53.6	55.4	59.0	43.9	48.6		60.1	22.3	13.7	20.9	35.0	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.95	1.15	1.32
Incremental Delay, d2	6.5	0.5	7.2	3.4	0.2		19.5	1.8	0.1	6.5	61.3	1.3
Delay (s)	60.1	55.9	66.2	47.3	48.9		79.6	24.2	13.9	26.4	101.4	29.9
Level of Service	E	E	E	D	D		E	C	B	C	F	C
Approach Delay (s/veh)		64.0			48.1			32.8			88.9	
Approach LOS		E			D			C			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	63.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

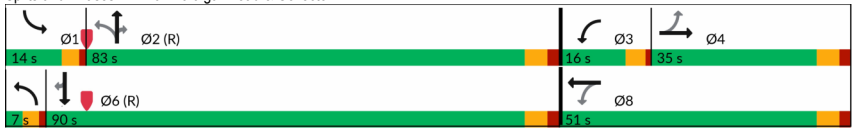
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	18	100	185	18	259	146	1692	47	121	2657	188
Future Volume (vph)	92	18	100	185	18	259	146	1692	47	121	2657	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		50.0	100.0		50.0
Storage Lanes	1		0	1		0	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt		0.873			0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1572	0	1652	1549	0	1711	4421	1566	3319	4421	1566
Flt Permitted	0.589			0.458			0.046			0.950		
Satd. Flow (perm)	1024	1572	0	796	1549	0	83	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		74			91				114			85
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
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
Adj. Flow (vph)	92	18	100	185	18	259	146	1692	47	121	2657	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	118	0	185	277	0	146	1692	47	121	2657	188
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	35.0	35.0		16.0	51.0		7.0	83.0	83.0	14.0	90.0	90.0
Total Split (%)	23.6%	23.6%		10.8%	34.5%		4.7%	56.1%	56.1%	9.5%	60.8%	60.8%
Maximum Green (s)	29.0	29.0		11.5	45.0		3.0	77.0	77.0	10.0	84.0	84.0
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	18.6	18.6		36.1	34.6		99.7	87.1	87.1	10.3	84.0	84.0
Actuated g/C Ratio	0.13	0.13		0.24	0.23		0.67	0.59	0.59	0.07	0.57	0.57
v/c Ratio	0.72	0.45		0.71	0.64		0.72	0.65	0.05	0.52	1.06	0.20
Control Delay (s/veh)	90.1	28.6		62.8	40.0		54.5	23.0	0.1	74.4	67.6	8.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	28.6		62.8	40.0		54.5	23.3	0.1	74.4	67.6	8.9
LOS	F	C		E	D		D	C	A	E	E	A
Approach Delay (s/veh)		55.5			49.1			25.1			64.2	
Approach LOS		E			D			C			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 148		
Actuated Cycle Length: 148		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.06		
Intersection Signal Delay (s/veh): 49.3		Intersection LOS: D
Intersection Capacity Utilization 103.0%		ICU Level of Service G
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	118	185	277	146	1692	47	121	2657	188
v/c Ratio	0.72	0.45	0.71	0.64	0.72	0.65	0.05	0.52	1.06	0.20
Control Delay (s/veh)	90.1	28.6	62.8	40.0	54.5	23.0	0.1	74.4	67.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	28.6	62.8	40.0	54.5	23.3	0.1	74.4	67.6	8.9
Queue Length 50th (m)	26.8	12.0	47.4	50.8	26.8	135.5	0.0	18.2	~361.1	13.7
Queue Length 95th (m)	44.3	29.9	66.2	76.5	#92.1	180.2	0.0	28.8	#389.7	26.3
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	50.0		80.0		50.0		50.0	100.0		50.0
Base Capacity (vph)	200	367	260	534	203	2601	968	244	2509	925
Starvation Cap Reductn	0	0	0	0	0	362	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.32	0.71	0.52	0.72	0.76	0.05	0.50	1.06	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	18	100	185	18	259	146	1692	47	121	2657	188
Future Volume (vph)	92	18	100	185	18	259	146	1692	47	121	2657	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.87		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)	1652	1572		1652	1548		1711	4421	1566	3319	4421	1566
Flt Permitted	0.59	1.00		0.46	1.00		0.05	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1025	1572		796	1548		83	4421	1566	3319	4421	1566
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	18	100	185	18	259	146	1692	47	121	2657	188
RTOR Reduction (vph)	0	65	0	0	70	0	0	0	19	0	0	37
Lane Group Flow (vph)	92	53	0	185	207	0	146	1692	28	121	2657	151
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2			6
Actuated Green, G (s)	18.6	18.6		34.6	34.6		100.5	87.1	87.1	10.3	84.0	84.0
Effective Green, g (s)	18.6	18.6		34.6	34.6		100.5	87.1	87.1	10.3	84.0	84.0
Actuated g/C Ratio	0.13	0.13		0.23	0.23		0.68	0.59	0.59	0.07	0.57	0.57
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	128	197		252	361		203	2601	921	230	2509	888
v/s Ratio Prot		0.03		c0.06	0.13		c0.06	0.38		0.04	c0.60	
v/s Ratio Perm	0.09			c0.11			0.42		0.02			0.10
v/c Ratio	0.72	0.27		0.73	0.57		0.72	0.65	0.03	0.53	1.06	0.17
Uniform Delay, d1	62.2	58.6		50.6	50.2		47.0	20.3	12.8	66.5	32.0	15.3
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	17.5	0.7		10.5	2.2		11.5	1.3	0.1	2.2	36.0	0.4
Delay (s)	79.7	59.3		61.2	52.4		58.5	21.6	12.8	68.7	68.0	15.7
Level of Service	E	E		E	D		E	C	B	E	E	B
Approach Delay (s/veh)		68.2			55.9			24.2			64.7	
Approach LOS		E			E			C			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	50.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	103.0%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

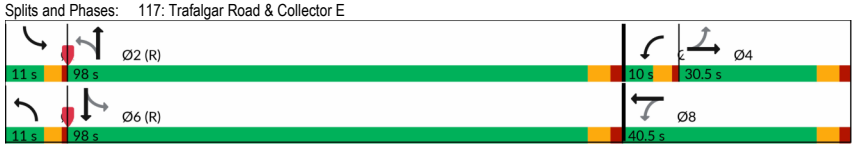
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	8	4	81	7	63	33	1846	37	61	2873	29
Future Volume (vph)	9	8	4	81	7	63	33	1846	37	61	2873	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.950			0.865			0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1789	0	1789	1629	0	1711	4408	0	1711	4416	0
Flt Permitted	0.711			0.428			0.037			0.061		
Satd. Flow (perm)	1339	1789	0	806	1629	0	67	4408	0	110	4416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			63			3			2	
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
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
Adj. Flow (vph)	9	8	4	81	7	63	33	1846	37	61	2873	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	12	0	81	70	0	33	1883	0	61	2902	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	30.5	30.5		10.0	40.5		11.0	98.0		11.0	98.0	
Total Split (%)	20.4%	20.4%		6.7%	27.1%		7.4%	65.6%		7.4%	65.6%	
Maximum Green (s)	24.5	24.5		5.5	34.5		7.0	92.0		7.0	92.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0			27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effct Green (s)	10.0	10.0		17.5	16.0		119.2	111.9		121.4	113.1	
Actuated g/C Ratio	0.07	0.07		0.12	0.11		0.80	0.75		0.81	0.76	
v/c Ratio	0.10	0.10		0.55	0.30		0.26	0.57		0.35	0.87	
Control Delay (s/veh)	68.3	53.3		74.9	19.2		11.8	10.1		8.7	18.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	5.9	
Total Delay (s/veh)	68.3	53.3		74.9	19.2		11.8	10.1		8.7	24.4	
LOS	E	D		E	B		B	B		A	C	
Approach Delay (s/veh)		59.8			49.1			10.1			24.0	
Approach LOS		E			D			B			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.87		
Intersection Signal Delay (s/veh): 19.7	Intersection LOS: B	
Intersection Capacity Utilization 77.3%	ICU Level of Service D	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	9	12	81	70	33	1883	61	2902
v/c Ratio	0.10	0.10	0.55	0.30	0.26	0.57	0.35	0.87
Control Delay (s/veh)	68.3	53.3	74.9	19.2	11.8	10.1	8.7	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
Total Delay (s/veh)	68.3	53.3	74.9	19.2	11.8	10.1	8.7	24.4
Queue Length 50th (m)	2.6	2.3	22.2	1.9	1.8	108.7	3.3	276.2
Queue Length 95th (m)	8.8	9.3	39.4	16.8	6.0	132.5	6.8	307.9
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	219	296	146	424	130	3300	172	3340
Starvation Cap Reductn	0	0	0	0	0	0	0	407
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.55	0.17	0.25	0.57	0.35	0.99

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	8	4	81	7	63	33	1846	37	61	2873	29
Future Volume (vph)	9	8	4	81	7	63	33	1846	37	61	2873	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.95		1.00	0.87		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)	1789	1789		1789	1629		1711	4408		1711	4414	
Flt Permitted	0.71	1.00		0.43	1.00		0.04	1.00		0.06	1.00	
Satd. Flow (perm)	1340	1789		807	1629		66	4408		111	4414	
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)	9	8	4	81	7	63	33	1846	37	61	2873	29
RTOR Reduction (vph)	0	4	0	0	55	0	0	1	0	0	1	0
Lane Group Flow (vph)	9	8	0	81	15	0	33	1882	0	61	2901	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.0	6.0		18.4	18.4		113.9	108.7		116.3	109.9	
Effective Green, g (s)	6.0	6.0		18.4	18.4		113.9	108.7		116.3	109.9	
Actuated g/C Ratio	0.04	0.04		0.12	0.12		0.76	0.73		0.78	0.74	
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	71		151	200		107	3205		154	3244	
v/s Ratio Prot		0.00		c0.03	0.01		0.01	0.43		c0.02	c0.66	
v/s Ratio Perm	0.01			c0.04			0.22			0.29		
v/c Ratio	0.17	0.11		0.54	0.07		0.31	0.59		0.40	0.89	
Uniform Delay, d1	69.3	69.2		60.3	58.0		26.0	9.7		7.9	15.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.7		3.6	0.2		1.6	0.8		1.7	4.3	
Delay (s)	70.9	69.9		63.9	58.2		27.7	10.5		9.6	19.6	
Level of Service	E	E		E	E		C	B		A	B	
Approach Delay (s/veh)		70.3			61.2			10.8			19.4	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	17.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	77.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	187	0	0	0	0	210
Future Volume (vph)	187	0	0	0	0	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			80.2	161.7	
Travel Time (s)	55.9			6.0	12.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	187	0	0	0	0	210
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	0	0	0	0	210
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	187	0	0	0	0	210
Future Volume (vph)	187	0	0	0	0	210
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	187	0	0	0	0	210

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	187	0	210
Volume Left (vph)	187	0	0
Volume Right (vph)	0	0	210
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.5	4.9	3.9
Degree Utilization, x	0.28	0.00	0.23
Capacity (veh/h)	629	719	885
Control Delay (s/veh)	9.4	6.7	8.0
Approach Delay (s/veh)	9.4		8.0
Approach LOS	A		A

Intersection Summary				
Delay	8.7			
Level of Service	A			
Intersection Capacity Utilization	16.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	86	27	47	23	34
Future Volume (vph)	16	86	27	47	23	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886		0.914			
Flt Protected	0.992					0.980
Satd. Flow (prot)	1583	0	1646	0	0	1765
Flt Permitted	0.992					0.980
Satd. Flow (perm)	1583	0	1646	0	0	1765
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	86	27	47	23	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	74	0	0	57
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	86	27	47	23	34
Future Volume (Veh/h)	16	86	27	47	23	34
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)	16	86	27	47	23	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	131	51			74	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	131	51			74	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	92			98	
cM capacity (veh/h)	851	1018			1526	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	102	74	57
Volume Left	16	0	23
Volume Right	86	47	0
cSH	987	1700	1526
Volume to Capacity	0.10	0.04	0.02
Queue Length 95th (m)	2.6	0.0	0.3
Control Delay (s/veh)	9.1	0.0	3.1
Lane LOS	A		A
Approach Delay (s/veh)	9.1	0.0	3.1
Approach LOS	A		

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	84	12	83	194	4	23	26	63	43	5	0
Future Volume (vph)	0	84	12	83	194	4	23	26	63	43	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.998			0.924				
Flt Protected					0.985			0.990			0.957	
Satd. Flow (prot)	0	1851	0	0	1770	0	0	1723	0	0	1802	0
Flt Permitted					0.985			0.990			0.957	
Satd. Flow (perm)	0	1851	0	0	1770	0	0	1723	0	0	1802	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
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
Adj. Flow (vph)	0	84	12	83	194	4	23	26	63	43	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	281	0	0	112	0	0	48	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	84	12	83	194	4	23	26	63	43	5	0
Future Volume (Veh/h)	0	84	12	83	194	4	23	26	63	43	5	0
Sign Control		Free			Free			Stop			Stop	
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)	0	84	12	83	194	4	23	26	63	43	5	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	198			96			455	454	90	528	458	196
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	198			96			455	454	90	528	458	196
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			95	95	93	89	99	100
cM capacity (veh/h)	1375			1498			490	474	968	396	472	845

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	96	281	112	48
Volume Left	0	83	23	43
Volume Right	12	4	63	0
cSH	1375	1498	671	402
Volume to Capacity	0.00	0.06	0.17	0.12
Queue Length 95th (m)	0.0	1.3	4.5	3.1
Control Delay (s/veh)	0.0	2.6	11.4	15.2
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	2.6	11.4	15.2
Approach LOS			B	C

Intersection Summary				
Average Delay		5.1		
Intersection Capacity Utilization		37.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	86	72	28	291	69	38
Future Volume (vph)	86	72	28	291	69	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938				0.952	
Flt Protected				0.996	0.969	
Satd. Flow (prot)	1767	0	0	1876	1737	0
Flt Permitted				0.996	0.969	
Satd. Flow (perm)	1767	0	0	1876	1737	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	86	72	28	291	69	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	0	0	319	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	7	67	10	4	46
Future Volume (vph)	4	7	67	10	4	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.982			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1560	0	1768	0	0	1793
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1560	0	1768	0	0	1793
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	7	67	10	4	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	77	0	0	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	7	67	10	4	46
Future Volume (Veh/h)	4	7	67	10	4	46
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	67	10	4	46
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	126	72			77	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126	72			77	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	866	990			1522	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	77	50
Volume Left	4	0	4
Volume Right	7	10	0
cSH	941	1700	1522
Volume to Capacity	0.01	0.05	0.00*
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s/veh)	8.9	0.0	0.6
Lane LOS	A		A
Approach Delay (s/veh)	8.9	0.0	0.6
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	12	9	9	41	16	11	94	9	12	86	2
Future Volume (vph)	2	12	9	9	41	16	11	94	9	12	86	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947			0.967			0.989			0.997	
Flt Protected		0.996			0.993			0.995			0.994	
Satd. Flow (prot)	0	1640	0	0	1669	0	0	1772	0	0	1784	0
Flt Permitted		0.996			0.993			0.995			0.994	
Satd. Flow (perm)	0	1640	0	0	1669	0	0	1772	0	0	1784	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
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
Adj. Flow (vph)	2	12	9	9	41	16	11	94	9	12	86	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	66	0	0	114	0	0	100	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	12	9	9	41	16	11	94	9	12	86	2
Future Volume (Veh/h)	2	12	9	9	41	16	11	94	9	12	86	2
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)	2	12	9	9	41	16	11	94	9	12	86	2
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	268	236	87	247	233	99	88			103		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	268	236	87	247	233	99	88			103		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	99	94	98	99			99		
cM capacity (veh/h)	634	655	971	683	657	957	1508			1489		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	66	114	100
Volume Left	2	9	11	12
Volume Right	9	16	9	2
cSH	748	715	1508	1489
Volume to Capacity	0.03	0.09	0.00*	0.00*
Queue Length 95th (m)	0.7	2.3	0.2	0.2
Control Delay (s/veh)	10.0	10.5	0.8	0.9
Lane LOS	A	B	A	A
Approach Delay (s/veh)	10.0	10.5	0.8	0.9
Approach LOS	A	B		

Intersection Summary				
Average Delay		3.7		
Intersection Capacity Utilization	19.9%	ICU Level of Service		A
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	28	16	0	49	0	67	134	8	0	133	22
Future Volume (vph)	9	28	16	0	49	0	67	134	8	0	133	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959						0.995			0.981	
Flt Protected		0.992						0.984				
Satd. Flow (prot)	0	1792	0	0	1883	0	0	1763	0	0	1766	0
Flt Permitted		0.992						0.984				
Satd. Flow (perm)	0	1792	0	0	1883	0	0	1763	0	0	1766	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
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
Adj. Flow (vph)	9	28	16	0	49	0	67	134	8	0	133	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	49	0	0	209	0	0	155	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	28	16	0	49	0	67	134	8	0	133	22
Future Volume (Veh/h)	9	28	16	0	49	0	67	134	8	0	133	22
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)	9	28	16	0	49	0	67	134	8	0	133	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	441	420	144	446	427	138	155			142		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	441	420	144	446	427	138	155			142		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	94	98	100	90	100	95			100		
cM capacity (veh/h)	470	500	903	474	495	910	1425			1441		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	49	209	155
Volume Left	9	0	67	0
Volume Right	16	0	8	22
cSH	571	495	1425	1441
Volume to Capacity	0.09	0.10	0.05	0.00
Queue Length 95th (m)	2.3	2.5	1.1	0.0
Control Delay (s/veh)	12.0	13.1	2.7	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	12.0	13.1	2.7	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.0		
Intersection Capacity Utilization	39.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	34	2	1	39	11	5	46	15	8	25	17
Future Volume (vph)	20	34	2	1	39	11	5	46	15	8	25	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.971			0.969			0.954	
Flt Protected		0.982			0.999			0.996			0.992	
Satd. Flow (prot)	0	1699	0	0	1747	0	0	1738	0	0	1704	0
Flt Permitted		0.982			0.999			0.996			0.992	
Satd. Flow (perm)	0	1699	0	0	1747	0	0	1738	0	0	1704	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
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
Adj. Flow (vph)	20	34	2	1	39	11	5	46	15	8	25	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	51	0	0	66	0	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	34	2	1	39	11	5	46	15	8	25	17
Future Volume (Veh/h)	20	34	2	1	39	11	5	46	15	8	25	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)	20	34	2	1	39	11	5	46	15	8	25	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	144	121	34	132	122	54	42			61		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	144	121	34	132	122	54	42			61		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	100	100	95	99	100			99		
cM capacity (veh/h)	780	763	1040	805	762	1014	1567			1542		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	56	51	66	50
Volume Left	20	1	5	8
Volume Right	2	11	15	17
cSH	777	806	1567	1542
Volume to Capacity	0.07	0.06	0.00*	0.00*
Queue Length 95th (m)	1.8	1.5	0.1	0.1
Control Delay (s/veh)	10.0	9.8	0.6	1.2
Lane LOS	A	A	A	A
Approach Delay (s/veh)	10.0	9.8	0.6	1.2
Approach LOS	A	A		

Intersection Summary				
Average Delay		5.2		
Intersection Capacity Utilization		21.1%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	63	0	8	76	90	6	19	5	80	19	5
Future Volume (vph)	5	63	0	8	76	90	6	19	5	80	19	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.930			0.977			0.994	
Flt Protected		0.996			0.998			0.990			0.963	
Satd. Flow (prot)	0	1793	0	0	1671	0	0	1742	0	0	1724	0
Flt Permitted		0.996			0.998			0.990			0.963	
Satd. Flow (perm)	0	1793	0	0	1671	0	0	1742	0	0	1724	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
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
Adj. Flow (vph)	5	63	0	8	76	90	6	19	5	80	19	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	174	0	0	30	0	0	104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	63	0	8	76	90	6	19	5	80	19	5
Future Volume (Veh/h)	5	63	0	8	76	90	6	19	5	80	19	5
Sign Control		Free			Free			Stop			Stop	
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)	5	63	0	8	76	90	6	19	5	80	19	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	166			63			225	255	63	225	210	121
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	166			63			225	255	63	225	210	121
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	97	100	89	97	99
cM capacity (veh/h)	1412			1540			707	643	1002	706	681	930

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	68	174	30	104
Volume Left	5	8	6	80
Volume Right	0	90	5	5
cSH	1412	1540	697	710
Volume to Capacity	0.00*	0.00*	0.04	0.15
Queue Length 95th (m)	0.1	0.1	1.0	3.9
Control Delay (s/veh)	0.6	0.4	10.4	10.9
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.6	0.4	10.4	10.9
Approach LOS			B	B

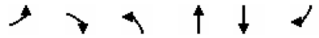
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	30.8%	ICU Level of Service		A
Analysis Period (min)	15			

* Value less than 0.01.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	152	52	60	61	67	98
Future Volume (vph)	152	52	60	61	67	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966				0.920	
Flt Protected	0.964		0.950			
Satd. Flow (prot)	1677	0	1711	0	1657	0
Flt Permitted	0.964		0.950			
Satd. Flow (perm)	1677	0	1711	0	1657	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	52	60	61	67	98
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	60	61	165	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	152	52	60	61	67	98
Future Volume (Veh/h)	152	52	60	61	67	98
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)	152	52	60	61	67	98
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	297	116	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	297	116	165			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	94	96			
cM capacity (veh/h)	665	936	1413			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	204	60	165
Volume Left	152	60	0
Volume Right	52	0	98
cSH	718	1413	1700
Volume to Capacity	0.28	0.04	0.10
Queue Length 95th (m)	8.9	1.0	0.0
Control Delay (s/veh)	12.0	7.7	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	12.0	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	33	48	0	34	19	11
Future Volume (vph)	33	48	0	34	19	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.950	
Flt Protected					0.969	
Satd. Flow (prot)	1657	0	0	1801	1658	0
Flt Permitted					0.969	
Satd. Flow (perm)	1657	0	0	1801	1658	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	48	0	34	19	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	81	0	0	34	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	33	48	0	34	19	11
Future Volume (Veh/h)	33	48	0	34	19	11
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	33	48	0	34	19	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	49	0	108	44	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	49	0	108	44	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	96	96	100	96	99	
cM capacity (veh/h)	833	1085	800	838	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	81	34	30
Volume Left	0	0	19
Volume Right	48	0	11
cSH	966	838	1623
Volume to Capacity	0.08	0.04	0.01
Queue Length 95th (m)	2.1	1.0	0.3
Control Delay (s/veh)	9.1	9.5	4.6
Lane LOS	A	A	A
Approach Delay (s/veh)	9.1	9.5	4.6
Approach LOS	A	A	

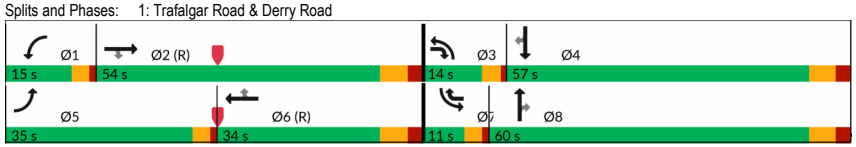
Intersection Summary				
Average Delay		8.2		
Intersection Capacity Utilization		14.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	798	1641	380	387	750	553	302	1979	313	211	1686	73
Future Volume (vph)	798	1641	380	387	750	553	302	1979	313	211	1686	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			164			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	814	1674	388	395	765	564	308	2019	319	215	1720	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	814	1674	388	395	765	564	308	2019	319	215	1720	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	35.0	54.0	14.0	15.0	34.0	11.0	14.0	60.0	60.0	11.0	57.0	57.0
Total Split (%)	25.0%	38.6%	10.0%	10.7%	24.3%	7.9%	10.0%	42.9%	42.9%	7.9%	40.7%	40.7%
Maximum Green (s)	31.0	47.1	10.0	11.0	27.1	7.0	10.0	53.2	53.2	7.0	50.2	50.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	32.0	49.1	66.0	12.0	29.1	43.0	11.0	55.2	55.2	8.0	52.2	52.2
Actuated g/C Ratio	0.23	0.35	0.47	0.09	0.21	0.31	0.08	0.39	0.39	0.06	0.37	0.37
v/c Ratio	1.03	1.06	0.50	1.33	0.85	1.00	1.29	1.23	0.45	1.30	1.09	0.13
Control Delay (s/veh)	97.7	81.4	24.4	217.1	63.8	77.8	200.9	138.3	15.5	219.6	94.5	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	97.7	81.4	24.4	217.1	63.8	77.8	200.9	138.3	15.5	219.6	94.5	1.0
LOS	F	F	C	F	E	E	F	F	B	F	F	A
Approach Delay (s/veh)		78.3			103.5			130.8			104.5	
Approach LOS		E			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.33		
Intersection Signal Delay (s/veh): 103.7	Intersection LOS: F	
Intersection Capacity Utilization 105.9%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	814	1674	388	395	765	564	308	2019	319	215	1720	74
v/c Ratio	1.03	1.06	0.50	1.33	0.85	1.00	1.29	1.23	0.45	1.30	1.09	0.13
Control Delay (s/veh)	97.7	81.4	24.4	217.1	63.8	77.8	200.9	138.3	15.5	219.6	94.5	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	97.7	81.4	24.4	217.1	63.8	77.8	200.9	138.3	15.5	219.6	94.5	1.0
Queue Length 50th (m)	~129.3	~212.0	49.5	~74.0	90.6	136.7	~60.4	~300.9	22.3	~42.7	~236.2	0.0
Queue Length 95th (m)	m#163.0	#247.2	m65.1	#107.1	#110.3	#213.9	m#76.7	m#326.9	m35.9	#71.2	#271.3	1.5
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	793	1585	779	297	895	565	239	1646	716	166	1571	550
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.06	0.50	1.33	0.85	1.00	1.29	1.23	0.45	1.30	1.09	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	798	1641	380	387	750	553	302	1979	313	211	1686	73
Future Volume (vph)	798	1641	380	387	750	553	302	1979	313	211	1686	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	4520	1585	3471	4309	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	814	1674	388	395	765	564	308	2019	319	215	1720	74
RTOR Reduction (vph)	0	0	34	0	0	67	0	0	99	0	0	46
Lane Group Flow (vph)	814	1674	354	395	765	497	308	2019	220	215	1720	28
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	31.0	47.1	57.1	11.0	27.1	34.1	10.0	53.2	53.2	7.0	50.2	50.2
Effective Green, g (s)	32.0	49.1	61.1	12.0	29.1	38.1	11.0	55.2	55.2	8.0	52.2	52.2
Actuated g/C Ratio	0.23	0.35	0.44	0.09	0.21	0.27	0.08	0.39	0.39	0.06	0.37	0.37
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	793	1585	691	297	895	444	239	1646	617	166	1571	472
v/s Ratio Prot	c0.23	c0.37	c0.04	c0.11	0.18	0.07	c0.10	c0.48		0.07	0.41	
v/s Ratio Perm			0.18			0.23			0.14			0.02
v/c Ratio	1.03	1.06	0.51	1.33	0.85	1.12	1.29	1.23	0.36	1.30	1.09	0.06
Uniform Delay, d1	54.0	45.4	28.6	64.0	53.4	50.9	64.5	42.4	29.9	66.0	43.9	28.1
Progression Factor	1.34	1.12	1.09	1.00	1.00	1.00	1.13	0.85	0.98	1.00	1.00	1.00
Incremental Delay, d2	28.9	32.9	0.6	169.8	10.2	79.5	147.2	105.3	0.4	170.0	53.3	0.1
Delay (s)	101.4	84.0	31.7	233.8	63.6	130.4	219.8	141.4	29.8	236.0	97.2	28.3
Level of Service	F	F	C	F	E	F	F	F	C	F	F	C
Approach Delay (s/veh)		81.9			124.5			137.1			109.5	
Approach LOS		F			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	111.6	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.20			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	105.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

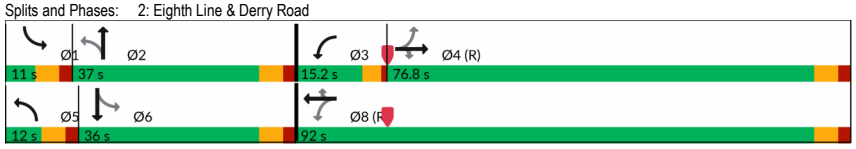
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	1779	128	131	976	21	155	30	134	8	10	12
Future Volume (vph)	36	1779	128	131	976	21	155	30	134	8	10	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.877			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1613	0	1217	1608	0
Flt Permitted	0.233			0.046			0.455			0.649		
Satd. Flow (perm)	315	4520	1601	88	4391	1633	874	1613	0	831	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		140			13	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	38	1853	133	136	1017	22	161	31	140	8	10	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1853	133	136	1017	22	161	171	0	8	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	87.2	87.2	87.2	105.3	103.3	103.3	23.7	22.5		12.8	11.1	
Actuated g/C Ratio	0.62	0.62	0.62	0.75	0.74	0.74	0.17	0.16		0.09	0.08	
v/c Ratio	0.19	0.66	0.13	0.63	0.31	0.02	0.67	0.45		0.09	0.17	
Control Delay (s/veh)	18.2	20.3	4.7	40.1	7.4	0.0	65.3	16.6		45.8	38.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	18.2	20.3	4.7	40.1	7.4	0.0	65.3	16.6		45.8	38.0	
LOS	B	C	A	D	A	A	E	B		D	D	
Approach Delay (s/veh)		19.2			11.0			40.2			40.0	
Approach LOS		B			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 18.6		Intersection LOS: B	
Intersection Capacity Utilization 70.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	1853	133	136	1017	22	161	171	8	23
v/c Ratio	0.19	0.66	0.13	0.63	0.31	0.02	0.67	0.45	0.09	0.17
Control Delay (s/veh)	18.2	20.3	4.7	40.1	7.4	0.0	65.3	16.6	45.8	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.2	20.3	4.7	40.1	7.4	0.0	65.3	16.6	45.8	38.0
Queue Length 50th (m)	6.8	156.9	3.9	21.0	48.3	0.0	37.3	6.8	2.4	2.7
Queue Length 95th (m)	16.3	170.7	12.9	40.8	47.8	0.0	#81.6	31.4	9.4	11.5
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	196	2814	1035	227	3241	1223	242	482	92	354
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.66	0.13	0.60	0.31	0.02	0.67	0.35	0.09	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	1779	128	131	976	21	155	30	134	8	10	12
Future Volume (vph)	36	1779	128	131	976	21	155	30	134	8	10	12
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.88		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1613		1217	1608	
Flt Permitted	0.23	1.00	1.00	0.05	1.00	1.00	0.45	1.00		0.65	1.00	
Satd. Flow (perm)	315	4520	1601	89	4391	1633	874	1613		831	1608	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	38	1853	133	136	1017	22	161	31	140	8	10	12
RTOR Reduction (vph)	0	0	42	0	0	7	0	118	0	0	12	0
Lane Group Flow (vph)	38	1853	91	136	1017	15	161	54	0	8	11	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	82.3	82.3	82.3	98.5	98.5	98.5	29.5	22.5		10.5	9.5	
Effective Green, g (s)	82.3	82.3	82.3	98.5	98.5	98.5	29.5	22.5		10.5	9.5	
Actuated g/C Ratio	0.59	0.59	0.59	0.70	0.70	0.70	0.21	0.16		0.08	0.07	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	185	2657	941	213	3089	1148	279	259		65	109	
v/s Ratio Prot		c0.41		c0.06	0.23		c0.06	0.03		0.00	0.01	
v/s Ratio Perm	0.12		0.06	0.39		0.01	c0.06			0.01		
v/c Ratio	0.21	0.70	0.10	0.64	0.33	0.01	0.58	0.21		0.12	0.10	
Uniform Delay, d1	13.5	20.2	12.6	34.0	8.0	6.2	48.0	51.0		60.3	61.2	
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	2.5	1.5	0.2	6.2	0.3	0.0	2.9	0.4		0.9	0.4	
Delay (s)	16.0	21.7	12.8	40.1	8.3	6.2	50.9	51.4		61.1	61.6	
Level of Service	B	C	B	D	A	A	D	D		E	E	
Approach Delay (s/veh)		21.0			11.9			51.1			61.5	
Approach LOS		C			B			D			E	

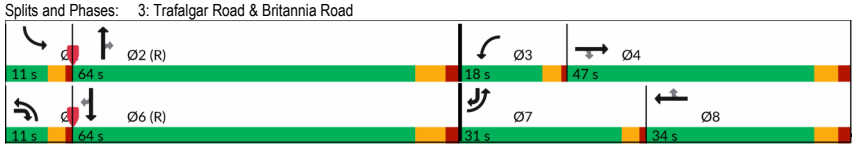
Intersection Summary				
HCM 2000 Control Delay (s/veh)	21.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	674	1044	461	252	768	261	189	1488	225	145	1980	822
Future Volume (vph)	674	1044	461	252	768	261	189	1488	225	145	1980	822
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			125			165			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	681	1055	466	255	776	264	191	1503	227	146	2000	830
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	1055	466	255	776	264	191	1503	227	146	2000	830
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	31.0	47.0	11.0	18.0	34.0	34.0	11.0	64.0	64.0	11.0	64.0	31.0
Total Split (%)	22.1%	33.6%	7.9%	12.9%	24.3%	24.3%	7.9%	45.7%	45.7%	7.9%	45.7%	22.1%
Maximum Green (s)	27.0	41.0	7.0	14.0	28.0	28.0	7.0	57.0	57.0	7.0	57.0	27.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	28.0	42.9	56.6	14.4	29.4	29.4	8.6	59.1	59.1	8.6	59.0	93.0
Actuated g/C Ratio	0.20	0.31	0.40	0.10	0.21	0.21	0.06	0.42	0.42	0.06	0.42	0.66
v/c Ratio	1.01	0.77	0.70	0.71	0.84	0.60	1.09	0.84	0.30	0.82	1.10	0.90
Control Delay (s/veh)	92.3	48.5	36.6	72.0	61.9	31.8	151.1	41.4	8.8	85.0	82.7	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	92.3	48.5	36.6	72.0	61.9	31.8	151.1	41.4	8.8	85.0	82.7	37.5
LOS	F	D	D	E	E	C	F	D	A	F	F	D
Approach Delay (s/veh)		59.5			57.8			48.5			70.2	
Approach LOS		E			E			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay (s/veh): 60.5		Intersection LOS: E	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	1055	466	255	776	264	191	1503	227	146	2000	830
v/c Ratio	1.01	0.77	0.70	0.71	0.84	0.60	1.09	0.84	0.30	0.82	1.10	0.90
Control Delay (s/veh)	92.3	48.5	36.6	72.0	61.9	31.8	151.1	41.4	8.8	85.0	82.7	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	92.3	48.5	36.6	72.0	61.9	31.8	151.1	41.4	8.8	85.0	82.7	37.5
Queue Length 50th (m)	~103.7	113.2	97.7	35.9	88.7	34.5	~35.9	160.8	10.4	22.2	~279.5	258.7
Queue Length 95th (m)	#145.3	133.3	140.7	50.5	107.6	64.2	#63.6	185.0	28.3	m23.9	m#244.7	m247.7
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	674	1376	665	375	949	448	176	1794	756	177	1810	925
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.77	0.70	0.68	0.82	0.59	1.09	0.84	0.30	0.82	1.10	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	674	1044	461	252	768	261	189	1488	225	145	1980	822
Future Volume (vph)	674	1044	461	252	768	261	189	1488	225	145	1980	822
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	681	1055	466	255	776	264	191	1503	227	146	2000	830
RTOR Reduction (vph)	0	0	39	0	0	99	0	0	95	0	0	20
Lane Group Flow (vph)	681	1055	427	255	776	165	191	1503	132	146	2000	810
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	27.0	41.0	48.6	13.4	27.4	27.4	7.6	57.0	57.0	7.6	57.0	84.0
Effective Green, g (s)	28.0	43.0	52.6	14.4	29.4	29.4	8.6	59.0	59.0	8.6	59.0	88.0
Actuated g/C Ratio	0.20	0.31	0.38	0.10	0.21	0.21	0.06	0.42	0.42	0.06	0.42	0.63
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	674	1374	584	360	930	342	176	1792	659	177	1810	858
v/s Ratio Prot	c0.20	0.24	0.05	0.07	c0.18		c0.07	0.35		0.05	c0.47	0.20
v/s Ratio Perm			0.22			0.10			0.08			0.40
v/c Ratio	1.01	0.77	0.73	0.71	0.83	0.48	1.09	0.84	0.20	0.82	1.10	0.94
Uniform Delay, d1	56.0	44.0	37.6	60.8	53.0	48.6	65.7	36.2	25.6	65.0	40.5	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.78	1.63
Incremental Delay, d2	37.3	2.6	4.7	6.3	6.5	1.1	92.4	4.9	0.7	13.4	51.6	10.3
Delay (s)	93.3	46.6	42.3	67.0	59.5	49.7	158.1	41.1	26.3	81.1	83.2	49.0
Level of Service	F	D	D	E	E	D	F	D	C	F	F	D
Approach Delay (s/veh)		60.1			59.0			51.0			73.5	
Approach LOS		E			E			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	62.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.02			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	92.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

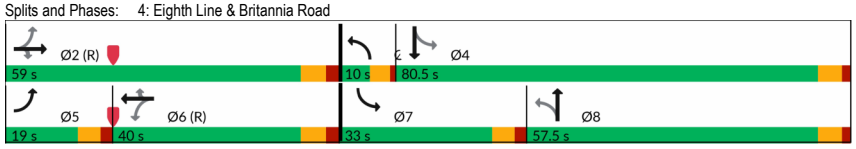
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	1164	55	24	674	130	41	222	29	201	335	201
Future Volume (vph)	163	1164	55	24	674	130	41	222	29	201	335	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792	0	1825	1810	0
Flt Permitted	0.250			0.183			0.177			0.354		
Satd. Flow (perm)	480	4476	1306	352	4476	1633	312	1792	0	680	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			140		5			30	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	166	1188	56	24	688	133	42	227	30	205	342	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	1188	56	24	688	133	42	257	0	205	556	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	77.0	76.2	76.2	56.8	56.8	56.8	45.2	38.5		60.5	52.8	
Actuated g/C Ratio	0.52	0.51	0.51	0.38	0.38	0.38	0.30	0.26		0.40	0.35	
v/c Ratio	0.45	0.52	0.08	0.18	0.40	0.19	0.29	0.55		0.51	0.84	
Control Delay (s/veh)	26.5	27.6	0.9	45.1	38.2	6.3	28.4	50.0		32.6	53.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.5	27.6	0.9	45.1	38.2	6.3	28.4	50.0		32.6	53.6	
LOS	C	C	A	D	D	A	C	D		C	D	
Approach Delay (s/veh)		26.4			33.4			47.0			48.0	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 35.0		Intersection LOS: C	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	166	1188	56	24	688	133	42	257	205	556
v/c Ratio	0.45	0.52	0.08	0.18	0.40	0.19	0.29	0.55	0.51	0.84
Control Delay (s/veh)	26.5	27.6	0.9	45.1	38.2	6.3	28.4	50.0	32.6	53.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.5	27.6	0.9	45.1	38.2	6.3	28.4	50.0	32.6	53.6
Queue Length 50th (m)	26.7	101.9	0.0	4.8	65.1	0.0	7.7	66.7	39.2	143.9
Queue Length 95th (m)	48.4	139.2	1.7	15.8	96.0	14.9	13.4	87.3	49.1	165.9
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	379	2280	712	133	1699	707	144	624	481	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.52	0.08	0.18	0.40	0.19	0.29	0.41	0.43	0.60

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	1164	55	24	674	130	41	222	29	201	335	201
Future Volume (vph)	163	1164	55	24	674	130	41	222	29	201	335	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792		1825	1810	
Flt Permitted	0.25	1.00	1.00	0.18	1.00	1.00	0.18	1.00		0.35	1.00	
Satd. Flow (perm)	479	4476	1306	352	4476	1633	312	1792		680	1810	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	166	1188	56	24	688	133	42	227	30	205	342	214
RTOR Reduction (vph)	0	0	28	0	0	83	0	4	0	0	19	0
Lane Group Flow (vph)	166	1188	28	24	688	50	42	253	0	205	537	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	75.3	75.3	75.3	55.9	55.9	55.9	43.8	39.4		61.7	52.8	
Effective Green, g (s)	75.3	75.3	75.3	55.9	55.9	55.9	43.8	39.4		61.7	52.8	
Actuated g/C Ratio	0.50	0.50	0.50	0.37	0.37	0.37	0.29	0.26		0.41	0.35	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	361	2254	657	131	1673	610	131	472		405	639	
v/s Ratio Prot	0.04	c0.27			0.15		0.01	0.14		c0.06	c0.30	
v/s Ratio Perm	0.19		0.02	0.07		0.03	0.08			0.15		
v/c Ratio	0.46	0.53	0.04	0.18	0.41	0.08	0.32	0.54		0.51	0.84	
Uniform Delay, d1	21.5	25.1	18.8	31.5	34.6	30.2	40.4	47.2		30.5	44.5	
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	0.9	0.9	0.1	3.1	0.7	0.3	1.4	1.2		1.0	9.5	
Delay (s)	22.5	26.0	18.9	34.5	35.4	30.5	41.8	48.4		31.5	54.0	
Level of Service	C	C	B	C	D	C	D	D		C	D	
Approach Delay (s/veh)		25.3			34.6			47.5			47.9	
Approach LOS		C			C			D			D	

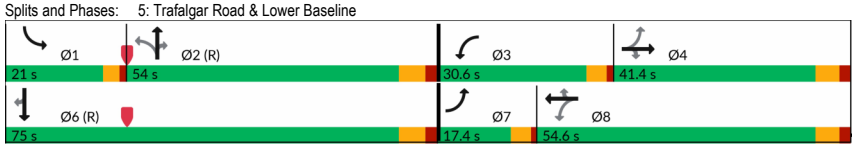
Intersection Summary				
HCM 2000 Control Delay (s/veh)	34.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5	
Intersection Capacity Utilization	93.0%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	498	98	410	198	202	39	1505	231	416	2142	127
Future Volume (vph)	206	498	98	410	198	202	39	1505	231	416	2142	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.629			0.101			0.083			0.950		
Satd. Flow (perm)	1151	1902	1601	190	1883	1541	142	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			210			139			91
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	215	519	102	427	206	210	39	1505	231	433	2231	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	519	102	427	206	210	39	1505	231	433	2231	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	25.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	9.5	24.2	24.2	31.6	31.6	31.6	11.0	31.6	31.6
Total Split (s)	17.4	41.4	41.4	30.6	54.6	54.6	54.0	54.0	54.0	21.0	75.0	75.0
Total Split (%)	11.8%	28.2%	28.2%	20.8%	37.1%	37.1%	36.7%	36.7%	36.7%	14.3%	51.0%	51.0%
Maximum Green (s)	12.9	35.2	35.2	26.1	48.4	48.4	47.4	47.4	47.4	17.0	68.4	68.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	4.6	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	51.5	37.2	37.2	68.5	50.7	50.7	48.4	49.4	49.4	18.0	70.4	70.4
Actuated g/C Ratio	0.35	0.25	0.25	0.47	0.34	0.34	0.33	0.34	0.34	0.12	0.48	0.48
v/c Ratio	0.47	1.08	0.21	1.11	0.32	0.31	0.85	1.06	0.38	1.07	1.09	0.17
Control Delay (s/veh)	29.6	114.7	4.9	121.5	37.2	5.4	142.2	88.9	16.2	123.0	84.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	114.7	4.9	121.5	37.2	5.4	142.2	88.9	16.2	123.0	84.1	8.1
LOS	C	F	A	F	D	A	F	F	B	F	F	A
Approach Delay (s/veh)		79.4			72.0			80.6			86.5	
Approach LOS		E			E			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 147		
Actuated Cycle Length: 147		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.11		
Intersection Signal Delay (s/veh): 81.9		Intersection LOS: F
Intersection Capacity Utilization 126.5%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	215	519	102	427	206	210	39	1505	231	433	2231	132
v/c Ratio	0.47	1.08	0.21	1.11	0.32	0.31	0.85	1.06	0.38	1.07	1.09	0.17
Control Delay (s/veh)	29.6	114.7	4.9	121.5	37.2	5.4	142.2	88.9	16.2	123.0	84.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	114.7	4.9	121.5	37.2	5.4	142.2	88.9	16.2	123.0	84.1	8.1
Queue Length 50th (m)	39.1	~169.5	0.0	~127.9	45.0	0.0	11.1	~211.8	19.4	~72.6	~314.7	6.5
Queue Length 95th (m)	58.0	#239.5	9.8	#195.8	66.9	18.0	#36.8	#247.4	42.9	#107.1	#346.9	18.8
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	461	481	497	383	649	669	46	1416	613	406	2056	775
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	1.08	0.21	1.11	0.32	0.31	0.85	1.06	0.38	1.07	1.09	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	498	98	410	198	202	39	1505	231	416	2142	127
Future Volume (vph)	206	498	98	410	198	202	39	1505	231	416	2142	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	5.6	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	1902	1601	1789	1883	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.63	1.00	1.00	0.10	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1150	1902	1601	190	1883	1541	142	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	215	519	102	427	206	210	39	1505	231	433	2231	132
RTOR Reduction (vph)	0	0	76	0	0	138	0	0	92	0	0	47
Lane Group Flow (vph)	215	519	26	427	206	72	39	1505	139	433	2231	85
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	47.8	35.2	35.2	65.8	48.7	48.7	47.4	47.4	47.4	17.0	68.4	68.4
Effective Green, g (s)	49.8	37.2	37.2	66.8	50.7	50.7	48.4	49.4	49.4	18.0	70.4	70.4
Actuated g/C Ratio	0.34	0.25	0.25	0.45	0.34	0.34	0.33	0.34	0.34	0.12	0.48	0.48
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	6.6	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	443	481	405	381	649	531	46	1416	521	406	2056	728
v/s Ratio Prot	0.04	0.27		c0.21	0.11			0.36		0.13	c0.52	
v/s Ratio Perm	0.12		0.02	c0.30		0.05	0.27		0.09			0.06
v/c Ratio	0.49	1.08	0.06	1.12	0.32	0.14	0.85	1.06	0.27	1.07	1.09	0.12
Uniform Delay, d1	36.7	54.9	41.7	47.1	35.4	33.1	45.9	48.8	35.6	64.5	38.3	21.1
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	0.8	64.0	0.1	83.0	0.6	0.2	92.7	42.6	1.2	63.5	47.3	0.3
Delay (s)	37.5	118.9	41.8	130.1	36.0	33.3	138.5	91.4	36.8	128.0	85.6	21.5
Level of Service	D	F	D	F	D	C	F	F	D	F	F	C
Approach Delay (s/veh)		88.5			83.0			85.3			89.2	
Approach LOS		F			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	87.2	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.14			
Actuated Cycle Length (s)	147.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	126.5%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

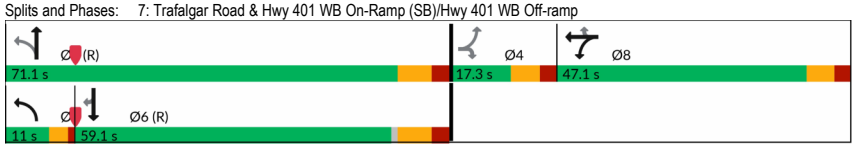
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Future Volume (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.075					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	144	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			327						136
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

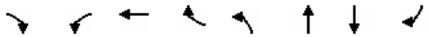
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	27.5	27.5	27.5	93.4	89.3			84.9	84.9
Actuated g/C Ratio			0.07	0.20	0.20	0.20	0.69	0.66			0.63	0.63
v/c Ratio			0.03	0.82	0.03	0.53	0.08	0.47			0.58	0.20
Control Delay (s/veh)			0.3	63.4	40.1	12.1	11.1	13.8			19.1	5.4
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.3	63.4	40.1	12.1	11.1	13.8			19.1	5.4
LOS			A	E	D	B	B	B			B	A
Approach Delay (s/veh)		0.3			40.0			13.8			17.8	
Approach LOS		A			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 21.6		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

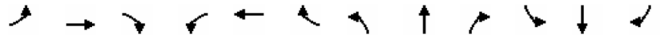
Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp





Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	7	480	10	405	15	1213	1573	170
v/c Ratio	0.03	0.82	0.03	0.53	0.08	0.47	0.58	0.20
Control Delay (s/veh)	0.3	63.4	40.1	12.1	11.1	13.8	19.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.3	63.4	40.1	12.1	11.1	13.8	19.1	5.4
Queue Length 50th (m)	0.0	75.9	2.2	11.2	1.1	63.8	83.8	3.3
Queue Length 95th (m)	0.0	92.3	6.7	27.8	5.3	126.6	191.7	24.6
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	240	849	567	955	186	2598	2701	850
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.57	0.02	0.42	0.08	0.47	0.58	0.20

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Future Volume (vph)	0	0	7	480	10	405	15	1213	0	0	1573	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	145	3941			4309	1276
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	7	480	10	405	15	1213	0	0	1573	170
RTOR Reduction (vph)	0	0	7	0	0	261	0	0	0	0	0	59
Lane Group Flow (vph)	0	0	0	480	10	144	15	1213	0	0	1573	111
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	27.5	27.5	27.5	83.5	83.5			76.7	76.7
Effective Green, g (s)			2.0	27.5	27.5	27.5	83.5	83.5			76.7	76.7
Actuated g/C Ratio			0.01	0.20	0.20	0.20	0.62	0.62			0.57	0.57
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	584	389	498	124	2428			2439	722
v/s Ratio Prot				c0.17	0.01		0.00	c0.31			c0.37	
v/s Ratio Perm			c0.00			0.06	0.07					0.09
v/c Ratio			0.00	0.82	0.03	0.29	0.12	0.50			0.64	0.15
Uniform Delay, d1			65.8	51.7	43.3	45.7	13.5	14.4			20.1	14.0
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	8.7	0.0	0.1	0.2	0.7			1.3	0.5
Delay (s)			65.8	60.3	43.3	45.8	13.7	15.2			21.4	14.4
Level of Service			E	E	D	D	B	B			C	B
Approach Delay (s/veh)		65.8			53.6			15.1			20.7	
Approach LOS		E			D			B			C	

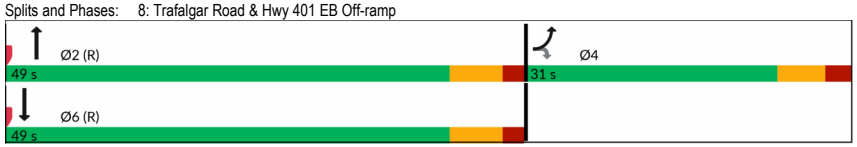
Intersection Summary					
HCM 2000 Control Delay (s/veh)	26.6	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	135.5	Sum of lost time (s)		26.5	
Intersection Capacity Utilization	71.2%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	890	0	2172	1069	0
Future Volume (vph)	165	890	0	2172	1069	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.891	0.850				
Flt Protected	0.987					
Satd. Flow (prot)	2822	1339	0	4154	4117	0
Flt Permitted	0.987					
Satd. Flow (perm)	2822	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	72	72				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	165	890	0	2172	1069	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	610	445	0	2172	1069	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
v/c Ratio	0.91dr	0.98		1.00	0.49	
Control Delay (s/veh)	26.1	64.8		38.7	13.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.1	64.8		38.7	13.2	
LOS	C	E		D	B	
Approach Delay (s/veh)	42.4			38.7	13.2	
Approach LOS	D			D	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay (s/veh): 33.2		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	610	445	2172	1069
v/c Ratio	0.91dr	0.98	1.00	0.49
Control Delay (s/veh)	26.1	64.8	38.7	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.1	64.8	38.7	13.2
Queue Length 50th (m)	45.6	69.0	139.6	44.5
Queue Length 95th (m)	67.1	#138.9	#193.1	57.7
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	897	452	2180	2161
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.68	0.98	1.00	0.49

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	890	0	2172	1069	0
Future Volume (vph)	165	890	0	2172	1069	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2820	1339		4154	4117	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2820	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	890	0	2172	1069	0
RTOR Reduction (vph)	50	50	0	0	0	0
Lane Group Flow (vph)	560	395	0	2172	1069	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0		42.0	42.0	
Effective Green, g (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	846	401		2180	2161	
v/s Ratio Prot	0.20			c0.52	0.26	
v/s Ratio Perm		c0.29				
v/c Ratio	0.91dr	0.98		1.00	0.49	
Uniform Delay, d1	24.5	27.8		18.9	12.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	40.4		18.4	0.8	
Delay (s)	26.4	68.2		37.4	13.0	
Level of Service	C	E		D	B	
Approach Delay (s/veh)	44.0			37.4	13.0	
Approach LOS	D			D	B	

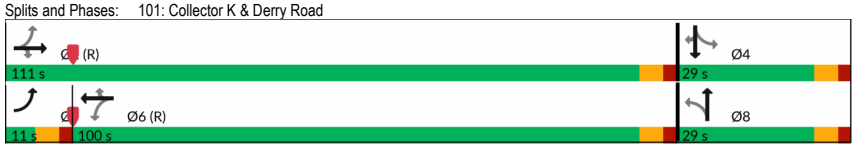
Intersection Summary				
HCM 2000 Control Delay (s/veh)	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	2753	26	0	1243	12	146	0	0	65	0	24
Future Volume (vph)	36	2753	26	0	1243	12	146	0	0	65	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	4520	1601	1883	4520	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.124						0.757			0.757		
Satd. Flow (perm)	234	4520	1601	1883	4520	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23			70						126
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	2992	28	0	1351	13	159	0	0	71	0	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	2992	28	0	1351	13	159	0	0	71	0	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	111.0	111.0	100.0	100.0	100.0	29.0	29.0		29.0	29.0	29.0
Total Split (%)	7.9%	79.3%	79.3%	71.4%	71.4%	71.4%	20.7%	20.7%		20.7%	20.7%	20.7%
Maximum Green (s)	5.0	105.0	105.0	94.0	94.0	94.0	23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	105.0	105.0	105.0		96.2	96.2	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.69	0.69	0.16			0.16		0.16
v/c Ratio	0.17	0.88	0.02		0.44	0.01	0.68			0.30		0.07
Control Delay (s/veh)	6.1	17.2	2.0		2.1	0.0	70.7			55.5		0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	6.1	17.2	2.0		2.1	0.0	70.7			55.5		0.4
LOS	A	B	A		A	A	E			E		A
Approach Delay (s/veh)		16.9			2.1			70.7			40.8	
Approach LOS		B			A			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 14.9		Intersection LOS: B	
Intersection Capacity Utilization 77.9%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	39	2992	28	1351	13	159	71	26
v/c Ratio	0.17	0.88	0.02	0.44	0.01	0.68	0.30	0.07
Control Delay (s/veh)	6.1	17.2	2.0	2.1	0.0	70.7	55.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.1	17.2	2.0	2.1	0.0	70.7	55.5	0.4
Queue Length 50th (m)	2.5	229.8	0.3	11.7	0.0	42.6	17.8	0.0
Queue Length 95th (m)	5.3	256.6	2.7	m12.1	m0.0	#70.6	33.2	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	30.0	30.0
Base Capacity (vph)	231	3390	1206	3105	1121	234	234	368
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.88	0.02	0.44	0.01	0.68	0.30	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	2753	26	0	1243	12	146	0	0	65	0	24
Future Volume (vph)	36	2753	26	0	1243	12	146	0	0	65	0	24
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	*0.80	1.00		*0.80	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	4520	1601		4520	1601	1789			1789		1601
Flt Permitted	0.12	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	234	4520	1601		4520	1601	1426			1426		1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	2992	28	0	1351	13	159	0	0	71	0	26
RTOR Reduction (vph)	0	0	6	0	0	4	0	0	0	0	0	22
Lane Group Flow (vph)	39	2992	22	0	1351	9	159	0	0	71	0	4
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	105.0	105.0	105.0		95.0	95.0	23.0			23.0		23.0
Effective Green, g (s)	105.0	105.0	105.0		95.0	95.0	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.68	0.68	0.16			0.16		0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	219	3390	1200		3067	1086	234			234		263
v/s Ratio Prot	0.01	c0.66			0.30							
v/s Ratio Perm	0.13		0.01			0.01	c0.11			0.05		0.00
v/c Ratio	0.18	0.88	0.02		0.44	0.01	0.68			0.30		0.02
Uniform Delay, d1	6.2	12.9	4.4		10.3	7.3	55.0			51.5		49.0
Progression Factor	1.00	1.00	1.00		0.18	1.00	1.00			1.00		1.00
Incremental Delay, d2	0.4	3.7	0.0		0.3	0.0	7.6			3.3		0.1
Delay (s)	6.6	16.7	4.5		2.1	7.3	62.7			54.8		49.1
Level of Service	A	B	A		A	A	E			D		D
Approach Delay (s/veh)		16.4			2.2			62.7			53.3	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2048	44	0	1610	8	0	0	21	0	0	80
Future Volume (vph)	0	2048	44	0	1610	8	0	0	21	0	0	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	4520	1601	0	4516	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	4520	1601	0	4516	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2226	48	0	1750	9	0	0	23	0	0	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2226	48	0	1759	0	0	0	23	0	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2048	44	0	1610	8	0	0	21	0	0	80
Future Volume (Veh/h)	0	2048	44	0	1610	8	0	0	21	0	0	80
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2226	48	0	1750	9	0	0	23	0	0	87
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.84			0.66			0.74	0.74	0.66	0.74	0.74	0.84
vC, conflicting volume	1759			2274			2896	3985	742	2520	4029	588
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1228			1145			876	2338	0	370	2396	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	97	100	100	90
cM capacity (veh/h)	472			402			164	27	719	405	25	908

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	742	742	742	48	700	700	359	23	87
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	48	0	0	9	23	87
cSH	1700	1700	1700	1700	1700	1700	1700	719	908
Volume to Capacity	0.44	0.44	0.44	0.03	0.41	0.41	0.21	0.03	0.10
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.4
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.4
Lane LOS								B	A
Approach Delay (s/veh)	0.0				0.0			10.2	9.4
Approach LOS								B	A

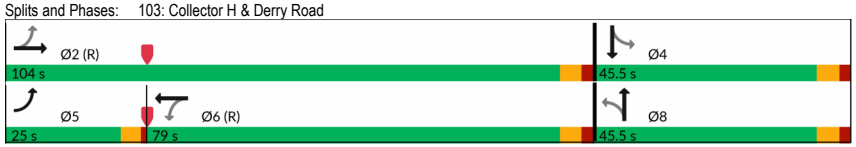
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	1970	51	14	1365	17	207	0	18	21	3	27
Future Volume (vph)	106	1970	51	14	1365	17	207	0	18	21	3	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.998			0.989			0.929	
Flt Protected	0.950			0.950				0.956			0.980	
Satd. Flow (prot)	1789	4502	0	1789	4511	0	0	1781	0	0	1715	0
Flt Permitted	0.096			0.043				0.733			0.897	
Satd. Flow (perm)	181	4502	0	81	4511	0	0	1365	0	0	1569	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			1			55			29	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	2141	55	15	1484	18	225	0	20	23	3	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	2196	0	15	1502	0	0	245	0	0	55	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	25.0	104.0		79.0	79.0		45.5	45.5		45.5	45.5	
Total Split (%)	16.7%	69.6%		52.8%	52.8%		30.4%	30.4%		30.4%	30.4%	
Maximum Green (s)	20.5	98.0		73.0	73.0		39.5	39.5		39.5	39.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	111.9	110.4		96.7	96.7			27.1			27.1	
Actuated g/C Ratio	0.75	0.74		0.65	0.65			0.18			0.18	
v/c Ratio	0.49	0.66		0.29	0.51			0.84			0.18	
Control Delay (s/veh)	13.4	12.2		27.2	11.4			68.6			26.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	13.4	12.2		27.2	11.4			68.6			26.6	
LOS	B	B		C	B			E			C	
Approach Delay (s/veh)		12.3			11.5			68.6			26.6	
Approach LOS		B			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	115	2196	15	1502	245	55
v/c Ratio	0.49	0.66	0.29	0.51	0.84	0.18
Control Delay (s/veh)	13.4	12.2	27.2	11.4	68.6	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.4	12.2	27.2	11.4	68.6	26.6
Queue Length 50th (m)	8.3	127.1	1.3	63.0	56.9	7.2
Queue Length 95th (m)	18.6	187.1	m4.2	88.5	82.7	m13.1
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	355	3326	52	2918	401	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.66	0.29	0.51	0.61	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	1970	51	14	1365	17	207	0	18	21	3	27
Future Volume (vph)	106	1970	51	14	1365	17	207	0	18	21	3	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1789	4503		1789	4512			1781			1714	
Flt Permitted	0.10	1.00		0.04	1.00			0.73			0.90	
Satd. Flow (perm)	180	4503		81	4512			1365			1569	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	2141	55	15	1484	18	225	0	20	23	3	29
RTOR Reduction (vph)	0	1	0	0	0	0	0	45	0	0	24	0
Lane Group Flow (vph)	115	2195	0	15	1502	0	0	200	0	0	31	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	110.4	110.4		96.7	96.7			27.1			27.1	
Effective Green, g (s)	110.4	110.4		96.7	96.7			27.1			27.1	
Actuated g/C Ratio	0.74	0.74		0.65	0.65			0.18			0.18	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	231	3325		52	2918			247			284	
v/s Ratio Prot	0.03	c0.49			0.33							
v/s Ratio Perm	0.34			0.18				c0.15			0.02	
v/c Ratio	0.50	0.66		0.29	0.51			0.81			0.11	
Uniform Delay, d1	9.9	10.0		11.5	14.0			58.7			51.1	
Progression Factor	1.00	1.00		0.71	0.69			1.00			0.99	
Incremental Delay, d2	1.7	1.0		12.0	0.6			17.5			0.2	
Delay (s)	11.6	11.0		20.0	10.3			76.2			50.7	
Level of Service	B	B		C	B			E			D	
Approach Delay (s/veh)		11.1			10.4			76.2			50.7	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

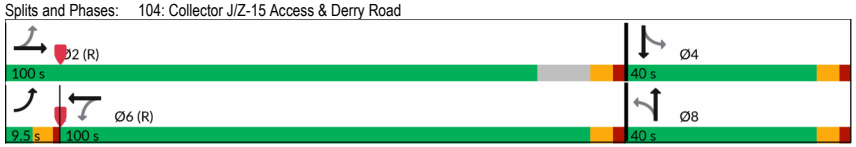
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1899	67	8	1083	36	271	0	24	8	0	27
Future Volume (vph)	100	1899	67	8	1083	36	271	0	24	8	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.995			0.989			0.897	
Flt Protected	0.950			0.950				0.956			0.988	
Satd. Flow (prot)	1789	4498	0	1789	4498	0	0	1781	0	0	1669	0
Flt Permitted	0.138			0.046				0.716			0.916	
Satd. Flow (perm)	260	4498	0	87	4498	0	0	1334	0	0	1548	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			5			55			55	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	2064	73	9	1177	39	295	0	26	9	0	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	2137	0	9	1216	0	0	321	0	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	9.5	100.0		100.0	100.0		40.0	40.0		40.0	40.0	
Total Split (%)	6.4%	66.9%		66.9%	66.9%		26.8%	26.8%		26.8%	26.8%	
Maximum Green (s)	5.0	94.0		94.0	94.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	101.3	99.8		87.7	87.7			37.7			37.7	
Actuated g/C Ratio	0.68	0.67		0.59	0.59			0.25			0.25	
v/c Ratio	0.43	0.71		0.18	0.46			0.85			0.09	
Control Delay (s/veh)	7.1	9.8		26.6	18.7			64.1			4.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	7.1	9.8		26.6	18.7			64.1			4.9	
LOS	A	A		C	B			E			A	
Approach Delay (s/veh)		9.7			18.7			64.1			4.9	
Approach LOS		A			B			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 17.1		Intersection LOS: B	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road

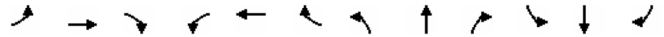




Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	109	2137	9	1216	321	38
v/c Ratio	0.43	0.71	0.18	0.46	0.85	0.09
Control Delay (s/veh)	7.1	9.8	26.6	18.7	64.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.1	9.8	26.6	18.7	64.1	4.9
Queue Length 50th (m)	4.7	171.0	1.3	87.4	77.0	0.0
Queue Length 95th (m)	m5.2	220.4	5.7	98.8	#115.8	5.3
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	253	3151	55	2856	387	443
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.68	0.16	0.43	0.83	0.09

Intersection Summary

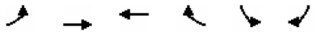
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1899	67	8	1083	36	271	0	24	8	0	27
Future Volume (vph)	100	1899	67	8	1083	36	271	0	24	8	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4497		1789	4499			1781			1670	
Flt Permitted	0.14	1.00		0.05	1.00			0.72			0.92	
Satd. Flow (perm)	261	4497		86	4499			1333			1547	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	2064	73	9	1177	39	295	0	26	9	0	29
RTOR Reduction (vph)	0	2	0	0	2	0	0	41	0	0	28	0
Lane Group Flow (vph)	109	2135	0	9	1214	0	0	280	0	0	10	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	99.8	99.8		87.8	87.8			37.7			37.7	
Effective Green, g (s)	99.8	99.8		87.8	87.8			37.7			37.7	
Actuated g/C Ratio	0.67	0.67		0.59	0.59			0.25			0.25	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	250	3002		50	2642			336			390	
v/s Ratio Prot	0.02	c0.47			0.27							
v/s Ratio Perm	0.27			0.10				c0.21			0.01	
v/c Ratio	0.44	0.71		0.18	0.46			0.83			0.02	
Uniform Delay, d1	11.3	15.7		14.2	17.4			52.9			42.1	
Progression Factor	0.32	0.52		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.9	1.1		7.7	0.6			16.0			0.0	
Delay (s)	4.6	9.3		22.0	18.0			68.9			42.1	
Level of Service	A	A		C	B			E			D	
Approach Delay (s/veh)		9.1			18.0			68.9			42.1	
Approach LOS		A			B			E			D	

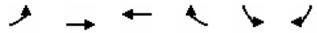
Intersection Summary					
HCM 2000 Control Delay (s/veh)	17.3	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	93.0%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	2818	1201	20	0	54
Future Volume (vph)	0	2818	1201	20	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	3014	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	3014	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	3063	1305	22	0	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3063	1305	22	0	59
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	2818	1201	20	0	54
Future Volume (Veh/h)	0	2818	1201	20	0	54
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3063	1305	22	0	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.82				0.50	0.82
vC, conflicting volume	1327				2326	653
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	963				0	141
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	92
cM capacity (veh/h)	584				507	723

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	1021	1021	1021	653	653	22	59
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	22	59
cSH	1700	1700	1700	1700	1700	1700	723
Volume to Capacity	0.60	0.60	0.60	0.38	0.38	0.01	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	10.4
Lane LOS							B
Approach Delay (s/veh)	0.0			0.0			10.4
Approach LOS							B

Intersection Summary				
Average Delay		0.1		
Intersection Capacity Utilization		57.8%	ICU Level of Service	B
Analysis Period (min)		15		

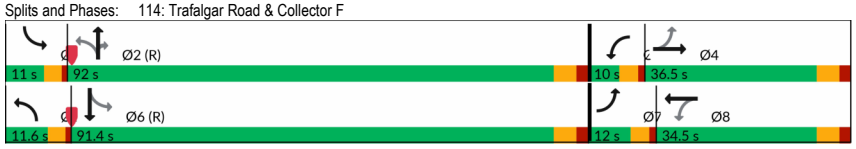
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	58	106	108	68	166	59	2968	130	128	1755	54
Future Volume (vph)	114	58	106	108	68	166	59	2968	130	128	1755	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		50.0	70.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.903			0.894				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1626	0	1652	1610	0	1711	4421	1566	1711	4403	0
Flt Permitted	0.179			0.477			0.046			0.044		
Satd. Flow (perm)	311	1626	0	829	1610	0	83	4421	1566	79	4403	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			72				84		4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	124	63	115	117	74	180	64	3226	141	139	1908	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	178	0	117	254	0	64	3226	141	139	1967	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	9.5	40.0		9.5	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	12.0	36.5		10.0	34.5		11.6	92.0	92.0	11.0	91.4	
Total Split (%)	8.0%	24.4%		6.7%	23.1%		7.8%	61.5%	61.5%	7.4%	61.1%	
Maximum Green (s)	7.5	30.5		5.5	28.5		7.6	86.0	86.0	7.0	85.4	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	33.1	24.1		29.1	22.1		96.5	87.0	87.0	103.8	94.2	
Actuated g/C Ratio	0.22	0.16		0.19	0.15		0.65	0.58	0.58	0.69	0.63	
v/c Ratio	0.92	0.58		0.61	0.85		0.48	1.25	0.15	0.73	0.71	
Control Delay (s/veh)	106.3	46.3		62.9	68.6		28.3	146.9	6.5	56.6	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.2	
Total Delay (s/veh)	106.3	46.3		62.9	68.6		28.3	146.9	6.5	56.6	22.0	
LOS	F	D		E	E		C	F	A	E	C	
Approach Delay (s/veh)		71.0			66.8			138.9			24.3	
Approach LOS		E			E			F			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.25		
Intersection Signal Delay (s/veh): 92.4	Intersection LOS: F	
Intersection Capacity Utilization 101.6%	ICU Level of Service G	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	178	117	254	64	3226	141	139	1967
v/c Ratio	0.92	0.58	0.61	0.85	0.48	1.25	0.15	0.73	0.71
Control Delay (s/veh)	106.3	46.3	62.9	68.6	28.3	146.9	6.5	56.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	106.3	46.3	62.9	68.6	28.3	146.9	6.5	56.6	22.0
Queue Length 50th (m)	30.8	34.4	28.9	54.8	5.6	~508.5	7.3	25.5	165.2
Queue Length 95th (m)	#52.6	57.3	45.1	84.6	19.5	#531.8	17.4	#78.2	206.7
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	60.0		50.0		50.0		50.0	70.0	
Base Capacity (vph)	135	375	191	365	137	2574	946	190	2775
Starvation Cap Reductn	0	0	0	0	0	0	0	0	201
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.47	0.61	0.70	0.47	1.25	0.15	0.73	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	58	106	108	68	166	59	2968	130	128	1755	54
Future Volume (vph)	114	58	106	108	68	166	59	2968	130	128	1755	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.90		1.00	0.89		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)	1652	1626		1652	1609		1711	4421	1566	1711	4401	
Flt Permitted	0.18	1.00		0.48	1.00		0.05	1.00	1.00	0.04	1.00	
Satd. Flow (perm)	311	1626		829	1609		83	4421	1566	79	4401	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	124	63	115	117	74	180	64	3226	141	139	1908	59
RTOR Reduction (vph)	0	46	0	0	61	0	0	0	35	0	2	0
Lane Group Flow (vph)	124	132	0	117	193	0	64	3226	106	139	1965	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.6	24.1		27.6	22.1		93.0	87.0	87.0	103.4	93.4	
Effective Green, g (s)	31.6	24.1		27.6	22.1		93.0	87.0	87.0	103.4	93.4	
Actuated g/C Ratio	0.21	0.16		0.18	0.15		0.62	0.58	0.58	0.69	0.62	
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	133	262		183	237		116	2572	911	190	2749	
v/s Ratio Prot	c0.05	0.08		0.02	0.12		0.02	c0.73		c0.06	0.45	
v/s Ratio Perm	c0.15			0.09			0.32		0.07	0.44		
v/c Ratio	0.93	0.50		0.64	0.81		0.55	1.25	0.12	0.73	0.71	
Uniform Delay, d1	54.7	57.2		56.1	61.7		18.6	31.3	14.0	48.3	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	57.4	1.5		7.1	18.8		5.6	117.8	0.3	13.5	1.6	
Delay (s)	112.1	58.8		63.2	80.5		24.1	149.0	14.3	61.9	20.6	
Level of Service	F	E		E	F		C	F	B	E	C	
Approach Delay (s/veh)		80.7			75.0			141.2			23.4	
Approach LOS		F			E			F			C	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	94.3	HCM 2000 Level of Service		F	
HCM 2000 Volume to Capacity ratio	1.14				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	101.6%	ICU Level of Service		G	
Analysis Period (min)	15				
c Critical Lane Group					

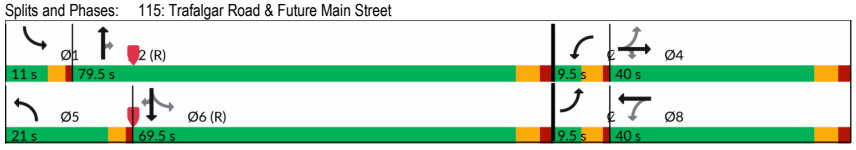
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	67	348	63	114	48	330	2913	191	111	1612	176
Future Volume (vph)	102	67	348	63	114	48	330	2913	191	111	1612	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.956				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3421	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.581			0.713			0.950			0.048		
Satd. Flow (perm)	1094	1883	2818	1343	3421	0	3319	4421	1566	86	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			352		43				90			134
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	103	68	352	64	115	48	333	2942	193	112	1628	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	68	352	64	163	0	333	2942	193	112	1628	178
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		21.0	79.5	79.5	11.0	69.5	69.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		15.0%	56.8%	56.8%	7.9%	49.6%	49.6%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		17.0	73.5	73.5	7.0	63.5	63.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	18.8	13.3	13.3	17.9	11.4		19.6	91.8	91.8	96.9	83.6	83.6
Actuated g/C Ratio	0.13	0.10	0.10	0.13	0.08		0.14	0.66	0.66	0.69	0.60	0.60
v/c Ratio	0.60	0.38	0.60	0.34	0.51		0.72	1.02	0.18	0.59	0.62	0.18
Control Delay (s/veh)	69.5	66.9	10.3	56.8	50.8		66.5	45.0	5.9	51.2	17.7	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	66.9	10.3	56.8	50.8		66.5	45.0	5.9	51.2	17.7	3.1
LOS	E	E	B	E	D		E	D	A	D	B	A
Approach Delay (s/veh)		29.3			52.5			44.8			18.3	
Approach LOS		C			D			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 35.5		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	68	352	64	163	333	2942	193	112	1628	178
v/c Ratio	0.60	0.38	0.60	0.34	0.51	0.72	1.02	0.18	0.59	0.62	0.18
Control Delay (s/veh)	69.5	66.9	10.3	56.8	50.8	66.5	45.0	5.9	51.2	17.7	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	66.9	10.3	56.8	50.8	66.5	45.0	5.9	51.2	17.7	3.1
Queue Length 50th (m)	26.4	18.7	0.0	16.0	17.3	46.8	~328.0	9.8	17.1	114.4	5.5
Queue Length 95th (m)	43.5	33.8	16.0	29.4	28.6	61.2	#418.0	22.8	32.4	152.3	17.1
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	171	457	950	187	863	474	2898	1057	190	2638	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.15	0.37	0.34	0.19	0.70	1.02	0.18	0.59	0.62	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	67	348	63	114	48	330	2913	191	111	1612	176
Future Volume (vph)	102	67	348	63	114	48	330	2913	191	111	1612	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.96		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	1883	2818	1789	3420		3319	4421	1566	1711	4421	1566
Flt Permitted	0.58	1.00	1.00	0.71	1.00		0.95	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1094	1883	2818	1342	3420		3319	4421	1566	87	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	103	68	352	64	115	48	333	2942	193	112	1628	178
RTOR Reduction (vph)	0	0	319	0	39	0	0	0	32	0	0	55
Lane Group Flow (vph)	103	68	33	64	124	0	333	2942	161	112	1628	123
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	18.3	13.3	13.3	16.3	12.3		19.6	90.9	90.9	93.9	82.6	82.6
Effective Green, g (s)	18.3	13.3	13.3	16.3	12.3		19.6	90.9	90.9	93.9	82.6	82.6
Actuated g/C Ratio	0.13	0.10	0.10	0.12	0.09		0.14	0.65	0.65	0.67	0.59	0.59
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	167	178	267	169	300		464	2870	1016	189	2608	923
v/s Ratio Prot	c0.02	0.04		0.01	0.04		c0.10	c0.67		0.05	0.37	
v/s Ratio Perm	c0.06		0.01	0.03					0.10	0.35		0.08
v/c Ratio	0.62	0.38	0.13	0.38	0.41		0.72	1.03	0.16	0.59	0.62	0.13
Uniform Delay, d1	56.7	59.5	58.0	56.7	60.4		57.6	24.5	9.6	38.1	18.6	12.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.39	0.89	0.65
Incremental Delay, d2	6.6	1.4	0.2	1.4	0.9		5.2	23.6	0.3	4.6	1.1	0.3
Delay (s)	63.4	60.9	58.2	58.1	61.4		62.8	48.1	9.9	57.6	17.6	8.6
Level of Service	E	E	E	E	E		E	D	A	E	B	A
Approach Delay (s/veh)		59.6			60.4			47.4			19.1	
Approach LOS		E			E			D			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	40.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

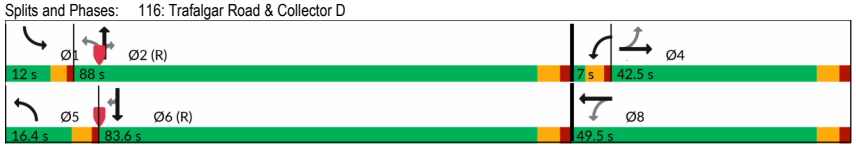
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	13	243	59	9	92	109	3027	151	247	1519	108
Future Volume (vph)	246	13	243	59	9	92	109	3027	151	247	1519	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		50.0	100.0		50.0
Storage Lanes	1		0	1		0	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt		0.858			0.864				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1545	0	1652	1556	0	1711	4421	1566	3319	4421	1566
Flt Permitted	0.686			0.302			0.060			0.950		
Satd. Flow (perm)	1193	1545	0	525	1556	0	108	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		126			100				84			84
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	14	264	64	10	100	118	3290	164	268	1651	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	267	278	0	64	110	0	118	3290	164	268	1651	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		9.5	26.0	26.0	11.0	26.0	26.0
Total Split (s)	42.5	42.5		7.0	49.5		16.4	88.0	88.0	12.0	83.6	83.6
Total Split (%)	28.4%	28.4%		4.7%	33.1%		11.0%	58.9%	58.9%	8.0%	55.9%	55.9%
Maximum Green (s)	36.5	36.5		2.5	43.5		11.9	82.0	82.0	8.0	77.6	77.6
Yellow Time (s)	4.0	4.0		3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	35.3	35.3		42.4	40.9		93.5	82.0	82.0	10.6	82.1	82.1
Actuated g/C Ratio	0.24	0.24		0.28	0.27		0.63	0.55	0.55	0.07	0.55	0.55
v/c Ratio	0.95	0.60		0.38	0.22		0.67	1.36	0.18	1.14	0.68	0.13
Control Delay (s/veh)	97.9	32.9		47.2	9.8		42.0	193.5	8.5	158.2	26.9	6.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	97.9	32.9		47.2	9.8		42.0	193.6	8.5	158.2	26.9	6.5
LOS	F	C		D	A		D	F	A	F	C	A
Approach Delay (s/veh)		64.7			23.5			180.1			43.1	
Approach LOS		E			C			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.36		
Intersection Signal Delay (s/veh): 121.8	Intersection LOS: F	
Intersection Capacity Utilization 105.8%	ICU Level of Service G	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	267	278	64	110	118	3290	164	268	1651	117
v/c Ratio	0.95	0.60	0.38	0.22	0.67	1.36	0.18	1.14	0.68	0.13
Control Delay (s/veh)	97.9	32.9	47.2	9.8	42.0	193.5	8.5	158.2	26.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	97.9	32.9	47.2	9.8	42.0	193.6	8.5	158.2	26.9	6.5
Queue Length 50th (m)	79.0	40.6	14.1	2.2	15.3	~540.5	11.1	~57.6	153.2	4.7
Queue Length 95th (m)	#133.2	72.2	26.4	17.2	36.9	#563.4	23.0	#87.2	175.7	15.1
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	50.0		80.0		50.0		50.0	100.0		50.0
Base Capacity (vph)	291	472	167	523	196	2424	896	236	2428	898
Starvation Cap Reductn	0	0	0	0	0	126	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.59	0.38	0.21	0.60	1.43	0.18	1.14	0.68	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	13	243	59	9	92	109	3027	151	247	1519	108
Future Volume (vph)	246	13	243	59	9	92	109	3027	151	247	1519	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.86		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)	1652	1544		1652	1555		1711	4421	1566	3319	4421	1566
Flt Permitted	0.69	1.00		0.30	1.00		0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1193	1544		526	1555		108	4421	1566	3319	4421	1566
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	14	264	64	10	100	118	3290	164	268	1651	117
RTOR Reduction (vph)	0	96	0	0	72	0	0	0	38	0	0	38
Lane Group Flow (vph)	267	182	0	64	38	0	118	3290	126	268	1651	79
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2			6
Actuated Green, G (s)	35.3	35.3		41.8	41.8		91.1	81.1	81.1	10.6	81.2	81.2
Effective Green, g (s)	35.3	35.3		41.8	41.8		91.1	81.1	81.1	10.6	81.2	81.2
Actuated g/C Ratio	0.24	0.24		0.28	0.28		0.61	0.54	0.54	0.07	0.54	0.54
Clearance Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	281	364		162	434		173	2398	849	235	2401	850
v/s Ratio Prot		0.12		c0.01	0.02		0.05	c0.74		c0.08	0.37	
v/s Ratio Perm	c0.22			0.11			0.37		0.08			0.05
v/c Ratio	0.95	0.50		0.40	0.09		0.68	1.37	0.15	1.14	0.69	0.09
Uniform Delay, d1	56.2	49.4		50.0	39.8		26.0	34.2	17.0	69.5	24.9	16.4
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	40.2	1.1		1.6	0.1		10.6	170.1	0.4	101.8	1.6	0.2
Delay (s)	96.5	50.5		51.6	39.9		36.6	204.3	17.4	171.3	26.5	16.6
Level of Service	F	D		D	D		D	F	B	F	C	B
Approach Delay (s/veh)		73.0			44.2			190.2			45.0	
Approach LOS		E			D			F			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	129.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

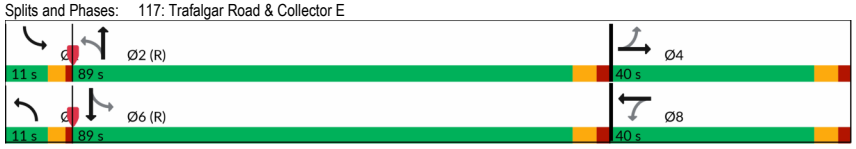
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	23	54	5	57	12	3185	51	68	1804	5
Future Volume (vph)	45	4	23	54	5	57	12	3185	51	68	1804	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.871			0.861			0.998				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1640	0	1789	1622	0	1711	4412	0	1711	4421	0
Flt Permitted	0.713			0.738			0.062			0.037		
Satd. Flow (perm)	1343	1640	0	1390	1622	0	112	4412	0	67	4421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			62			2				
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	4	25	59	5	62	13	3462	55	74	1961	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	29	0	59	67	0	13	3517	0	74	1966	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.0	89.0		11.0	89.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		7.9%	63.6%		7.9%	63.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.0	83.0		7.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	12.2	12.2		12.2	12.2		112.9	105.7		117.5	111.6	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.81	0.76		0.84	0.80	
v/c Ratio	0.42	0.18		0.49	0.34		0.08	1.06		0.48	0.56	
Control Delay (s/veh)	71.0	25.2		74.1	20.0		3.3	51.7		29.1	6.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	18.9		0.0	0.3	
Total Delay (s/veh)	71.0	25.2		74.1	20.0		3.3	70.6		29.1	7.1	
LOS	E	C		E	C		A	E		C	A	
Approach Delay (s/veh)		54.0			45.3			70.4			7.9	
Approach LOS		D			D			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay (s/veh): 47.5		Intersection LOS: D	
Intersection Capacity Utilization 82.3%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	29	59	67	13	3517	74	1966
v/c Ratio	0.42	0.18	0.49	0.34	0.08	1.06	0.48	0.56
Control Delay (s/veh)	71.0	25.2	74.1	20.0	3.3	51.7	29.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.3
Total Delay (s/veh)	71.0	25.2	74.1	20.0	3.3	70.6	29.1	7.1
Queue Length 50th (m)	13.4	1.1	16.2	1.3	0.4	~451.1	4.3	54.9
Queue Length 95th (m)	26.1	10.9	30.5	15.7	1.8	#511.7	21.4	117.5
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	326	417	337	440	170	3331	153	3524
Starvation Cap Reductn	0	0	0	0	0	147	0	818
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.07	0.18	0.15	0.08	1.10	0.48	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	23	54	5	57	12	3185	51	68	1804	5
Future Volume (vph)	45	4	23	54	5	57	12	3185	51	68	1804	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.87		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)	1789	1640		1789	1622		1711	4411		1711	4419	
Flt Permitted	0.71	1.00		0.74	1.00		0.06	1.00		0.04	1.00	
Satd. Flow (perm)	1344	1640		1391	1622		112	4411		66	4419	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	4	25	59	5	62	13	3462	55	74	1961	5
RTOR Reduction (vph)	0	23	0	0	57	0	0	1	0	0	0	0
Lane Group Flow (vph)	49	6	0	59	10	0	13	3516	0	74	1966	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.2	12.2		12.2	12.2		107.5	104.9		115.8	109.2	
Effective Green, g (s)	12.2	12.2		12.2	12.2		107.5	104.9		115.8	109.2	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.77	0.75		0.83	0.78	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	117	142		121	141		115	3305		135	3446	
v/s Ratio Prot		0.00			0.01		0.00	c0.80		c0.03	0.44	
v/s Ratio Perm	0.04			c0.04			0.08			0.42		
v/c Ratio	0.42	0.04		0.49	0.07		0.11	1.06		0.55	0.57	
Uniform Delay, d1	60.5	58.6		60.9	58.7		4.7	17.5		45.3	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.1		3.1	0.2		0.4	36.0		4.5	0.7	
Delay (s)	63.0	58.7		64.0	58.9		5.2	53.6		49.8	6.8	
Level of Service	E	E		E	E		A	D		D	A	
Approach Delay (s/veh)		61.4			61.3			53.4			8.4	
Approach LOS		E			E			D			A	

Intersection Summary

HCM 2000 Control Delay (s/veh)	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	177	0	0	0	0	160
Future Volume (vph)	177	0	0	0	0	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			80.2	161.7	
Travel Time (s)	55.9			6.0	12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	0	0	0	0	174
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	0	0	0	174
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	177	0	0	0	0	160
Future Volume (vph)	177	0	0	0	0	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	192	0	0	0	0	174

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	192	0	174
Volume Left (vph)	192	0	0
Volume Right (vph)	0	0	174
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.4	4.9	3.9
Degree Utilization, x	0.29	0.00	0.19
Capacity (veh/h)	640	733	881
Control Delay (s/veh)	9.4	6.7	7.8
Approach Delay (s/veh)	9.4		7.8
Approach LOS	A		A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	13.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	47	50	30	57	62	77
Future Volume (vph)	47	50	30	57	62	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931		0.912			
Flt Protected	0.976					0.978
Satd. Flow (prot)	1636	0	1642	0	0	1761
Flt Permitted	0.976					0.978
Satd. Flow (perm)	1636	0	1642	0	0	1761
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	54	33	62	67	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	0	95	0	0	151
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	47	50	30	57	62	77
Future Volume (Veh/h)	47	50	30	57	62	77
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	54	33	62	67	84
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	282	64			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	282	64			95	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	95			96	
cM capacity (veh/h)	676	1000			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	105	95	151
Volume Left	51	0	67
Volume Right	54	62	0
cSH	812	1700	1499
Volume to Capacity	0.13	0.06	0.04
Queue Length 95th (m)	3.4	0.0	1.1
Control Delay (s/veh)	10.1	0.0	3.5
Lane LOS	B		A
Approach Delay (s/veh)	10.1	0.0	3.5
Approach LOS	B		

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	174	9	51	127	0	11	12	32	117	6	0
Future Volume (vph)	0	174	9	51	127	0	11	12	32	117	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.921				
Flt Protected					0.986			0.990			0.955	
Satd. Flow (prot)	0	1870	0	0	1775	0	0	1717	0	0	1799	0
Flt Permitted					0.986			0.990			0.955	
Satd. Flow (perm)	0	1870	0	0	1775	0	0	1717	0	0	1799	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	189	10	55	138	0	12	13	35	127	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	199	0	0	193	0	0	60	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	174	9	51	127	0	11	12	32	117	6	0
Future Volume (Veh/h)	0	174	9	51	127	0	11	12	32	117	6	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	189	10	55	138	0	12	13	35	127	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	138			199			446	442	194	484	447	138
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	138			199			446	442	194	484	447	138
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			98	97	96	72	99	100
cM capacity (veh/h)	1446			1373			501	489	847	449	486	910

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	199	193	60	134
Volume Left	0	55	12	127
Volume Right	10	0	35	0
cSH	1446	1373	654	451
Volume to Capacity	0.00	0.04	0.09	0.30
Queue Length 95th (m)	0.0	1.0	2.3	9.3
Control Delay (s/veh)	0.0	2.4	11.1	16.3
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	2.4	11.1	16.3
Approach LOS			B	C

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	235	46	12	99	32	34
Future Volume (vph)	235	46	12	99	32	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.931	
Flt Protected				0.995	0.976	
Satd. Flow (prot)	1842	0	0	1874	1711	0
Flt Permitted				0.995	0.976	
Satd. Flow (perm)	1842	0	0	1874	1711	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	255	50	13	108	35	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	305	0	0	121	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	2	85	11	0	124
Future Volume (vph)	19	2	85	11	0	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988		0.984			
Flt Protected	0.956					
Satd. Flow (prot)	1642	0	1772	0	0	1801
Flt Permitted	0.956					
Satd. Flow (perm)	1642	0	1772	0	0	1801
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	2	92	12	0	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	104	0	0	135
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	2	85	11	0	124
Future Volume (Veh/h)	19	2	85	11	0	124
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	2	92	12	0	135
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	233	98			104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233	98			104	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	755	958			1488	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	104	135
Volume Left	21	0	0
Volume Right	2	12	0
cSH	769	1700	1488
Volume to Capacity	0.03	0.06	0.00
Queue Length 95th (m)	0.7	0.0	0.0
Control Delay (s/veh)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	45	4	4	15	8	3	47	2	2	64	0
Future Volume (vph)	0	45	4	4	15	8	3	47	2	2	64	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.958			0.995				
Flt Protected					0.993			0.997			0.999	
Satd. Flow (prot)	0	1721	0	0	1654	0	0	1786	0	0	1799	0
Flt Permitted					0.993			0.997			0.999	
Satd. Flow (perm)	0	1721	0	0	1654	0	0	1786	0	0	1799	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	49	4	4	16	9	3	51	2	2	70	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	29	0	0	56	0	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	45	4	4	15	8	3	47	2	2	64	0
Future Volume (Veh/h)	0	45	4	4	15	8	3	47	2	2	64	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	49	4	4	16	9	3	51	2	2	70	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	149	133	70	161	132	52	70			53		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	149	133	70	161	132	52	70			53		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	94	100	99	98	99	100			100		
cM capacity (veh/h)	797	755	993	760	756	1016	1531			1553		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	29	56	72
Volume Left	0	4	3	2
Volume Right	4	9	2	0
cSH	769	822	1531	1553
Volume to Capacity	0.07	0.04	0.00*	0.00*
Queue Length 95th (m)	1.7	0.8	0.0	0.0
Control Delay (s/veh)	10.0	9.5	0.4	0.2
Lane LOS	B	A	A	A
Approach Delay (s/veh)	10.0	9.5	0.4	0.2
Approach LOS	B	A		

Intersection Summary				
Average Delay		4.0		
Intersection Capacity Utilization	15.5%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	76	14	0	17	0	27	97	22	0	62	4
Future Volume (vph)	2	76	14	0	17	0	27	97	22	0	62	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980						0.979			0.992	
Flt Protected		0.999						0.991				
Satd. Flow (prot)	0	1844	0	0	1883	0	0	1747	0	0	1786	0
Flt Permitted		0.999						0.991				
Satd. Flow (perm)	0	1844	0	0	1883	0	0	1747	0	0	1786	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	83	15	0	18	0	29	105	24	0	67	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	18	0	0	158	0	0	71	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	76	14	0	17	0	27	97	22	0	62	4
Future Volume (Veh/h)	2	76	14	0	17	0	27	97	22	0	62	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	83	15	0	18	0	29	105	24	0	67	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	253	256	69	301	246	117	71			129		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	253	256	69	301	246	117	71			129		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	87	98	100	97	100	98			100		
cM capacity (veh/h)	675	636	994	570	644	935	1529			1457		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	100	18	158	71
Volume Left	2	0	29	0
Volume Right	15	0	24	4
cSH	673	644	1529	1457
Volume to Capacity	0.15	0.03	0.02	0.00
Queue Length 95th (m)	4.0	0.7	0.4	0.0
Control Delay (s/veh)	11.3	10.8	1.5	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	11.3	10.8	1.5	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	123	13	9	121	4	15	25	8	1	63	79
Future Volume (vph)	67	123	13	9	121	4	15	25	8	1	63	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.977			0.925	
Flt Protected		0.984			0.997			0.985				
Satd. Flow (prot)	0	1695	0	0	1788	0	0	1733	0	0	1666	0
Flt Permitted		0.984			0.997			0.985				
Satd. Flow (perm)	0	1695	0	0	1788	0	0	1733	0	0	1666	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	134	14	10	132	4	16	27	9	1	68	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	0	0	146	0	0	52	0	0	155	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	123	13	9	121	4	15	25	8	1	63	79
Future Volume (Veh/h)	67	123	13	9	121	4	15	25	8	1	63	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	134	14	10	132	4	16	27	9	1	68	86
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	247	181	111	258	220	32	154			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	247	181	111	258	220	32	154			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	81	99	98	80	100	99			100		
cM capacity (veh/h)	593	704	942	580	671	1043	1426			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	221	146	52	155
Volume Left	73	10	16	1
Volume Right	14	4	9	86
cSH	673	670	1426	1575
Volume to Capacity	0.33	0.22	0.01	0.00*
Queue Length 95th (m)	10.9	6.3	0.3	0.0
Control Delay (s/veh)	12.9	11.9	2.4	0.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	12.9	11.9	2.4	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	150	0	13	112	28	1	15	4	20	41	11
Future Volume (vph)	10	150	0	13	112	28	1	15	4	20	41	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.976			0.974			0.979	
Flt Protected		0.997			0.996			0.998			0.986	
Satd. Flow (prot)	0	1795	0	0	1750	0	0	1750	0	0	1738	0
Flt Permitted		0.997			0.996			0.998			0.986	
Satd. Flow (perm)	0	1795	0	0	1750	0	0	1750	0	0	1738	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	163	0	14	122	30	1	16	4	22	45	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	166	0	0	21	0	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	150	0	13	112	28	1	15	4	20	41	11
Future Volume (Veh/h)	10	150	0	13	112	28	1	15	4	20	41	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	163	0	14	122	30	1	16	4	22	45	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	152			163			385	365	163	362	350	137
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			163			385	365	163	362	350	137
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	97	100	96	92	99
cM capacity (veh/h)	1429			1416			525	553	882	570	564	911

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	174	166	21	79
Volume Left	11	14	1	22
Volume Right	0	30	4	12
cSH	1429	1416	594	601
Volume to Capacity	0.00*	0.00*	0.04	0.13
Queue Length 95th (m)	0.2	0.2	0.8	3.4
Control Delay (s/veh)	0.5	0.7	11.3	11.9
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.5	0.7	11.3	11.9
Approach LOS			B	B

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		28.9%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	88	59	21	104	29	36
Future Volume (vph)	88	59	21	104	29	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946				0.926	
Flt Protected	0.971		0.950			
Satd. Flow (prot)	1654	0	1711	0	1667	0
Flt Permitted	0.971		0.950			
Satd. Flow (perm)	1654	0	1711	0	1667	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	64	23	113	32	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	23	113	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	59	21	104	29	36
Future Volume (Veh/h)	88	59	21	104	29	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	96	64	23	113	32	39
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	211	52	71			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211	52	71			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	94	98			
cM capacity (veh/h)	766	1016	1529			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	160	23	71
Volume Left	96	23	0
Volume Right	64	0	39
cSH	850	1529	1700
Volume to Capacity	0.19	0.02	0.04
Queue Length 95th (m)	5.2	0.3	0.0
Control Delay (s/veh)	10.2	7.4	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	10.2	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	9	123	0	8	9	3
Future Volume (vph)	9	123	0	8	9	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874				0.969	
Flt Protected					0.963	
Satd. Flow (prot)	1574	0	0	1801	1680	0
Flt Permitted					0.963	
Satd. Flow (perm)	1574	0	0	1801	1680	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	134	0	9	10	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	9	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	9	123	0	8	9	3
Future Volume (Veh/h)	9	123	0	8	9	3
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	134	0	9	10	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	23	0	161	22	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	23	0	161	22	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	99	88	100	99	99	
cM capacity (veh/h)	865	1085	696	867	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	144	9	13
Volume Left	0	0	10
Volume Right	134	0	3
cSH	1066	867	1623
Volume to Capacity	0.14	0.01	0.00*
Queue Length 95th (m)	3.5	0.2	0.1
Control Delay (s/veh)	8.9	9.2	5.6
Lane LOS	A	A	A
Approach Delay (s/veh)	8.9	9.2	5.6
Approach LOS	A	A	

Intersection Summary				
Average Delay		8.7		
Intersection Capacity Utilization		18.1%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Future Volume (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192			140			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Shared Lane Traffic (%)												
Lane Group Flow (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	18.0	60.0	60.0	18.0	60.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	12.9%	42.9%	42.9%	12.9%	42.9%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	14.0	53.2	53.2	14.0	53.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.0	35.1	35.1	19.0	46.1	46.1	15.0	55.2	55.2	15.0	55.2	69.0
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.11	0.39	0.39	0.11	0.39	0.49
v/c Ratio	1.04	0.79	0.65	0.86	1.29	0.47	1.26	1.01	0.28	1.23	1.19	0.64
Control Delay (s/veh)	144.9	50.0	21.6	81.1	171.4	20.4	181.3	47.1	8.9	158.2	135.4	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	144.9	50.0	21.6	81.1	171.4	20.4	181.3	47.1	8.9	158.2	135.4	38.4
LOS	F	D	C	F	F	C	F	D	A	F	F	D
Approach Delay (s/veh)		56.3			140.9			68.6			121.4	
Approach LOS		E			F			E			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.29		
Intersection Signal Delay (s/veh): 103.8	Intersection LOS: F	
Intersection Capacity Utilization 108.9%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
v/c Ratio	1.04	0.79	0.65	0.86	1.29	0.47	1.26	1.01	0.28	1.23	1.19	0.64
Control Delay (s/veh)	144.9	50.0	21.6	81.1	171.4	20.4	181.3	47.1	8.9	158.2	135.4	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	144.9	50.0	21.6	81.1	171.4	20.4	181.3	47.1	8.9	158.2	135.4	38.4
Queue Length 50th (m)	~32.6	98.8	24.2	54.4	~288.7	14.3	~77.8	~220.2	8.8	~75.3	~299.7	127.1
Queue Length 95th (m)	#59.9	118.2	75.7	#86.3	#318.0	56.0	m#71.9	m184.8	m8.1	m#88.5	#334.7	m159.3
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		70.0	110.0		70.0	130.0		85.0
Base Capacity (vph)	192	1122	537	475	1503	621	339	1677	692	343	1677	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.79	0.65	0.86	1.29	0.47	1.26	1.01	0.28	1.23	1.19	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Future Volume (vph)	199	887	347	409	1940	289	427	1694	195	421	1999	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	4476	1570	3506	4565	1601	3173	4254	1566	3204	4254	1566
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)	199	887	347	409	1940	289	427	1694	195	421	1999	525
RTOR Reduction (vph)	0	0	144	0	0	94	0	0	75	0	0	50
Lane Group Flow (vph)	199	887	203	409	1940	195	427	1694	120	421	1999	475
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	33.1	33.1	18.0	44.1	44.1	14.0	53.2	53.2	14.0	53.2	60.2
Effective Green, g (s)	8.0	35.1	35.1	19.0	46.1	46.1	15.0	55.2	55.2	15.0	55.2	64.2
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.11	0.39	0.39	0.11	0.39	0.46
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	192	1122	393	475	1503	527	339	1677	617	343	1677	718
v/s Ratio Prot	c0.06	0.20		0.12	c0.42		c0.13	0.40		0.13	c0.47	0.04
v/s Ratio Perm			0.13			0.12			0.08			0.26
v/c Ratio	1.04	0.79	0.52	0.86	1.29	0.37	1.26	1.01	0.19	1.23	1.19	0.66
Uniform Delay, d1	66.0	49.0	45.2	59.2	47.0	35.9	62.5	42.4	27.8	62.5	42.4	29.4
Progression Factor	1.18	0.90	0.78	1.14	0.94	1.00	1.35	0.89	0.82	0.86	1.28	1.69
Incremental Delay, d2	72.7	5.4	4.5	11.9	134.5	1.4	119.1	9.3	0.0	113.6	89.3	1.4
Delay (s)	150.7	49.7	39.7	79.6	178.6	37.2	203.2	47.1	22.7	167.1	143.4	51.2
Level of Service	F	D	D	E	F	D	F	D	C	F	F	D
Approach Delay (s/veh)		61.3			147.7			73.9			130.3	
Approach LOS		E			F			E			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	110.6	HCM 2000 Level of Service	F			
HCM 2000 Volume to Capacity ratio	1.23					
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7			
Intersection Capacity Utilization	108.9%	ICU Level of Service	G			
Analysis Period (min)	15					

c Critical Lane Group

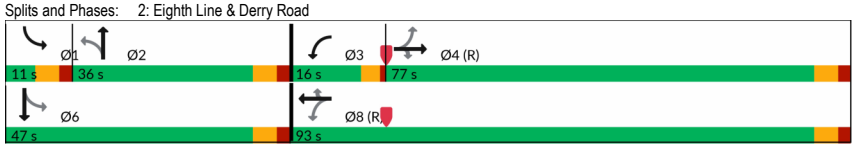
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1070	150	162	2205	8	116	13	130	20	36	8
Future Volume (vph)	10	1070	150	162	2205	8	116	13	130	20	36	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.864			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1657	0	1825	1869	0
Flt Permitted	0.046			0.182			0.728			0.357		
Satd. Flow (perm)	88	4520	1555	350	4565	1633	1399	1657	0	686	1869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			70		130			8	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	10	1070	150	162	2205	8	116	13	130	20	36	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	1070	150	162	2205	8	116	143	0	20	44	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	89.5	89.5	89.5	105.1	103.1	103.1	16.9	16.9		24.9	24.9	
Actuated g/C Ratio	0.64	0.64	0.64	0.75	0.74	0.74	0.12	0.12		0.18	0.18	
v/c Ratio	0.18	0.37	0.14	0.45	0.66	0.01	0.69	0.46		0.11	0.13	
Control Delay (s/veh)	26.4	14.2	2.7	10.3	12.4	0.0	62.5	16.7		43.0	37.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.4	14.2	2.7	10.3	12.4	0.0	62.5	16.7		43.0	37.0	
LOS	C	B	A	B	B	A	E	B		D	D	
Approach Delay (s/veh)		12.9			12.2			37.2			38.9	
Approach LOS		B			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay (s/veh): 14.5	Intersection LOS: B	
Intersection Capacity Utilization 90.9%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	1070	150	162	2205	8	116	143	20	44
v/c Ratio	0.18	0.37	0.14	0.45	0.66	0.01	0.69	0.46	0.11	0.13
Control Delay (s/veh)	26.4	14.2	2.7	10.3	12.4	0.0	62.5	16.7	43.0	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.4	14.2	2.7	10.3	12.4	0.0	62.5	16.7	43.0	37.0
Queue Length 50th (m)	1.2	61.1	0.0	12.6	134.2	0.0	30.8	10.4	4.5	8.1
Queue Length 95th (m)	6.5	89.8	10.8	24.7	187.0	0.0	m47.9	m29.8	10.6	17.2
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	56	2890	1048	390	3361	1220	299	457	176	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.37	0.14	0.42	0.66	0.01	0.39	0.31	0.11	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1070	150	162	2205	8	116	13	130	20	36	8
Future Volume (vph)	10	1070	150	162	2205	8	116	13	130	20	36	8
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.86		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1656		1825	1869	
Flt Permitted	0.05	1.00	1.00	0.18	1.00	1.00	0.73	1.00		0.36	1.00	
Satd. Flow (perm)	88	4520	1555	349	4565	1633	1399	1656		686	1869	
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	1070	150	162	2205	8	116	13	130	20	36	8
RTOR Reduction (vph)	0	0	57	0	0	2	0	114	0	0	6	0
Lane Group Flow (vph)	10	1070	93	162	2205	6	116	29	0	20	38	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	87.1	87.1	87.1	100.7	100.7	100.7	16.9	16.9		27.3	27.3	
Effective Green, g (s)	87.1	87.1	87.1	100.7	100.7	100.7	16.9	16.9		27.3	27.3	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.72	0.72	0.12	0.12		0.20	0.20	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	2812	967	352	3283	1174	168	199		169	364	
v/s Ratio Prot		0.24		0.03	c0.48			0.02		0.00	c0.02	
v/s Ratio Perm	0.11		0.06	0.30		0.00	c0.08			0.02		
v/c Ratio	0.19	0.38	0.10	0.46	0.67	0.00	0.69	0.14		0.12	0.10	
Uniform Delay, d1	11.3	13.1	10.6	7.4	10.7	5.5	59.0	55.1		46.3	46.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.77	1.17		1.00	1.00	
Incremental Delay, d2	7.4	0.4	0.2	1.0	1.1	0.0	10.0	0.3		0.3	0.1	
Delay (s)	18.7	13.5	10.8	8.4	11.8	5.5	55.2	64.5		46.6	46.4	
Level of Service	B	B	B	A	B	A	E	E		D	D	
Approach Delay (s/veh)		13.2			11.5			60.4			46.5	
Approach LOS		B			B			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	15.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	90.9%	ICU Level of Service	E	
Analysis Period (min)	15			

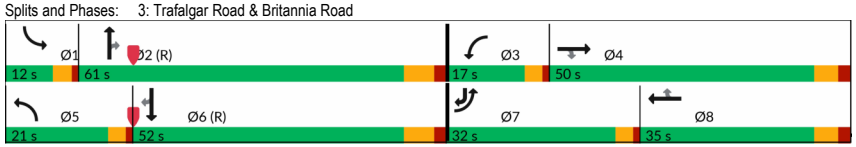
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Future Volume (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			156			132			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Shared Lane Traffic (%)												
Lane Group Flow (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	32.0	50.0	50.0	17.0	35.0	35.0	21.0	61.0	61.0	12.0	52.0	32.0
Total Split (%)	22.9%	35.7%	35.7%	12.1%	25.0%	25.0%	15.0%	43.6%	43.6%	8.6%	37.1%	22.9%
Maximum Green (s)	28.0	44.0	44.0	13.0	29.0	29.0	17.0	54.0	54.0	8.0	45.0	28.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	29.0	47.0	47.0	13.0	31.0	31.0	18.0	56.0	56.0	9.0	47.0	82.0
Actuated g/C Ratio	0.21	0.34	0.34	0.09	0.22	0.22	0.13	0.40	0.40	0.06	0.34	0.59
v/c Ratio	1.31	0.72	0.40	0.59	1.13	0.49	1.08	0.99	0.30	1.17	1.02	0.94
Control Delay (s/veh)	193.2	44.2	10.0	91.6	102.6	7.9	104.4	71.6	28.4	149.5	42.2	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	193.2	44.2	10.0	91.6	102.6	7.9	104.4	71.6	28.4	149.5	42.2	23.3
LOS	F	D	B	F	F	A	F	E	C	F	D	C
Approach Delay (s/veh)		96.6			87.5			73.8			45.5	
Approach LOS		F			F			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.31		
Intersection Signal Delay (s/veh): 73.5	Intersection LOS: E	
Intersection Capacity Utilization 101.0%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
v/c Ratio	1.31	0.72	0.40	0.59	1.13	0.49	1.08	0.99	0.30	1.17	1.02	0.94
Control Delay (s/veh)	193.2	44.2	10.0	91.6	102.6	7.9	104.4	71.6	28.4	149.5	42.2	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	193.2	44.2	10.0	91.6	102.6	7.9	104.4	71.6	28.4	149.5	42.2	23.3
Queue Length 50th (m)	~170.7	112.7	10.7	29.2	~155.0	21.8	~72.3	191.1	29.8	~40.1	~186.4	248.7
Queue Length 95th (m)	#215.1	132.7	33.5	42.4	#179.9	6.0	m#82.3	m#220.7	m34.2	m#37.1	m160.3	m220.6
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	125.0		85.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	632	1501	675	354	1010	462	411	1734	705	200	1441	935
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	0.72	0.40	0.55	1.13	0.49	1.08	0.99	0.30	1.17	1.02	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Future Volume (vph)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	827	1079	270	195	1143	228	444	1716	215	233	1476	876
RTOR Reduction (vph)	0	0	143	0	0	121	0	0	79	0	0	39
Lane Group Flow (vph)	827	1079	127	195	1143	107	444	1716	136	233	1476	837
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	45.0	45.0	12.0	29.0	29.0	17.0	54.0	54.0	8.0	45.0	73.0
Effective Green, g (s)	29.0	47.0	47.0	13.0	31.0	31.0	18.0	56.0	56.0	9.0	47.0	77.0
Actuated g/C Ratio	0.21	0.34	0.34	0.09	0.22	0.22	0.13	0.40	0.40	0.06	0.34	0.55
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	632	1502	532	328	1010	341	411	1734	626	200	1441	844
v/s Ratio Prot	c0.27	0.24		0.06	c0.25		c0.14	c0.40		c0.07	0.34	0.21
v/s Ratio Perm			0.08			0.07			0.09			0.33
v/c Ratio	1.31	0.72	0.24	0.59	1.13	0.31	1.08	0.99	0.22	1.17	1.02	0.99
Uniform Delay, d1	55.5	40.7	33.6	61.0	54.5	45.6	61.0	41.7	27.6	65.5	46.5	31.2
Progression Factor	1.00	1.00	1.00	1.40	0.62	0.31	0.93	1.48	2.54	1.33	0.58	0.83
Incremental Delay, d2	150.0	1.7	0.2	2.3	69.7	0.4	51.8	11.1	0.3	79.6	14.5	7.6
Delay (s)	205.5	42.4	33.8	87.8	103.7	14.5	108.6	72.9	70.3	166.9	41.3	33.6
Level of Service	F	D	C	F	F	B	F	E	E	F	D	C
Approach Delay (s/veh)		103.3			88.7			79.4			50.0	
Approach LOS		F			F			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	78.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.13			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	101.0%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

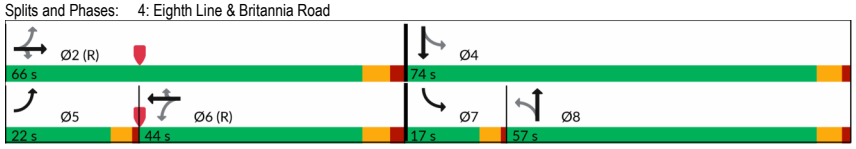
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	932	49	27	1195	187	81	345	47	187	259	184
Future Volume (vph)	235	932	49	27	1195	187	81	345	47	187	259	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1878	0	1825	1761	0
Flt Permitted	0.089			0.258			0.416			0.151		
Satd. Flow (perm)	171	4476	1328	496	4520	1633	799	1878	0	290	1761	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			134		6			36	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	235	932	49	27	1195	187	81	345	47	187	259	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	932	49	27	1195	187	81	392	0	187	443	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	78.2	75.9	75.9	53.6	53.6	53.6	34.8	34.8		52.8	51.6	
Actuated g/C Ratio	0.56	0.54	0.54	0.38	0.38	0.38	0.25	0.25		0.38	0.37	
v/c Ratio	0.77	0.38	0.07	0.14	0.69	0.26	0.41	0.83		0.76	0.66	
Control Delay (s/veh)	70.0	21.2	8.6	37.6	40.6	12.4	43.5	58.6		51.3	36.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	70.0	21.2	8.6	37.6	40.6	12.4	43.5	58.6		51.3	36.8	
LOS	E	C	A	D	D	B	D	E		D	D	
Approach Delay (s/veh)		30.2			36.8			56.0			41.1	
Approach LOS		C			D			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay (s/veh): 37.8		Intersection LOS: D
Intersection Capacity Utilization 92.9%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	932	49	27	1195	187	81	392	187	443
v/c Ratio	0.77	0.38	0.07	0.14	0.69	0.26	0.41	0.83	0.76	0.66
Control Delay (s/veh)	70.0	21.2	8.6	37.6	40.6	12.4	43.5	58.6	51.3	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.0	21.2	8.6	37.6	40.6	12.4	43.5	58.6	51.3	36.8
Queue Length 50th (m)	56.8	46.6	0.5	4.9	117.2	9.3	17.9	99.4	36.8	98.7
Queue Length 95th (m)	m79.4	m65.1	m2.1	14.7	#178.6	31.5	m31.8	128.2	#49.3	113.9
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	329	2425	745	189	1731	708	292	691	246	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.38	0.07	0.14	0.69	0.26	0.28	0.57	0.76	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	932	49	27	1195	187	81	345	47	187	259	184
Future Volume (vph)	235	932	49	27	1195	187	81	345	47	187	259	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1878		1825	1760	
Flt Permitted	0.09	1.00	1.00	0.26	1.00	1.00	0.42	1.00		0.15	1.00	
Satd. Flow (perm)	170	4476	1328	495	4520	1633	798	1878		291	1760	
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)	235	932	49	27	1195	187	81	345	47	187	259	184
RTOR Reduction (vph)	0	0	22	0	0	83	0	5	0	0	23	0
Lane Group Flow (vph)	235	932	27	27	1195	104	81	387	0	187	420	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	75.8	75.8	75.8	53.6	53.6	53.6	34.8	34.8		51.7	51.7	
Effective Green, g (s)	75.8	75.8	75.8	53.6	53.6	53.6	34.8	34.8		51.7	51.7	
Actuated g/C Ratio	0.54	0.54	0.54	0.38	0.38	0.38	0.25	0.25		0.37	0.37	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	301	2423	719	189	1730	625	198	466		243	649	
v/s Ratio Prot	c0.10	0.21			0.26			c0.21		c0.07	0.24	
v/s Ratio Perm	c0.32		0.02	0.05		0.06	0.10			0.22		
v/c Ratio	0.78	0.38	0.04	0.14	0.69	0.17	0.41	0.83		0.77	0.65	
Uniform Delay, d1	33.4	18.6	15.0	28.2	36.2	28.5	44.0	49.8		34.5	36.6	
Progression Factor	2.00	1.07	2.11	1.00	1.00	1.00	0.89	0.91		1.06	0.97	
Incremental Delay, d2	8.5	0.3	0.1	1.6	2.3	0.6	1.3	11.1		13.6	2.2	
Delay (s)	75.3	20.1	31.8	29.8	38.5	29.1	40.5	56.4		50.2	37.7	
Level of Service	E	C	C	C	D	C	D	E		D	D	
Approach Delay (s/veh)		31.3			37.1			53.7			41.4	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	38.0	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.81				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		21.5	
Intersection Capacity Utilization	92.9%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Future Volume (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.190			0.141			0.064			0.950		
Satd. Flow (perm)	351	1883	1570	268	1902	1585	118	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			149			232			122
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	pm+ov

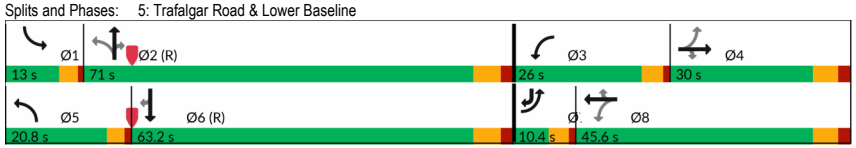
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	7.0	25.0	25.0	7.0	25.0	5.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	11.5	31.6	31.6	11.0	31.6	9.5
Total Split (s)	10.4	30.0	30.0	26.0	45.6	45.6	20.8	71.0	71.0	13.0	63.2	10.4
Total Split (%)	7.4%	21.4%	21.4%	18.6%	32.6%	32.6%	14.9%	50.7%	50.7%	9.3%	45.1%	7.4%
Maximum Green (s)	5.9	23.8	23.8	21.5	39.4	39.4	16.8	64.4	64.4	9.0	56.6	5.9
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	2.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	33.4	25.8	25.8	52.5	41.4	41.4	80.8	66.4	66.4	10.0	60.1	72.6
Actuated g/C Ratio	0.24	0.18	0.18	0.38	0.30	0.30	0.58	0.47	0.47	0.07	0.43	0.52
v/c Ratio	0.72	0.99	0.13	1.02	0.84	0.68	0.84	0.98	0.45	0.97	0.83	0.11
Control Delay (s/veh)	59.2	103.4	0.6	112.4	81.9	55.9	61.7	51.0	11.1	85.2	57.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.2	103.4	0.6	112.4	81.9	55.9	61.7	51.0	11.1	85.2	57.1	8.1
LOS	E	F	A	F	F	E	E	D	B	F	E	A
Approach Delay (s/veh)		82.8			82.5			45.9			58.1	
Approach LOS		F			F			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay (s/veh): 59.7 Intersection LOS: E
Intersection Capacity Utilization 97.6% ICU Level of Service F
Analysis Period (min) 15

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
v/c Ratio	0.72	0.99	0.13	1.02	0.84	0.68	0.84	0.98	0.45	0.97	0.83	0.11
Control Delay (s/veh)	59.2	103.4	0.6	112.4	81.9	55.9	61.7	51.0	11.1	85.2	57.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.2	103.4	0.6	112.4	81.9	55.9	61.7	51.0	11.1	85.2	57.1	8.1
Queue Length 50th (m)	20.6	98.1	0.0	~105.6	137.7	85.7	42.2	230.0	26.7	35.4	150.2	3.7
Queue Length 95th (m)	#38.8	#161.4	0.0	#154.3	#183.4	124.0	#79.5	#275.7	52.4	m#39.7	m152.0	m4.8
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	152	347	420	347	562	573	275	2076	871	237	1843	862
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.99	0.13	1.02	0.84	0.68	0.78	0.98	0.45	0.97	0.83	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Future Volume (vph)	109	345	55	355	472	390	215	2027	392	230	1537	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.0	4.6	4.6	3.0	4.6	2.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	1883	1570	1807	1902	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.19	1.00	1.00	0.14	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	351	1883	1570	269	1902	1585	118	4378	1581	3319	4295	1551
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	345	55	355	472	390	215	2027	392	230	1537	95
RTOR Reduction (vph)	0	0	45	0	0	105	0	0	122	0	0	49
Lane Group Flow (vph)	109	345	10	355	472	285	215	2027	270	230	1537	46
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	29.7	23.8	23.8	49.8	39.4	39.4	77.4	64.4	64.4	9.0	58.1	64.0
Effective Green, g (s)	31.7	25.8	25.8	50.8	41.4	41.4	78.4	66.4	66.4	10.0	60.1	68.0
Actuated g/C Ratio	0.23	0.18	0.18	0.36	0.30	0.30	0.56	0.47	0.47	0.07	0.43	0.49
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.0	6.6	6.6	4.0	6.6	4.5
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	148	347	289	344	562	468	255	2076	749	237	1843	753
v/s Ratio Prot	0.04	0.18		c0.17	0.25		c0.10	c0.46		c0.07	0.36	0.00
v/s Ratio Perm	0.13		0.01	c0.21		0.18	0.37		0.17			0.03
v/c Ratio	0.74	0.99	0.04	1.03	0.84	0.61	0.84	0.98	0.36	0.97	0.83	0.06
Uniform Delay, d1	46.1	57.0	46.9	42.5	46.2	42.3	41.2	36.0	23.3	64.9	35.5	19.1
Progression Factor	1.00	1.00	1.00	1.63	1.49	1.88	1.00	1.00	1.00	0.81	1.52	6.03
Incremental Delay, d2	17.3	46.7	0.1	55.0	10.9	3.0	21.6	14.9	1.3	30.9	2.1	0.0
Delay (s)	63.4	103.7	47.0	124.3	79.6	82.6	62.9	50.9	24.7	83.8	56.1	115.1
Level of Service	E	F	D	F	E	F	E	D	C	F	E	F
Approach Delay (s/veh)		88.9			93.6			48.0			62.5	
Approach LOS		F			F			D			E	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	64.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.02			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	97.6%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

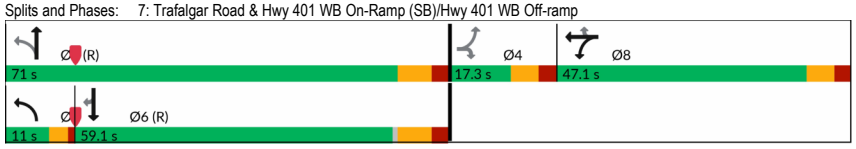
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Future Volume (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.488			0.950			0.073					
Satd. Flow (perm)	938	0	1633	3372	1921	2737	140	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			215						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.2		10.2	48.8	48.8	48.8	61.4	57.3			55.1	55.1
Actuated g/C Ratio	0.08		0.08	0.36	0.36	0.36	0.45	0.42			0.41	0.41
v/c Ratio	0.37		0.09	0.82	0.06	1.79	0.05	0.71			0.75	0.11
Control Delay (s/veh)	74.8		0.7	47.4	33.4	384.9	18.8	34.2			37.4	0.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	74.8		0.7	47.4	33.4	384.9	18.8	34.2			37.4	0.4
LOS	E		A	D	C	F	B	C			D	A
Approach Delay (s/veh)		41.7			270.3			34.1			35.6	
Approach LOS		D			F			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.79			
Intersection Signal Delay (s/veh): 158.9		Intersection LOS: F	
Intersection Capacity Utilization 114.7%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



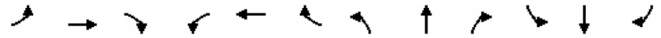


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	26	21	993	40	2013	8	1291	1324	66
v/c Ratio	0.37	0.09	0.82	0.06	1.79	0.05	0.71	0.75	0.11
Control Delay (s/veh)	74.8	0.7	47.4	33.4	384.9	18.8	34.2	37.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.8	0.7	47.4	33.4	384.9	18.8	34.2	37.4	0.4
Queue Length 50th (m)	6.8	0.0	133.0	7.2	~465.4	1.2	124.2	127.2	0.0
Queue Length 95th (m)	16.7	0.0	#189.2	16.8	#529.7	3.9	133.0	158.7	0.0
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	70	244	1215	692	1124	150	2001	1779	607
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.09	0.82	0.06	1.79	0.05	0.65	0.74	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Future Volume (vph)	26	0	21	993	40	2013	8	1291	0	0	1324	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.49		1.00	0.95	1.00	1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)	937		1633	3372	1921	2737	141	4309			4350	1306
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)	26	0	21	993	40	2013	8	1291	0	0	1324	66
RTOR Reduction (vph)	0	0	20	0	0	138	0	0	0	0	0	41
Lane Group Flow (vph)	26	0	1	993	40	1875	8	1291	0	0	1324	25
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	8.2		8.2	48.8	48.8	48.8	55.9	55.9			50.5	50.5
Effective Green, g (s)	8.2		8.2	48.8	48.8	48.8	55.9	55.9			50.5	50.5
Actuated g/C Ratio	0.06		0.06	0.36	0.36	0.36	0.41	0.41			0.37	0.37
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		98	1215	692	986	75	1778			1622	487
v/s Ratio Prot				0.29	0.02		0.00	c0.30			c0.30	
v/s Ratio Perm	c0.03		0.00			c0.69	0.04					0.02
v/c Ratio	0.46		0.01	0.82	0.06	1.90	0.11	0.73			0.82	0.05
Uniform Delay, d1	61.5		59.8	39.3	28.3	43.3	27.7	33.3			38.3	27.1
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	6.0		0.1	4.2	0.0	409.8	0.2	2.6			4.7	0.2
Delay (s)	67.5		59.8	43.4	28.3	453.1	27.9	36.0			42.9	27.3
Level of Service	E		E	D	C	F	C	D			D	C
Approach Delay (s/veh)		64.1			313.9			35.9			42.2	
Approach LOS		E			F			D			D	

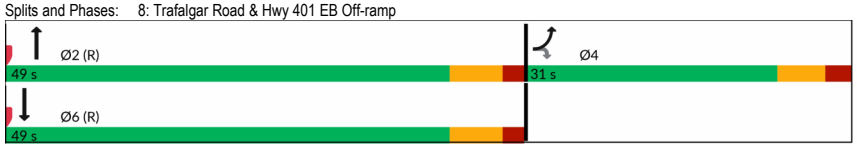
Intersection Summary						
HCM 2000 Control Delay (s/veh)	184.1	HCM 2000 Level of Service	F			
HCM 2000 Volume to Capacity ratio	1.28					
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5			
Intersection Capacity Utilization	114.7%	ICU Level of Service	H			
Analysis Period (min)	15					
c Critical Lane Group						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	213	1001	0	1829	1761	0
Future Volume (vph)	213	1001	0	1829	1761	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.895	0.850				
Flt Protected	0.985					
Satd. Flow (prot)	2934	1327	0	4309	4350	0
Flt Permitted	0.985					
Satd. Flow (perm)	2934	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11	11				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	213	1001	0	1829	1761	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	714	500	0	1829	1761	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	25.5	25.5		40.5	40.5	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
v/c Ratio	1.06dr	1.17		0.84	0.80	
Control Delay (s/veh)	31.1	125.4		21.1	19.6	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	31.1	125.4		21.1	19.6	
LOS	C	F		C	B	
Approach Delay (s/veh)	69.9			21.1	19.6	
Approach LOS	E			C	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.17			
Intersection Signal Delay (s/veh): 32.9		Intersection LOS: C	
Intersection Capacity Utilization 87.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	714	500	1829	1761
v/c Ratio	1.06dr	1.17	0.84	0.80
Control Delay (s/veh)	31.1	125.4	21.1	19.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.1	125.4	21.1	19.6
Queue Length 50th (m)	55.3	~114.2	94.5	87.4
Queue Length 95th (m)	#80.2	#182.6	118.6	109.5
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	941	429	2262	2283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.76	1.17	0.81	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	213	1001	0	1829	1761	0
Future Volume (vph)	213	1001	0	1829	1761	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2934	1327		4309	4350	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2934	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	213	1001	0	1829	1761	0
RTOR Reduction (vph)	7	7	0	0	0	0
Lane Group Flow (vph)	707	493	0	1829	1761	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	25.5	25.5		40.5	40.5	
Effective Green, g (s)	25.5	25.5		40.5	40.5	
Actuated g/C Ratio	0.32	0.32		0.51	0.51	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	935	422		2181	2202	
v/s Ratio Prot	0.24			c0.42	0.40	
v/s Ratio Perm		c0.37				
v/c Ratio	1.06dr	1.17		0.84	0.80	
Uniform Delay, d1	24.5	27.3		16.9	16.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	98.0		4.1	3.2	
Delay (s)	28.0	125.3		21.0	19.5	
Level of Service	C	F		C	B	
Approach Delay (s/veh)	68.1			21.0	19.5	
Approach LOS	E			C	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

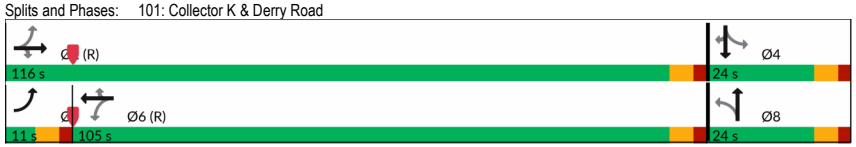
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
Future Volume (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	30.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	4520	1601	1883	4520	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.038						0.757			0.757		
Satd. Flow (perm)	72	4520	1601	1883	4520	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			70						70
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
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
Adj. Flow (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	116.0	116.0	105.0	105.0	105.0	24.0	24.0		24.0	24.0	24.0
Total Split (%)	7.9%	82.9%	82.9%	75.0%	75.0%	75.0%	17.1%	17.1%		17.1%	17.1%	17.1%
Maximum Green (s)	5.0	110.0	110.0	99.0	99.0	99.0	18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	110.0	110.0	110.0		101.2	101.2	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.72	0.72	0.13			0.13		0.13
v/c Ratio	0.53	0.40	0.08		0.99	0.01	0.44			0.10		0.03
Control Delay (s/veh)	30.2	5.1	0.7		17.6	0.0	64.6			55.5		0.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	30.2	5.1	0.7		17.6	0.0	64.6			55.5		0.3
LOS	C	A	A		B	A	E			E		A
Approach Delay (s/veh)		5.8			17.5			64.6			38.5	
Approach LOS		A			B			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 14.6		Intersection LOS: B	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	62	1415	96	3240	11	80	18	8
v/c Ratio	0.53	0.40	0.08	0.99	0.01	0.44	0.10	0.03
Control Delay (s/veh)	30.2	5.1	0.7	17.6	0.0	64.6	55.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.2	5.1	0.7	17.6	0.0	64.6	55.5	0.3
Queue Length 50th (m)	3.3	44.2	0.0	~159.7	0.0	21.1	4.6	0.0
Queue Length 95th (m)	16.7	50.9	3.4	m213.9	m0.0	38.6	12.4	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	30.0	30.0
Base Capacity (vph)	117	3551	1278	3267	1176	183	183	266
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.40	0.08	0.99	0.01	0.44	0.10	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
Future Volume (vph)	62	1415	96	0	3240	11	80	0	0	18	0	8
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	*0.80	1.00		*0.80	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	4520	1601		4520	1601	1789			1789		1601
Flt Permitted	0.04	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	71	4520	1601		4520	1601	1426			1426		1601
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	1415	96	0	3240	11	80	0	0	18	0	8
RTOR Reduction (vph)	0	0	21	0	0	3	0	0	0	0	0	7
Lane Group Flow (vph)	62	1415	75	0	3240	8	80	0	0	18	0	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Effective Green, g (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.71	0.71	0.13			0.13		0.13
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	104	3551	1257		3228	1143	183			183		205
v/s Ratio Prot	0.02	c0.31			c0.72							
v/s Ratio Perm	0.45		0.05			0.00	c0.06			0.01		0.00
v/c Ratio	0.60	0.40	0.06		1.00	0.01	0.44			0.10		0.01
Uniform Delay, d1	41.8	4.7	3.4		20.0	5.7	56.3			53.8		53.2
Progression Factor	1.00	1.00	1.00		0.69	1.00	1.00			1.00		1.00
Incremental Delay, d2	8.9	0.3	0.1		5.7	0.0	1.7			1.1		0.0
Delay (s)	50.6	5.0	3.5		19.5	5.7	58.0			54.9		53.2
Level of Service	D	A	A		B	A	E			D		D
Approach Delay (s/veh)		6.7			19.4			58.0			54.4	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1314	222	0	2612	10	0	0	92	0	0	46
Future Volume (vph)	0	1314	222	0	2612	10	0	0	92	0	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	4520	1601	0	4516	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	4520	1601	0	4516	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
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
Adj. Flow (vph)	0	1314	222	0	2612	10	0	0	92	0	0	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1314	222	0	2622	0	0	0	92	0	0	46
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1314	222	0	2612	10	0	0	92	0	0	46
Future Volume (Veh/h)	0	1314	222	0	2612	10	0	0	92	0	0	46
Sign Control		Free			Free			Stop			Stop	
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)	0	1314	222	0	2612	10	0	0	92	0	0	46
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.68			0.84			0.76	0.76	0.84	0.76	0.76	0.68
vC, conflicting volume	2622			1536			2231	3936	438	3147	4153	876
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1730			973			83	2333	0	1292	2620	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	94
cM capacity (veh/h)	245			592			636	28	911	82	18	735

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	438	438	438	222	1045	1045	532	92	46
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	222	0	0	10	92	46
cSH	1700	1700	1700	1700	1700	1700	1700	911	735
Volume to Capacity	0.26	0.26	0.26	0.13	0.61	0.61	0.31	0.10	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.5
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	10.2
Lane LOS								A	B
Approach Delay (s/veh)	0.0				0.0			9.4	10.2
Approach LOS								A	B

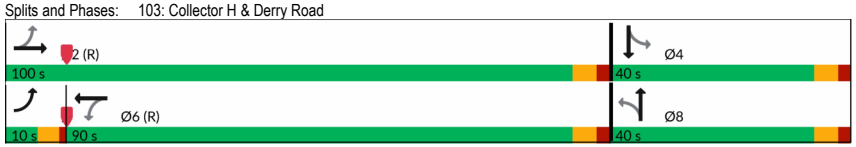
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	60.7%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1305	129	29	2470	13	108	0	14	24	12	53
Future Volume (vph)	62	1305	129	29	2470	13	108	0	14	24	12	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.999			0.985			0.920	
Flt Protected	0.950			0.950				0.958			0.987	
Satd. Flow (prot)	1789	4461	0	1789	4516	0	0	1777	0	0	1710	0
Flt Permitted	0.037			0.141				0.617			0.928	
Satd. Flow (perm)	70	4461	0	266	4516	0	0	1145	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			1			58			50	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
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
Adj. Flow (vph)	62	1305	129	29	2470	13	108	0	14	24	12	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	1434	0	29	2483	0	0	122	0	0	89	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	10.0	100.0		90.0	90.0		40.0	40.0		40.0	40.0	
Total Split (%)	7.1%	71.4%		64.3%	64.3%		28.6%	28.6%		28.6%	28.6%	
Maximum Green (s)	5.5	94.0		84.0	84.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	115.5	114.0		104.8	104.8			14.0			14.0	
Actuated g/C Ratio	0.83	0.81		0.75	0.75			0.10			0.10	
v/c Ratio	0.44	0.39		0.15	0.73			0.73			0.43	
Control Delay (s/veh)	30.8	6.4		9.1	12.9			56.9			34.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	30.8	6.4		9.1	12.9			56.9			34.0	
LOS	C	A		A	B			E			C	
Approach Delay (s/veh)		7.4			12.9			56.9			34.0	
Approach LOS		A			B			E			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.73		
Intersection Signal Delay (s/veh): 12.7	Intersection LOS: B	
Intersection Capacity Utilization 75.0%	ICU Level of Service D	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	62	1434	29	2483	122	89
v/c Ratio	0.44	0.39	0.15	0.73	0.73	0.43
Control Delay (s/veh)	30.8	6.4	9.1	12.9	56.9	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.8	6.4	9.1	12.9	56.9	34.0
Queue Length 50th (m)	9.4	57.0	2.1	145.4	17.8	10.4
Queue Length 95th (m)	m14.3	m39.2	7.8	225.5	38.5	26.3
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	140	3637	199	3380	321	428
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.39	0.15	0.73	0.38	0.21

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1305	129	29	2470	13	108	0	14	24	12	53
Future Volume (vph)	62	1305	129	29	2470	13	108	0	14	24	12	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.98			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4459		1789	4517			1776			1709	
Flt Permitted	0.04	1.00		0.14	1.00			0.62			0.93	
Satd. Flow (perm)	69	4459		266	4517			1144			1607	
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	1305	129	29	2470	13	108	0	14	24	12	53
RTOR Reduction (vph)	0	4	0	0	0	0	0	52	0	0	45	0
Lane Group Flow (vph)	62	1430	0	29	2483	0	0	70	0	0	44	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	114.0	114.0		103.9	103.9			14.0			14.0	
Effective Green, g (s)	114.0	114.0		103.9	103.9			14.0			14.0	
Actuated g/C Ratio	0.81	0.81		0.74	0.74			0.10			0.10	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	124	3630		197	3352			114			160	
v/s Ratio Prot	0.02	c0.32			c0.55							
v/s Ratio Perm	0.38			0.11				c0.06			0.03	
v/c Ratio	0.50	0.39		0.15	0.74			0.61			0.28	
Uniform Delay, d1	18.6	3.6		5.2	10.3			60.4			58.3	
Progression Factor	1.77	1.62		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.1	0.2		1.6	1.5			9.4			0.9	
Delay (s)	35.0	6.0		6.8	11.8			69.8			59.2	
Level of Service	C	A		A	B			E			E	
Approach Delay (s/veh)		7.2			11.8			69.8			59.2	
Approach LOS		A			B			E			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	12.8	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.72				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	75.0%	ICU Level of Service		D	
Analysis Period (min)	15				

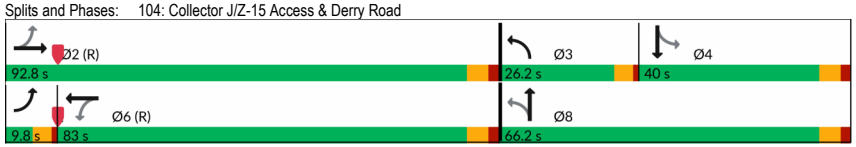
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	1184	213	18	2282	13	144	0	20	30	0	107
Future Volume (vph)	36	1184	213	18	2282	13	144	0	20	30	0	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.999			0.984			0.895	
Flt Protected	0.950			0.950				0.958			0.989	
Satd. Flow (prot)	1789	4416	0	1789	4516	0	0	1775	0	0	1667	0
Flt Permitted	0.034			0.145				0.526			0.928	
Satd. Flow (perm)	64	4416	0	273	4516	0	0	975	0	0	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			1			51			103	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
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
Adj. Flow (vph)	36	1184	213	18	2282	13	144	0	20	30	0	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1397	0	18	2295	0	0	164	0	0	137	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		9.5	40.0		40.0	40.0	
Total Split (s)	9.8	92.8		83.0	83.0		26.2	66.2		40.0	40.0	
Total Split (%)	6.2%	58.4%		52.2%	52.2%		16.5%	41.6%		25.2%	25.2%	
Maximum Green (s)	5.3	86.8		77.0	77.0		21.7	60.2		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		3.5	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		1.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0			7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0			27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0			0		0	0	
Act Effct Green (s)	123.4	121.9		113.0	113.0			25.1			25.1	
Actuated g/C Ratio	0.78	0.77		0.71	0.71			0.16			0.16	
v/c Ratio	0.31	0.41		0.09	0.72			0.84			0.41	
Control Delay (s/veh)	15.8	7.5		12.5	17.6			75.0			19.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	15.8	7.5		12.5	17.6			75.0			19.5	
LOS	B	A		B	B			E			B	
Approach Delay (s/veh)		7.7			17.6			75.0			19.5	
Approach LOS		A			B			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 159			
Actuated Cycle Length: 159			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 16.5		Intersection LOS: B	
Intersection Capacity Utilization 70.2%		ICU Level of Service C	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	36	1397	18	2295	164	137
v/c Ratio	0.31	0.41	0.09	0.72	0.84	0.41
Control Delay (s/veh)	15.8	7.5	12.5	17.6	75.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.8	7.5	12.5	17.6	75.0	19.5
Queue Length 50th (m)	2.4	55.4	1.7	174.2	36.5	9.5
Queue Length 95th (m)	9.8	91.3	6.8	262.2	59.7	27.5
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	50.0		50.0			
Base Capacity (vph)	118	3391	193	3209	400	424
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.41	0.09	0.72	0.41	0.32

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	1184	213	18	2282	13	144	0	20	30	0	107
Future Volume (vph)	36	1184	213	18	2282	13	144	0	20	30	0	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.98			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4417		1789	4516			1775			1667	
Flt Permitted	0.03	1.00		0.14	1.00			0.53			0.93	
Satd. Flow (perm)	65	4417		273	4516			974			1563	
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)	36	1184	213	18	2282	13	144	0	20	30	0	107
RTOR Reduction (vph)	0	7	0	0	0	0	0	43	0	0	87	0
Lane Group Flow (vph)	36	1390	0	18	2295	0	0	121	0	0	50	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	121.9	121.9		112.1	112.1			25.1			25.1	
Effective Green, g (s)	121.9	121.9		112.1	112.1			25.1			25.1	
Actuated g/C Ratio	0.77	0.77		0.71	0.71			0.16			0.16	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	107	3386		192	3183			153			246	
v/s Ratio Prot	0.01	c0.31			c0.51							
v/s Ratio Perm	0.25			0.07				c0.12			0.03	
v/c Ratio	0.34	0.41		0.09	0.72			0.79			0.20	
Uniform Delay, d1	16.6	6.3		7.4	14.1			64.4			58.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	0.4		1.0	1.4			23.7			0.4	
Delay (s)	18.4	6.7		8.4	15.5			88.1			58.7	
Level of Service	B	A		A	B			F			E	
Approach Delay (s/veh)		7.0			15.5			88.1			58.7	
Approach LOS		A			B			F			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	16.9	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.75				
Actuated Cycle Length (s)	159.0	Sum of lost time (s)		21.0	
Intersection Capacity Utilization	70.2%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	1433	3229	32	0	22
Future Volume (vph)	0	1433	3229	32	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	3014	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	3014	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1433	3229	32	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1433	3229	32	0	22
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
* User Entered Value			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	1433	3229	32	0	22
Future Volume (Veh/h)	0	1433	3229	32	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1433	3229	32	0	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.67				0.71	0.67
vC, conflicting volume	3261				3707	1615
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3392				3265	919
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	88
cM capacity (veh/h)	52				5	182

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	478	478	478	1615	1615	32	22
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	32	22
cSH	1700	1700	1700	1700	1700	1700	182
Volume to Capacity	0.28	0.28	0.28	0.95	0.95	0.02	0.12
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	27.5
Lane LOS							D
Approach Delay (s/veh)	0.0			0.0			27.5
Approach LOS							D

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	99.3%	ICU Level of Service		F
Analysis Period (min)	15			

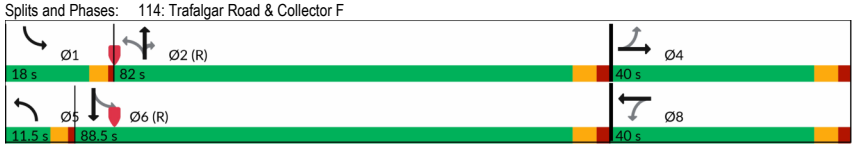
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	50	48	48	46	89	77	1876	184	157	2846	96
Future Volume (vph)	37	50	48	48	46	89	77	1876	184	157	2846	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	60.0		0.0	50.0		0.0	50.0		50.0	70.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.927			0.901				0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1669	0	1652	1622	0	1711	4421	1566	1711	4399	0
Flt Permitted	0.447			0.623			0.041			0.057		
Satd. Flow (perm)	777	1669	0	1083	1622	0	74	4421	1566	103	4399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			66				100		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
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
Adj. Flow (vph)	37	50	48	48	46	89	77	1876	184	157	2846	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	98	0	48	135	0	77	1876	184	157	2942	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.5	82.0	82.0	18.0	88.5	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		8.2%	58.6%	58.6%	12.9%	63.2%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.5	76.0	76.0	14.0	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	12.9	12.9		12.9	12.9		107.4	97.3	97.3	116.4	103.1	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.77	0.70	0.70	0.83	0.74	
v/c Ratio	0.52	0.54		0.48	0.65		0.51	0.61	0.16	0.64	0.91	
Control Delay (s/veh)	85.1	50.1		76.1	46.1		35.5	25.5	8.3	36.0	20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	4.2	
Total Delay (s/veh)	85.1	50.1		76.1	46.1		35.5	25.5	8.3	36.0	25.0	
LOS	F	D		E	D		D	C	A	D	C	
Approach Delay (s/veh)		59.7			54.0			24.4			25.6	
Approach LOS		E			D			C			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.91		
Intersection Signal Delay (s/veh): 26.9	Intersection LOS: C	
Intersection Capacity Utilization 98.0%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	37	98	48	135	77	1876	184	157	2942
v/c Ratio	0.52	0.54	0.48	0.65	0.51	0.61	0.16	0.64	0.91
Control Delay (s/veh)	85.1	50.1	76.1	46.1	35.5	25.5	8.3	36.0	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Total Delay (s/veh)	85.1	50.1	76.1	46.1	35.5	25.5	8.3	36.0	25.0
Queue Length 50th (m)	10.3	17.8	13.4	19.1	7.7	221.7	16.1	19.1	226.9
Queue Length 95th (m)	m21.7	35.2	m26.0	m39.6	m6.7	m225.5	m27.2	43.6	#382.1
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	60.0		50.0		50.0		50.0	70.0	
Base Capacity (vph)	188	430	263	443	154	3073	1119	266	3239
Starvation Cap Reductn	0	0	0	0	0	0	0	0	244
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.23	0.18	0.30	0.50	0.61	0.16	0.59	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	50	48	48	46	89	77	1876	184	157	2846	96
Future Volume (vph)	37	50	48	48	46	89	77	1876	184	157	2846	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.93		1.00	0.90		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)	1652	1668		1652	1623		1711	4421	1566	1711	4399	
Flt Permitted	0.45	1.00		0.62	1.00		0.04	1.00	1.00	0.06	1.00	
Satd. Flow (perm)	777	1668		1083	1623		74	4421	1566	103	4399	
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)	37	50	48	48	46	89	77	1876	184	157	2846	96
RTOR Reduction (vph)	0	30	0	0	60	0	0	0	31	0	1	0
Lane Group Flow (vph)	37	68	0	48	75	0	77	1876	154	157	2941	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	12.9	12.9		12.9	12.9		105.4	97.3	97.3	115.1	103.0	
Effective Green, g (s)	12.9	12.9		12.9	12.9		105.4	97.3	97.3	115.1	103.0	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.75	0.70	0.70	0.82	0.74	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	71	153		99	149		150	3072	1088	243	3236	
v/s Ratio Prot		0.04			0.05		0.03	0.42		c0.06	c0.67	
v/s Ratio Perm	c0.05			0.04			0.36		0.10	0.47		
v/c Ratio	0.52	0.44		0.48	0.50		0.51	0.61	0.14	0.65	0.91	
Uniform Delay, d1	60.6	60.2		60.4	60.5		29.2	11.3	7.2	29.7	14.8	
Progression Factor	1.00	1.00		1.01	1.01		1.37	2.01	1.94	1.00	1.00	
Incremental Delay, d2	6.7	2.1		3.7	2.7		1.0	0.3	0.1	5.8	4.9	
Delay (s)	67.6	62.2		64.6	64.0		41.2	23.1	14.1	35.5	19.7	
Level of Service	E	E		E	E		D	C	B	D	B	
Approach Delay (s/veh)		63.7			64.1			23.0			20.5	
Approach LOS		E			E			C			C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

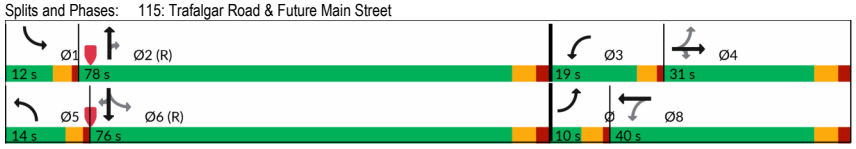
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	58	476	233	146	69	378	1817	107	100	2537	426
Future Volume (vph)	143	58	476	233	146	69	378	1817	107	100	2537	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.952				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3407	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.617			0.575			0.950			0.057		
Satd. Flow (perm)	1162	1883	2818	1083	3407	0	3319	4421	1566	103	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			237		53				125			225
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	143	58	476	233	146	69	378	1817	107	100	2537	426
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	58	476	233	215	0	378	1817	107	100	2537	426
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	10.0	31.0	31.0	19.0	40.0		14.0	78.0	78.0	12.0	76.0	76.0
Total Split (%)	7.1%	22.1%	22.1%	13.6%	28.6%		10.0%	55.7%	55.7%	8.6%	54.3%	54.3%
Maximum Green (s)	5.5	25.0	25.0	14.5	34.0		10.0	72.0	72.0	8.0	70.0	70.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	25.0	18.0	18.0	38.4	26.9		17.1	78.3	78.3	80.7	70.0	70.0
Actuated g/C Ratio	0.18	0.13	0.13	0.27	0.19		0.12	0.56	0.56	0.58	0.50	0.50
v/c Ratio	0.62	0.24	0.84	0.63	0.31		0.94	0.73	0.11	0.63	1.15	0.48
Control Delay (s/veh)	56.7	55.2	42.8	49.8	36.3		90.8	26.3	2.1	37.2	108.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	55.2	42.8	49.8	36.3		90.8	26.3	2.1	37.2	108.4	14.2
LOS	E	E	D	D	D		F	C	A	D	F	B
Approach Delay (s/veh)		46.8			43.3			35.8			93.0	
Approach LOS		D			D			D			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.15		
Intersection Signal Delay (s/veh): 64.4		Intersection LOS: E
Intersection Capacity Utilization 98.1%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	143	58	476	233	215	378	1817	107	100	2537	426
v/c Ratio	0.62	0.24	0.84	0.63	0.31	0.94	0.73	0.11	0.63	1.15	0.48
Control Delay (s/veh)	56.7	55.2	42.8	49.8	36.3	90.8	26.3	2.1	37.2	108.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	55.2	42.8	49.8	36.3	90.8	26.3	2.1	37.2	108.4	14.2
Queue Length 50th (m)	31.8	14.9	38.5	54.9	20.5	55.2	155.8	0.0	12.3	~356.3	50.8
Queue Length 95th (m)	47.4	27.3	57.5	75.2	30.5	#110.5	194.5	6.7	m25.9	#380.4	68.0
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	231	336	697	370	867	404	2473	931	162	2210	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	36	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.17	0.68	0.63	0.25	0.94	0.73	0.11	0.62	1.17	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	58	476	233	146	69	378	1817	107	100	2537	426
Future Volume (vph)	143	58	476	233	146	69	378	1817	107	100	2537	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.95		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	1883	2818	1789	3406		3319	4421	1566	1711	4421	1566
Flt Permitted	0.62	1.00	1.00	0.58	1.00		0.95	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1162	1883	2818	1084	3406		3319	4421	1566	103	4421	1566
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	58	476	233	146	69	378	1817	107	100	2537	426
RTOR Reduction (vph)	0	0	207	0	43	0	0	0	47	0	0	113
Lane Group Flow (vph)	143	58	269	233	172	0	378	1817	60	100	2537	313
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	23.5	18.0	18.0	37.0	27.0		17.1	78.3	78.3	78.6	69.9	69.9
Effective Green, g (s)	23.5	18.0	18.0	37.0	27.0		17.1	78.3	78.3	78.6	69.9	69.9
Actuated g/C Ratio	0.17	0.13	0.13	0.26	0.19		0.12	0.56	0.56	0.56	0.50	0.50
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	219	242	362	359	656		405	2472	875	157	2207	781
v/s Ratio Prot	0.03	0.03		c0.07	0.05		c0.11	0.41		0.04	c0.57	
v/s Ratio Perm	0.08		c0.10	0.10					0.04	0.32		0.20
v/c Ratio	0.65	0.24	0.74	0.65	0.26		0.93	0.74	0.07	0.64	1.15	0.40
Uniform Delay, d1	53.2	54.8	58.8	43.9	48.0		60.9	23.1	14.1	21.6	35.1	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.96	1.14	1.25
Incremental Delay, d2	6.8	0.5	8.1	4.0	0.2		28.4	2.0	0.2	6.9	72.1	1.3
Delay (s)	60.0	55.4	66.8	47.9	48.3		89.3	25.1	14.3	27.6	111.9	28.8
Level of Service	E	E	E	D	D		F	C	B	C	F	C
Approach Delay (s/veh)		64.4			48.1			35.1			97.6	
Approach LOS		E			D			D			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	68.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	98.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

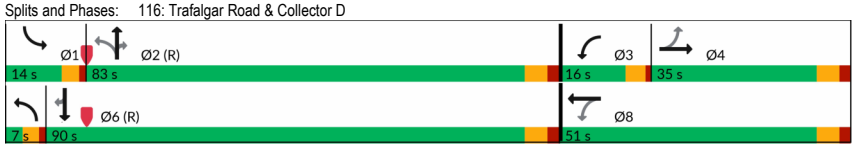
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	18	109	208	21	269	178	1706	54	125	2716	205
Future Volume (vph)	88	18	109	208	21	269	178	1706	54	125	2716	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	80.0		0.0	50.0		50.0	100.0		50.0
Storage Lanes	1		0	1		0	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt		0.871			0.861				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1568	0	1652	1550	0	1711	4421	1566	3319	4421	1566
Flt Permitted	0.582			0.427			0.046			0.950		
Satd. Flow (perm)	1012	1568	0	742	1550	0	83	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			90				114			85
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
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
Adj. Flow (vph)	88	18	109	208	21	269	178	1706	54	125	2716	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	127	0	208	290	0	178	1706	54	125	2716	205
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	35.0	35.0		16.0	51.0		7.0	83.0	83.0	14.0	90.0	90.0
Total Split (%)	23.6%	23.6%		10.8%	34.5%		4.7%	56.1%	56.1%	9.5%	60.8%	60.8%
Maximum Green (s)	29.0	29.0		11.5	45.0		3.0	77.0	77.0	10.0	84.0	84.0
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	18.2	18.2		35.7	34.2		100.2	87.2	87.2	10.6	84.0	84.0
Actuated g/C Ratio	0.12	0.12		0.24	0.23		0.68	0.59	0.59	0.07	0.57	0.57
v/c Ratio	0.71	0.51		0.84	0.68		0.86	0.66	0.06	0.53	1.08	0.22
Control Delay (s/veh)	90.1	35.4		76.4	42.8		73.3	23.0	0.1	74.2	76.3	9.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	35.4		76.4	42.8		73.3	23.4	0.1	74.2	76.3	9.6
LOS	F	D		E	D		E	C	A	E	E	A
Approach Delay (s/veh)		57.8			56.9			27.3			71.8	
Approach LOS		E			E			C			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 148		
Actuated Cycle Length: 148		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.08		
Intersection Signal Delay (s/veh): 54.8		Intersection LOS: D
Intersection Capacity Utilization 106.7%		ICU Level of Service G
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	88	127	208	290	178	1706	54	125	2716	205
v/c Ratio	0.71	0.51	0.84	0.68	0.86	0.66	0.06	0.53	1.08	0.22
Control Delay (s/veh)	90.1	35.4	76.4	42.8	73.3	23.0	0.1	74.2	76.3	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	35.4	76.4	42.8	73.3	23.4	0.1	74.2	76.3	9.6
Queue Length 50th (m)	25.6	16.9	54.3	55.4	37.0	136.8	0.0	18.8	~376.2	16.2
Queue Length 95th (m)	42.9	35.9	#75.2	82.1	#113.1	182.6	0.0	29.5	#404.3	29.8
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	50.0		80.0		50.0		50.0	100.0		50.0
Base Capacity (vph)	198	360	249	533	207	2604	969	249	2509	925
Starvation Cap Reductn	0	0	0	0	0	362	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.35	0.84	0.54	0.86	0.76	0.06	0.50	1.08	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	18	109	208	21	269	178	1706	54	125	2716	205
Future Volume (vph)	88	18	109	208	21	269	178	1706	54	125	2716	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.87		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)	1652	1569		1652	1550		1711	4421	1566	3319	4421	1566
Flt Permitted	0.58	1.00		0.43	1.00		0.05	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1012	1569		742	1550		83	4421	1566	3319	4421	1566
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)	88	18	109	208	21	269	178	1706	54	125	2716	205
RTOR Reduction (vph)	0	58	0	0	69	0	0	0	22	0	0	37
Lane Group Flow (vph)	88	69	0	208	221	0	178	1706	32	125	2716	168
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2			6
Actuated Green, G (s)	18.2	18.2		34.2	34.2		101.0	87.2	87.2	10.6	84.0	84.0
Effective Green, g (s)	18.2	18.2		34.2	34.2		101.0	87.2	87.2	10.6	84.0	84.0
Actuated g/C Ratio	0.12	0.12		0.23	0.23		0.68	0.59	0.59	0.07	0.57	0.57
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	124	192		242	358		208	2604	922	237	2509	888
v/s Ratio Prot		0.04		c0.07	0.14		c0.08	0.39		0.04	c0.61	
v/s Ratio Perm	0.09			c0.13			0.51		0.02			0.11
v/c Ratio	0.71	0.36		0.86	0.62		0.86	0.66	0.03	0.53	1.08	0.19
Uniform Delay, d1	62.4	59.6		53.0	51.0		50.9	20.3	12.7	66.3	32.0	15.5
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	17.0	1.2		24.8	3.1		27.4	1.3	0.1	2.1	44.9	0.5
Delay (s)	79.3	60.7		77.8	54.2		78.3	21.6	12.8	68.4	76.9	16.0
Level of Service	E	E		E	D		E	C	B	E	E	B
Approach Delay (s/veh)		68.3			64.0			26.6			72.5	
Approach LOS		E			E			C			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	56.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

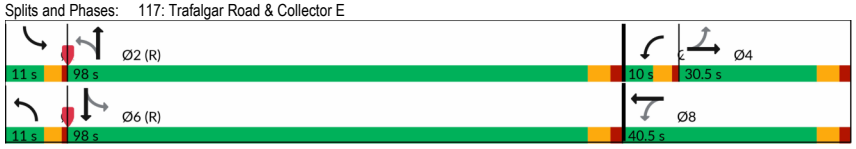
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	8	4	90	8	64	33	1900	36	56	2972	26
Future Volume (vph)	7	8	4	90	8	64	33	1900	36	56	2972	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.950			0.867			0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1789	0	1789	1633	0	1711	4408	0	1711	4416	0
Flt Permitted	0.710			0.428			0.037			0.057		
Satd. Flow (perm)	1337	1789	0	806	1633	0	67	4408	0	103	4416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			64			3			1	
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
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
Adj. Flow (vph)	7	8	4	90	8	64	33	1900	36	56	2972	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	12	0	90	72	0	33	1936	0	56	2998	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	30.5	30.5		10.0	40.5		11.0	98.0		11.0	98.0	
Total Split (%)	20.4%	20.4%		6.7%	27.1%		7.4%	65.6%		7.4%	65.6%	
Maximum Green (s)	24.5	24.5		5.5	34.5		7.0	92.0		7.0	92.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0			27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effct Green (s)	10.0	10.0		17.5	16.0		119.2	112.0		121.4	113.1	
Actuated g/C Ratio	0.07	0.07		0.12	0.11		0.80	0.75		0.81	0.76	
v/c Ratio	0.08	0.10		0.62	0.31		0.26	0.59		0.34	0.90	
Control Delay (s/veh)	67.7	53.3		79.2	19.4		11.7	10.3		8.6	20.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.2		0.0	11.1	
Total Delay (s/veh)	67.7	53.3		79.2	19.4		11.7	10.5		8.6	31.4	
LOS	E	D		E	B		B	B		A	C	
Approach Delay (s/veh)		58.6			52.6			10.5			31.0	
Approach LOS		E			D			B			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.90		
Intersection Signal Delay (s/veh): 24.0	Intersection LOS: C	
Intersection Capacity Utilization 79.7%	ICU Level of Service D	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	7	12	90	72	33	1936	56	2998
v/c Ratio	0.08	0.10	0.62	0.31	0.26	0.59	0.34	0.90
Control Delay (s/veh)	67.7	53.3	79.2	19.4	11.7	10.3	8.6	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	11.1
Total Delay (s/veh)	67.7	53.3	79.2	19.4	11.7	10.5	8.6	31.4
Queue Length 50th (m)	2.0	2.3	24.8	2.1	1.8	114.0	3.0	305.0
Queue Length 95th (m)	7.3	9.3	42.9	17.1	5.9	138.3	6.1	340.1
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	219	296	146	426	130	3302	166	3339
Starvation Cap Reductn	0	0	0	0	0	461	0	379
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.62	0.17	0.25	0.68	0.34	1.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	8	4	90	8	64	33	1900	36	56	2972	26
Future Volume (vph)	7	8	4	90	8	64	33	1900	36	56	2972	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.95		1.00	0.87		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)	1789	1789		1789	1632		1711	4409		1711	4415	
Flt Permitted	0.71	1.00		0.43	1.00		0.04	1.00		0.06	1.00	
Satd. Flow (perm)	1337	1789		807	1632		66	4409		102	4415	
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)	7	8	4	90	8	64	33	1900	36	56	2972	26
RTOR Reduction (vph)	0	4	0	0	56	0	0	1	0	0	0	0
Lane Group Flow (vph)	7	8	0	90	16	0	33	1935	0	56	2998	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.0	6.0		18.4	18.4		114.0	108.8		116.2	109.9	
Effective Green, g (s)	6.0	6.0		18.4	18.4		114.0	108.8		116.2	109.9	
Actuated g/C Ratio	0.04	0.04		0.12	0.12		0.76	0.73		0.78	0.74	
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	71		151	200		107	3208		147	3245	
v/s Ratio Prot		0.00		c0.03	0.01		0.01	0.44		c0.02	c0.68	
v/s Ratio Perm	0.01			c0.04			0.22			0.28		
v/c Ratio	0.13	0.11		0.60	0.08		0.31	0.60		0.38	0.92	
Uniform Delay, d1	69.2	69.2		60.6	58.0		30.3	9.9		8.3	16.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.7		6.2	0.2		1.6	0.8		1.6	5.8	
Delay (s)	70.4	69.9		66.8	58.2		31.9	10.7		10.0	22.1	
Level of Service	E	E		E	E		C	B		A	C	
Approach Delay (s/veh)		70.1			63.0			11.1			21.9	
Approach LOS		E			E			B			C	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	19.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		20.5	
Intersection Capacity Utilization	79.7%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	188	0	0	0	0	215
Future Volume (vph)	188	0	0	0	0	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			80.2	161.7	
Travel Time (s)	55.9			6.0	12.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	188	0	0	0	0	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	188	0	0	0	0	215
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	188	0	0	0	0	215
Future Volume (vph)	188	0	0	0	0	215
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	188	0	0	0	0	215

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	188	0	215
Volume Left (vph)	188	0	0
Volume Right (vph)	0	0	215
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.5	5.0	3.9
Degree Utilization, x	0.29	0.00	0.23
Capacity (veh/h)	628	717	884
Control Delay (s/veh)	9.5	6.8	8.1
Approach Delay (s/veh)	9.5		8.1
Approach LOS	A		A

Intersection Summary				
Delay	8.7			
Level of Service	A			
Intersection Capacity Utilization	16.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	98	26	47	23	33
Future Volume (vph)	17	98	26	47	23	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885		0.913			
Flt Protected	0.993					0.980
Satd. Flow (prot)	1582	0	1644	0	0	1765
Flt Permitted	0.993					0.980
Satd. Flow (perm)	1582	0	1644	0	0	1765
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	98	26	47	23	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	115	0	73	0	0	56
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	98	26	47	23	33
Future Volume (Veh/h)	17	98	26	47	23	33
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	98	26	47	23	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	129	50			73	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	50			73	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	90			98	
cM capacity (veh/h)	853	1019			1527	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	115	73	56
Volume Left	17	0	23
Volume Right	98	47	0
cSH	990	1700	1527
Volume to Capacity	0.12	0.04	0.02
Queue Length 95th (m)	3.0	0.0	0.3
Control Delay (s/veh)	9.1	0.0	3.1
Lane LOS	A		A
Approach Delay (s/veh)	9.1	0.0	3.1
Approach LOS	A		

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	84	14	85	214	4	27	29	64	44	5	0
Future Volume (vph)	0	84	14	85	214	4	27	29	64	44	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.998			0.928				
Flt Protected					0.986			0.989			0.957	
Satd. Flow (prot)	0	1848	0	0	1772	0	0	1729	0	0	1802	0
Flt Permitted					0.986			0.989			0.957	
Satd. Flow (perm)	0	1848	0	0	1772	0	0	1729	0	0	1802	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
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
Adj. Flow (vph)	0	84	14	85	214	4	27	29	64	44	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	303	0	0	120	0	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.0%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	84	14	85	214	4	27	29	64	44	5	0
Future Volume (Veh/h)	0	84	14	85	214	4	27	29	64	44	5	0
Sign Control		Free			Free			Stop			Stop	
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)	0	84	14	85	214	4	27	29	64	44	5	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	218			98			480	479	91	556	484	216
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	218			98			480	479	91	556	484	216
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			94	94	93	88	99	100
cM capacity (veh/h)	1352			1495			471	458	967	376	455	824

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	98	303	120	49
Volume Left	0	85	27	44
Volume Right	14	4	64	0
cSH	1352	1495	642	383
Volume to Capacity	0.00	0.06	0.19	0.13
Queue Length 95th (m)	0.0	1.4	5.2	3.3
Control Delay (s/veh)	0.0	2.5	11.9	15.8
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	2.5	11.9	15.8
Approach LOS			B	C

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	38.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	93	54	30	312	76	41
Future Volume (vph)	93	54	30	312	76	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950				0.953	
Flt Protected				0.996	0.969	
Satd. Flow (prot)	1789	0	0	1876	1739	0
Flt Permitted				0.996	0.969	
Satd. Flow (perm)	1789	0	0	1876	1739	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	93	54	30	312	76	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	342	117	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	7	66	9	4	46
Future Volume (vph)	3	7	66	9	4	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905		0.984			
Flt Protected	0.985					0.996
Satd. Flow (prot)	1550	0	1772	0	0	1793
Flt Permitted	0.985					0.996
Satd. Flow (perm)	1550	0	1772	0	0	1793
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	7	66	9	4	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	75	0	0	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	7	66	9	4	46
Future Volume (Veh/h)	3	7	66	9	4	46
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	66	9	4	46
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	125	71			75	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125	71			75	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	868	992			1524	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	10	75	50
Volume Left	3	0	4
Volume Right	7	9	0
cSH	951	1700	1524
Volume to Capacity	0.01	0.04	0.00*
Queue Length 95th (m)	0.2	0.0	0.1
Control Delay (s/veh)	8.8	0.0	0.6
Lane LOS	A		A
Approach Delay (s/veh)	8.8	0.0	0.6
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	11	8	8	37	19	11	99	11	13	89	2
Future Volume (vph)	2	11	8	8	37	19	11	99	11	13	89	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.960			0.988			0.997	
Flt Protected		0.995			0.994			0.995			0.994	
Satd. Flow (prot)	0	1642	0	0	1659	0	0	1770	0	0	1784	0
Flt Permitted		0.995			0.994			0.995			0.994	
Satd. Flow (perm)	0	1642	0	0	1659	0	0	1770	0	0	1784	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
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
Adj. Flow (vph)	2	11	8	8	37	19	11	99	11	13	89	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	64	0	0	121	0	0	104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	11	8	8	37	19	11	99	11	13	89	2
Future Volume (Veh/h)	2	11	8	8	37	19	11	99	11	13	89	2
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)	2	11	8	8	37	19	11	99	11	13	89	2
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	280	248	90	256	244	105	91			110		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	280	248	90	256	244	105	91			110		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	99	94	98	99			99		
cM capacity (veh/h)	622	644	968	674	648	950	1504			1480		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	64	121	104
Volume Left	2	8	11	13
Volume Right	8	19	11	2
cSH	735	719	1504	1480
Volume to Capacity	0.03	0.09	0.00*	0.00*
Queue Length 95th (m)	0.7	2.2	0.2	0.2
Control Delay (s/veh)	10.0	10.5	0.7	1.0
Lane LOS	B	B	A	A
Approach Delay (s/veh)	10.0	10.5	0.7	1.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		3.5		
Intersection Capacity Utilization		19.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	29	4	0	55	0	71	147	9	0	89	23
Future Volume (vph)	9	29	4	0	55	0	71	147	9	0	89	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987						0.995			0.972	
Flt Protected		0.989						0.985				
Satd. Flow (prot)	0	1839	0	0	1883	0	0	1765	0	0	1750	0
Flt Permitted		0.989						0.985				
Satd. Flow (perm)	0	1839	0	0	1883	0	0	1765	0	0	1750	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
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
Adj. Flow (vph)	9	29	4	0	55	0	71	147	9	0	89	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	55	0	0	227	0	0	112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	29	4	0	55	0	71	147	9	0	89	23
Future Volume (Veh/h)	9	29	4	0	55	0	71	147	9	0	89	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)	9	29	4	0	55	0	71	147	9	0	89	23
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	422	399	101	413	406	152	112			156		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	422	399	101	413	406	152	112			156		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	94	100	100	89	100	95			100		
cM capacity (veh/h)	480	513	955	505	509	895	1478			1424		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	42	55	227	112
Volume Left	9	0	71	0
Volume Right	4	0	9	23
cSH	529	509	1478	1424
Volume to Capacity	0.08	0.11	0.05	0.00
Queue Length 95th (m)	2.0	2.7	1.1	0.0
Control Delay (s/veh)	12.4	12.9	2.6	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	12.4	12.9	2.6	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization		34.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	33	2	0	37	11	4	44	15	8	23	18
Future Volume (vph)	20	33	2	0	37	11	4	44	15	8	23	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.969			0.968			0.950	
Flt Protected		0.982						0.997			0.992	
Satd. Flow (prot)	0	1699	0	0	1745	0	0	1738	0	0	1697	0
Flt Permitted		0.982						0.997			0.992	
Satd. Flow (perm)	0	1699	0	0	1745	0	0	1738	0	0	1697	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
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
Adj. Flow (vph)	20	33	2	0	37	11	4	44	15	8	23	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	48	0	0	63	0	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	33	2	0	37	11	4	44	15	8	23	18
Future Volume (Veh/h)	20	33	2	0	37	11	4	44	15	8	23	18
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	33	2	0	37	11	4	44	15	8	23	18
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	137	115	32	126	117	52	41			59		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	137	115	32	126	117	52	41			59		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	100	100	95	99	100			99		
cM capacity (veh/h)	790	769	1042	814	768	1016	1568			1545		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	55	48	63	49
Volume Left	20	0	4	8
Volume Right	2	11	15	18
cSH	784	813	1568	1545
Volume to Capacity	0.07	0.06	0.00*	0.00*
Queue Length 95th (m)	1.7	1.4	0.1	0.1
Control Delay (s/veh)	9.9	9.7	0.5	1.2
Lane LOS	A	A	A	A
Approach Delay (s/veh)	9.9	9.7	0.5	1.2
Approach LOS	A	A		

Intersection Summary				
Average Delay		5.1		
Intersection Capacity Utilization		21.3%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	63	0	7	72	95	6	21	5	85	15	5
Future Volume (vph)	5	63	0	7	72	95	6	21	5	85	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.926			0.979			0.994	
Flt Protected		0.996			0.998			0.991			0.961	
Satd. Flow (prot)	0	1793	0	0	1664	0	0	1747	0	0	1720	0
Flt Permitted		0.996			0.998			0.991			0.961	
Satd. Flow (perm)	0	1793	0	0	1664	0	0	1747	0	0	1720	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
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
Adj. Flow (vph)	5	63	0	7	72	95	6	21	5	85	15	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	174	0	0	32	0	0	105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	63	0	7	72	95	6	21	5	85	15	5
Future Volume (Veh/h)	5	63	0	7	72	95	6	21	5	85	15	5
Sign Control		Free			Free			Stop			Stop	
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)	5	63	0	7	72	95	6	21	5	85	15	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	167			63			219	254	63	222	207	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	167			63			219	254	63	222	207	120
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	97	100	88	98	99
cM capacity (veh/h)	1411			1540			716	644	1002	708	685	932

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	68	174	32	105
Volume Left	5	7	6	85
Volume Right	0	95	5	5
cSH	1411	1540	696	712
Volume to Capacity	0.00*	0.00*	0.05	0.15
Queue Length 95th (m)	0.1	0.1	1.1	3.9
Control Delay (s/veh)	0.6	0.3	10.4	10.9
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.6	0.3	10.4	10.9
Approach LOS			B	B

Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization		30.7%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	166	53	61	66	67	36
Future Volume (vph)	166	53	61	66	67	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967				0.953	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1677	0	1711	0	1716	0
Flt Permitted	0.963		0.950			
Satd. Flow (perm)	1677	0	1711	0	1716	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	166	53	61	66	67	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	219	0	61	66	103	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	166	53	61	66	67	36
Future Volume (Veh/h)	166	53	61	66	67	36
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)	166	53	61	66	67	36
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	273	85	103			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273	85	103			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	95	96			
cM capacity (veh/h)	687	974	1489			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	219	61	103
Volume Left	166	61	0
Volume Right	53	0	36
cSH	740	1489	1700
Volume to Capacity	0.30	0.04	0.06
Queue Length 95th (m)	9.4	1.0	0.0
Control Delay (s/veh)	11.9	7.5	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	11.9	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	Err%	ICU Level of Service	H	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	36	49	0	36	21	12
Future Volume (vph)	36	49	0	36	21	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922				0.951	
Flt Protected					0.969	
Satd. Flow (prot)	1660	0	0	1801	1659	0
Flt Permitted					0.969	
Satd. Flow (perm)	1660	0	0	1801	1659	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	49	0	36	21	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	85	0	0	36	33	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	36	49	0	36	21	12
Future Volume (Veh/h)	36	49	0	36	21	12
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	36	49	0	36	21	12
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	54	0	115	48	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54	0	115	48	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	96	95	100	96	99	
cM capacity (veh/h)	826	1085	788	833	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	85	36	33
Volume Left	0	0	21
Volume Right	49	0	12
cSH	958	833	1623
Volume to Capacity	0.09	0.04	0.01
Queue Length 95th (m)	2.2	1.0	0.3
Control Delay (s/veh)	9.1	9.5	4.6
Lane LOS	A	A	A
Approach Delay (s/veh)	9.1	9.5	4.6
Approach LOS	A	A	

Intersection Summary				
Average Delay		8.3		
Intersection Capacity Utilization		14.9%	ICU Level of Service	A
Analysis Period (min)		15		

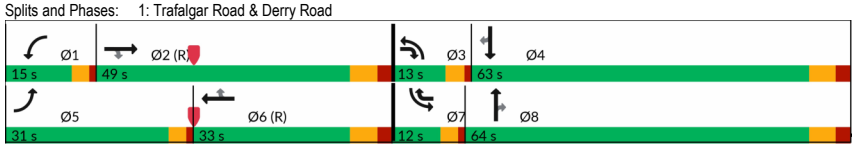
2051 Future Total

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	833	1829	434	423	797	623	266	2283	380	238	1840	104
Future Volume (vph)	833	1829	434	423	797	623	266	2283	380	238	1840	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			182			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	850	1866	443	432	813	636	271	2330	388	243	1878	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	850	1866	443	432	813	636	271	2330	388	243	1878	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	31.0	49.0	13.0	15.0	33.0	12.0	13.0	64.0	64.0	12.0	63.0	63.0
Total Split (%)	22.1%	35.0%	9.3%	10.7%	23.6%	8.6%	9.3%	45.7%	45.7%	8.6%	45.0%	45.0%
Maximum Green (s)	27.0	42.1	9.0	11.0	26.1	8.0	9.0	57.2	57.2	8.0	56.2	56.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	28.0	44.1	60.0	12.0	28.1	43.0	10.0	59.2	59.2	9.0	58.2	58.2
Actuated g/C Ratio	0.20	0.32	0.43	0.09	0.20	0.31	0.07	0.42	0.42	0.06	0.42	0.42
v/c Ratio	1.22	1.15	0.62	1.45	0.83	1.13	1.24	1.32	0.51	1.30	1.07	0.18
Control Delay (s/veh)	167.0	119.6	29.2	265.5	61.8	115.3	180.7	177.2	16.6	217.4	83.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	167.0	119.6	29.2	265.5	61.8	115.3	180.7	177.2	16.6	217.4	83.2	3.4
LOS	F	F	C	F	E	F	F	F	B	F	F	A
Approach Delay (s/veh)		119.7			126.7			156.7			94.0	
Approach LOS		F			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.45		
Intersection Signal Delay (s/veh): 126.2		Intersection LOS: F
Intersection Capacity Utilization 117.1%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	850	1866	443	432	813	636	271	2330	388	243	1878	106
v/c Ratio	1.22	1.15	0.62	1.45	0.83	1.13	1.24	1.32	0.51	1.30	1.07	0.18
Control Delay (s/veh)	167.0	119.6	29.2	265.5	61.8	115.3	180.7	177.2	16.6	217.4	83.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	167.0	119.6	29.2	265.5	61.8	115.3	180.7	177.2	16.6	217.4	83.2	3.4
Queue Length 50th (m)	~155.6	~223.6	59.0	~85.2	84.2	~184.7	~51.8	~366.4	32.0	~48.4	~253.3	0.0
Queue Length 95th (m)	#197.2	#254.0	m79.1	#119.2	101.4	#257.6	m#57.6	m#370.0	m35.4	#78.6	#287.9	9.9
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Base Capacity (vph)	694	1619	714	297	983	565	218	1765	767	187	1751	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	1.15	0.62	1.45	0.83	1.13	1.24	1.32	0.51	1.30	1.07	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	833	1829	434	423	797	623	266	2283	380	238	1840	104
Future Volume (vph)	833	1829	434	423	797	623	266	2283	380	238	1840	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	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	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	850	1866	443	432	813	636	271	2330	388	243	1878	106
RTOR Reduction (vph)	0	0	37	0	0	67	0	0	105	0	0	62
Lane Group Flow (vph)	850	1866	406	432	813	569	271	2330	283	243	1878	44
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	27.0	42.1	51.1	11.0	26.1	34.1	9.0	57.2	57.2	8.0	56.2	56.2
Effective Green, g (s)	28.0	44.1	55.1	12.0	28.1	38.1	10.0	59.2	59.2	9.0	58.2	58.2
Actuated g/C Ratio	0.20	0.32	0.39	0.09	0.20	0.27	0.07	0.42	0.42	0.06	0.42	0.42
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	694	1619	623	297	983	444	218	1765	662	187	1751	527
v/s Ratio Prot	c0.24	0.36	0.05	c0.12	0.17	c0.09	0.09	c0.56		0.08	0.45	
v/s Ratio Perm			0.20			0.26			0.18			0.03
v/c Ratio	1.22	1.15	0.65	1.45	0.83	1.28	1.24	1.32	0.43	1.30	1.07	0.08
Uniform Delay, d1	56.0	48.0	34.6	64.0	53.6	50.9	65.0	40.4	28.5	65.5	40.9	24.8
Progression Factor	1.35	1.11	1.00	1.00	1.00	1.00	1.09	0.88	1.03	1.00	1.00	1.00
Incremental Delay, d2	107.9	72.7	1.7	222.4	7.9	143.1	125.8	145.9	0.4	168.2	43.9	0.1
Delay (s)	183.5	126.0	36.4	286.4	61.6	194.0	196.8	181.3	29.6	233.7	84.8	24.9
Level of Service	F	F	D	F	E	F	F	F	C	F	F	C
Approach Delay (s/veh)		128.9			158.0			163.0			98.2	
Approach LOS		F			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	137.5	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.31			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	117.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

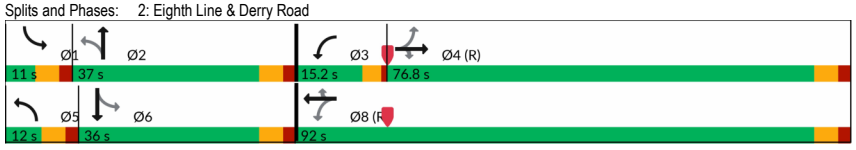
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1938	148	139	1052	28	206	38	154	11	13	15
Future Volume (vph)	45	1938	148	139	1052	28	206	38	154	11	13	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.880			0.920	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1619	0	1217	1622	0
Flt Permitted	0.212			0.046			0.461			0.632		
Satd. Flow (perm)	287	4520	1601	88	4391	1633	886	1619	0	809	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		132			16	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	47	2019	154	145	1096	29	215	40	160	11	14	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	2019	154	145	1096	29	215	200	0	11	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	86.0	86.0	86.0	104.7	102.7	102.7	23.3	20.9		14.3	12.7	
Actuated g/C Ratio	0.61	0.61	0.61	0.75	0.73	0.73	0.17	0.15		0.10	0.09	
v/c Ratio	0.27	0.73	0.15	0.65	0.34	0.02	0.92	0.57		0.11	0.19	
Control Delay (s/veh)	21.0	22.5	5.8	42.3	7.5	0.0	95.8	26.4		47.1	35.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.0	22.5	5.8	42.3	7.5	0.0	95.8	26.4		47.1	35.8	
LOS	C	C	A	D	A	A	F	C		D	D	
Approach Delay (s/veh)		21.3			11.3			62.3			38.8	
Approach LOS		C			B			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.92		
Intersection Signal Delay (s/veh): 22.6		Intersection LOS: C
Intersection Capacity Utilization 76.6%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	2019	154	145	1096	29	215	200	11	30
v/c Ratio	0.27	0.73	0.15	0.65	0.34	0.02	0.92	0.57	0.11	0.19
Control Delay (s/veh)	21.0	22.5	5.8	42.3	7.5	0.0	95.8	26.4	47.1	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.0	22.5	5.8	42.3	7.5	0.0	95.8	26.4	47.1	35.8
Queue Length 50th (m)	9.1	187.0	6.8	23.7	54.4	0.0	51.1	15.1	3.3	3.8
Queue Length 95th (m)	23.3	216.9	18.0	44.7	58.8	0.0	#110.8	43.5	11.0	13.2
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	176	2777	1022	231	3222	1217	234	469	98	360
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.73	0.15	0.63	0.34	0.02	0.92	0.43	0.11	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1938	148	139	1052	28	206	38	154	11	13	15
Future Volume (vph)	45	1938	148	139	1052	28	206	38	154	11	13	15
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.88		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1619		1217	1622	
Flt Permitted	0.21	1.00	1.00	0.05	1.00	1.00	0.46	1.00		0.63	1.00	
Satd. Flow (perm)	287	4520	1601	89	4391	1633	886	1619		810	1622	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	47	2019	154	145	1096	29	215	40	160	11	14	16
RTOR Reduction (vph)	0	0	42	0	0	8	0	112	0	0	15	0
Lane Group Flow (vph)	47	2019	112	145	1096	21	215	88	0	11	15	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	82.4	82.4	82.4	99.1	99.1	99.1	28.9	20.9		12.0	10.0	
Effective Green, g (s)	82.4	82.4	82.4	99.1	99.1	99.1	28.9	20.9		12.0	10.0	
Actuated g/C Ratio	0.59	0.59	0.59	0.71	0.71	0.71	0.21	0.15		0.09	0.07	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	168	2660	942	220	3108	1155	269	241		75	115	
v/s Ratio Prot		c0.45		c0.06	0.25		c0.07	0.05		0.00	0.01	
v/s Ratio Perm	0.16		0.07	0.41		0.01	c0.09			0.01		
v/c Ratio	0.28	0.76	0.12	0.66	0.35	0.02	0.80	0.36		0.15	0.13	
Uniform Delay, d1	14.2	21.4	12.7	36.9	8.0	6.1	50.9	53.6		59.0	60.9	
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	4.1	2.1	0.3	7.0	0.3	0.0	15.2	0.9		0.9	0.5	
Delay (s)	18.3	23.5	13.0	43.9	8.3	6.1	66.1	54.5		60.0	61.5	
Level of Service	B	C	B	D	A	A	E	D		E	E	
Approach Delay (s/veh)		22.7			12.3			60.5			61.0	
Approach LOS		C			B			E			E	

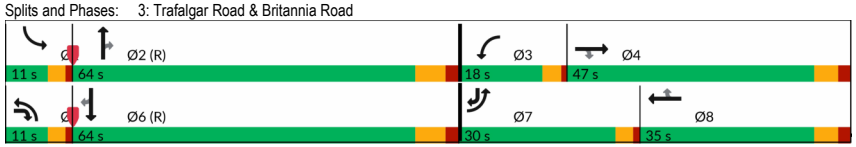
Intersection Summary				
HCM 2000 Control Delay (s/veh)	23.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	76.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	713	1126	503	270	802	266	224	1718	268	150	2286	816
Future Volume (vph)	713	1126	503	270	802	266	224	1718	268	150	2286	816
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			125			170			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	720	1137	508	273	810	269	226	1735	271	152	2309	824
Shared Lane Traffic (%)												
Lane Group Flow (vph)	720	1137	508	273	810	269	226	1735	271	152	2309	824
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	30.0	47.0	11.0	18.0	35.0	35.0	11.0	64.0	64.0	11.0	64.0	30.0
Total Split (%)	21.4%	33.6%	7.9%	12.9%	25.0%	25.0%	7.9%	45.7%	45.7%	7.9%	45.7%	21.4%
Maximum Green (s)	26.0	41.0	7.0	14.0	29.0	29.0	7.0	57.0	57.0	7.0	57.0	26.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	27.0	42.8	56.4	14.6	30.4	30.4	8.6	59.0	59.0	8.6	59.0	92.0
Actuated g/C Ratio	0.19	0.31	0.40	0.10	0.22	0.22	0.06	0.42	0.42	0.06	0.42	0.66
v/c Ratio	1.11	0.83	0.77	0.75	0.84	0.60	1.28	0.97	0.36	0.85	1.28	0.90
Control Delay (s/veh)	119.7	51.6	40.6	74.2	61.6	31.6	212.9	54.6	11.2	86.9	155.6	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	119.7	51.6	40.6	74.2	61.6	31.6	212.9	54.6	11.2	86.9	155.6	35.6
LOS	F	D	D	E	E	C	F	D	B	F	F	D
Approach Delay (s/veh)		70.0			58.2			65.3			122.3	
Approach LOS		E			E			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay (s/veh): 85.7		Intersection LOS: F	
Intersection Capacity Utilization 100.6%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	720	1137	508	273	810	269	226	1735	271	152	2309	824
v/c Ratio	1.11	0.83	0.77	0.75	0.84	0.60	1.28	0.97	0.36	0.85	1.28	0.90
Control Delay (s/veh)	119.7	51.6	40.6	74.2	61.6	31.6	212.9	54.6	11.2	86.9	155.6	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	119.7	51.6	40.6	74.2	61.6	31.6	212.9	54.6	11.2	86.9	155.6	35.6
Queue Length 50th (m)	~121.5	125.0	112.2	38.6	92.7	35.6	~47.4	202.5	17.4	23.6	~354.7	256.1
Queue Length 95th (m)	#161.6	146.2	160.3	54.0	111.9	65.2	#77.1	#245.2	38.6	m25.2	m#319.0	m240.6
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	650	1374	663	375	981	458	176	1792	758	178	1810	915
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.83	0.77	0.73	0.83	0.59	1.28	0.97	0.36	0.85	1.28	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	713	1126	503	270	802	266	224	1718	268	150	2286	816
Future Volume (vph)	713	1126	503	270	802	266	224	1718	268	150	2286	816
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	720	1137	508	273	810	269	226	1735	271	152	2309	824
RTOR Reduction (vph)	0	0	39	0	0	98	0	0	98	0	0	21
Lane Group Flow (vph)	720	1137	469	273	810	171	226	1735	173	152	2309	803
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.0	40.8	48.4	13.6	28.4	28.4	7.6	57.0	57.0	7.6	57.0	83.0
Effective Green, g (s)	27.0	42.8	52.4	14.6	30.4	30.4	8.6	59.0	59.0	8.6	59.0	87.0
Actuated g/C Ratio	0.19	0.31	0.37	0.10	0.22	0.22	0.06	0.42	0.42	0.06	0.42	0.62
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	650	1368	582	365	962	354	176	1792	659	177	1810	848
v/s Ratio Prot	c0.21	c0.25	0.06	0.08	0.18		c0.08	0.41		0.05	c0.54	0.19
v/s Ratio Perm			0.25			0.10			0.11			0.40
v/c Ratio	1.11	0.83	0.81	0.75	0.84	0.48	1.28	0.97	0.26	0.86	1.28	0.95
Uniform Delay, d1	56.5	45.2	39.2	60.9	52.5	47.9	65.7	39.6	26.3	65.1	40.5	24.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	0.78	1.48
Incremental Delay, d2	68.6	4.5	8.0	8.1	6.8	1.0	163.9	15.0	1.0	16.3	126.0	10.4
Delay (s)	125.1	49.7	47.3	69.1	59.3	49.0	229.6	54.5	27.3	84.4	157.6	46.6
Level of Service	F	D	D	E	E	D	F	D	C	F	F	D
Approach Delay (s/veh)		72.1			59.2			69.0			126.3	
Approach LOS		E			E			E			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	88.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

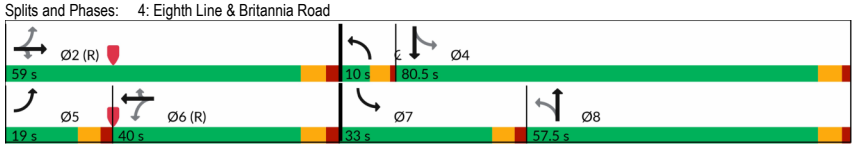
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1256	57	27	728	150	48	269	39	219	381	210
Future Volume (vph)	165	1256	57	27	728	150	48	269	39	219	381	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.981			0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1791	0	1825	1815	0
Flt Permitted	0.210			0.147			0.158			0.310		
Satd. Flow (perm)	403	4476	1306	282	4476	1633	278	1791	0	596	1815	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			153		5			28	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	168	1282	58	28	743	153	49	274	40	223	389	223
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	1282	58	28	743	153	49	314	0	223	612	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	72.2	71.4	71.4	51.7	51.7	51.7	49.6	42.9		65.3	57.6	
Actuated g/C Ratio	0.48	0.48	0.48	0.35	0.35	0.35	0.33	0.29		0.44	0.39	
v/c Ratio	0.52	0.60	0.09	0.29	0.48	0.23	0.34	0.61		0.56	0.85	
Control Delay (s/veh)	31.2	32.4	1.3	55.4	42.9	7.4	27.8	49.0		30.9	51.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	31.2	32.4	1.3	55.4	42.9	7.4	27.8	49.0		30.9	51.5	
LOS	C	C	A	E	D	A	C	D		C	D	
Approach Delay (s/veh)		31.0			37.4			46.1			46.0	
Approach LOS		C			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 37.6		Intersection LOS: D	
Intersection Capacity Utilization 97.8%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	168	1282	58	28	743	153	49	314	223	612
v/c Ratio	0.52	0.60	0.09	0.29	0.48	0.23	0.34	0.61	0.56	0.85
Control Delay (s/veh)	31.2	32.4	1.3	55.4	42.9	7.4	27.8	49.0	30.9	51.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.2	32.4	1.3	55.4	42.9	7.4	27.8	49.0	30.9	51.5
Queue Length 50th (m)	29.0	121.2	0.0	6.2	76.2	0.0	8.4	81.1	40.5	157.9
Queue Length 95th (m)	52.0	162.5	2.5	#20.1	106.8	18.3	14.0	103.3	49.7	180.2
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	334	2137	673	97	1548	664	143	630	482	922
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.60	0.09	0.29	0.48	0.23	0.34	0.50	0.46	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1256	57	27	728	150	48	269	39	219	381	210
Future Volume (vph)	165	1256	57	27	728	150	48	269	39	219	381	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1791		1825	1816	
Flt Permitted	0.21	1.00	1.00	0.15	1.00	1.00	0.16	1.00		0.31	1.00	
Satd. Flow (perm)	404	4476	1306	282	4476	1633	279	1791		596	1816	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	168	1282	58	28	743	153	49	274	40	223	389	223
RTOR Reduction (vph)	0	0	31	0	0	101	0	4	0	0	17	0
Lane Group Flow (vph)	168	1282	27	28	743	52	49	310	0	223	595	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	70.5	70.5	70.5	50.8	50.8	50.8	48.1	43.7		66.5	57.6	
Effective Green, g (s)	70.5	70.5	70.5	50.8	50.8	50.8	48.1	43.7		66.5	57.6	
Actuated g/C Ratio	0.47	0.47	0.47	0.34	0.34	0.34	0.32	0.29		0.44	0.39	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	320	2110	615	95	1520	554	130	523		403	699	
v/s Ratio Prot	0.05	c0.29			0.17		0.01	0.17		c0.06	c0.33	
v/s Ratio Perm	0.20		0.02	0.10		0.03	0.11			0.18		
v/c Ratio	0.53	0.61	0.04	0.29	0.49	0.09	0.38	0.59		0.55	0.85	
Uniform Delay, d1	24.8	29.3	21.3	36.2	39.1	33.7	38.2	45.3		28.4	42.0	
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	1.6	1.3	0.1	7.7	1.1	0.3	1.8	1.8		1.6	9.8	
Delay (s)	26.3	30.6	21.5	43.9	40.2	34.0	40.0	47.1		30.0	51.8	
Level of Service	C	C	C	D	D	C	D	D		C	D	
Approach Delay (s/veh)		29.7			39.3			46.1			46.0	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	37.5	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.76				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		24.5	
Intersection Capacity Utilization	97.8%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	600	120	476	236	230	47	1767	268	488	2489	138
Future Volume (vph)	248	600	120	476	236	230	47	1767	268	488	2489	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.599			0.158			0.062			0.950		
Satd. Flow (perm)	1096	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			240			143			115
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	258	625	125	496	246	240	47	1767	268	508	2593	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	625	125	496	246	240	47	1767	268	508	2593	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	27.8	27.0	27.0	36.0	35.2	35.2	9.5	70.0	70.0	26.0	86.5	86.5
Total Split (%)	17.5%	17.0%	17.0%	22.6%	22.1%	22.1%	6.0%	44.0%	44.0%	16.4%	54.4%	54.4%
Maximum Green (s)	23.3	20.8	20.8	31.5	29.0	29.0	5.0	63.4	63.4	22.0	79.9	79.9
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	45.4	22.8	22.8	59.5	33.4	33.4	72.5	65.4	65.4	23.0	83.8	83.8
Actuated g/C Ratio	0.29	0.14	0.14	0.37	0.21	0.21	0.46	0.41	0.41	0.14	0.53	0.53
v/c Ratio	0.64	1.21	0.35	1.19	0.33	0.47	0.45	1.02	0.37	1.06	1.15	0.17
Control Delay (s/veh)	45.7	165.1	8.2	149.2	55.4	9.2	33.1	72.4	16.0	120.3	106.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	165.1	8.2	149.2	55.4	9.2	33.1	72.4	16.0	120.3	106.4	5.6
LOS	D	F	A	F	E	A	C	E	B	F	F	A
Approach Delay (s/veh)		115.1			91.5			64.2			104.1	
Approach LOS		F			F			E			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 159		
Actuated Cycle Length: 159		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.21		
Intersection Signal Delay (s/veh): 92.6		Intersection LOS: F
Intersection Capacity Utilization 109.2%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	258	625	125	496	246	240	47	1767	268	508	2593	144
v/c Ratio	0.64	1.21	0.35	1.19	0.33	0.47	0.45	1.02	0.37	1.06	1.15	0.17
Control Delay (s/veh)	45.7	165.1	8.2	149.2	55.4	9.2	33.1	72.4	16.0	120.3	106.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	165.1	8.2	149.2	55.4	9.2	33.1	72.4	16.0	120.3	106.4	5.6
Queue Length 50th (m)	62.2	~127.0	0.0	~174.9	36.2	0.0	6.5	~259.3	26.4	~91.8	~421.8	4.6
Queue Length 95th (m)	88.8	#166.6	13.5	#247.0	50.4	25.1	14.8	#293.6	49.9	#128.9	#450.2	16.5
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	427	518	353	416	751	513	105	1733	722	480	2263	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.21	0.35	1.19	0.33	0.47	0.45	1.02	0.37	1.06	1.15	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	600	120	476	236	230	47	1767	268	488	2489	138
Future Volume (vph)	248	600	120	476	236	230	47	1767	268	488	2489	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.60	1.00	1.00	0.16	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1096	3614	1601	298	3579	1541	107	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	258	625	125	496	246	240	47	1767	268	508	2593	144
RTOR Reduction (vph)	0	0	107	0	0	190	0	0	84	0	0	55
Lane Group Flow (vph)	258	625	18	496	246	50	47	1767	184	508	2593	89
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	41.7	20.8	20.8	56.8	31.4	31.4	67.4	63.4	63.4	22.0	80.9	80.9
Effective Green, g (s)	43.7	22.8	22.8	57.8	33.4	33.4	69.4	65.4	65.4	23.0	82.9	82.9
Actuated g/C Ratio	0.27	0.14	0.14	0.36	0.21	0.21	0.44	0.41	0.41	0.14	0.52	0.52
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	389	518	229	413	751	323	94	1733	637	480	2239	793
v/s Ratio Prot	0.09	0.17		c0.25	0.07		0.02	0.42		c0.15	c0.60	
v/s Ratio Perm	0.09		0.01	c0.19		0.03	0.20		0.12			0.06
v/c Ratio	0.66	1.21	0.08	1.20	0.33	0.16	0.50	1.02	0.29	1.06	1.16	0.11
Uniform Delay, d1	49.1	68.1	59.0	49.5	53.3	51.3	37.8	46.8	31.3	68.0	38.1	19.3
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	4.2	110.1	0.3	111.6	0.5	0.5	4.1	26.7	1.1	57.4	76.6	0.3
Delay (s)	53.3	178.2	59.3	161.1	53.8	51.8	41.9	73.5	32.4	125.4	114.7	19.6
Level of Service	D	F	E	F	D	D	D	E	C	F	F	B
Approach Delay (s/veh)		131.5			107.5			67.5			112.1	
Approach LOS		F			F			E			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	101.5	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.20			
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	15.8	
Intersection Capacity Utilization	109.2%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

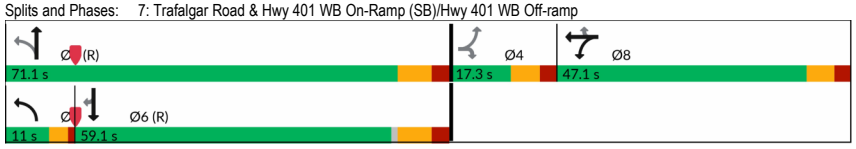
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Future Volume (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.052					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	100	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			308						149
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

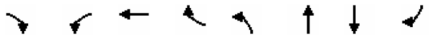
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	33.4	33.4	33.4	87.5	83.4			81.2	81.2
Actuated g/C Ratio			0.07	0.25	0.25	0.25	0.65	0.62			0.60	0.60
v/c Ratio			0.04	0.86	0.03	0.58	0.04	0.56			0.67	0.25
Control Delay (s/veh)			0.3	61.0	35.9	18.0	13.7	18.4			22.5	6.8
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.3	61.0	35.9	18.0	13.7	18.4			22.5	6.8
LOS			A	E	D	B	B	B			C	A
Approach Delay (s/veh)		0.3			41.8			18.4			20.8	
Approach LOS		A			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 25.3		Intersection LOS: C	
Intersection Capacity Utilization 78.0%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp

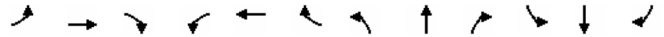




Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	9	608	13	488	6	1368	1740	205
v/c Ratio	0.04	0.86	0.03	0.58	0.04	0.56	0.67	0.25
Control Delay (s/veh)	0.3	61.0	35.9	18.0	13.7	18.4	22.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.3	61.0	35.9	18.0	13.7	18.4	22.5	6.8
Queue Length 50th (m)	0.0	95.0	2.7	26.0	0.5	90.4	116.9	6.5
Queue Length 95th (m)	0.0	113.9	7.7	45.3	3.2	163.5	#258.6	34.5
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	240	849	567	942	153	2425	2582	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.72	0.02	0.52	0.04	0.56	0.67	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Future Volume (vph)	0	0	9	608	13	488	6	1368	0	0	1740	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.05	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	101	3941			4309	1276
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	9	608	13	488	6	1368	0	0	1740	205
RTOR Reduction (vph)	0	0	9	0	0	232	0	0	0	0	0	70
Lane Group Flow (vph)	0	0	0	608	13	256	6	1368	0	0	1740	135
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	33.4	33.4	33.4	77.6	77.6			72.2	72.2
Effective Green, g (s)			2.0	33.4	33.4	33.4	77.6	77.6			72.2	72.2
Actuated g/C Ratio			0.01	0.25	0.25	0.25	0.57	0.57			0.53	0.53
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	709	473	605	75	2256			2296	679
v/s Ratio Prot				c0.21	0.01		0.00	c0.35			c0.40	
v/s Ratio Perm			c0.00			0.10	0.04					0.11
v/c Ratio			0.01	0.86	0.03	0.42	0.08	0.61			0.76	0.20
Uniform Delay, d1			65.8	48.8	38.7	42.9	18.1	19.0			24.8	16.5
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	9.7	0.0	0.2	0.2	1.2			2.4	0.7
Delay (s)			65.9	58.5	38.7	43.1	18.2	20.2			27.2	17.2
Level of Service			E	E	D	D	B	C			C	B
Approach Delay (s/veh)		65.9			51.5			20.2			26.1	
Approach LOS		E			D			C			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	30.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	26.5	
Intersection Capacity Utilization	78.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	1106	0	2421	1161	0
Future Volume (vph)	200	1106	0	2421	1161	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.890	0.850				
Flt Protected	0.987					
Satd. Flow (prot)	2821	1339	0	4154	4117	0
Flt Permitted	0.987					
Satd. Flow (perm)	2821	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	56	56				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	200	1106	0	2421	1161	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	753	553	0	2421	1161	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

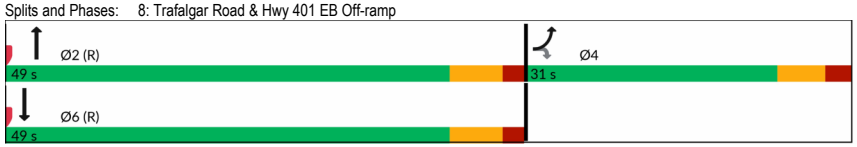
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
v/c Ratio	1.15dr	1.26		1.11	0.54	
Control Delay (s/veh)	35.4	158.8		78.1	13.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	35.4	158.8		78.1	13.7	
LOS	D	F		E	B	
Approach Delay (s/veh)	87.6			78.1	13.7	
Approach LOS	F			E	B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.26		
Intersection Signal Delay (s/veh): 65.3		Intersection LOS: E
Intersection Capacity Utilization 79.8%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	753	553	2421	1161
v/c Ratio	1.15dr	1.26	1.11	0.54
Control Delay (s/veh)	35.4	158.8	78.1	13.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.4	158.8	78.1	13.7
Queue Length 50th (m)	63.5	~120.8	~193.7	50.0
Queue Length 95th (m)	#100.3	#191.0	#229.7	64.3
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	885	440	2180	2161
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.85	1.26	1.11	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	1106	0	2421	1161	0
Future Volume (vph)	200	1106	0	2421	1161	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2820	1339		4154	4117	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2820	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	1106	0	2421	1161	0
RTOR Reduction (vph)	39	39	0	0	0	0
Lane Group Flow (vph)	714	514	0	2421	1161	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0		42.0	42.0	
Effective Green, g (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	846	401		2180	2161	
v/s Ratio Prot	0.25			c0.58	0.28	
v/s Ratio Perm		c0.38				
v/c Ratio	1.15dr	1.28		1.11	0.54	
Uniform Delay, d1	26.2	28.0		19.0	12.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.7	144.5		57.0	1.0	
Delay (s)	33.9	172.5		76.0	13.5	
Level of Service	C	F		E	B	
Approach Delay (s/veh)	92.6			76.0	13.5	
Approach LOS	F			E	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	65.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

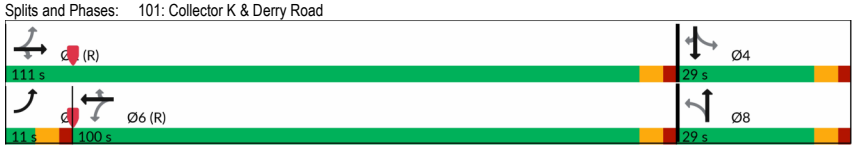
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

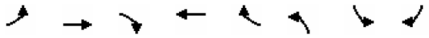
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	3024	26	0	1339	11	146	0	0	69	0	23
Future Volume (vph)	30	3024	26	0	1339	11	146	0	0	69	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	40.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
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	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5142	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.139						0.757			0.757		
Satd. Flow (perm)	262	5142	1601	1883	5142	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23			70						112
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	3287	28	0	1455	12	159	0	0	75	0	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	3287	28	0	1455	12	159	0	0	75	0	25
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	111.0	111.0	100.0	100.0	100.0	29.0	29.0		29.0	29.0	29.0
Total Split (%)	7.9%	79.3%	79.3%	71.4%	71.4%	71.4%	20.7%	20.7%		20.7%	20.7%	20.7%
Maximum Green (s)	5.0	105.0	105.0	94.0	94.0	94.0	23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	105.0	105.0	105.0		98.4	98.4	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.70	0.70	0.16			0.16		0.16
v/c Ratio	0.13	0.85	0.02		0.40	0.01	0.68			0.32		0.07
Control Delay (s/veh)	5.6	15.1	2.0		2.2	0.0	70.7			56.0		0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	5.6	15.1	2.0		2.2	0.0	70.7			56.0		0.4
LOS	A	B	A		A	A	E			E		A
Approach Delay (s/veh)		14.9			2.2			70.7			42.1	
Approach LOS		B			A			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 13.5		Intersection LOS: B	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			

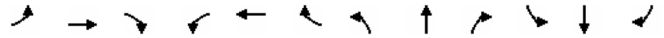
Splits and Phases: 101: Collector K & Derry Road





Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	33	3287	28	1455	12	159	75	25
v/c Ratio	0.13	0.85	0.02	0.40	0.01	0.68	0.32	0.07
Control Delay (s/veh)	5.6	15.1	2.0	2.2	0.0	70.7	56.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.6	15.1	2.0	2.2	0.0	70.7	56.0	0.4
Queue Length 50th (m)	2.1	208.0	0.3	13.4	0.0	42.6	18.9	0.0
Queue Length 95th (m)	4.8	226.9	2.7	m14.0	m0.0	#70.6	34.7	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	40.0	30.0
Base Capacity (vph)	251	3856	1206	3614	1145	234	234	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.85	0.02	0.40	0.01	0.68	0.32	0.07

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	3024	26	0	1339	11	146	0	0	69	0	23
Future Volume (vph)	30	3024	26	0	1339	11	146	0	0	69	0	23
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	0.91	1.00		0.91	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5142	1601	1789			1789		1601
Flt Permitted	0.14	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	262	5142	1601		5142	1601	1426			1426		1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	3287	28	0	1455	12	159	0	0	75	0	25
RTOR Reduction (vph)	0	0	6	0	0	4	0	0	0	0	0	21
Lane Group Flow (vph)	33	3287	22	0	1455	8	159	0	0	75	0	4
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	105.0	105.0	105.0		96.0	96.0	23.0			23.0		23.0
Effective Green, g (s)	105.0	105.0	105.0		96.0	96.0	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.69	0.69	0.16			0.16		0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	229	3856	1200		3525	1097	234			234		263
v/s Ratio Prot	0.00	c0.64			0.28							
v/s Ratio Perm	0.10		0.01			0.01	c0.11			0.05		0.00
v/c Ratio	0.14	0.85	0.02		0.41	0.01	0.68			0.32		0.02
Uniform Delay, d1	5.8	12.1	4.4		9.6	7.0	55.0			51.6		49.0
Progression Factor	1.00	1.00	1.00		0.22	1.00	1.00			1.00		1.00
Incremental Delay, d2	0.3	2.6	0.0		0.3	0.0	7.6			3.6		0.1
Delay (s)	6.1	14.7	4.5		2.4	7.0	62.7			55.2		49.1
Level of Service	A	B	A		A	A	E			E		D
Approach Delay (s/veh)		14.6			2.4			62.7			53.7	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2305	44	0	1758	8	0	0	21	0	0	82
Future Volume (vph)	0	2305	44	0	1758	8	0	0	21	0	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2505	48	0	1911	9	0	0	23	0	0	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2505	48	0	1920	0	0	0	23	0	0	89
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2305	44	0	1758	8	0	0	21	0	0	82
Future Volume (Veh/h)	0	2305	44	0	1758	8	0	0	21	0	0	82
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2505	48	0	1911	9	0	0	23	0	0	89
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.79			0.69			0.80	0.80	0.69	0.80	0.80	0.79
vC, conflicting volume	1920			2553			3231	4425	835	2774	4469	642
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1237			1687			1133	2632	0	559	2687	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	97	100	100	90
cM capacity (veh/h)	442			260			113	19	750	318	17	857

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	835	835	835	48	764	764	391	23	89
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	48	0	0	9	23	89
cSH	1700	1700	1700	1700	1700	1700	1700	750	857
Volume to Capacity	0.49	0.49	0.49	0.03	0.45	0.45	0.23	0.03	0.10
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.6
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	9.7
Lane LOS								A	A
Approach Delay (s/veh)	0.0				0.0			9.9	9.7
Approach LOS								A	A

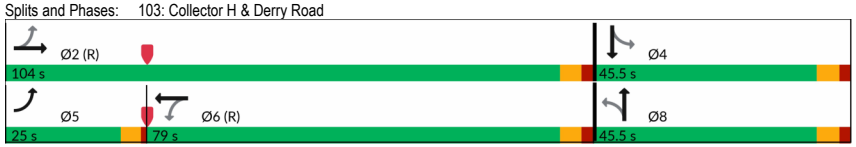
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	2190	51	14	1499	22	207	0	18	26	5	27
Future Volume (vph)	150	2190	51	14	1499	22	207	0	18	26	5	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.998			0.989			0.937	
Flt Protected	0.950			0.950				0.956			0.978	
Satd. Flow (prot)	1789	4507	0	1789	4511	0	0	1781	0	0	1726	0
Flt Permitted	0.070			0.043				0.718			0.887	
Satd. Flow (perm)	132	4507	0	81	4511	0	0	1337	0	0	1565	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			55			29	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	2380	55	15	1629	24	225	0	20	28	5	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	2435	0	15	1653	0	0	245	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	25.0	104.0		79.0	79.0		45.5	45.5		45.5	45.5	
Total Split (%)	16.7%	69.6%		52.8%	52.8%		30.4%	30.4%		30.4%	30.4%	
Maximum Green (s)	20.5	98.0		73.0	73.0		39.5	39.5		39.5	39.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	111.6	110.1		92.1	92.1			27.4			27.4	
Actuated g/C Ratio	0.75	0.74		0.62	0.62			0.18			0.18	
v/c Ratio	0.66	0.73		0.31	0.59			0.85			0.20	
Control Delay (s/veh)	33.3	14.2		31.0	13.5			69.6			28.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	33.3	14.2		31.0	13.5			69.6			28.2	
LOS	C	B		C	B			E			C	
Approach Delay (s/veh)		15.4			13.7			69.6			28.2	
Approach LOS		B			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 17.8		Intersection LOS: B	
Intersection Capacity Utilization 94.3%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	163	2435	15	1653	245	62
v/c Ratio	0.66	0.73	0.31	0.59	0.85	0.20
Control Delay (s/veh)	33.3	14.2	31.0	13.5	69.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.3	14.2	31.0	13.5	69.6	28.2
Queue Length 50th (m)	19.5	158.4	1.4	81.7	57.1	7.9
Queue Length 95th (m)	46.6	232.6	m3.5	83.3	82.9	m18.1
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	326	3321	49	2780	393	434
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.73	0.31	0.59	0.62	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	2190	51	14	1499	22	207	0	18	26	5	27
Future Volume (vph)	150	2190	51	14	1499	22	207	0	18	26	5	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1789	4505		1789	4510			1781			1726	
Flt Permitted	0.07	1.00		0.04	1.00			0.72			0.89	
Satd. Flow (perm)	131	4505		82	4510			1338			1565	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	2380	55	15	1629	24	225	0	20	28	5	29
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	24	0
Lane Group Flow (vph)	163	2434	0	15	1652	0	0	200	0	0	38	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	110.1	110.1		92.1	92.1			27.4			27.4	
Effective Green, g (s)	110.1	110.1		92.1	92.1			27.4			27.4	
Actuated g/C Ratio	0.74	0.74		0.62	0.62			0.18			0.18	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	246	3317		50	2778			245			286	
v/s Ratio Prot	0.06	c0.54			0.37							
v/s Ratio Perm	0.43			0.18				c0.15			0.02	
v/c Ratio	0.66	0.73		0.30	0.59			0.82			0.13	
Uniform Delay, d1	26.2	11.3		13.5	17.4			58.6			51.1	
Progression Factor	1.00	1.00		0.67	0.65			1.00			0.97	
Incremental Delay, d2	6.6	1.5		12.8	0.8			18.6			0.2	
Delay (s)	32.7	12.8		22.0	12.1			77.2			49.8	
Level of Service	C	B		C	B			E			D	
Approach Delay (s/veh)		14.0			12.2			77.2			49.8	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

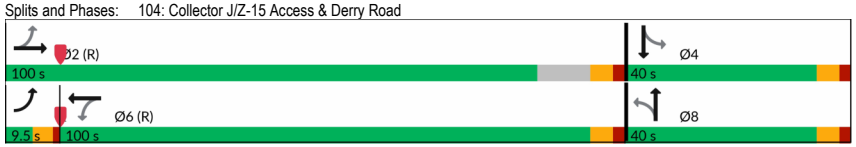
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	2084	67	8	1196	55	271	0	24	12	0	39
Future Volume (vph)	148	2084	67	8	1196	55	271	0	24	12	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.993			0.989			0.897	
Flt Protected	0.950			0.950				0.956			0.988	
Satd. Flow (prot)	1789	4498	0	1789	4489	0	0	1781	0	0	1669	0
Flt Permitted	0.109			0.046				0.733			0.915	
Satd. Flow (perm)	205	4498	0	87	4489	0	0	1365	0	0	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			55			55	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	2265	73	9	1300	60	295	0	26	13	0	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	161	2338	0	9	1360	0	0	321	0	0	55	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	9.5	100.0		100.0	100.0		40.0	40.0		40.0	40.0	
Total Split (%)	6.4%	66.9%		66.9%	66.9%		26.8%	26.8%		26.8%	26.8%	
Maximum Green (s)	5.0	94.0		94.0	94.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	101.7	100.2		87.2	87.2			37.3			37.3	
Actuated g/C Ratio	0.68	0.67		0.58	0.58			0.25			0.25	
v/c Ratio	0.70	0.77		0.18	0.52			0.84			0.13	
Control Delay (s/veh)	27.9	9.8		27.9	20.1			62.9			9.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	27.9	9.8		27.9	20.1			62.9			9.6	
LOS	C	A		C	C			E			A	
Approach Delay (s/veh)		11.0			20.2			62.9			9.6	
Approach LOS		B			C			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 17.8		Intersection LOS: B	
Intersection Capacity Utilization 96.6%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	161	2338	9	1360	321	55
v/c Ratio	0.70	0.77	0.18	0.52	0.84	0.13
Control Delay (s/veh)	27.9	9.8	27.9	20.1	62.9	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.9	9.8	27.9	20.1	62.9	9.6
Queue Length 50th (m)	7.6	210.3	1.3	104.1	77.4	0.0
Queue Length 95th (m)	m#26.3	30.9	6.1	122.5	108.7	10.6
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	230	3164	55	2853	395	442
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.74	0.16	0.48	0.81	0.12

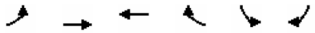
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	2084	67	8	1196	55	271	0	24	12	0	39
Future Volume (vph)	148	2084	67	8	1196	55	271	0	24	12	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4499		1789	4490			1781			1670	
Flt Permitted	0.11	1.00		0.05	1.00			0.73			0.92	
Satd. Flow (perm)	205	4499		86	4490			1365			1546	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	2265	73	9	1300	60	295	0	26	13	0	42
RTOR Reduction (vph)	0	2	0	0	3	0	0	41	0	0	41	0
Lane Group Flow (vph)	161	2336	0	9	1357	0	0	280	0	0	14	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	100.2	100.2		87.2	87.2			37.3			37.3	
Effective Green, g (s)	100.2	100.2		87.2	87.2			37.3			37.3	
Actuated g/C Ratio	0.67	0.67		0.58	0.58			0.25			0.25	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	227	3015		50	2618			340			385	
v/s Ratio Prot	0.04	c0.52			0.30							
v/s Ratio Perm	0.44			0.10				c0.20			0.01	
v/c Ratio	0.71	0.77		0.18	0.52			0.82			0.04	
Uniform Delay, d1	14.5	16.9		14.5	18.6			53.0			42.5	
Progression Factor	1.24	0.46		1.00	1.00			1.00			1.00	
Incremental Delay, d2	7.0	1.4		7.7	0.7			14.8			0.0	
Delay (s)	24.9	9.1		22.2	19.3			67.7			42.5	
Level of Service	C	A		C	B			E			D	
Approach Delay (s/veh)		10.2			19.4			67.7			42.5	
Approach LOS		B			B			E			D	

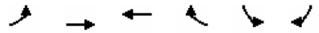
Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	3093	1300	18	0	50
Future Volume (vph)	0	3093	1300	18	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	3362	1413	20	0	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3362	1413	20	0	54
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	3093	1300	18	0	50
Future Volume (Veh/h)	0	3093	1300	18	0	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3362	1413	20	0	54
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.83				0.36	0.83
vC, conflicting volume	1433				2534	707
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1106				0	228
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	92
cM capacity (veh/h)	519				364	641

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	1121	1121	1121	707	707	20	54
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	20	54
cSH	1700	1700	1700	1700	1700	1700	641
Volume to Capacity	0.66	0.66	0.66	0.42	0.42	0.01	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Lane LOS							B
Approach Delay (s/veh)	0.0			0.0			11.1
Approach LOS							B

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	63.1%	ICU Level of Service		B
Analysis Period (min)	15			

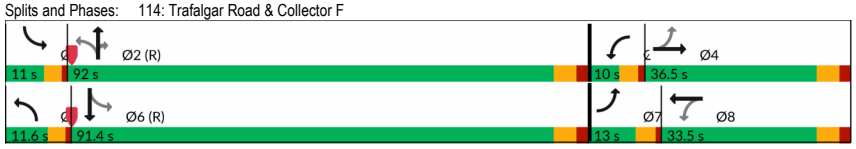
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	62	113	110	76	186	53	3291	121	165	1955	54
Future Volume (vph)	123	62	113	110	76	186	53	3291	121	165	1955	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	50.0		0.0	50.0		50.0	140.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.903			0.894				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1626	0	1652	1610	0	1711	4421	1566	1711	4403	0
Flt Permitted	0.147			0.495			0.047			0.044		
Satd. Flow (perm)	256	1626	0	861	1610	0	85	4421	1566	79	4403	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			72				84		4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	67	123	120	83	202	58	3577	132	179	2125	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	190	0	120	285	0	58	3577	132	179	2184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	9.5	40.0		9.5	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	13.0	36.5		10.0	33.5		11.6	92.0	92.0	11.0	91.4	
Total Split (%)	8.7%	24.4%		6.7%	22.4%		7.8%	61.5%	61.5%	7.4%	61.1%	
Maximum Green (s)	8.5	30.5		5.5	27.5		7.6	86.0	86.0	7.0	85.4	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	37.2	27.2		31.2	24.2		95.3	86.0	86.0	99.8	91.2	
Actuated g/C Ratio	0.25	0.18		0.21	0.16		0.64	0.58	0.58	0.67	0.61	
v/c Ratio	0.94	0.56		0.58	0.89		0.44	1.41	0.14	1.08	0.81	
Control Delay (s/veh)	107.4	44.7		59.2	74.2		24.2	213.8	6.0	132.1	27.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.4	
Total Delay (s/veh)	107.4	44.7		59.2	74.2		24.2	213.8	6.0	132.1	27.4	
LOS	F	D		E	E		C	F	A	F	C	
Approach Delay (s/veh)		70.6			69.8			203.6			35.3	
Approach LOS		E			E			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.41		
Intersection Signal Delay (s/veh): 131.4	Intersection LOS: F	
Intersection Capacity Utilization 112.1%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	134	190	120	285	58	3577	132	179	2184
v/c Ratio	0.94	0.56	0.58	0.89	0.44	1.41	0.14	1.08	0.81
Control Delay (s/veh)	107.4	44.7	59.2	74.2	24.2	213.8	6.0	132.1	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay (s/veh)	107.4	44.7	59.2	74.2	24.2	213.8	6.0	132.1	27.4
Queue Length 50th (m)	32.0	36.2	28.6	63.9	5.6	~599.7	6.1	~54.6	219.8
Queue Length 95th (m)	#63.3	61.7	46.2	#107.2	16.2	#619.8	15.9	#108.0	251.0
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	70.0		50.0		50.0		50.0	140.0	
Base Capacity (vph)	143	376	208	354	137	2543	936	165	2688
Starvation Cap Reductn	0	0	0	0	0	0	0	0	135
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.51	0.58	0.81	0.42	1.41	0.14	1.08	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	62	113	110	76	186	53	3291	121	165	1955	54
Future Volume (vph)	123	62	113	110	76	186	53	3291	121	165	1955	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.90		1.00	0.89		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)	1652	1626		1652	1609		1711	4421	1566	1711	4403	
Flt Permitted	0.15	1.00		0.49	1.00		0.05	1.00	1.00	0.04	1.00	
Satd. Flow (perm)	256	1626		860	1609		84	4421	1566	80	4403	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	67	123	120	83	202	58	3577	132	179	2125	59
RTOR Reduction (vph)	0	46	0	0	60	0	0	0	36	0	2	0
Lane Group Flow (vph)	134	144	0	120	225	0	58	3577	96	179	2182	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	35.7	27.2		29.7	24.2		91.9	86.0	86.0	100.3	90.4	
Effective Green, g (s)	35.7	27.2		29.7	24.2		91.9	86.0	86.0	100.3	90.4	
Actuated g/C Ratio	0.24	0.18		0.20	0.16		0.61	0.58	0.58	0.67	0.60	
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	140	295		199	260		115	2543	900	166	2662	
v/s Ratio Prot	c0.05	0.09		0.02	0.14		0.02	c0.81		c0.07	0.50	
v/s Ratio Perm	c0.17			0.10			0.29		0.06	0.65		
v/c Ratio	0.96	0.49		0.60	0.86		0.50	1.41	0.11	1.08	0.82	
Uniform Delay, d1	51.6	54.9		54.2	61.0		23.3	31.8	14.4	53.2	23.2	
Progression Factor	1.00	1.00		1.01	1.01		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	62.4	1.3		5.1	24.4		3.5	185.4	0.2	92.3	3.0	
Delay (s)	114.0	56.2		59.9	85.9		26.7	217.1	14.6	145.5	26.1	
Level of Service	F	E		E	F		C	F	B	F	C	
Approach Delay (s/veh)		80.1			78.2			207.1			35.2	
Approach LOS		F			E			F			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	134.3	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.29			
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	112.1%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

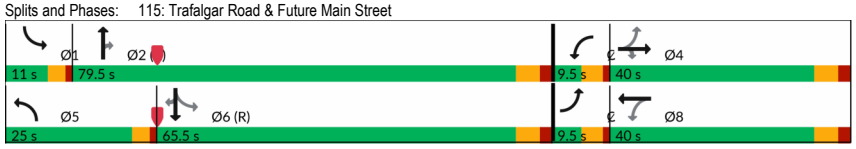
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	85	398	94	119	61	448	3075	286	146	1705	235
Future Volume (vph)	118	85	398	94	119	61	448	3075	286	146	1705	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.949				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3396	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.578			0.679			0.950			0.052		
Satd. Flow (perm)	1089	1883	2818	1279	3396	0	3319	4421	1566	94	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			402		62				92			160
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	119	86	402	95	120	62	453	3106	289	147	1722	237
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	86	402	95	182	0	453	3106	289	147	1722	237
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		25.0	79.5	79.5	11.0	65.5	65.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		17.9%	56.8%	56.8%	7.9%	46.8%	46.8%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		21.0	73.5	73.5	7.0	59.5	59.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	19.0	12.5	12.5	19.0	12.5		25.1	85.1	85.1	95.8	76.9	76.9
Actuated g/C Ratio	0.14	0.09	0.09	0.14	0.09		0.18	0.61	0.61	0.68	0.55	0.55
v/c Ratio	0.69	0.51	0.65	0.50	0.51		0.76	1.16	0.29	0.57	0.71	0.25
Control Delay (s/veh)	74.7	71.2	10.5	61.4	44.3		63.3	102.6	10.0	48.9	24.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.7	71.2	10.5	61.4	44.3		63.3	102.6	10.0	48.9	24.4	5.0
LOS	E	E	B	E	D		E	F	A	D	C	A
Approach Delay (s/veh)		31.7			50.2			91.0			23.9	
Approach LOS		C			D			F			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.16		
Intersection Signal Delay (s/veh): 63.4		Intersection LOS: E
Intersection Capacity Utilization 99.5%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	119	86	402	95	182	453	3106	289	147	1722	237
v/c Ratio	0.69	0.51	0.65	0.50	0.51	0.76	1.16	0.29	0.57	0.71	0.25
Control Delay (s/veh)	74.7	71.2	10.5	61.4	44.3	63.3	102.6	10.0	48.9	24.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.7	71.2	10.5	61.4	44.3	63.3	102.6	10.0	48.9	24.4	5.0
Queue Length 50th (m)	30.4	23.6	0.0	23.9	17.1	62.9	~423.5	23.2	25.7	145.0	10.3
Queue Length 95th (m)	48.0	40.0	16.3	39.4	28.7	79.2	#480.2	45.3	43.2	190.5	28.5
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	172	457	988	191	871	599	2685	987	259	2428	932
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.19	0.41	0.50	0.21	0.76	1.16	0.29	0.57	0.71	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	85	398	94	119	61	448	3075	286	146	1705	235
Future Volume (vph)	118	85	398	94	119	61	448	3075	286	146	1705	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.95		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	1883	2818	1789	3396		3319	4421	1566	1711	4421	1566
Flt Permitted	0.58	1.00	1.00	0.68	1.00		0.95	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1088	1883	2818	1279	3396		3319	4421	1566	94	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	119	86	402	95	120	62	453	3106	289	147	1722	237
RTOR Reduction (vph)	0	0	366	0	56	0	0	0	36	0	0	72
Lane Group Flow (vph)	119	86	36	95	126	0	453	3106	253	147	1722	165
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	17.5	12.5	12.5	17.5	12.5		25.1	85.1	85.1	93.8	76.9	76.9
Effective Green, g (s)	17.5	12.5	12.5	17.5	12.5		25.1	85.1	85.1	93.8	76.9	76.9
Actuated g/C Ratio	0.13	0.09	0.09	0.13	0.09		0.18	0.61	0.61	0.67	0.55	0.55
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	161	168	251	178	303		595	2687	951	258	2428	860
v/s Ratio Prot	c0.03	0.05		0.02	0.04		c0.14	c0.70		0.07	0.39	
v/s Ratio Perm	c0.07		0.01	0.05					0.16	0.31		0.11
v/c Ratio	0.74	0.51	0.14	0.53	0.41		0.76	1.16	0.27	0.57	0.71	0.19
Uniform Delay, d1	58.3	60.8	58.8	56.8	60.3		54.6	27.5	12.8	39.1	23.3	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.29	0.93	0.71
Incremental Delay, d2	16.2	2.6	0.3	3.1	0.9		5.7	74.8	0.7	2.7	1.7	0.5
Delay (s)	74.5	63.5	59.1	59.8	61.2		60.3	102.3	13.5	53.0	23.2	11.7
Level of Service	E	E	E	E	E		E	F	B	D	C	B
Approach Delay (s/veh)		62.7			60.7			90.7			24.0	
Approach LOS		E			E			F			C	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	66.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	99.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

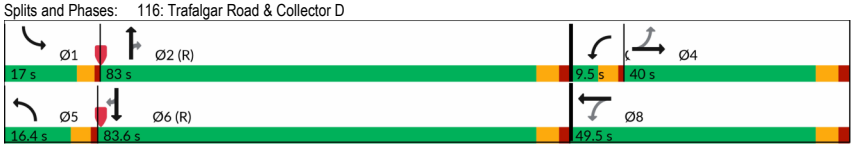
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	268	12	254	76	8	129	90	3343	210	348	1651	94
Future Volume (vph)	268	12	254	76	8	129	90	3343	210	348	1651	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	160.0		0.0	70.0		50.0	120.0		50.0
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt		0.857			0.859				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1543	0	1652	1547	0	3319	4421	1566	3319	4421	1566
Flt Permitted	0.662			0.271			0.950			0.950		
Satd. Flow (perm)	1151	1543	0	471	1547	0	3319	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		168			140				88			88
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	13	276	83	9	140	98	3634	228	378	1795	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	291	289	0	83	149	0	98	3634	228	378	1795	102
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		9.5	26.0	26.0	11.0	26.0	26.0
Total Split (s)	40.0	40.0		9.5	49.5		16.4	83.0	83.0	17.0	83.6	83.6
Total Split (%)	26.8%	26.8%		6.4%	33.1%		11.0%	55.5%	55.5%	11.4%	55.9%	55.9%
Maximum Green (s)	34.0	34.0		5.0	43.5		11.9	77.0	77.0	13.0	77.6	77.6
Yellow Time (s)	4.0	4.0		3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	34.0	34.0		45.0	43.5		9.6	77.0	77.0	13.0	79.9	79.9
Actuated g/C Ratio	0.23	0.23		0.30	0.29		0.06	0.52	0.52	0.09	0.53	0.53
v/c Ratio	1.11	0.60		0.46	0.27		0.46	1.60	0.27	1.31	0.76	0.12
Control Delay (s/veh)	141.5	26.8		48.2	8.4		74.0	298.5	13.0	213.5	30.2	4.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	141.5	26.8		48.2	8.4		74.0	298.6	13.0	213.5	30.2	4.9
LOS	F	C		D	A		E	F	B	F	C	A
Approach Delay (s/veh)		84.4			22.6			276.6			59.6	
Approach LOS		F			C			F			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.60		
Intersection Signal Delay (s/veh): 182.3	Intersection LOS: F	
Intersection Capacity Utilization 116.1%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	291	289	83	149	98	3634	228	378	1795	102
v/c Ratio	1.11	0.60	0.46	0.27	0.46	1.60	0.27	1.31	0.76	0.12
Control Delay (s/veh)	141.5	26.8	48.2	8.4	74.0	298.5	13.0	213.5	30.2	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	141.5	26.8	48.2	8.4	74.0	298.6	13.0	213.5	30.2	4.9
Queue Length 50th (m)	~100.0	32.3	18.5	2.0	14.9	~649.2	22.1	~75.2	172.3	1.9
Queue Length 95th (m)	#159.3	64.3	32.6	18.8	24.4	#668.7	39.1	#108.7	200.5	11.6
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	70.0		160.0		70.0		50.0	120.0		50.0
Base Capacity (vph)	261	480	181	549	264	2277	849	288	2361	877
Starvation Cap Reductn	0	0	0	0	0	60	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.60	0.46	0.27	0.37	1.64	0.27	1.31	0.76	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	268	12	254	76	8	129	90	3343	210	348	1651	94
Future Volume (vph)	268	12	254	76	8	129	90	3343	210	348	1651	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		0.97	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.86		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)	1652	1543		1652	1547		3319	4421	1566	3319	4421	1566
Flt Permitted	0.66	1.00		0.27	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1151	1543		471	1547		3319	4421	1566	3319	4421	1566
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	13	276	83	9	140	98	3634	228	378	1795	102
RTOR Reduction (vph)	0	130	0	0	99	0	0	0	43	0	0	41
Lane Group Flow (vph)	291	159	0	83	50	0	98	3634	185	378	1795	61
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	34.0	34.0		43.5	43.5		9.6	77.0	77.0	13.0	79.9	79.9
Effective Green, g (s)	34.0	34.0		43.5	43.5		9.6	77.0	77.0	13.0	79.9	79.9
Actuated g/C Ratio	0.23	0.23		0.29	0.29		0.06	0.52	0.52	0.09	0.53	0.53
Clearance Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	350		176	450		213	2277	806	288	2362	836
v/s Ratio Prot		0.10		c0.02	0.03		0.03	c0.82		c0.11	c0.41	
v/s Ratio Perm	c0.25			0.12					0.12			0.04
v/c Ratio	1.11	0.45		0.47	0.11		0.46	1.60	0.23	1.31	0.76	0.07
Uniform Delay, d1	57.8	49.8		42.9	38.8		67.5	36.3	19.9	68.3	27.3	16.9
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	90.1	0.9		2.0	0.1		1.6	270.3	0.7	163.2	2.4	0.2
Delay (s)	147.9	50.7		44.8	38.9		69.0	306.5	20.6	231.5	29.6	17.0
Level of Service	F	D		D	D		E	F	C	F	C	B
Approach Delay (s/veh)		99.5			41.1			284.2			62.6	
Approach LOS		F			D			F			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	189.5	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.39				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	21.0		
Intersection Capacity Utilization	116.1%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

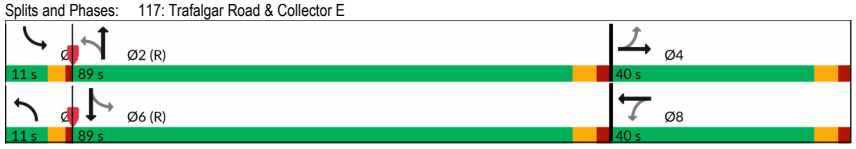
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	6	26	60	6	65	10	3527	63	91	1987	4
Future Volume (vph)	51	6	26	60	6	65	10	3527	63	91	1987	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.880			0.863			0.997				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1657	0	1789	1625	0	1711	4408	0	1711	4421	0
Flt Permitted	0.706			0.734			0.047			0.038		
Satd. Flow (perm)	1330	1657	0	1382	1625	0	85	4408	0	68	4421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			71			3				
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	7	28	65	7	71	11	3834	68	99	2160	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	35	0	65	78	0	11	3902	0	99	2164	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.0	89.0		11.0	89.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		7.9%	63.6%		7.9%	63.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.0	83.0		7.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	12.7	12.7		12.7	12.7		109.8	101.3		117.3	111.1	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.78	0.72		0.84	0.79	
v/c Ratio	0.46	0.20		0.52	0.37		0.08	1.22		0.57	0.62	
Control Delay (s/veh)	72.0	26.3		75.1	19.8		3.9	125.3		37.5	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.4	
Total Delay (s/veh)	72.0	26.3		75.1	19.8		3.9	125.3		37.5	8.2	
LOS	E	C		E	B		A	F		D	A	
Approach Delay (s/veh)		54.2			44.9			125.0			9.5	
Approach LOS		D			D			F			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay (s/veh): 81.4		Intersection LOS: F	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	55	35	65	78	11	3902	99	2164
v/c Ratio	0.46	0.20	0.52	0.37	0.08	1.22	0.57	0.62
Control Delay (s/veh)	72.0	26.3	75.1	19.8	3.9	125.3	37.5	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay (s/veh)	72.0	26.3	75.1	19.8	3.9	125.3	37.5	8.2
Queue Length 50th (m)	15.0	1.9	17.9	1.9	0.4	~559.4	11.3	68.3
Queue Length 95th (m)	28.6	12.4	32.6	17.3	1.6	#617.1	30.7	144.2
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	323	423	335	448	148	3190	174	3509
Starvation Cap Reductn	0	0	0	0	0	65	0	737
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.08	0.19	0.17	0.07	1.25	0.57	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	6	26	60	6	65	10	3527	63	91	1987	4
Future Volume (vph)	51	6	26	60	6	65	10	3527	63	91	1987	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.88		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)	1789	1657		1789	1626		1711	4409		1711	4420	
Flt Permitted	0.71	1.00		0.73	1.00		0.05	1.00		0.04	1.00	
Satd. Flow (perm)	1330	1657		1383	1626		85	4409		68	4420	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	7	28	65	7	71	11	3834	68	99	2160	4
RTOR Reduction (vph)	0	25	0	0	65	0	0	1	0	0	0	0
Lane Group Flow (vph)	55	10	0	65	13	0	11	3901	0	99	2164	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.7	12.7		12.7	12.7		103.9	101.3		115.3	108.7	
Effective Green, g (s)	12.7	12.7		12.7	12.7		103.9	101.3		115.3	108.7	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.74	0.72		0.82	0.78	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	120	150		125	147		93	3190		173	3431	
v/s Ratio Prot		0.01			0.01		0.00	c0.88		c0.04	0.49	
v/s Ratio Perm	0.04			c0.05			0.09			0.43		
v/c Ratio	0.46	0.06		0.52	0.09		0.12	1.22		0.57	0.63	
Uniform Delay, d1	60.4	58.2		60.7	58.4		6.0	19.4		47.2	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	0.2		3.9	0.3		0.6	103.3		4.5	0.9	
Delay (s)	63.1	58.4		64.6	58.6		6.6	122.7		51.7	7.7	
Level of Service	E	E		E	E		A	F		D	A	
Approach Delay (s/veh)		61.3			61.3			122.4			9.7	
Approach LOS		E			E			F			A	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	80.3	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.10				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	95.6%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	214	0	0	0	0	172
Future Volume (vph)	214	0	0	0	0	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			52.5	161.7	
Travel Time (s)	55.9			3.9	12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	233	0	0	0	0	187
Shared Lane Traffic (%)						
Lane Group Flow (vph)	233	0	0	0	0	187
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	214	0	0	0	0	172
Future Volume (vph)	214	0	0	0	0	172
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	233	0	0	0	0	187

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	233	0	187
Volume Left (vph)	233	0	0
Volume Right (vph)	0	0	187
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.4	4.9	4.0
Degree Utilization, x	0.35	0.00	0.21
Capacity (veh/h)	637	728	849
Control Delay (s/veh)	10.2	6.7	8.1
Approach Delay (s/veh)	10.2		8.1
Approach LOS	B		A

Intersection Summary				
Delay	9.2			
Level of Service	A			
Intersection Capacity Utilization	15.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	48	43	30	54	67	79
Future Volume (vph)	48	43	30	54	67	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.936		0.913			
Flt Protected	0.974					0.978
Satd. Flow (prot)	1642	0	1644	0	0	1761
Flt Permitted	0.974					0.978
Satd. Flow (perm)	1642	0	1644	0	0	1761
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	47	33	59	73	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	99	0	92	0	0	159
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	43	30	54	67	79
Future Volume (Veh/h)	48	43	30	54	67	79
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	47	33	59	73	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	295	63			92	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	295	63			92	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	95			95	
cM capacity (veh/h)	663	1002			1503	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	99	92	159
Volume Left	52	0	73
Volume Right	47	59	0
cSH	790	1700	1503
Volume to Capacity	0.13	0.05	0.05
Queue Length 95th (m)	3.3	0.0	1.2
Control Delay (s/veh)	10.2	0.0	3.7
Lane LOS	B		A
Approach Delay (s/veh)	10.2	0.0	3.7
Approach LOS	B		

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	185	12	57	113	2	12	15	47	125	6	0
Future Volume (vph)	0	185	12	57	113	2	12	15	47	125	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.999			0.914				
Flt Protected					0.984			0.992			0.955	
Satd. Flow (prot)	0	1868	0	0	1770	0	0	1708	0	0	1799	0
Flt Permitted					0.984			0.992			0.955	
Satd. Flow (perm)	0	1868	0	0	1770	0	0	1708	0	0	1799	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	201	13	62	123	2	13	16	51	136	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	214	0	0	187	0	0	80	0	0	143	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	185	12	57	113	2	12	15	47	125	6	0
Future Volume (Veh/h)	0	185	12	57	113	2	12	15	47	125	6	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	201	13	62	123	2	13	16	51	136	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	125			214			459	457	208	515	462	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	125			214			459	457	208	515	462	124
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			97	97	94	67	99	100
cM capacity (veh/h)	1462			1356			489	477	833	416	474	927

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	214	187	80	143
Volume Left	0	62	13	136
Volume Right	13	2	51	0
cSH	1462	1356	659	418
Volume to Capacity	0.00	0.05	0.12	0.34
Queue Length 95th (m)	0.0	1.1	3.1	11.4
Control Delay (s/veh)	0.0	2.8	11.2	18.0
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	2.8	11.2	18.0
Approach LOS			B	C

Intersection Summary				
Average Delay		6.4		
Intersection Capacity Utilization		43.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	330	60	21	137	40	49
Future Volume (vph)	330	60	21	137	40	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979				0.925	
Flt Protected				0.993	0.978	
Satd. Flow (prot)	1844	0	0	1870	1704	0
Flt Permitted				0.993	0.978	
Satd. Flow (perm)	1844	0	0	1870	1704	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	65	23	149	43	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	424	0	0	172	96	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

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

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	2	82	11	0	127
Future Volume (vph)	19	2	82	11	0	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988		0.984			
Flt Protected	0.956					
Satd. Flow (prot)	1642	0	1772	0	0	1801
Flt Permitted	0.956					
Satd. Flow (perm)	1642	0	1772	0	0	1801
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	2	89	12	0	138
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	101	0	0	138
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	2	82	11	0	127
Future Volume (Veh/h)	19	2	82	11	0	127
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	2	89	12	0	138
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	233	95			101	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233	95			101	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	755	962			1491	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	101	138
Volume Left	21	0	0
Volume Right	2	12	0
cSH	770	1700	1491
Volume to Capacity	0.03	0.06	0.00
Queue Length 95th (m)	0.7	0.0	0.0
Control Delay (s/veh)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	16.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	51	6	6	15	10	3	62	3	5	70	0
Future Volume (vph)	2	51	6	6	15	10	3	62	3	5	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.956			0.994				
Flt Protected		0.998			0.990			0.998			0.997	
Satd. Flow (prot)	0	1709	0	0	1645	0	0	1786	0	0	1795	0
Flt Permitted		0.998			0.990			0.998			0.997	
Satd. Flow (perm)	0	1709	0	0	1645	0	0	1786	0	0	1795	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	55	7	7	16	11	3	67	3	5	76	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	34	0	0	73	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	51	6	6	15	10	3	62	3	5	70	0
Future Volume (Veh/h)	2	51	6	6	15	10	3	62	3	5	70	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	55	7	7	16	11	3	67	3	5	76	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	180	162	76	195	161	69	76			70		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	180	162	76	195	161	69	76			70		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	92	99	99	98	99	100			100		
cM capacity (veh/h)	758	727	985	712	728	995	1523			1531		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	64	34	73	81
Volume Left	2	7	3	5
Volume Right	7	11	3	0
cSH	749	793	1523	1531
Volume to Capacity	0.09	0.04	0.00*	0.00*
Queue Length 95th (m)	2.1	1.0	0.0	0.1
Control Delay (s/veh)	10.3	9.7	0.3	0.5
Lane LOS	B	A	A	A
Approach Delay (s/veh)	10.3	9.7	0.3	0.5
Approach LOS	B	A		

Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization		16.5%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	107	18	0	24	0	28	151	30	0	83	8
Future Volume (vph)	4	107	18	0	24	0	28	151	30	0	83	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981						0.980			0.988	
Flt Protected		0.999						0.993				
Satd. Flow (prot)	0	1846	0	0	1883	0	0	1752	0	0	1779	0
Flt Permitted		0.999						0.993				
Satd. Flow (perm)	0	1846	0	0	1883	0	0	1752	0	0	1779	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	116	20	0	26	0	30	164	33	0	90	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	0	0	26	0	0	227	0	0	99	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	107	18	0	24	0	28	151	30	0	83	8
Future Volume (Veh/h)	4	107	18	0	24	0	28	151	30	0	83	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	116	20	0	26	0	30	164	33	0	90	9
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	348	352	95	413	340	181	99			197		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	348	352	95	413	340	181	99			197		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	79	98	100	95	100	98			100		
cM capacity (veh/h)	577	562	962	446	570	862	1494			1376		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	140	26	227	99
Volume Left	4	0	30	0
Volume Right	20	0	33	9
cSH	598	570	1494	1376
Volume to Capacity	0.23	0.05	0.02	0.00
Queue Length 95th (m)	6.9	1.1	0.5	0.0
Control Delay (s/veh)	12.9	11.6	1.1	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	12.9	11.6	1.1	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.8		
Intersection Capacity Utilization		34.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	126	14	8	123	5	14	20	7	1	66	79
Future Volume (vph)	68	126	14	8	123	5	14	20	7	1	66	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.995			0.976			0.927	
Flt Protected		0.984			0.997			0.984				
Satd. Flow (prot)	0	1695	0	0	1786	0	0	1729	0	0	1669	0
Flt Permitted		0.984			0.997			0.984				
Satd. Flow (perm)	0	1695	0	0	1786	0	0	1729	0	0	1669	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	137	15	9	134	5	15	22	8	1	72	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	0	0	148	0	0	45	0	0	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	126	14	8	123	5	14	20	7	1	66	79
Future Volume (Veh/h)	68	126	14	8	123	5	14	20	7	1	66	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	137	15	9	134	5	15	22	8	1	72	86
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	245	177	115	257	216	26	158			30		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	245	177	115	257	216	26	158			30		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	81	98	98	80	100	99			100		
cM capacity (veh/h)	593	709	937	579	674	1050	1422			1583		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	226	148	45	159
Volume Left	74	9	15	1
Volume Right	15	5	8	86
cSH	676	676	1422	1583
Volume to Capacity	0.33	0.22	0.01	0.00*
Queue Length 95th (m)	11.2	6.3	0.2	0.0
Control Delay (s/veh)	13.0	11.8	2.6	0.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	13.0	11.8	2.6	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	8.3			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	153	0	13	117	44	1	13	4	33	37	12
Future Volume (vph)	11	153	0	13	117	44	1	13	4	33	37	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966			0.972			0.980	
Flt Protected		0.997			0.996			0.997			0.980	
Satd. Flow (prot)	0	1795	0	0	1732	0	0	1745	0	0	1729	0
Flt Permitted		0.997			0.996			0.997			0.980	
Satd. Flow (perm)	0	1795	0	0	1732	0	0	1745	0	0	1729	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	166	0	14	127	48	1	14	4	36	40	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	189	0	0	19	0	0	89	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	153	0	13	117	44	1	13	4	33	37	12
Future Volume (Veh/h)	11	153	0	13	117	44	1	13	4	33	37	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	166	0	14	127	48	1	14	4	36	40	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	175			166			402	393	166	380	369	151
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	175			166			402	393	166	380	369	151
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	97	100	94	93	99
cM capacity (veh/h)	1401			1412			513	533	878	556	550	895

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	178	189	19	89
Volume Left	12	14	1	36
Volume Right	0	48	4	13
cSH	1401	1412	580	585
Volume to Capacity	0.00*	0.00*	0.03	0.15
Queue Length 95th (m)	0.2	0.2	0.8	4.1
Control Delay (s/veh)	0.6	0.6	11.4	12.2
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.6	0.6	11.4	12.2
Approach LOS			B	B

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		30.5%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	103	40	134	31	58
Future Volume (vph)	116	103	40	134	31	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.936				0.912	
Flt Protected	0.974		0.950			
Satd. Flow (prot)	1642	0	1711	0	1642	0
Flt Permitted	0.974		0.950			
Satd. Flow (perm)	1642	0	1711	0	1642	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	112	43	146	34	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	0	43	146	97	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	103	40	134	31	58
Future Volume (Veh/h)	116	103	40	134	31	58
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	126	112	43	146	34	63
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	298	66	97			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	298	66	97			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	89	97			
cM capacity (veh/h)	674	998	1496			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	238	43	97
Volume Left	126	43	0
Volume Right	112	0	63
cSH	796	1496	1700
Volume to Capacity	0.30	0.03	0.06
Queue Length 95th (m)	9.6	0.7	0.0
Control Delay (s/veh)	11.4	7.5	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	11.4	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	17	131	0	12	10	7
Future Volume (vph)	17	131	0	12	10	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880				0.943	
Flt Protected					0.972	
Satd. Flow (prot)	1585	0	0	1801	1650	0
Flt Permitted					0.972	
Satd. Flow (perm)	1585	0	0	1801	1650	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	142	0	13	11	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	13	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	17	131	0	12	10	7
Future Volume (Veh/h)	17	131	0	12	10	7
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	142	0	13	11	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	30	0	177	26	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30	0	177	26	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	98	87	100	98	99	
cM capacity (veh/h)	857	1085	668	861	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	160	13	19
Volume Left	0	0	11
Volume Right	142	0	8
cSH	1053	861	1623
Volume to Capacity	0.15	0.02	0.00*
Queue Length 95th (m)	4.1	0.3	0.2
Control Delay (s/veh)	9.0	9.2	4.2
Lane LOS	A	A	A
Approach Delay (s/veh)	9.0	9.2	4.2
Approach LOS	A	A	

Intersection Summary				
Average Delay		8.6		
Intersection Capacity Utilization		19.0%	ICU Level of Service	A
Analysis Period (min)		15		

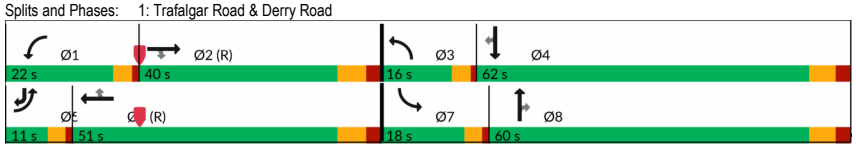
* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Future Volume (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			154			183			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	16.0	60.0	60.0	18.0	62.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	11.4%	42.9%	42.9%	12.9%	44.3%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.0	35.1	35.1	19.0	46.1	46.1	13.0	55.2	55.2	15.0	57.2	71.0
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.09	0.39	0.39	0.11	0.41	0.51
v/c Ratio	1.13	0.59	0.30	0.86	1.24	0.49	1.37	1.16	0.27	1.49	1.37	0.74
Control Delay (s/veh)	167.4	43.9	5.5	86.9	149.8	20.5	228.0	107.2	6.3	258.6	202.2	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	167.4	43.9	5.5	86.9	149.8	20.5	228.0	107.2	6.3	258.6	202.2	38.4
LOS	F	D	A	F	F	C	F	F	A	F	F	D
Approach Delay (s/veh)		62.4			126.2			119.1			181.3	
Approach LOS		E			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.49			
Intersection Signal Delay (s/veh): 136.6		Intersection LOS: F	
Intersection Capacity Utilization 119.2%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
v/c Ratio	1.13	0.59	0.30	0.86	1.24	0.49	1.37	1.16	0.27	1.49	1.37	0.74
Control Delay (s/veh)	167.4	43.9	5.5	86.9	149.8	20.5	228.0	107.2	6.3	258.6	202.2	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	167.4	43.9	5.5	86.9	149.8	20.5	228.0	107.2	6.3	258.6	202.2	38.4
Queue Length 50th (m)	~37.9	69.4	0.1	61.1	~265.3	23.5	~79.2	~286.5	6.2	~102.1	~388.5	167.8
Queue Length 95th (m)	#65.9	84.0	11.5	m#79.2	#295.0	m54.0	m#67.1	m#231.5	m5.0	m#86.2	m#324.2	m153.0
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Base Capacity (vph)	192	1276	509	475	1709	649	294	1677	692	343	1738	840
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.59	0.30	0.86	1.24	0.49	1.37	1.16	0.27	1.49	1.37	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Future Volume (vph)	216	752	154	409	2117	320	404	1951	184	510	2373	624
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
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)	216	752	154	409	2117	320	404	1951	184	510	2373	624
RTOR Reduction (vph)	0	0	115	0	0	123	0	0	75	0	0	49
Lane Group Flow (vph)	216	752	39	409	2117	197	404	1951	109	510	2373	575
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	62.2
Effective Green, g (s)	8.0	35.1	35.1	19.0	46.1	46.1	13.0	55.2	55.2	15.0	57.2	66.2
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.09	0.39	0.39	0.11	0.41	0.47
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	192	1276	393	475	1709	527	294	1677	617	343	1738	740
v/s Ratio Prot	c0.06	0.15		0.12	c0.41		0.13	0.46		c0.16	c0.56	0.05
v/s Ratio Perm			0.02			0.12			0.07			0.32
v/c Ratio	1.13	0.59	0.10	0.86	1.24	0.37	1.37	1.16	0.18	1.49	1.37	0.78
Uniform Delay, d1	66.0	46.1	40.3	59.2	47.0	35.9	63.5	42.4	27.6	62.5	41.4	30.7
Progression Factor	1.18	0.91	0.66	1.28	0.98	1.22	1.37	0.82	0.63	0.88	1.16	1.61
Incremental Delay, d2	101.4	1.9	0.5	10.2	110.6	1.2	170.4	74.2	0.0	220.5	164.8	0.6
Delay (s)	179.4	43.7	26.9	85.8	156.5	44.9	257.3	109.1	17.3	275.4	212.7	50.0
Level of Service	F	D	C	F	F	D	F	F	B	F	F	D
Approach Delay (s/veh)		67.5			133.8			126.1			192.9	
Approach LOS		E			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	145.1	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.32			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	119.2%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

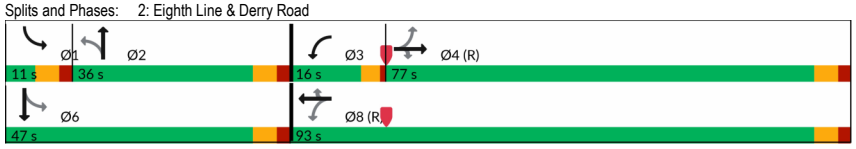
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1163	193	170	2399	11	156	17	156	31	47	10
Future Volume (vph)	13	1163	193	170	2399	11	156	17	156	31	47	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.865			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1659	0	1825	1871	0
Flt Permitted	0.048			0.153			0.720			0.344		
Satd. Flow (perm)	92	4520	1555	294	4565	1633	1383	1659	0	661	1871	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			70		156			5	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	13	1163	193	170	2399	11	156	17	156	31	47	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	1163	193	170	2399	11	156	173	0	31	57	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	85.4	85.4	85.4	101.4	99.4	99.4	21.0	21.0		28.6	28.6	
Actuated g/C Ratio	0.61	0.61	0.61	0.72	0.71	0.71	0.15	0.15		0.20	0.20	
v/c Ratio	0.23	0.42	0.19	0.53	0.74	0.01	0.75	0.45		0.16	0.15	
Control Delay (s/veh)	32.2	16.9	2.7	13.7	16.3	0.0	65.8	18.2		41.5	38.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	32.2	16.9	2.7	13.7	16.3	0.0	65.8	18.2		41.5	38.1	
LOS	C	B	A	B	B	A	E	B		D	D	
Approach Delay (s/veh)		15.1			16.1			40.8			39.3	
Approach LOS		B			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay (s/veh): 18.1		Intersection LOS: B
Intersection Capacity Utilization 100.0%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	1163	193	170	2399	11	156	173	31	57
v/c Ratio	0.23	0.42	0.19	0.53	0.74	0.01	0.75	0.45	0.16	0.15
Control Delay (s/veh)	32.2	16.9	2.7	13.7	16.3	0.0	65.8	18.2	41.5	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.2	16.9	2.7	13.7	16.3	0.0	65.8	18.2	41.5	38.1
Queue Length 50th (m)	1.7	75.9	0.0	15.1	180.2	0.0	45.0	19.8	6.7	11.3
Queue Length 95th (m)	9.0	103.0	12.4	27.1	230.9	0.0	m63.9	m32.5	14.2	21.6
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	56	2755	1023	346	3239	1179	296	478	188	551
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.42	0.19	0.49	0.74	0.01	0.53	0.36	0.16	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1163	193	170	2399	11	156	17	156	31	47	10
Future Volume (vph)	13	1163	193	170	2399	11	156	17	156	31	47	10
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.86		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1658		1825	1871	
Flt Permitted	0.05	1.00	1.00	0.15	1.00	1.00	0.72	1.00		0.34	1.00	
Satd. Flow (perm)	93	4520	1555	294	4565	1633	1383	1658		661	1871	
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)	13	1163	193	170	2399	11	156	17	156	31	47	10
RTOR Reduction (vph)	0	0	79	0	0	3	0	133	0	0	4	0
Lane Group Flow (vph)	13	1163	114	170	2399	8	156	40	0	31	53	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	83.0	83.0	83.0	97.0	97.0	97.0	21.0	21.0		31.0	31.0	
Effective Green, g (s)	83.0	83.0	83.0	97.0	97.0	97.0	21.0	21.0		31.0	31.0	
Actuated g/C Ratio	0.59	0.59	0.59	0.69	0.69	0.69	0.15	0.15		0.22	0.22	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	2679	921	313	3162	1131	207	248		179	414	
v/s Ratio Prot		0.26		0.04	c0.53			0.02		0.00	c0.03	
v/s Ratio Perm	0.14		0.07	0.34		0.00	c0.11			0.03		
v/c Ratio	0.24	0.43	0.12	0.54	0.76	0.01	0.75	0.16		0.17	0.13	
Uniform Delay, d1	13.5	15.6	12.5	9.6	13.9	6.6	57.0	51.8		43.8	43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.57		1.00	1.00	
Incremental Delay, d2	9.8	0.5	0.3	1.9	1.8	0.0	11.7	0.2		0.5	0.1	
Delay (s)	23.3	16.1	12.8	11.6	15.7	6.6	60.2	81.6		44.2	43.8	
Level of Service	C	B	B	B	B	A	E	F		D	D	
Approach Delay (s/veh)		15.7			15.4			71.5			44.0	
Approach LOS		B			B			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	20.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	100.0%	ICU Level of Service	F	
Analysis Period (min)	15			

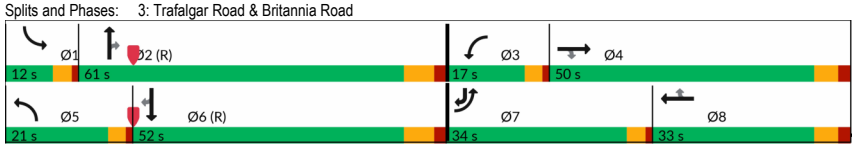
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Future Volume (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212			156			136			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Shared Lane Traffic (%)												
Lane Group Flow (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	34.0	50.0	50.0	17.0	33.0	33.0	21.0	61.0	61.0	12.0	52.0	34.0
Total Split (%)	24.3%	35.7%	35.7%	12.1%	23.6%	23.6%	15.0%	43.6%	43.6%	8.6%	37.1%	24.3%
Maximum Green (s)	30.0	44.0	44.0	13.0	27.0	27.0	17.0	54.0	54.0	8.0	45.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	31.0	46.8	46.8	13.2	29.0	29.0	18.0	56.0	56.0	9.0	47.0	84.0
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.60
v/c Ratio	1.22	0.76	0.44	0.63	1.30	0.53	1.30	1.11	0.35	1.26	1.24	1.01
Control Delay (s/veh)	156.6	45.9	12.4	93.3	169.3	7.6	182.1	107.7	29.2	186.4	131.7	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	156.6	45.9	12.4	93.3	169.3	7.6	182.1	107.7	29.2	186.4	131.7	39.4
LOS	F	D	B	F	F	A	F	F	C	F	F	D
Approach Delay (s/veh)		81.9			136.9			115.1			106.6	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay (s/veh): 108.5		Intersection LOS: F	
Intersection Capacity Utilization 110.9%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
v/c Ratio	1.22	0.76	0.44	0.63	1.30	0.53	1.30	1.11	0.35	1.26	1.24	1.01
Control Delay (s/veh)	156.6	45.9	12.4	93.3	169.3	7.6	182.1	107.7	29.2	186.4	131.7	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	156.6	45.9	12.4	93.3	169.3	7.6	182.1	107.7	29.2	186.4	131.7	39.4
Queue Length 50th (m)	~161.7	121.5	16.0	32.2	~183.2	14.9	~100.0	~259.4	37.5	~46.1	~264.0	~287.1
Queue Length 95th (m)	#206.1	142.4	41.9	m41.2	#207.8	m3.1	m#99.7	m#242.5	m38.3	m#33.6	m172.2	m228.1
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	675	1495	670	354	945	442	411	1734	708	200	1441	956
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.76	0.44	0.60	1.30	0.53	1.30	1.11	0.35	1.27	1.24	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Future Volume (vph)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	822	1142	292	212	1225	235	533	1931	250	253	1781	966
RTOR Reduction (vph)	0	0	141	0	0	124	0	0	82	0	0	37
Lane Group Flow (vph)	822	1142	151	212	1225	111	533	1931	168	253	1781	929
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	30.0	44.8	44.8	12.2	27.0	27.0	17.0	54.0	54.0	8.0	45.0	75.0
Effective Green, g (s)	31.0	46.8	46.8	13.2	29.0	29.0	18.0	56.0	56.0	9.0	47.0	79.0
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.56
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	675	1496	529	333	945	319	411	1734	626	200	1441	866
v/s Ratio Prot	c0.27	0.26		0.06	c0.27		c0.17	0.45		0.08	c0.41	0.24
v/s Ratio Perm			0.10			0.07			0.11			0.36
v/c Ratio	1.22	0.76	0.29	0.64	1.30	0.35	1.30	1.11	0.27	1.26	1.24	1.07
Uniform Delay, d1	54.5	41.7	34.3	61.1	55.5	47.4	61.0	42.0	28.2	65.5	46.5	30.5
Progression Factor	1.00	1.00	1.00	1.43	0.60	0.26	0.93	1.45	2.24	1.33	0.52	1.10
Incremental Delay, d2	111.1	2.4	0.3	2.7	138.8	0.5	137.9	53.4	0.2	123.0	106.8	35.1
Delay (s)	165.6	44.0	34.6	89.8	172.2	12.8	194.6	114.4	63.4	210.2	130.7	68.5
Level of Service	F	D	C	F	F	B	F	F	E	F	F	E
Approach Delay (s/veh)		87.1			139.3			125.4			117.4	
Approach LOS		F			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	116.4	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.25			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	110.9%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

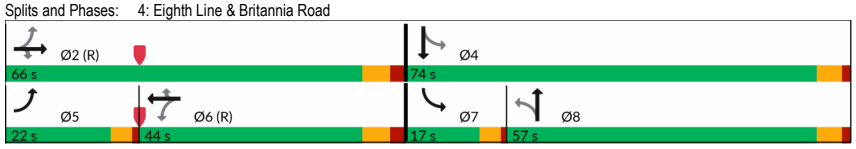
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	1014	51	30	1291	199	95	388	64	213	305	198
Future Volume (vph)	235	1014	51	30	1291	199	95	388	64	213	305	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.979			0.941	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1870	0	1825	1765	0
Flt Permitted	0.074			0.234			0.360			0.129		
Satd. Flow (perm)	142	4476	1328	450	4520	1633	692	1870	0	248	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			132		7			33	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	235	1014	51	30	1291	199	95	388	64	213	305	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	1014	51	30	1291	199	95	452	0	213	503	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	73.5	71.2	71.2	49.6	49.6	49.6	39.3	39.3		57.5	56.3	
Actuated g/C Ratio	0.53	0.51	0.51	0.35	0.35	0.35	0.28	0.28		0.41	0.40	
v/c Ratio	0.84	0.45	0.07	0.19	0.81	0.30	0.49	0.85		0.88	0.69	
Control Delay (s/veh)	78.9	25.5	10.3	41.4	46.8	14.8	40.8	53.5		66.3	35.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	78.9	25.5	10.3	41.4	46.8	14.8	40.8	53.5		66.3	35.5	
LOS	E	C	B	D	D	B	D	D		E	D	
Approach Delay (s/veh)		34.5			42.5			51.3			44.7	
Approach LOS		C			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.88		
Intersection Signal Delay (s/veh): 41.5		Intersection LOS: D
Intersection Capacity Utilization 97.7%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	1014	51	30	1291	199	95	452	213	503
v/c Ratio	0.84	0.45	0.07	0.19	0.81	0.30	0.49	0.85	0.88	0.69
Control Delay (s/veh)	78.9	25.5	10.3	41.4	46.8	14.8	40.8	53.5	66.3	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.9	25.5	10.3	41.4	46.8	14.8	40.8	53.5	66.3	35.5
Queue Length 50th (m)	59.2	56.5	0.6	5.8	138.7	12.7	22.9	119.2	35.3	113.8
Queue Length 95th (m)	m77.3	m75.9	m2.4	16.4	#202.2	35.9	m32.6	m146.6	#71.3	107.7
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	302	2274	702	159	1600	663	253	689	242	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.45	0.07	0.19	0.81	0.30	0.38	0.66	0.88	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	1014	51	30	1291	199	95	388	64	213	305	198
Future Volume (vph)	235	1014	51	30	1291	199	95	388	64	213	305	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1870		1825	1765	
Flt Permitted	0.07	1.00	1.00	0.23	1.00	1.00	0.36	1.00		0.13	1.00	
Satd. Flow (perm)	142	4476	1328	449	4520	1633	691	1870		247	1765	
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)	235	1014	51	30	1291	199	95	388	64	213	305	198
RTOR Reduction (vph)	0	0	25	0	0	85	0	5	0	0	20	0
Lane Group Flow (vph)	235	1014	26	30	1291	114	95	447	0	213	483	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	71.2	71.2	71.2	49.6	49.6	49.6	39.3	39.3		56.3	56.3	
Effective Green, g (s)	71.2	71.2	71.2	49.6	49.6	49.6	39.3	39.3		56.3	56.3	
Actuated g/C Ratio	0.51	0.51	0.51	0.35	0.35	0.35	0.28	0.28		0.40	0.40	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	2276	675	159	1601	578	193	524		240	709	
v/s Ratio Prot	c0.10	0.23			0.29			0.24		c0.08	0.27	
v/s Ratio Perm	c0.33		0.02	0.07		0.07	0.14			c0.28		
v/c Ratio	0.85	0.45	0.04	0.19	0.81	0.20	0.49	0.85		0.89	0.68	
Uniform Delay, d1	40.1	21.9	17.2	31.3	40.9	31.4	42.0	47.6		33.2	34.5	
Progression Factor	1.82	1.09	2.14	1.00	1.00	1.00	0.83	0.87		1.18	0.96	
Incremental Delay, d2	13.6	0.4	0.1	2.6	4.5	0.8	1.6	10.8		29.9	2.7	
Delay (s)	86.5	24.1	36.9	33.9	45.3	32.1	36.4	52.1		68.9	35.9	
Level of Service	F	C	D	C	D	C	D	D		E	D	
Approach Delay (s/veh)		35.9			43.4			49.4			45.7	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	42.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5	
Intersection Capacity Utilization	97.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

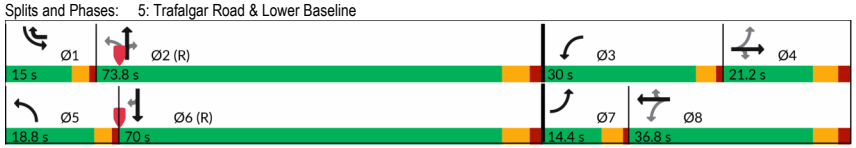
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Future Volume (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.405			0.205			0.059			0.950		
Satd. Flow (perm)	748	3579	1570	390	3614	1585	108	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			63			243			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	7.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	11.0	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	14.4	21.2	21.2	30.0	36.8	15.0	18.8	73.8	73.8	15.0	70.0	70.0
Total Split (%)	10.3%	15.1%	15.1%	21.4%	26.3%	10.7%	13.4%	52.7%	52.7%	10.7%	50.0%	50.0%
Maximum Green (s)	9.9	15.0	15.0	25.5	30.6	11.0	14.8	67.2	67.2	11.0	63.4	63.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	3.0	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.2	17.0	17.0	47.7	33.0	50.2	85.8	69.2	69.2	12.0	65.4	65.4
Actuated g/C Ratio	0.20	0.12	0.12	0.34	0.24	0.36	0.61	0.49	0.49	0.09	0.47	0.47
v/c Ratio	0.53	0.95	0.21	1.04	0.67	0.76	1.04	1.07	0.50	0.97	0.93	0.14
Control Delay (s/veh)	43.3	93.7	1.6	114.5	78.2	60.3	107.3	74.5	12.1	65.1	48.7	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.3	93.7	1.6	114.5	78.2	60.3	107.3	74.5	12.1	65.1	48.7	13.2
LOS	D	F	A	F	E	E	F	E	B	E	D	B
Approach Delay (s/veh)		73.7			82.9			68.0			49.0	
Approach LOS		E			F			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 65.6	Intersection LOS: E	
Intersection Capacity Utilization 100.9%	ICU Level of Service G	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
v/c Ratio	0.53	0.95	0.21	1.04	0.67	0.76	1.04	1.07	0.50	0.97	0.93	0.14
Control Delay (s/veh)	43.3	93.7	1.6	114.5	78.2	60.3	107.3	74.5	12.1	65.1	48.7	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.3	93.7	1.6	114.5	78.2	60.3	107.3	74.5	12.1	65.1	48.7	13.2
Queue Length 50th (m)	24.0	61.8	0.0	~127.2	88.7	107.2	~61.4	~300.2	35.4	42.4	157.3	7.2
Queue Length 95th (m)	39.9	#94.8	0.0	#176.7	107.6	140.7	#117.4	#332.1	63.7	m39.1	m133.7	m6.8
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	231	434	303	401	851	608	250	2163	904	284	2006	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.95	0.21	1.04	0.67	0.76	1.04	1.07	0.50	0.97	0.93	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Future Volume (vph)	119	414	65	416	570	463	260	2307	449	275	1860	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.40	1.00	1.00	0.21	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	748	3579	1570	390	3614	1585	109	4378	1581	3319	4295	1551
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	414	65	416	570	463	260	2307	449	275	1860	112
RTOR Reduction (vph)	0	0	57	0	0	42	0	0	123	0	0	60
Lane Group Flow (vph)	119	414	8	416	570	421	260	2307	326	275	1860	52
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	24.5	15.0	15.0	45.0	31.0	42.0	82.0	67.2	67.2	11.0	63.4	63.4
Effective Green, g (s)	26.5	17.0	17.0	46.0	33.0	46.0	83.2	69.2	69.2	12.0	65.4	65.4
Actuated g/C Ratio	0.19	0.12	0.12	0.33	0.24	0.33	0.59	0.49	0.49	0.09	0.47	0.47
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	4.0	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	217	434	190	396	851	520	249	2163	781	284	2006	724
v/s Ratio Prot	0.04	0.12		c0.20	0.16	0.07	c0.12	c0.53		0.08	0.43	
v/s Ratio Perm	0.06		0.01	c0.15		0.19	0.50		0.21			0.03
v/c Ratio	0.55	0.95	0.04	1.05	0.67	0.81	1.04	1.07	0.42	0.97	0.93	0.07
Uniform Delay, d1	49.4	61.1	54.3	41.7	48.6	43.0	47.1	35.4	22.6	63.8	35.1	20.6
Progression Factor	1.00	1.00	1.00	1.71	1.52	1.52	1.00	1.00	1.00	0.86	1.36	5.22
Incremental Delay, d2	2.8	32.0	0.2	55.3	2.2	7.7	69.1	40.0	1.6	9.7	1.0	0.0
Delay (s)	52.2	93.2	54.5	126.8	76.2	72.9	116.2	75.4	24.2	64.5	48.7	107.4
Level of Service	D	F	D	F	E	E	F	E	C	E	D	F
Approach Delay (s/veh)		80.8			89.7			71.3			53.5	
Approach LOS		F			F			E			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	70.2	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.09			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	100.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

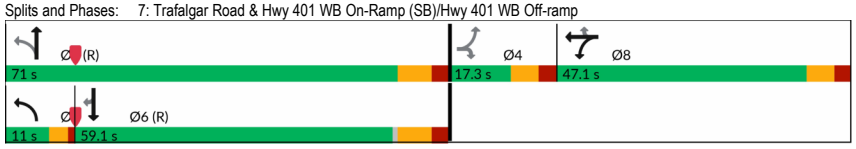
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Future Volume (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.500			0.950			0.069					
Satd. Flow (perm)	961	0	1633	3372	1921	2737	133	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			181						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.0		10.0	45.6	45.6	45.6	64.8	60.7			58.5	58.5
Actuated g/C Ratio	0.07		0.07	0.34	0.34	0.34	0.48	0.45			0.43	0.43
v/c Ratio	0.44		0.11	1.02	0.08	2.33	0.07	0.78			0.79	0.13
Control Delay (s/veh)	80.2		0.9	75.7	34.7	623.6	18.4	34.9			37.1	1.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	80.2		0.9	75.7	34.7	623.6	18.4	34.9			37.1	1.4
LOS	F		A	E	C	F	B	C			D	A
Approach Delay (s/veh)		44.0			441.4			34.8			35.2	
Approach LOS		D			F			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.4			
Actuated Cycle Length: 135.4			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.33			
Intersection Signal Delay (s/veh): 253.1		Intersection LOS: F	
Intersection Capacity Utilization 133.5%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	31	26	1155	49	2429	10	1509	1484	80
v/c Ratio	0.44	0.11	1.02	0.08	2.33	0.07	0.78	0.79	0.13
Control Delay (s/veh)	80.2	0.9	75.7	34.7	623.6	18.4	34.9	37.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.2	0.9	75.7	34.7	623.6	18.4	34.9	37.1	1.4
Queue Length 50th (m)	8.1	0.0	~195.5	9.5	~629.0	1.3	143.5	138.1	0.0
Queue Length 95th (m)	19.0	0.0	#238.3	19.3	#673.2	4.4	165.8	186.2	3.2
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	70	241	1136	647	1042	151	2001	1880	635
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.11	1.02	0.08	2.33	0.07	0.75	0.79	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Future Volume (vph)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.50		1.00	0.95	1.00	1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)	961		1633	3372	1921	2737	133	4309			4350	1306
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)	31	0	26	1155	49	2429	10	1509	0	0	1484	80
RTOR Reduction (vph)	0	0	24	0	0	120	0	0	0	0	0	48
Lane Group Flow (vph)	31	0	2	1155	49	2309	10	1509	0	0	1484	32
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	8.0		8.0	45.6	45.6	45.6	59.3	59.3			53.9	53.9
Effective Green, g (s)	8.0		8.0	45.6	45.6	45.6	59.3	59.3			53.9	53.9
Actuated g/C Ratio	0.06		0.06	0.34	0.34	0.34	0.44	0.44			0.40	0.40
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		96	1135	646	921	75	1887			1731	519
v/s Ratio Prot				0.34	0.03		0.00	c0.35			c0.34	
v/s Ratio Perm	c0.03		0.00			c0.84	0.06					0.02
v/c Ratio	0.55		0.02	1.02	0.08	2.51	0.13	0.80			0.86	0.06
Uniform Delay, d1	62.0		60.0	44.9	30.6	44.9	27.1	32.9			37.2	25.1
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	11.3		0.1	31.2	0.0	681.4	0.3	3.7			5.7	0.2
Delay (s)	73.3		60.1	76.1	30.6	726.3	27.4	36.6			43.0	25.4
Level of Service	E		E	E	C	F	C	D			D	C
Approach Delay (s/veh)		67.3			510.2			36.5			42.1	
Approach LOS		E			F			D			D	

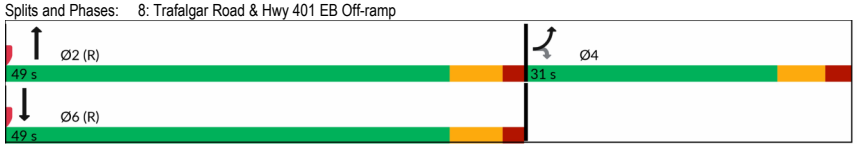
Intersection Summary					
HCM 2000 Control Delay (s/veh)	292.1	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.53				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	133.5%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	256	1121	0	2184	1966	0
Future Volume (vph)	256	1121	0	2184	1966	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.897	0.850				
Flt Protected	0.985					
Satd. Flow (prot)	2940	1327	0	4309	4350	0
Flt Permitted	0.985					
Satd. Flow (perm)	2940	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6	6				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	256	1121	0	2184	1966	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	817	560	0	2184	1966	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
v/c Ratio	1.27dr	1.39		0.97	0.86	
Control Delay (s/veh)	44.7	218.1		31.8	21.6	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	44.7	218.1		31.8	21.6	
LOS	D	F		C	C	
Approach Delay (s/veh)	115.2			31.8	21.6	
Approach LOS	F			C	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 49.0		Intersection LOS: D	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	817	560	2184	1966
v/c Ratio	1.27dr	1.39	0.97	0.86
Control Delay (s/veh)	44.7	218.1	31.8	21.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.7	218.1	31.8	21.6
Queue Length 50th (m)	66.9	~139.5	131.7	105.9
Queue Length 95th (m)	#104.7	#210.6	#183.5	132.5
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	886	402	2262	2283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.92	1.39	0.97	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	256	1121	0	2184	1966	0
Future Volume (vph)	256	1121	0	2184	1966	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2939	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2939	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	256	1121	0	2184	1966	0
RTOR Reduction (vph)	4	4	0	0	0	0
Lane Group Flow (vph)	813	556	0	2184	1966	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0		42.0	42.0	
Effective Green, g (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	881	398		2262	2283	
v/s Ratio Prot	0.28			c0.51	0.45	
v/s Ratio Perm		c0.42				
v/c Ratio	1.27dr	1.40		0.97	0.86	
Uniform Delay, d1	27.1	28.0		18.3	16.5	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.9	193.1		12.4	4.6	
Delay (s)	42.0	221.1		30.7	21.0	
Level of Service	D	F		C	C	
Approach Delay (s/veh)	114.8			30.7	21.0	
Approach LOS	F			C	C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	48.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

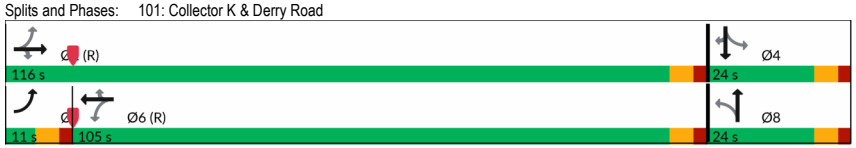
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
Future Volume (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	40.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
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	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5142	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.038						0.757			0.757		
Satd. Flow (perm)	72	5142	1601	1883	5142	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			70						70
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
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
Adj. Flow (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	116.0	116.0	105.0	105.0	105.0	24.0	24.0		24.0	24.0	24.0
Total Split (%)	7.9%	82.9%	82.9%	75.0%	75.0%	75.0%	17.1%	17.1%		17.1%	17.1%	17.1%
Maximum Green (s)	5.0	110.0	110.0	99.0	99.0	99.0	18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	110.0	110.0	110.0		101.2	101.2	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.72	0.72	0.13			0.13		0.13
v/c Ratio	0.49	0.32	0.08		0.96	0.01	0.44			0.14		0.03
Control Delay (s/veh)	25.9	4.5	0.7		13.3	0.0	64.6			56.3		0.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	25.9	4.5	0.7		13.3	0.0	64.6			56.3		0.3
LOS	C	A	A		B	A	E			E		A
Approach Delay (s/veh)		5.1			13.2			64.6			42.7	
Approach LOS		A			B			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.96		
Intersection Signal Delay (s/veh): 11.9	Intersection LOS: B	
Intersection Capacity Utilization 92.8%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	57	1306	96	3584	13	80	25	8
v/c Ratio	0.49	0.32	0.08	0.96	0.01	0.44	0.14	0.03
Control Delay (s/veh)	25.9	4.5	0.7	13.3	0.0	64.6	56.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.9	4.5	0.7	13.3	0.0	64.6	56.3	0.3
Queue Length 50th (m)	3.0	33.0	0.0	123.8	0.0	21.1	6.3	0.0
Queue Length 95th (m)	14.5	38.0	3.4	m180.8	m0.0	38.6	15.6	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	40.0	30.0
Base Capacity (vph)	117	4040	1278	3717	1176	183	183	266
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.32	0.08	0.96	0.01	0.44	0.14	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
Future Volume (vph)	57	1306	96	0	3584	13	80	0	0	25	0	8
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	0.91	1.00		0.91	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5142	1601	1789			1789		1601
Flt Permitted	0.04	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	71	5142	1601		5142	1601	1426			1426		1601
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	1306	96	0	3584	13	80	0	0	25	0	8
RTOR Reduction (vph)	0	0	21	0	0	4	0	0	0	0	0	7
Lane Group Flow (vph)	57	1306	75	0	3584	9	80	0	0	25	0	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Effective Green, g (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.71	0.71	0.13			0.13		0.13
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	104	4040	1257		3672	1143	183			183		205
v/s Ratio Prot	0.02	c0.25			c0.70							
v/s Ratio Perm	0.41		0.05			0.01	c0.06			0.02		0.00
v/c Ratio	0.55	0.32	0.06		0.98	0.01	0.44			0.14		0.01
Uniform Delay, d1	41.6	4.3	3.4		18.9	5.7	56.3			54.1		53.2
Progression Factor	1.00	1.00	1.00		0.62	1.00	1.00			1.00		1.00
Incremental Delay, d2	5.8	0.2	0.1		1.6	0.0	1.7			1.6		0.0
Delay (s)	47.4	4.5	3.5		13.3	5.7	58.0			55.7		53.2
Level of Service	D	A	A		B	A	E			E		D
Approach Delay (s/veh)		6.1			13.3			58.0			55.1	
Approach LOS		A			B			E			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	12.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.88				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	92.8%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1308	222	0	2832	10	0	0	92	0	0	60
Future Volume (vph)	0	1308	222	0	2832	10	0	0	92	0	0	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
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
Adj. Flow (vph)	0	1308	222	0	2832	10	0	0	92	0	0	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1308	222	0	2842	0	0	0	92	0	0	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	65.3%	ICU Level of Service C	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1308	222	0	2832	10	0	0	92	0	0	60
Future Volume (Veh/h)	0	1308	222	0	2832	10	0	0	92	0	0	60
Sign Control		Free			Free			Stop			Stop	
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)	0	1308	222	0	2832	10	0	0	92	0	0	60
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.57			0.89			0.63	0.63	0.89	0.63	0.63	0.57
vC, conflicting volume	2842			1530			2312	4150	436	3365	4367	949
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1579			1145			0	2700	0	1444	3047	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	90
cM capacity (veh/h)	234			536			577	13	960	52	8	615

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	436	436	436	222	1133	1133	576	92	60
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	222	0	0	10	92	60
cSH	1700	1700	1700	1700	1700	1700	1700	960	615
Volume to Capacity	0.26	0.26	0.26	0.13	0.67	0.67	0.34	0.10	0.10
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.5
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	11.5
Lane LOS								A	B
Approach Delay (s/veh)	0.0				0.0			9.1	11.5
Approach LOS								A	B

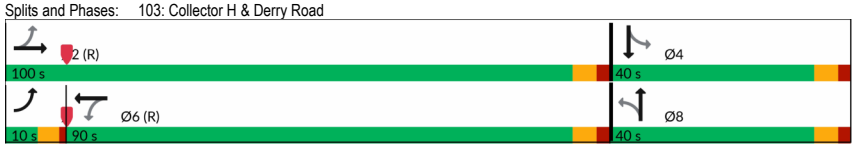
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	1363	129	29	2705	14	108	0	14	32	20	57
Future Volume (vph)	74	1363	129	29	2705	14	108	0	14	32	20	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.999			0.985			0.929	
Flt Protected	0.950			0.950				0.958			0.986	
Satd. Flow (prot)	1789	4461	0	1789	4516	0	0	1777	0	0	1725	0
Flt Permitted	0.038			0.131				0.555			0.920	
Satd. Flow (perm)	72	4461	0	247	4516	0	0	1030	0	0	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			1			58			37	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
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
Adj. Flow (vph)	74	1363	129	29	2705	14	108	0	14	32	20	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	1492	0	29	2719	0	0	122	0	0	109	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	10.0	100.0		90.0	90.0		40.0	40.0		40.0	40.0	
Total Split (%)	7.1%	71.4%		64.3%	64.3%		28.6%	28.6%		28.6%	28.6%	
Maximum Green (s)	5.5	94.0		84.0	84.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	115.2	113.7		101.8	101.8			14.3			14.3	
Actuated g/C Ratio	0.82	0.81		0.73	0.73			0.10			0.10	
v/c Ratio	0.49	0.41		0.16	0.83			0.78			0.55	
Control Delay (s/veh)	34.3	6.2		10.3	17.2			62.9			48.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	34.3	6.2		10.3	17.2			62.9			48.8	
LOS	C	A		B	B			E			D	
Approach Delay (s/veh)		7.5			17.2			62.9			48.8	
Approach LOS		A			B			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 15.8		Intersection LOS: B	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	74	1492	29	2719	122	109
v/c Ratio	0.49	0.41	0.16	0.83	0.78	0.55
Control Delay (s/veh)	34.3	6.2	10.3	17.2	62.9	48.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.3	6.2	10.3	17.2	62.9	48.8
Queue Length 50th (m)	11.1	39.9	2.1	184.7	18.0	19.6
Queue Length 95th (m)	m20.5	m45.4	8.5	293.9	39.1	37.0
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	150	3626	179	3282	294	419
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.41	0.16	0.83	0.41	0.26

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	1363	129	29	2705	14	108	0	14	32	20	57
Future Volume (vph)	74	1363	129	29	2705	14	108	0	14	32	20	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.98			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4462		1789	4517			1776			1725	
Flt Permitted	0.04	1.00		0.13	1.00			0.56			0.92	
Satd. Flow (perm)	71	4462		247	4517			1030			1610	
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	1363	129	29	2705	14	108	0	14	32	20	57
RTOR Reduction (vph)	0	4	0	0	0	0	0	52	0	0	33	0
Lane Group Flow (vph)	74	1488	0	29	2719	0	0	70	0	0	76	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	113.7	113.7		101.8	101.8			14.3			14.3	
Effective Green, g (s)	113.7	113.7		101.8	101.8			14.3			14.3	
Actuated g/C Ratio	0.81	0.81		0.73	0.73			0.10			0.10	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	148	3623		179	3284			105			164	
v/s Ratio Prot	0.03	c0.33			c0.60							
v/s Ratio Perm	0.38			0.12				c0.07			0.05	
v/c Ratio	0.50	0.41		0.16	0.83			0.67			0.46	
Uniform Delay, d1	28.2	3.7		5.9	13.1			60.5			59.2	
Progression Factor	1.58	1.48		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	0.2		1.9	2.6			14.8			2.1	
Delay (s)	46.4	5.7		7.8	15.6			75.4			61.3	
Level of Service	D	A		A	B			E			E	
Approach Delay (s/veh)		7.6			15.6			75.4			61.3	
Approach LOS		A			B			E			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	15.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.79				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	84.0%	ICU Level of Service		E	
Analysis Period (min)	15				

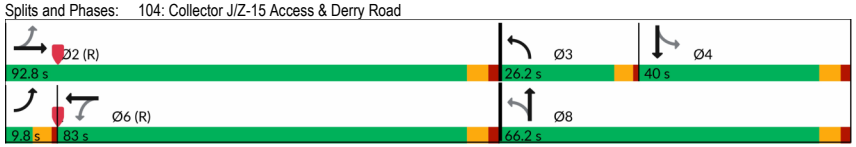
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	1310	213	18	2494	19	144	0	20	42	0	158
Future Volume (vph)	51	1310	213	18	2494	19	144	0	20	42	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.999			0.984			0.893	
Flt Protected	0.950			0.950				0.958			0.990	
Satd. Flow (prot)	1789	4425	0	1789	4516	0	0	1775	0	0	1665	0
Flt Permitted	0.036			0.119				0.444			0.921	
Satd. Flow (perm)	68	4425	0	224	4516	0	0	823	0	0	1549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			1			51			108	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
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
Adj. Flow (vph)	51	1310	213	18	2494	19	144	0	20	42	0	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	1523	0	18	2513	0	0	164	0	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		9.5	40.0		40.0	40.0	
Total Split (s)	9.8	92.8		83.0	83.0		26.2	66.2		40.0	40.0	
Total Split (%)	6.2%	58.4%		52.2%	52.2%		16.5%	41.6%		25.2%	25.2%	
Maximum Green (s)	5.3	86.8		77.0	77.0		21.7	60.2		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		3.5	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		1.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0			7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0			27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0			0		0	0	
Act Effct Green (s)	119.4	117.9		108.5	108.5			29.1			29.1	
Actuated g/C Ratio	0.75	0.74		0.68	0.68			0.18			0.18	
v/c Ratio	0.41	0.46		0.12	0.82			0.85			0.54	
Control Delay (s/veh)	23.9	9.8		16.4	23.8			76.5			29.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	23.9	9.8		16.4	23.8			76.5			29.4	
LOS	C	A		B	C			E			C	
Approach Delay (s/veh)		10.3			23.8			76.5			29.4	
Approach LOS		B			C			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 159			
Actuated Cycle Length: 159			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 21.2		Intersection LOS: C	
Intersection Capacity Utilization 84.9%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	51	1523	18	2513	164	200
v/c Ratio	0.41	0.46	0.12	0.82	0.85	0.54
Control Delay (s/veh)	23.9	9.8	16.4	23.8	76.5	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.9	9.8	16.4	23.8	76.5	29.4
Queue Length 50th (m)	3.8	71.5	2.0	234.1	36.7	26.5
Queue Length 95th (m)	16.9	118.7	8.1	#378.2	59.7	46.7
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	125	3287	152	3082	343	441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.46	0.12	0.82	0.48	0.45

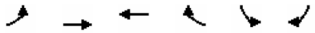
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	1310	213	18	2494	19	144	0	20	42	0	158
Future Volume (vph)	51	1310	213	18	2494	19	144	0	20	42	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.98			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4425		1789	4515			1775			1665	
Flt Permitted	0.04	1.00		0.12	1.00			0.44			0.92	
Satd. Flow (perm)	67	4425		225	4515			823			1550	
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)	51	1310	213	18	2494	19	144	0	20	42	0	158
RTOR Reduction (vph)	0	6	0	0	0	0	0	42	0	0	88	0
Lane Group Flow (vph)	51	1517	0	18	2513	0	0	122	0	0	112	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	117.9	117.9		107.6	107.6			29.1			29.1	
Effective Green, g (s)	117.9	117.9		107.6	107.6			29.1			29.1	
Actuated g/C Ratio	0.74	0.74		0.68	0.68			0.18			0.18	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	112	3281		152	3055			150			283	
v/s Ratio Prot	0.02	c0.34			c0.56							
v/s Ratio Perm	0.32			0.08				c0.15			0.07	
v/c Ratio	0.46	0.46		0.12	0.82			0.82			0.39	
Uniform Delay, d1	27.0	8.1		9.0	18.7			62.4			57.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.9	0.5		1.6	2.6			27.7			0.9	
Delay (s)	29.9	8.6		10.6	21.4			90.1			58.1	
Level of Service	C	A		B	C			F			E	
Approach Delay (s/veh)		9.2			21.3			90.1			58.1	
Approach LOS		A			C			F			E	

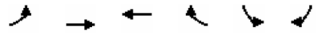
Intersection Summary					
HCM 2000 Control Delay (s/veh)	21.2	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	159.0	Sum of lost time (s)		21.0	
Intersection Capacity Utilization	84.9%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1329	3569	35	0	28
Future Volume (vph)	0	1329	3569	35	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1329	3569	35	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1329	3569	35	0	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	108.7%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1329	3569	35	0	28
Future Volume (Veh/h)	0	1329	3569	35	0	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1329	3569	35	0	28
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.66				0.70	0.66
vC, conflicting volume	3604				4012	1785
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3913				3855	1162
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	77
cM capacity (veh/h)	32				2	124

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	443	443	443	1785	1785	35	28
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	35	28
cSH	1700	1700	1700	1700	1700	1700	124
Volume to Capacity	0.26	0.26	0.26	1.05	1.05	0.02	0.23
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	42.2
Lane LOS							E
Approach Delay (s/veh)	0.0			0.0			42.2
Approach LOS							E

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	108.7%	ICU Level of Service		G
Analysis Period (min)	15			

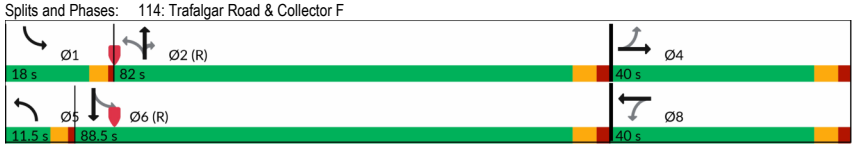
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	62	62	58	59	137	85	2069	176	166	3382	115
Future Volume (vph)	53	62	62	58	59	137	85	2069	176	166	3382	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	50.0		0.0	50.0		50.0	140.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.925			0.895				0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1666	0	1652	1612	0	1711	4421	1566	1711	4399	0
Flt Permitted	0.285			0.549			0.043			0.041		
Satd. Flow (perm)	495	1666	0	954	1612	0	77	4421	1566	74	4399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			79				87		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
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
Adj. Flow (vph)	53	62	62	58	59	137	85	2069	176	166	3382	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	124	0	58	196	0	85	2069	176	166	3497	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.5	82.0	82.0	18.0	88.5	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		8.2%	58.6%	58.6%	12.9%	63.2%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.5	76.0	76.0	14.0	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	16.5	16.5		16.5	16.5		103.4	92.9	92.9	112.9	99.0	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.74	0.66	0.66	0.81	0.71	
v/c Ratio	0.91	0.55		0.52	0.76		0.54	0.71	0.16	0.72	1.12	
Control Delay (s/veh)	157.1	50.0		73.2	53.3		28.9	32.6	11.3	52.0	82.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.1	
Total Delay (s/veh)	157.1	50.0		73.2	53.3		28.9	32.6	11.3	52.0	82.8	
LOS	F	D		E	D		C	C	B	D	F	
Approach Delay (s/veh)		82.1			57.9			30.8			81.4	
Approach LOS		F			E			C			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.12		
Intersection Signal Delay (s/veh): 62.1	Intersection LOS: E	
Intersection Capacity Utilization 111.9%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	124	58	196	85	2069	176	166	3497
v/c Ratio	0.91	0.55	0.52	0.76	0.54	0.71	0.16	0.72	1.12
Control Delay (s/veh)	157.1	50.0	73.2	53.3	28.9	32.6	11.3	52.0	82.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	157.1	50.0	73.2	53.3	28.9	32.6	11.3	52.0	82.8
Queue Length 50th (m)	15.1	23.9	15.9	32.9	8.1	247.7	20.1	29.6	~465.3
Queue Length 95th (m)	#35.7	42.5	m29.6	m56.5	m7.1	m223.9	m27.7	54.1	#542.6
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	70.0		50.0		50.0		50.0	140.0	
Base Capacity (vph)	120	430	231	451	160	2932	1067	249	3110
Starvation Cap Reductn	0	0	0	0	0	0	0	0	116
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.29	0.25	0.43	0.53	0.71	0.16	0.67	1.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	62	62	58	59	137	85	2069	176	166	3382	115
Future Volume (vph)	53	62	62	58	59	137	85	2069	176	166	3382	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.93		1.00	0.90		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)	1652	1666		1652	1612		1711	4421	1566	1711	4399	
Flt Permitted	0.28	1.00		0.55	1.00		0.04	1.00	1.00	0.04	1.00	
Satd. Flow (perm)	495	1666		954	1612		78	4421	1566	74	4399	
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)	53	62	62	58	59	137	85	2069	176	166	3382	115
RTOR Reduction (vph)	0	30	0	0	70	0	0	0	29	0	1	0
Lane Group Flow (vph)	53	94	0	58	126	0	85	2069	147	166	3496	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	16.5	16.5		16.5	16.5		101.4	92.8	92.8	111.5	98.9	
Effective Green, g (s)	16.5	16.5		16.5	16.5		101.4	92.8	92.8	111.5	98.9	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.72	0.66	0.66	0.80	0.71	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	58	196		112	189		156	2930	1038	230	3107	
v/s Ratio Prot		0.06			0.08		0.03	0.47		c0.08	c0.79	
v/s Ratio Perm	c0.11			0.06			0.36		0.09	0.49		
v/c Ratio	0.91	0.48		0.52	0.67		0.54	0.71	0.14	0.72	1.13	
Uniform Delay, d1	61.0	57.7		58.0	59.1		37.5	15.0	8.8	41.2	20.5	
Progression Factor	1.00	1.00		1.01	1.01		1.13	1.92	1.96	1.00	1.00	
Incremental Delay, d2	86.9	1.8		4.0	8.6		0.4	0.1	0.0	10.6	61.1	
Delay (s)	148.0	59.5		62.6	68.4		42.6	28.9	17.2	51.9	81.6	
Level of Service	F	E		E	E		D	C	B	D	F	
Approach Delay (s/veh)		86.0			67.1			28.5			80.3	
Approach LOS		F			E			C			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	61.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

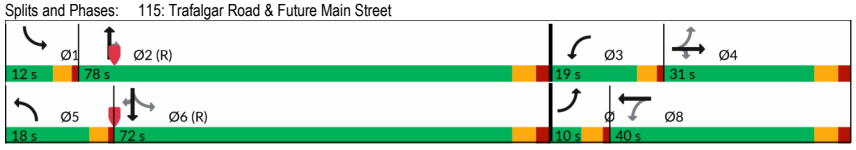
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	65	595	364	164	105	449	2003	143	116	2701	449
Future Volume (vph)	194	65	595	364	164	105	449	2003	143	116	2701	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.941				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3367	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.586			0.595			0.950			0.061		
Satd. Flow (perm)	1104	1883	2818	1121	3367	0	3319	4421	1566	110	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			255		96				125			211
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	194	65	595	364	164	105	449	2003	143	116	2701	449
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	65	595	364	269	0	449	2003	143	116	2701	449
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	10.0	31.0	31.0	19.0	40.0		18.0	78.0	78.0	12.0	72.0	72.0
Total Split (%)	7.1%	22.1%	22.1%	13.6%	28.6%		12.9%	55.7%	55.7%	8.6%	51.4%	51.4%
Maximum Green (s)	5.5	25.0	25.0	14.5	34.0		14.0	72.0	72.0	8.0	66.0	66.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	29.3	22.3	22.3	42.8	31.3		16.7	74.6	74.6	76.1	66.0	66.0
Actuated g/C Ratio	0.21	0.16	0.16	0.31	0.22		0.12	0.53	0.53	0.54	0.47	0.47
v/c Ratio	0.75	0.22	0.90	0.89	0.33		1.14	0.85	0.16	0.76	1.30	0.53
Control Delay (s/veh)	64.0	51.9	49.7	67.1	29.3		141.4	33.0	4.4	56.0	167.3	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.0	51.9	49.7	67.1	29.3		141.4	33.0	4.4	56.0	167.3	12.0
LOS	E	D	D	E	C		F	C	A	E	F	B
Approach Delay (s/veh)		53.1			51.0			50.2			142.0	
Approach LOS		D			D			D			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay (s/veh): 91.4		Intersection LOS: F
Intersection Capacity Utilization 110.6%		ICU Level of Service H
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	65	595	364	269	449	2003	143	116	2701	449
v/c Ratio	0.75	0.22	0.90	0.89	0.33	1.14	0.85	0.16	0.76	1.30	0.53
Control Delay (s/veh)	64.0	51.9	49.7	67.1	29.3	141.4	33.0	4.4	56.0	167.3	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.0	51.9	49.7	67.1	29.3	141.4	33.0	4.4	56.0	167.3	12.0
Queue Length 50th (m)	41.3	15.8	54.8	86.8	20.5	~85.1	203.0	2.4	15.1	~406.2	47.9
Queue Length 95th (m)	62.8	29.7	#81.3	#135.7	33.3	#119.4	229.4	13.3	m#34.4	#436.0	54.4
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	258	336	712	411	890	395	2354	892	153	2084	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.19	0.84	0.89	0.30	1.14	0.85	0.16	0.76	1.30	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	65	595	364	164	105	449	2003	143	116	2701	449
Future Volume (vph)	194	65	595	364	164	105	449	2003	143	116	2701	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.94		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	1883	2818	1789	3369		3319	4421	1566	1711	4421	1566
Flt Permitted	0.59	1.00	1.00	0.59	1.00		0.95	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1104	1883	2818	1120	3369		3319	4421	1566	109	4421	1566
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)	194	65	595	364	164	105	449	2003	143	116	2701	449
RTOR Reduction (vph)	0	0	214	0	75	0	0	0	58	0	0	112
Lane Group Flow (vph)	194	65	381	364	194	0	449	2003	85	116	2701	337
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	27.8	22.3	22.3	41.3	31.3		16.7	74.6	74.6	74.1	66.0	66.0
Effective Green, g (s)	27.8	22.3	22.3	41.3	31.3		16.7	74.6	74.6	74.1	66.0	66.0
Actuated g/C Ratio	0.20	0.16	0.16	0.30	0.22		0.12	0.53	0.53	0.53	0.47	0.47
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	299	448	399	753		395	2355	834	150	2084	738
v/s Ratio Prot	0.03	0.03		c0.09	0.06		c0.14	0.45		0.04	c0.61	
v/s Ratio Perm	0.13		0.14	c0.17					0.05	0.36		0.22
v/c Ratio	0.79	0.22	0.85	0.91	0.26		1.14	0.85	0.10	0.77	1.30	0.46
Uniform Delay, d1	51.9	51.3	57.2	46.3	44.8		61.7	27.9	16.1	28.8	37.0	24.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.16	0.93	0.78
Incremental Delay, d2	15.3	0.4	14.0	24.7	0.2		88.0	4.1	0.2	17.7	136.2	1.6
Delay (s)	67.2	51.6	71.2	71.0	45.0		149.7	32.0	16.4	51.3	170.8	21.0
Level of Service	E	D	E	E	D		F	C	B	D	F	C
Approach Delay (s/veh)		68.8			60.0			51.5			145.9	
Approach LOS		E			E			D			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	96.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

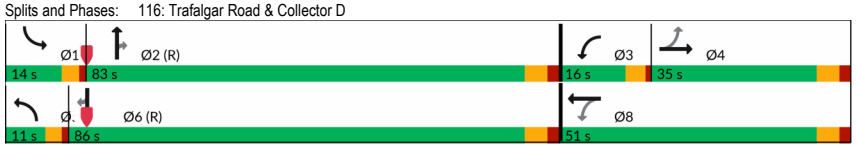
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	19	134	284	19	385	173	1884	74	173	3107	214
Future Volume (vph)	121	19	134	284	19	385	173	1884	74	173	3107	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	160.0		0.0	70.0		50.0	120.0		50.0
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt		0.869			0.857				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1565	0	1652	1543	0	3319	4421	1566	3319	4421	1566
Flt Permitted	0.374			0.465			0.950			0.950		
Satd. Flow (perm)	650	1565	0	808	1543	0	3319	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			98				85			85
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
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
Adj. Flow (vph)	121	19	134	284	19	385	173	1884	74	173	3107	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	153	0	284	404	0	173	1884	74	173	3107	214
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	35.0	35.0		16.0	51.0		11.0	83.0	83.0	14.0	86.0	86.0
Total Split (%)	23.6%	23.6%		10.8%	34.5%		7.4%	56.1%	56.1%	9.5%	58.1%	58.1%
Maximum Green (s)	29.0	29.0		11.5	45.0		7.0	77.0	77.0	10.0	80.0	80.0
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	28.1	28.1		45.6	44.1		7.9	78.0	78.0	9.9	80.0	80.0
Actuated g/C Ratio	0.19	0.19		0.31	0.30		0.05	0.53	0.53	0.07	0.54	0.54
v/c Ratio	0.98	0.41		0.90	0.77		0.98	0.81	0.09	0.78	1.30	0.24
Control Delay (s/veh)	135.4	22.9		77.2	45.8		131.0	32.6	2.7	90.7	169.2	11.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	1.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	135.4	22.9		77.2	45.8		131.0	33.7	2.7	90.7	169.2	11.2
LOS	F	C		E	D		F	C	A	F	F	B
Approach Delay (s/veh)		72.6			58.8			40.6			155.6	
Approach LOS		E			E			D			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 148		
Actuated Cycle Length: 148		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay (s/veh): 104.8		Intersection LOS: F
Intersection Capacity Utilization 117.3%		ICU Level of Service H
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	121	153	284	404	173	1884	74	173	3107	214
v/c Ratio	0.98	0.41	0.90	0.77	0.98	0.81	0.09	0.78	1.30	0.24
Control Delay (s/veh)	135.4	22.9	77.2	45.8	131.0	32.6	2.7	90.7	169.2	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	135.4	22.9	77.2	45.8	131.0	33.7	2.7	90.7	169.2	11.2
Queue Length 50th (m)	36.1	13.6	70.3	84.6	~30.1	190.8	0.0	26.6	~492.3	18.7
Queue Length 95th (m)	#77.4	35.1	#123.9	126.2	#55.2	214.4	6.5	#44.5	#517.0	34.0
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	70.0		160.0		70.0		50.0	120.0		50.0
Base Capacity (vph)	127	386	314	537	176	2329	865	224	2389	885
Starvation Cap Reductn	0	0	0	0	0	224	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.40	0.90	0.75	0.98	0.90	0.09	0.77	1.30	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	19	134	284	19	385	173	1884	74	173	3107	214
Future Volume (vph)	121	19	134	284	19	385	173	1884	74	173	3107	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		0.97	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.87		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)	1652	1564		1652	1543		3319	4421	1566	3319	4421	1566
Flt Permitted	0.37	1.00		0.46	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	650	1564		808	1543		3319	4421	1566	3319	4421	1566
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)	121	19	134	284	19	385	173	1884	74	173	3107	214
RTOR Reduction (vph)	0	80	0	0	69	0	0	0	35	0	0	39
Lane Group Flow (vph)	121	73	0	284	335	0	173	1884	39	173	3107	175
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	28.1	28.1		44.1	44.1		7.9	78.0	78.0	9.9	80.0	80.0
Effective Green, g (s)	28.1	28.1		44.1	44.1		7.9	78.0	78.0	9.9	80.0	80.0
Actuated g/C Ratio	0.19	0.19		0.30	0.30		0.05	0.53	0.53	0.07	0.54	0.54
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	123	296		306	459		177	2329	825	222	2389	846
v/s Ratio Prot		0.05		c0.07	0.22		c0.05	0.43		0.05	c0.70	
v/s Ratio Perm	0.19			c0.20					0.02			0.11
v/c Ratio	0.98	0.25		0.93	0.73		0.98	0.81	0.05	0.78	1.30	0.21
Uniform Delay, d1	59.7	50.9		49.6	46.6		70.0	28.9	17.0	68.0	34.0	17.6
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	75.6	0.4		32.9	5.9		60.4	3.2	0.1	15.8	138.4	0.6
Delay (s)	135.3	51.4		82.5	52.5		130.3	32.0	17.1	83.7	172.4	18.1
Level of Service	F	D		F	D		F	C	B	F	F	B
Approach Delay (s/veh)		88.5			64.9			39.5			158.6	
Approach LOS		F			E			D			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	107.3	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.19			
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	117.3%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

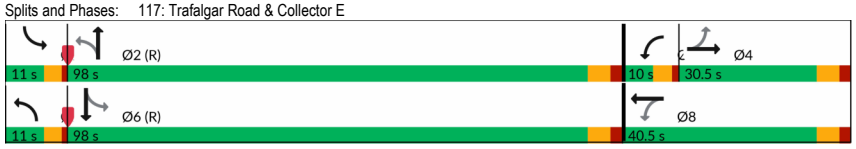
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	12	5	109	11	83	39	2106	47	78	3470	32
Future Volume (vph)	9	12	5	109	11	83	39	2106	47	78	3470	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.956			0.868			0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1801	0	1789	1635	0	1711	4408	0	1711	4416	0
Flt Permitted	0.696			0.426			0.038			0.037		
Satd. Flow (perm)	1311	1801	0	802	1635	0	68	4408	0	67	4416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			83			3			1	
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
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
Adj. Flow (vph)	9	12	5	109	11	83	39	2106	47	78	3470	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	17	0	109	94	0	39	2153	0	78	3502	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	30.5	30.5		10.0	40.5		11.0	98.0		11.0	98.0	
Total Split (%)	20.4%	20.4%		6.7%	27.1%		7.4%	65.6%		7.4%	65.6%	
Maximum Green (s)	24.5	24.5		5.5	34.5		7.0	92.0		7.0	92.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0			27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effct Green (s)	10.0	10.0		17.5	16.0		117.3	108.6		122.2	112.9	
Actuated g/C Ratio	0.07	0.07		0.12	0.11		0.78	0.73		0.82	0.76	
v/c Ratio	0.10	0.14		0.75	0.38		0.31	0.67		0.51	1.05	
Control Delay (s/veh)	68.6	54.3		91.4	19.1		15.8	13.1		33.3	50.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.3		0.0	21.3	
Total Delay (s/veh)	68.6	54.3		91.4	19.1		15.8	13.4		33.3	71.9	
LOS	E	D		F	B		B	B		C	E	
Approach Delay (s/veh)		59.2			57.9			13.5			71.1	
Approach LOS		E			E			B			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.05		
Intersection Signal Delay (s/veh): 49.5	Intersection LOS: D	
Intersection Capacity Utilization 90.5%	ICU Level of Service E	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	9	17	109	94	39	2153	78	3502
v/c Ratio	0.10	0.14	0.75	0.38	0.31	0.67	0.51	1.05
Control Delay (s/veh)	68.6	54.3	91.4	19.1	15.8	13.1	33.3	50.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	21.3
Total Delay (s/veh)	68.6	54.3	91.4	19.1	15.8	13.4	33.3	71.9
Queue Length 50th (m)	2.6	3.5	30.4	2.9	2.1	142.7	7.3	~501.0
Queue Length 95th (m)	8.8	11.7	#58.0	20.0	8.7	179.3	24.1	#526.1
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	214	299	145	441	131	3201	153	3335
Starvation Cap Reductn	0	0	0	0	0	396	0	228
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.06	0.75	0.21	0.30	0.77	0.51	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	12	5	109	11	83	39	2106	47	78	3470	32
Future Volume (vph)	9	12	5	109	11	83	39	2106	47	78	3470	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.96		1.00	0.87		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)	1789	1800		1789	1634		1711	4406		1711	4415	
Flt Permitted	0.70	1.00		0.43	1.00		0.04	1.00		0.04	1.00	
Satd. Flow (perm)	1311	1800		803	1634		68	4406		66	4415	
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)	9	12	5	109	11	83	39	2106	47	78	3470	32
RTOR Reduction (vph)	0	5	0	0	73	0	0	1	0	0	0	0
Lane Group Flow (vph)	9	12	0	109	21	0	39	2152	0	78	3502	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.0	6.0		18.4	18.4		111.6	106.2		118.6	109.7	
Effective Green, g (s)	6.0	6.0		18.4	18.4		111.6	106.2		118.6	109.7	
Actuated g/C Ratio	0.04	0.04		0.12	0.12		0.75	0.71		0.79	0.73	
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	72		150	201		110	3129		150	3239	
v/s Ratio Prot		0.01		c0.04	0.01		0.01	0.49		c0.03	c0.79	
v/s Ratio Perm	0.01			c0.05			0.25			0.38		
v/c Ratio	0.17	0.17		0.73	0.11		0.35	0.69		0.52	1.08	
Uniform Delay, d1	69.4	69.3		61.6	58.2		40.6	12.3		25.9	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	1.1		16.0	0.2		2.0	1.3		3.2	42.8	
Delay (s)	70.9	70.5		77.6	58.5		42.6	13.5		29.2	62.7	
Level of Service	E	E		E	E		D	B		C	E	
Approach Delay (s/veh)		70.6			68.8			14.0			62.0	
Approach LOS		E			E			B			E	

Intersection Summary						
HCM 2000 Control Delay (s/veh)	44.7	HCM 2000 Level of Service		D		
HCM 2000 Volume to Capacity ratio	1.04					
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		20.5		
Intersection Capacity Utilization	90.5%	ICU Level of Service		E		
Analysis Period (min)	15					
c Critical Lane Group						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	203	0	0	0	0	262
Future Volume (vph)	203	0	0	0	0	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			52.5	161.7	
Travel Time (s)	55.9			3.9	12.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	203	0	0	0	0	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	0	0	0	262
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	203	0	0	0	0	262
Future Volume (vph)	203	0	0	0	0	262
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	203	0	0	0	0	262

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	203	0	262
Volume Left (vph)	203	0	0
Volume Right (vph)	0	0	262
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.6	5.1	3.9
Degree Utilization, x	0.32	0.00	0.29
Capacity (veh/h)	614	701	873
Control Delay (s/veh)	10.0	6.9	8.5
Approach Delay (s/veh)	10.0		8.5
Approach LOS	A		A

Intersection Summary				
Delay		9.1		
Level of Service		A		
Intersection Capacity Utilization		19.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	101	26	47	29	41
Future Volume (vph)	19	101	26	47	29	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886		0.913			
Flt Protected	0.992					0.980
Satd. Flow (prot)	1583	0	1644	0	0	1765
Flt Permitted	0.992					0.980
Satd. Flow (perm)	1583	0	1644	0	0	1765
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	101	26	47	29	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	73	0	0	70
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	101	26	47	29	41
Future Volume (Veh/h)	19	101	26	47	29	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)	19	101	26	47	29	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	149	50			73	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149	50			73	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	90			98	
cM capacity (veh/h)	828	1019			1527	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	120	73	70
Volume Left	19	0	29
Volume Right	101	47	0
cSH	983	1700	1527
Volume to Capacity	0.12	0.04	0.02
Queue Length 95th (m)	3.2	0.0	0.4
Control Delay (s/veh)	9.2	0.0	3.2
Lane LOS	A		A
Approach Delay (s/veh)	9.2	0.0	3.2
Approach LOS	A		

Intersection Summary			
Average Delay		5.0	
Intersection Capacity Utilization		24.4%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	97	20	120	222	5	31	35	89	56	7	0
Future Volume (vph)	0	97	20	120	222	5	31	35	89	56	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.998			0.922				
Flt Protected					0.983			0.990			0.957	
Satd. Flow (prot)	0	1840	0	0	1767	0	0	1719	0	0	1802	0
Flt Permitted					0.983			0.990			0.957	
Satd. Flow (perm)	0	1840	0	0	1767	0	0	1719	0	0	1802	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
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
Adj. Flow (vph)	0	97	20	120	222	5	31	35	89	56	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	347	0	0	155	0	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	97	20	120	222	5	31	35	89	56	7	0
Future Volume (Veh/h)	0	97	20	120	222	5	31	35	89	56	7	0
Sign Control		Free			Free			Stop			Stop	
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)	0	97	20	120	222	5	31	35	89	56	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	227			117			575	574	107	678	582	225
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	227			117			575	574	107	678	582	225
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			92	91	91	81	98	100
cM capacity (veh/h)	1341			1471			397	394	947	290	390	815

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	117	347	155	63
Volume Left	0	120	31	56
Volume Right	20	5	89	0
cSH	1341	1471	594	299
Volume to Capacity	0.00	0.08	0.26	0.21
Queue Length 95th (m)	0.0	2.0	7.9	5.9
Control Delay (s/veh)	0.0	3.1	13.2	20.2
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	3.1	13.2	20.2
Approach LOS			B	C

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	136	60	41	451	85	57
Future Volume (vph)	136	60	41	451	85	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959				0.946	
Flt Protected				0.996	0.971	
Satd. Flow (prot)	1806	0	0	1876	1730	0
Flt Permitted				0.996	0.971	
Satd. Flow (perm)	1806	0	0	1876	1730	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	60	41	451	85	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	196	0	0	492	142	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	7	66	10	5	55
Future Volume (vph)	4	7	66	10	5	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.982			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1560	0	1768	0	0	1793
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1560	0	1768	0	0	1793
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	7	66	10	5	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	76	0	0	60
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	7	66	10	5	55
Future Volume (Veh/h)	4	7	66	10	5	55
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	66	10	5	55
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	136	71			76	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	136	71			76	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	855	991			1523	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	76	60
Volume Left	4	0	5
Volume Right	7	10	0
cSH	937	1700	1523
Volume to Capacity	0.01	0.04	0.00*
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s/veh)	8.9	0.0	0.6
Lane LOS	A		A
Approach Delay (s/veh)	8.9	0.0	0.6
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	14	10	13	45	24	15	129	13	20	123	4
Future Volume (vph)	2	14	10	13	45	24	15	129	13	20	123	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948			0.960			0.989			0.996	
Flt Protected		0.996			0.992			0.995			0.993	
Satd. Flow (prot)	0	1642	0	0	1656	0	0	1772	0	0	1781	0
Flt Permitted		0.996			0.992			0.995			0.993	
Satd. Flow (perm)	0	1642	0	0	1656	0	0	1772	0	0	1781	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
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
Adj. Flow (vph)	2	14	10	13	45	24	15	129	13	20	123	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	82	0	0	157	0	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	14	10	13	45	24	15	129	13	20	123	4
Future Volume (Veh/h)	2	14	10	13	45	24	15	129	13	20	123	4
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)	2	14	10	13	45	24	15	129	13	20	123	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	377	337	125	348	333	136	127			142		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	377	337	125	348	333	136	127			142		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	98	92	97	99			99		
cM capacity (veh/h)	522	570	926	578	573	913	1459			1441		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	26	82	157	147
Volume Left	2	13	15	20
Volume Right	10	24	13	4
cSH	663	644	1459	1441
Volume to Capacity	0.04	0.13	0.01	0.01
Queue Length 95th (m)	0.9	3.3	0.2	0.3
Control Delay (s/veh)	10.6	11.4	0.8	1.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	10.6	11.4	0.8	1.1
Approach LOS	B	B		

Intersection Summary				
Average Delay		3.6		
Intersection Capacity Utilization		25.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	43	5	0	77	0	74	184	12	0	113	36
Future Volume (vph)	13	43	5	0	77	0	74	184	12	0	113	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.994			0.967	
Flt Protected		0.989						0.986				
Satd. Flow (prot)	0	1842	0	0	1883	0	0	1765	0	0	1741	0
Flt Permitted		0.989						0.986				
Satd. Flow (perm)	0	1842	0	0	1883	0	0	1765	0	0	1741	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
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
Adj. Flow (vph)	13	43	5	0	77	0	74	184	12	0	113	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	77	0	0	270	0	0	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.6%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	43	5	0	77	0	74	184	12	0	113	36
Future Volume (Veh/h)	13	43	5	0	77	0	74	184	12	0	113	36
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	43	5	0	77	0	74	184	12	0	113	36
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	508	475	131	496	487	190	149			196		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	508	475	131	496	487	190	149			196		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	91	99	100	83	100	95			100		
cM capacity (veh/h)	398	463	919	430	456	852	1432			1377		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	61	77	270	149
Volume Left	13	0	74	0
Volume Right	5	0	12	36
cSH	466	456	1432	1377
Volume to Capacity	0.13	0.17	0.05	0.00
Queue Length 95th (m)	3.4	4.6	1.2	0.0
Control Delay (s/veh)	13.9	14.5	2.4	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	13.9	14.5	2.4	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		4.7		
Intersection Capacity Utilization	42.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	36	2	0	43	14	5	41	13	11	30	18
Future Volume (vph)	21	36	2	0	43	14	5	41	13	11	30	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.967			0.970			0.959	
Flt Protected		0.983						0.996			0.991	
Satd. Flow (prot)	0	1700	0	0	1741	0	0	1740	0	0	1711	0
Flt Permitted		0.983						0.996			0.991	
Satd. Flow (perm)	0	1700	0	0	1741	0	0	1740	0	0	1711	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
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
Adj. Flow (vph)	21	36	2	0	43	14	5	41	13	11	30	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	0	0	57	0	0	59	0	0	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	36	2	0	43	14	5	41	13	11	30	18
Future Volume (Veh/h)	21	36	2	0	43	14	5	41	13	11	30	18
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)	21	36	2	0	43	14	5	41	13	11	30	18
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	154	125	39	139	128	48	48			54		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	154	125	39	139	128	48	48			54		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	95	100	100	94	99	100			99		
cM capacity (veh/h)	761	758	1033	794	755	1022	1559			1551		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	59	57	59	59
Volume Left	21	0	5	11
Volume Right	2	14	13	18
cSH	766	807	1559	1551
Volume to Capacity	0.08	0.07	0.00*	0.00*
Queue Length 95th (m)	1.9	1.7	0.1	0.2
Control Delay (s/veh)	10.1	9.8	0.6	1.4
Lane LOS	B	A	A	A
Approach Delay (s/veh)	10.1	9.8	0.6	1.4
Approach LOS	B	A		

Intersection Summary				
Average Delay		5.5		
Intersection Capacity Utilization		22.3%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	71	0	8	90	131	8	21	6	119	20	7
Future Volume (vph)	5	71	0	8	90	131	8	21	6	119	20	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.923			0.977			0.994	
Flt Protected		0.997			0.998			0.989			0.961	
Satd. Flow (prot)	0	1795	0	0	1659	0	0	1740	0	0	1720	0
Flt Permitted		0.997			0.998			0.989			0.961	
Satd. Flow (perm)	0	1795	0	0	1659	0	0	1740	0	0	1720	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
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
Adj. Flow (vph)	5	71	0	8	90	131	8	21	6	119	20	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	0	229	0	0	35	0	0	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	71	0	8	90	131	8	21	6	119	20	7
Future Volume (Veh/h)	5	71	0	8	90	131	8	21	6	119	20	7
Sign Control		Free			Free			Stop			Stop	
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)	5	71	0	8	90	131	8	21	6	119	20	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	221			71			270	318	71	269	253	156
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	221			71			270	318	71	269	253	156
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	96	99	82	97	99
cM capacity (veh/h)	1348			1529			657	593	991	657	645	890

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	76	229	35	146
Volume Left	5	8	8	119
Volume Right	0	131	6	7
cSH	1348	1529	653	663
Volume to Capacity	0.00*	0.00*	0.05	0.22
Queue Length 95th (m)	0.1	0.1	1.3	6.4
Control Delay (s/veh)	0.5	0.3	10.8	12.0
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.5	0.3	10.8	12.0
Approach LOS			B	B

Intersection Summary				
Average Delay		4.6		
Intersection Capacity Utilization		36.6%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	198	81	96	74	76	44
Future Volume (vph)	198	81	96	74	76	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961				0.950	
Flt Protected	0.966		0.950			
Satd. Flow (prot)	1672	0	1711	0	1711	0
Flt Permitted	0.966		0.950			
Satd. Flow (perm)	1672	0	1711	0	1711	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	198	81	96	74	76	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	96	74	120	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	198	81	96	74	76	44
Future Volume (Veh/h)	198	81	96	74	76	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)	198	81	96	74	76	44
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	364	98	120			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364	98	120			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	67	92	93			
cM capacity (veh/h)	594	958	1468			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	279	96	120
Volume Left	198	96	0
Volume Right	81	0	44
cSH	668	1468	1700
Volume to Capacity	0.42	0.07	0.07
Queue Length 95th (m)	15.7	1.6	0.0
Control Delay (s/veh)	14.2	7.6	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	14.2	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	51	63	0	51	24	16
Future Volume (vph)	51	63	0	51	24	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925				0.946	
Flt Protected					0.971	
Satd. Flow (prot)	1666	0	0	1801	1654	0
Flt Permitted					0.971	
Satd. Flow (perm)	1666	0	0	1801	1654	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	63	0	51	24	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	0	0	51	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	51	63	0	51	24	16
Future Volume (Veh/h)	51	63	0	51	24	16
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	51	63	0	51	24	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	64	0	145	56	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	64	0	145	56	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	94	94	100	94	99	
cM capacity (veh/h)	815	1085	731	823	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	114	51	40
Volume Left	0	0	24
Volume Right	63	0	16
cSH	945	823	1623
Volume to Capacity	0.12	0.06	0.01
Queue Length 95th (m)	3.1	1.5	0.3
Control Delay (s/veh)	9.3	9.7	4.4
Lane LOS	A	A	A
Approach Delay (s/veh)	9.3	9.7	4.4
Approach LOS	A	A	

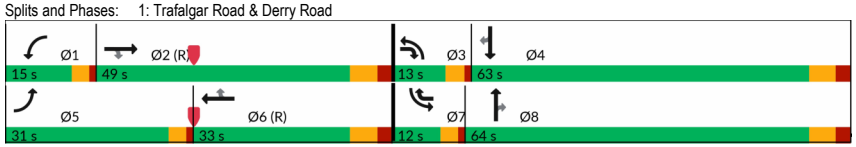
Intersection Summary				
Average Delay		8.5		
Intersection Capacity Utilization		16.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	854	1842	440	444	808	637	268	2481	413	241	1919	107
Future Volume (vph)	854	1842	440	444	808	637	268	2481	413	241	1919	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			92			182			124
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Adj. Flow (vph)	871	1880	449	453	824	650	273	2532	421	246	1958	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	871	1880	449	453	824	650	273	2532	421	246	1958	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	7.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	37.9	11.0	11.0	37.9	11.0	11.0	36.8	36.8	11.0	36.8	36.8
Total Split (s)	31.0	49.0	13.0	15.0	33.0	12.0	13.0	64.0	64.0	12.0	63.0	63.0
Total Split (%)	22.1%	35.0%	9.3%	10.7%	23.6%	8.6%	9.3%	45.7%	45.7%	8.6%	45.0%	45.0%
Maximum Green (s)	27.0	42.1	9.0	11.0	26.1	8.0	9.0	57.2	57.2	8.0	56.2	56.2
Yellow Time (s)	3.0	4.6	3.0	3.0	4.6	3.0	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		24.0			24.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	28.0	44.1	60.0	12.0	28.1	43.0	10.0	59.2	59.2	9.0	58.2	58.2
Actuated g/C Ratio	0.20	0.32	0.43	0.09	0.20	0.31	0.07	0.42	0.42	0.06	0.42	0.42
v/c Ratio	1.26	1.16	0.63	1.53	0.84	1.15	1.25	1.43	0.55	1.32	1.12	0.18
Control Delay (s/veh)	178.1	123.1	29.7	293.9	62.5	124.1	179.1	227.4	18.5	223.1	99.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	178.1	123.1	29.7	293.9	62.5	124.1	179.1	227.4	18.5	223.1	99.9	3.7
LOS	F	F	C	F	E	F	F	F	B	F	F	A
Approach Delay (s/veh)		125.0			137.7			196.0			108.5	
Approach LOS		F			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.53		
Intersection Signal Delay (s/veh): 145.2		Intersection LOS: F
Intersection Capacity Utilization 122.4%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	871	1880	449	453	824	650	273	2532	421	246	1958	109
v/c Ratio	1.26	1.16	0.63	1.53	0.84	1.15	1.25	1.43	0.55	1.32	1.12	0.18
Control Delay (s/veh)	178.1	123.1	29.7	293.9	62.5	124.1	179.1	227.4	18.5	223.1	99.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	178.1	123.1	29.7	293.9	62.5	124.1	179.1	227.4	18.5	223.1	99.9	3.7
Queue Length 50th (m)	~162.2	~226.8	61.0	~91.5	85.7	~192.9	~52.7	~418.6	39.1	~49.4	~273.5	0.0
Queue Length 95th (m)	#203.7	#257.5	m80.1	#126.1	102.8	#266.9	m#52.4	m#380.4	m36.7	#79.5	#307.9	10.5
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Base Capacity (vph)	694	1619	714	297	983	565	218	1765	767	187	1751	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	1.16	0.63	1.53	0.84	1.15	1.25	1.43	0.55	1.32	1.12	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	854	1842	440	444	808	637	268	2481	413	241	1919	107
Future Volume (vph)	854	1842	440	444	808	637	268	2481	413	241	1919	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	2.0	3.0	4.9	2.0	3.0	4.8	4.8	3.0	4.8	4.8
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	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	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Flt Permitted	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 (perm)	3471	5142	1585	3471	4902	1633	3054	4175	1566	2918	4214	1268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	871	1880	449	453	824	650	273	2532	421	246	1958	109
RTOR Reduction (vph)	0	0	37	0	0	67	0	0	105	0	0	64
Lane Group Flow (vph)	871	1880	412	453	824	583	273	2532	316	246	1958	45
Heavy Vehicles (%)	2%	2%	3%	2%	7%	0%	7%	8%	2%	12%	7%	26%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	27.0	42.1	51.1	11.0	26.1	34.1	9.0	57.2	57.2	8.0	56.2	56.2
Effective Green, g (s)	28.0	44.1	55.1	12.0	28.1	38.1	10.0	59.2	59.2	9.0	58.2	58.2
Actuated g/C Ratio	0.20	0.32	0.39	0.09	0.20	0.27	0.07	0.42	0.42	0.06	0.42	0.42
Clearance Time (s)	4.0	6.9	4.0	4.0	6.9	4.0	4.0	6.8	6.8	4.0	6.8	6.8
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)	694	1619	623	297	983	444	218	1765	662	187	1751	527
v/s Ratio Prot	c0.25	0.37	0.05	c0.13	0.17	c0.09	0.09	c0.61		0.08	0.46	
v/s Ratio Perm			0.21			0.26			0.20			0.04
v/c Ratio	1.26	1.16	0.66	1.53	0.84	1.31	1.25	1.43	0.48	1.32	1.12	0.09
Uniform Delay, d1	56.0	48.0	34.8	64.0	53.8	50.9	65.0	40.4	29.2	65.5	40.9	24.8
Progression Factor	1.34	1.12	1.02	1.00	1.00	1.00	1.08	0.92	1.06	1.00	1.00	1.00
Incremental Delay, d2	120.8	76.3	1.8	252.8	8.5	156.2	125.0	196.6	0.4	174.6	61.6	0.1
Delay (s)	195.9	129.8	37.1	316.8	62.3	207.2	195.3	233.9	31.3	240.1	102.5	24.9
Level of Service	F	F	D	F	E	F	F	F	C	F	F	C
Approach Delay (s/veh)		134.8			171.0			204.2			113.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	157.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7
Intersection Capacity Utilization	122.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

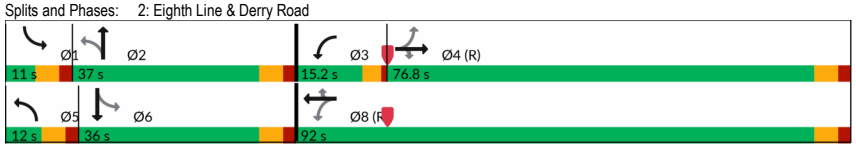
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1959	155	141	1076	28	221	45	156	11	15	15
Future Volume (vph)	47	1959	155	141	1076	28	221	45	156	11	15	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	50.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.884			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1628	0	1217	1638	0
Flt Permitted	0.206			0.047			0.473			0.626		
Satd. Flow (perm)	279	4520	1601	90	4391	1633	909	1628	0	802	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			70		115			16	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Adj. Flow (vph)	49	2041	161	147	1121	29	230	47	163	11	16	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	2041	161	147	1121	29	230	210	0	11	32	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.5	36.0	36.0	11.0	36.0		11.0	36.0	
Total Split (s)	76.8	76.8	76.8	15.2	92.0	92.0	12.0	37.0		11.0	36.0	
Total Split (%)	54.9%	54.9%	54.9%	10.9%	65.7%	65.7%	8.6%	26.4%		7.9%	25.7%	
Maximum Green (s)	70.8	70.8	70.8	11.2	86.0	86.0	6.0	31.0		5.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0		23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0			0	
Act Effct Green (s)	85.0	85.0	85.0	103.9	101.9	101.9	24.1	21.7		15.2	13.7	
Actuated g/C Ratio	0.61	0.61	0.61	0.74	0.73	0.73	0.17	0.16		0.11	0.10	
v/c Ratio	0.29	0.74	0.16	0.65	0.35	0.02	0.95	0.60		0.11	0.18	
Control Delay (s/veh)	22.9	23.7	6.4	42.0	8.0	0.0	102.0	31.9		45.6	35.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	22.9	23.7	6.4	42.0	8.0	0.0	102.0	31.9		45.6	35.6	
LOS	C	C	A	D	A	A	F	C		D	D	
Approach Delay (s/veh)		22.5			11.6			68.6			38.2	
Approach LOS		C			B			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.95		
Intersection Signal Delay (s/veh): 24.2		Intersection LOS: C
Intersection Capacity Utilization 77.9%		ICU Level of Service D
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	2041	161	147	1121	29	230	210	11	32
v/c Ratio	0.29	0.74	0.16	0.65	0.35	0.02	0.95	0.60	0.11	0.18
Control Delay (s/veh)	22.9	23.7	6.4	42.0	8.0	0.0	102.0	31.9	45.6	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.9	23.7	6.4	42.0	8.0	0.0	102.0	31.9	45.6	35.6
Queue Length 50th (m)	9.2	183.0	7.4	23.4	52.7	0.0	56.5	22.1	3.4	4.3
Queue Length 95th (m)	25.5	231.1	20.1	45.3	64.1	0.0	#114.8	51.7	10.7	13.7
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	50.0		35.0	
Base Capacity (vph)	169	2742	1011	234	3194	1207	241	453	103	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.74	0.16	0.63	0.35	0.02	0.95	0.46	0.11	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1959	155	141	1076	28	221	45	156	11	15	15
Future Volume (vph)	47	1959	155	141	1076	28	221	45	156	11	15	15
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.88		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1285	4520	1601	1825	4391	1633	1825	1627		1217	1638	
Flt Permitted	0.21	1.00	1.00	0.05	1.00	1.00	0.47	1.00		0.63	1.00	
Satd. Flow (perm)	278	4520	1601	90	4391	1633	909	1627		802	1638	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	49	2041	161	147	1121	29	230	47	162	11	16	16
RTOR Reduction (vph)	0	0	42	0	0	9	0	97	0	0	15	0
Lane Group Flow (vph)	49	2041	119	147	1121	20	230	113	0	11	17	0
Heavy Vehicles (%)	42%	2%	2%	0%	5%	0%	0%	2%	5%	50%	2%	15%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	81.4	81.4	81.4	98.3	98.3	98.3	29.7	21.7		12.8	10.8	
Effective Green, g (s)	81.4	81.4	81.4	98.3	98.3	98.3	29.7	21.7		12.8	10.8	
Actuated g/C Ratio	0.58	0.58	0.58	0.70	0.70	0.70	0.21	0.16		0.09	0.08	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	161	2628	930	223	3083	1146	277	252		79	126	
v/s Ratio Prot		c0.45		c0.06	0.26		c0.08	0.07		0.00	0.01	
v/s Ratio Perm	0.18		0.07	0.40		0.01	c0.10			0.01		
v/c Ratio	0.30	0.78	0.13	0.66	0.36	0.02	0.83	0.45		0.14	0.14	
Uniform Delay, d1	14.9	22.4	13.2	37.4	8.3	6.3	51.0	53.7		58.3	60.3	
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	4.8	2.3	0.3	6.9	0.3	0.0	18.6	1.3		0.8	0.5	
Delay (s)	19.7	24.7	13.5	44.2	8.7	6.3	69.6	55.0		59.1	60.7	
Level of Service	B	C	B	D	A	A	E	D		E	E	
Approach Delay (s/veh)		23.8			12.6			62.6			60.3	
Approach LOS		C			B			E			E	

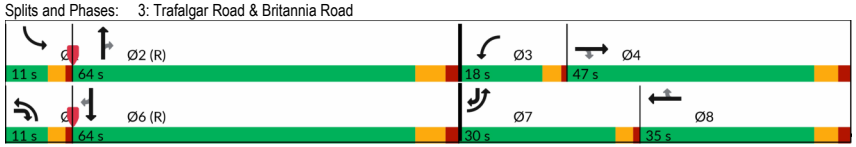
Intersection Summary				
HCM 2000 Control Delay (s/veh)	24.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	77.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	780	1136	508	274	806	281	226	1854	270	161	2345	844
Future Volume (vph)	780	1136	508	274	806	281	226	1854	270	161	2345	844
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			125			159			55
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Adj. Flow (vph)	788	1147	513	277	814	284	228	1873	273	163	2369	853
Shared Lane Traffic (%)												
Lane Group Flow (vph)	788	1147	513	277	814	284	228	1873	273	163	2369	853
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	7.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	11.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	30.0	47.0	11.0	18.0	35.0	35.0	11.0	64.0	64.0	11.0	64.0	30.0
Total Split (%)	21.4%	33.6%	7.9%	12.9%	25.0%	25.0%	7.9%	45.7%	45.7%	7.9%	45.7%	21.4%
Maximum Green (s)	26.0	41.0	7.0	14.0	29.0	29.0	7.0	57.0	57.0	7.0	57.0	26.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	27.0	42.8	56.4	14.6	30.4	30.4	8.6	59.0	59.0	8.6	59.0	92.0
Actuated g/C Ratio	0.19	0.31	0.40	0.10	0.22	0.22	0.06	0.42	0.42	0.06	0.42	0.66
v/c Ratio	1.21	0.84	0.77	0.76	0.85	0.63	1.30	1.05	0.36	0.92	1.31	0.93
Control Delay (s/veh)	156.4	52.0	41.1	74.7	61.8	33.9	219.2	73.6	12.4	91.7	169.5	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	156.4	52.0	41.1	74.7	61.8	33.9	219.2	73.6	12.4	91.7	169.5	37.6
LOS	F	D	D	E	E	C	F	E	B	F	F	D
Approach Delay (s/veh)		83.3			58.6			80.5			132.5	
Approach LOS		F			E			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.31		
Intersection Signal Delay (s/veh): 96.5	Intersection LOS: F	
Intersection Capacity Utilization 103.7%	ICU Level of Service G	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	788	1147	513	277	814	284	228	1873	273	163	2369	853
v/c Ratio	1.21	0.84	0.77	0.76	0.85	0.63	1.30	1.05	0.36	0.92	1.31	0.93
Control Delay (s/veh)	156.4	52.0	41.1	74.7	61.8	33.9	219.2	73.6	12.4	91.7	169.5	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	156.4	52.0	41.1	74.7	61.8	33.9	219.2	73.6	12.4	91.7	169.5	37.6
Queue Length 50th (m)	~142.5	126.4	114.1	39.2	93.2	39.9	~48.1	~245.0	19.8	25.3	~369.9	268.4
Queue Length 95th (m)	#183.1	148.1	163.2	54.6	112.6	71.2	#78.0	#279.6	41.8	m#26.7	m#315.8	m242.2
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	650	1374	663	375	981	458	175	1792	751	177	1810	915
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.83	0.77	0.74	0.83	0.62	1.30	1.05	0.36	0.92	1.31	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	780	1136	508	274	806	281	226	1854	270	161	2345	844
Future Volume (vph)	780	1136	508	274	806	281	226	1854	270	161	2345	844
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	2.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Flt Permitted	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 (perm)	3372	4476	1555	3506	4433	1633	2867	4254	1566	2892	4295	1365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	788	1147	513	277	814	284	228	1873	273	163	2369	853
RTOR Reduction (vph)	0	0	39	0	0	98	0	0	92	0	0	21
Lane Group Flow (vph)	788	1147	474	277	814	186	228	1873	181	163	2369	832
Heavy Vehicles (%)	5%	3%	5%	1%	4%	0%	14%	6%	2%	13%	5%	17%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.0	40.8	48.4	13.6	28.4	28.4	7.6	57.0	57.0	7.6	57.0	83.0
Effective Green, g (s)	27.0	42.8	52.4	14.6	30.4	30.4	8.6	59.0	59.0	8.6	59.0	87.0
Actuated g/C Ratio	0.19	0.31	0.37	0.10	0.22	0.22	0.06	0.42	0.42	0.06	0.42	0.62
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	650	1368	582	365	962	354	176	1792	659	177	1810	848
v/s Ratio Prot	c0.23	c0.26	0.06	0.08	0.18		c0.08	0.44		0.06	c0.55	0.20
v/s Ratio Perm			0.25			0.11			0.12			0.41
v/c Ratio	1.21	0.84	0.81	0.76	0.85	0.53	1.30	1.05	0.27	0.92	1.31	0.98
Uniform Delay, d1	56.5	45.4	39.4	61.0	52.6	48.4	65.7	40.5	26.5	65.4	40.5	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	0.77	1.48
Incremental Delay, d2	109.4	4.7	8.6	8.8	7.0	1.4	168.4	34.2	1.0	22.5	140.5	14.2
Delay (s)	165.9	50.0	48.0	69.7	59.5	49.8	234.1	74.7	27.5	91.1	171.7	52.3
Level of Service	F	D	D	E	E	D	F	E	C	F	F	D
Approach Delay (s/veh)		86.9			59.6			84.6			137.7	
Approach LOS		F			E			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	100.3	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.19			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	103.7%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

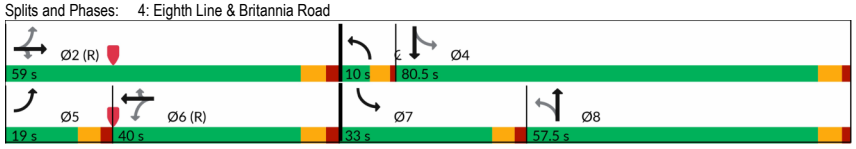
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1279	57	27	748	162	48	283	39	224	385	210
Future Volume (vph)	166	1279	57	27	748	162	48	283	39	224	385	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792	0	1825	1817	0
Flt Permitted	0.200			0.139			0.158			0.292		
Satd. Flow (perm)	384	4476	1306	267	4476	1633	278	1792	0	561	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			164		5			27	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Adj. Flow (vph)	169	1305	58	28	763	165	49	289	40	229	393	223
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	1305	58	28	763	165	49	329	0	229	616	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	9.5	44.7		11.0	44.7	
Total Split (s)	19.0	59.0	59.0	40.0	40.0	40.0	10.0	57.5		33.0	80.5	
Total Split (%)	12.7%	39.5%	39.5%	26.8%	26.8%	26.8%	6.7%	38.5%		22.1%	53.8%	
Maximum Green (s)	13.0	52.2	52.2	33.2	33.2	33.2	5.5	51.8		27.0	74.8	
Yellow Time (s)	4.0	4.6	4.6	4.6	4.6	4.6	3.5	4.2		4.0	4.2	
All-Red Time (s)	2.0	2.2	2.2	2.2	2.2	2.2	1.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0		32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	
Act Effct Green (s)	71.8	71.0	71.0	51.2	51.2	51.2	49.6	42.9		65.7	58.0	
Actuated g/C Ratio	0.48	0.47	0.47	0.34	0.34	0.34	0.33	0.29		0.44	0.39	
v/c Ratio	0.53	0.61	0.09	0.31	0.50	0.25	0.34	0.64		0.59	0.85	
Control Delay (s/veh)	31.9	32.9	1.3	57.2	43.5	7.4	27.6	50.1		31.5	51.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	31.9	32.9	1.3	57.2	43.5	7.4	27.6	50.1		31.5	51.3	
LOS	C	C	A	E	D	A	C	D		C	D	
Approach Delay (s/veh)		31.6			37.7			47.2			46.0	
Approach LOS		C			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 38.0		Intersection LOS: D	
Intersection Capacity Utilization 98.4%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	169	1305	58	28	763	165	49	329	229	616
v/c Ratio	0.53	0.61	0.09	0.31	0.50	0.25	0.34	0.64	0.59	0.85
Control Delay (s/veh)	31.9	32.9	1.3	57.2	43.5	7.4	27.6	50.1	31.5	51.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.9	32.9	1.3	57.2	43.5	7.4	27.6	50.1	31.5	51.3
Queue Length 50th (m)	29.3	124.9	0.0	6.3	79.2	0.2	8.4	85.8	41.5	158.8
Queue Length 95th (m)	52.3	166.9	2.5	#21.1	109.9	19.1	14.0	109.1	50.8	181.1
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	327	2125	670	91	1532	667	143	631	474	922
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.61	0.09	0.31	0.50	0.25	0.34	0.52	0.48	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1279	57	27	748	162	48	283	39	224	385	210
Future Volume (vph)	166	1279	57	27	748	162	48	283	39	224	385	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1306	1825	4476	1633	1674	1792		1825	1817	
Flt Permitted	0.20	1.00	1.00	0.14	1.00	1.00	0.16	1.00		0.29	1.00	
Satd. Flow (perm)	385	4476	1306	268	4476	1633	279	1792		561	1817	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.94
Adj. Flow (vph)	169	1305	58	28	763	165	49	289	40	229	393	223
RTOR Reduction (vph)	0	0	31	0	0	109	0	4	0	0	17	0
Lane Group Flow (vph)	169	1305	27	28	763	56	49	325	0	229	599	0
Heavy Vehicles (%)	0%	3%	25%	0%	3%	0%	9%	6%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	70.1	70.1	70.1	50.3	50.3	50.3	48.2	43.8		66.9	58.0	
Effective Green, g (s)	70.1	70.1	70.1	50.3	50.3	50.3	48.2	43.8		66.9	58.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.34	0.34	0.34	0.32	0.29		0.45	0.39	
Clearance Time (s)	6.0	6.8	6.8	6.8	6.8	6.8	4.5	5.7		6.0	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	313	2098	612	90	1505	549	131	525		395	704	
v/s Ratio Prot	0.05	c0.29			0.17		0.01	0.18		c0.07	c0.33	
v/s Ratio Perm	0.20		0.02	0.10		0.03	0.11			0.19		
v/c Ratio	0.54	0.62	0.04	0.31	0.51	0.10	0.37	0.62		0.58	0.85	
Uniform Delay, d1	25.2	29.8	21.5	36.8	39.7	34.1	38.1	45.7		28.5	41.8	
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	1.8	1.4	0.1	8.8	1.2	0.4	1.8	2.2		2.1	9.7	
Delay (s)	27.0	31.2	21.7	45.5	40.9	34.5	39.9	47.8		30.6	51.5	
Level of Service	C	C	C	D	D	C	D	D		C	D	
Approach Delay (s/veh)		30.3			39.9			46.8			45.9	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.5
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	606	120	478	239	250	48	1880	271	502	2538	143
Future Volume (vph)	256	606	120	478	239	250	48	1880	271	502	2538	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.597			0.158			0.062			0.950		
Satd. Flow (perm)	1092	3614	1601	298	3579	1541	106	4214	1551	3319	4295	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			244			142			115
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Adj. Flow (vph)	267	631	125	498	249	260	48	1880	271	523	2644	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	267	631	125	498	249	260	48	1880	271	523	2644	149
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	10.0	5.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	24.2	9.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	27.8	27.0	27.0	36.0	35.2	35.2	9.5	70.0	70.0	26.0	86.5	86.5
Total Split (%)	17.5%	17.0%	17.0%	22.6%	22.1%	22.1%	6.0%	44.0%	44.0%	16.4%	54.4%	54.4%
Maximum Green (s)	23.3	20.8	20.8	31.5	29.0	29.0	5.0	63.4	63.4	22.0	79.9	79.9
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)					7.0	7.0						
Flash Don't Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	45.7	22.8	22.8	59.5	33.1	33.1	72.5	65.4	65.4	23.0	83.8	83.8
Actuated g/C Ratio	0.29	0.14	0.14	0.37	0.21	0.21	0.46	0.41	0.41	0.14	0.53	0.53
v/c Ratio	0.66	1.22	0.35	1.20	0.33	0.51	0.46	1.08	0.38	1.09	1.17	0.17
Control Delay (s/veh)	46.5	169.3	8.2	151.0	55.7	11.5	33.8	92.5	16.4	128.6	115.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.5	169.3	8.2	151.0	55.7	11.5	33.8	92.5	16.4	128.6	115.6	6.0
LOS	D	F	A	F	E	B	C	F	B	F	F	A
Approach Delay (s/veh)		117.5			91.4			81.8			112.8	
Approach LOS		F			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 159		
Actuated Cycle Length: 159		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.22		
Intersection Signal Delay (s/veh): 101.5		Intersection LOS: F
Intersection Capacity Utilization 110.4%		ICU Level of Service H
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	267	631	125	498	249	260	48	1880	271	523	2644	149
v/c Ratio	0.66	1.22	0.35	1.20	0.33	0.51	0.46	1.08	0.38	1.09	1.17	0.17
Control Delay (s/veh)	46.5	169.3	8.2	151.0	55.7	11.5	33.8	92.5	16.4	128.6	115.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.5	169.3	8.2	151.0	55.7	11.5	33.8	92.5	16.4	128.6	115.6	6.0
Queue Length 50th (m)	64.8	~129.1	0.0	~176.3	36.8	4.4	6.7	~291.9	27.4	~97.0	~436.3	5.4
Queue Length 95th (m)	92.0	#168.7	13.5	#249.0	51.0	31.8	15.1	#325.6	51.4	#134.3	#463.8	17.8
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	427	518	353	416	744	513	105	1733	721	480	2263	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	1.22	0.35	1.20	0.33	0.51	0.46	1.08	0.38	1.09	1.17	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	606	120	478	239	250	48	1880	271	502	2538	143
Future Volume (vph)	256	606	120	478	239	250	48	1880	271	502	2538	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	4.2	3.5	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1738	3614	1601	1789	3579	1541	1631	4214	1551	3319	4295	1521
Flt Permitted	0.60	1.00	1.00	0.16	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1093	3614	1601	298	3579	1541	107	4214	1551	3319	4295	1521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.96	0.96
Adj. Flow (vph)	267	631	125	498	249	260	48	1880	271	523	2644	149
RTOR Reduction (vph)	0	0	107	0	0	193	0	0	84	0	0	55
Lane Group Flow (vph)	267	631	18	498	249	67	48	1880	187	523	2644	94
Heavy Vehicles (%)	5%	1%	2%	2%	2%	6%	7%	7%	3%	2%	5%	5%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	42.0	20.8	20.8	56.8	31.1	31.1	67.4	63.4	63.4	22.0	80.9	80.9
Effective Green, g (s)	44.0	22.8	22.8	57.8	33.1	33.1	69.4	65.4	65.4	23.0	82.9	82.9
Actuated g/C Ratio	0.28	0.14	0.14	0.36	0.21	0.21	0.44	0.41	0.41	0.14	0.52	0.52
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	6.2	4.5	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	392	518	229	413	745	320	94	1733	637	480	2239	793
v/s Ratio Prot	0.09	0.17		c0.25	0.07		0.02	0.45		c0.16	c0.62	
v/s Ratio Perm	0.09		0.01	c0.19		0.04	0.21		0.12			0.06
v/c Ratio	0.68	1.22	0.08	1.21	0.33	0.21	0.51	1.08	0.29	1.09	1.18	0.12
Uniform Delay, d1	49.1	68.1	59.0	49.5	53.6	52.1	37.8	46.8	31.3	68.0	38.1	19.4
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	4.8	114.8	0.3	113.5	0.6	0.7	4.6	48.6	1.2	67.5	86.3	0.3
Delay (s)	54.0	182.9	59.3	163.0	54.1	52.8	42.4	95.4	32.5	135.5	124.4	19.7
Level of Service	D	F	E	F	D	D	D	F	C	F	F	B
Approach Delay (s/veh)		134.1			107.6			86.5			121.4	
Approach LOS		F			F			F			F	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	111.1	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.21				
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	15.8		
Intersection Capacity Utilization	110.4%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

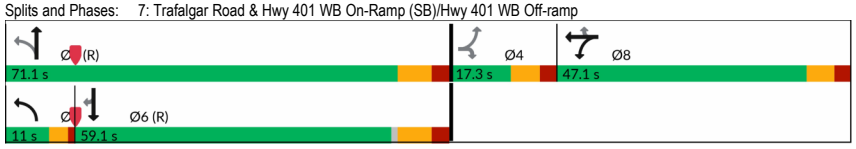
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Future Volume (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1883	0	1633	2879	1921	2456	1825	3941	0	0	4309	1276
Flt Permitted				0.950			0.053					
Satd. Flow (perm)	1883	0	1633	2879	1921	2456	102	3941	0	0	4309	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			306						145
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Adj. Flow (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

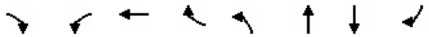
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.1			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.5%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	63.0			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)			10.0	34.0	34.0	34.0	87.0	82.9			80.7	80.7
Actuated g/C Ratio			0.07	0.25	0.25	0.25	0.64	0.61			0.60	0.60
v/c Ratio			0.04	0.86	0.03	0.59	0.04	0.58			0.70	0.25
Control Delay (s/veh)			0.3	61.2	35.7	18.5	13.7	18.9			23.3	7.2
Queue Delay			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)			0.3	61.2	35.7	18.5	13.7	18.9			23.3	7.2
LOS			A	E	D	B	B	B			C	A
Approach Delay (s/veh)		0.3			42.2			18.9			21.7	
Approach LOS		A			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135.5			
Actuated Cycle Length: 135.5			
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 25.9		Intersection LOS: C	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp

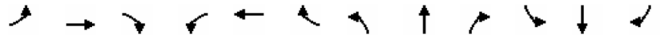




Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	9	623	13	494	6	1397	1802	208
v/c Ratio	0.04	0.86	0.03	0.59	0.04	0.58	0.70	0.25
Control Delay (s/veh)	0.3	61.2	35.7	18.5	13.7	18.9	23.3	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.3	61.2	35.7	18.5	13.7	18.9	23.3	7.2
Queue Length 50th (m)	0.0	97.3	2.6	27.3	0.5	94.8	126.0	7.5
Queue Length 95th (m)	0.0	117.4	7.7	46.7	3.2	168.6	#273.5	36.8
Internal Link Dist (m)			384.0			211.1	230.2	
Turn Bay Length (m)	10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	240	849	567	940	154	2410	2565	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.73	0.02	0.53	0.04	0.58	0.70	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Future Volume (vph)	0	0	9	623	13	494	6	1397	0	0	1802	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor			1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt			0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1633	2879	1921	2456	1825	3941			4309	1276
Flt Permitted			1.00	0.95	1.00	1.00	0.05	1.00			1.00	1.00
Satd. Flow (perm)			1633	2879	1921	2456	102	3941			4309	1276
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	9	623	13	494	6	1397	0	0	1802	208
RTOR Reduction (vph)	0	0	9	0	0	229	0	0	0	0	0	68
Lane Group Flow (vph)	0	0	0	623	13	265	6	1397	0	0	1802	140
Heavy Vehicles (%)	2%	2%	0%	23%	0%	17%	0%	17%	2%	2%	7%	28%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)			2.0	34.0	34.0	34.0	77.0	77.0			71.6	71.6
Effective Green, g (s)			2.0	34.0	34.0	34.0	77.0	77.0			71.6	71.6
Actuated g/C Ratio			0.01	0.25	0.25	0.25	0.57	0.57			0.53	0.53
Clearance Time (s)			7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)			3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)			24	722	482	616	75	2239			2276	674
v/s Ratio Prot				c0.22	0.01		0.00	c0.35			c0.42	
v/s Ratio Perm			c0.00			0.11	0.04					0.11
v/c Ratio			0.01	0.86	0.03	0.43	0.08	0.62			0.79	0.21
Uniform Delay, d1			65.8	48.5	38.3	42.6	19.2	19.6			25.9	16.9
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.1	10.1	0.0	0.2	0.2	1.3			2.9	0.7
Delay (s)			65.9	58.6	38.3	42.8	19.4	20.9			28.8	17.6
Level of Service			E	E	D	D	B	C			C	B
Approach Delay (s/veh)		65.9			51.5			20.9			27.7	
Approach LOS		E			D			C			C	

Intersection Summary

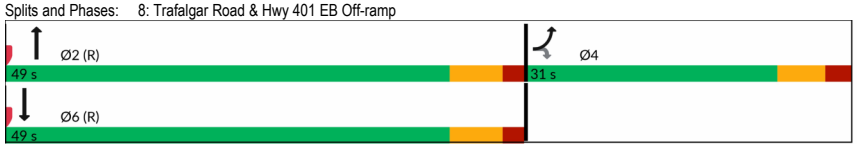
HCM 2000 Control Delay (s/veh)	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	26.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	202	1170	0	2460	1224	0
Future Volume (vph)	202	1170	0	2460	1224	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.889	0.850				
Flt Protected	0.987					
Satd. Flow (prot)	2822	1339	0	4154	4117	0
Flt Permitted	0.987					
Satd. Flow (perm)	2822	1339	0	4154	4117	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48	48				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Adj. Flow (vph)	202	1170	0	2460	1224	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	787	585	0	2460	1224	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
v/c Ratio	1.23dr	1.34		1.13	0.57	
Control Delay (s/veh)	39.8	195.4		85.5	14.1	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	39.8	195.4		85.5	14.1	
LOS	D	F		F	B	
Approach Delay (s/veh)	106.2			85.5	14.1	
Approach LOS	F			F	B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.34		
Intersection Signal Delay (s/veh): 73.8		Intersection LOS: E
Intersection Capacity Utilization 83.6%		ICU Level of Service E
Analysis Period (min) 15		
* User Entered Value		
dr Defacto Right Lane. Recode with 1 though lane as a right lane.		

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	787	585	2460	1224
v/c Ratio	1.23dr	1.34	1.13	0.57
Control Delay (s/veh)	39.8	195.4	85.5	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	195.4	85.5	14.1
Queue Length 50th (m)	68.7	~135.8	~199.4	53.7
Queue Length 95th (m)	#109.2	#207.4	#235.2	68.9
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	880	435	2180	2161
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.89	1.34	1.13	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	202	1170	0	2460	1224	0
Future Volume (vph)	202	1170	0	2460	1224	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.89	0.85		1.00	1.00	
Flt Protected	0.99	1.00		1.00	1.00	
Satd. Flow (prot)	2821	1339		4154	4117	
Flt Permitted	0.99	1.00		1.00	1.00	
Satd. Flow (perm)	2821	1339		4154	4117	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	202	1170	0	2460	1224	0
RTOR Reduction (vph)	34	34	0	0	0	0
Lane Group Flow (vph)	753	551	0	2460	1224	0
Heavy Vehicles (%)	30%	11%	2%	11%	12%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0		42.0	42.0	
Effective Green, g (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	846	401		2180	2161	
v/s Ratio Prot	0.27			c0.59	0.30	
v/s Ratio Perm		c0.41				
v/c Ratio	1.23dr	1.38		1.13	0.57	
Uniform Delay, d1	26.7	28.0		19.0	12.8	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.6	183.9		64.3	1.1	
Delay (s)	38.3	211.9		83.3	13.9	
Level of Service	D	F		F	B	
Approach Delay (s/veh)	112.3			83.3	13.9	
Approach LOS	F			F	B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	74.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

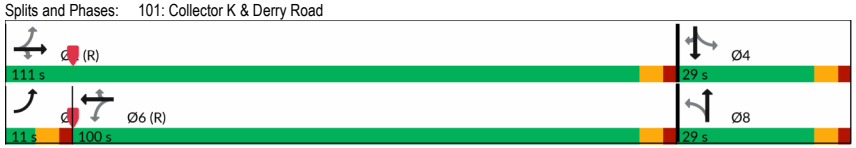
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

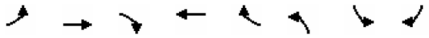
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	3062	26	0	1348	12	146	0	0	72	0	21
Future Volume (vph)	35	3062	26	0	1348	12	146	0	0	72	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	40.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
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	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5142	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.136						0.757			0.757		
Satd. Flow (perm)	256	5142	1601	1883	5142	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23			70						111
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	3328	28	0	1465	13	159	0	0	78	0	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	3328	28	0	1465	13	159	0	0	78	0	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	111.0	111.0	100.0	100.0	100.0	29.0	29.0		29.0	29.0	29.0
Total Split (%)	7.9%	79.3%	79.3%	71.4%	71.4%	71.4%	20.7%	20.7%		20.7%	20.7%	20.7%
Maximum Green (s)	5.0	105.0	105.0	94.0	94.0	94.0	23.0	23.0		23.0	23.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	105.0	105.0	105.0		96.2	96.2	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.69	0.69	0.16			0.16		0.16
v/c Ratio	0.15	0.86	0.02		0.41	0.01	0.68			0.33		0.06
Control Delay (s/veh)	5.8	15.6	2.0		2.4	0.0	70.7			56.3		0.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	5.8	15.6	2.0		2.4	0.0	70.7			56.3		0.3
LOS	A	B	A		A	A	E			E		A
Approach Delay (s/veh)		15.4			2.4			70.7			43.6	
Approach LOS		B			A			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 13.9		Intersection LOS: B	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	
Analysis Period (min) 15			

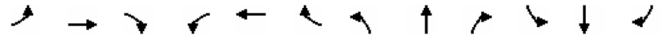
Splits and Phases: 101: Collector K & Derry Road





Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	38	3328	28	1465	13	159	78	23
v/c Ratio	0.15	0.86	0.02	0.41	0.01	0.68	0.33	0.06
Control Delay (s/veh)	5.8	15.6	2.0	2.4	0.0	70.7	56.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.8	15.6	2.0	2.4	0.0	70.7	56.3	0.3
Queue Length 50th (m)	2.4	215.3	0.3	13.4	0.0	42.6	19.7	0.0
Queue Length 95th (m)	5.2	234.7	2.7	m14.0	m0.0	#70.6	36.1	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	40.0	30.0
Base Capacity (vph)	246	3856	1206	3533	1121	234	234	355
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.86	0.02	0.41	0.01	0.68	0.33	0.06

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	3062	26	0	1348	12	146	0	0	72	0	21
Future Volume (vph)	35	3062	26	0	1348	12	146	0	0	72	0	21
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	0.91	1.00		0.91	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5142	1601	1789			1789		1601
Flt Permitted	0.14	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	257	5142	1601		5142	1601	1426			1426		1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	3328	28	0	1465	13	159	0	0	78	0	23
RTOR Reduction (vph)	0	0	6	0	0	4	0	0	0	0	0	19
Lane Group Flow (vph)	38	3328	22	0	1465	9	159	0	0	78	0	4
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	105.0	105.0	105.0		95.0	95.0	23.0			23.0		23.0
Effective Green, g (s)	105.0	105.0	105.0		95.0	95.0	23.0			23.0		23.0
Actuated g/C Ratio	0.75	0.75	0.75		0.68	0.68	0.16			0.16		0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	236	3856	1200		3489	1086	234			234		263
v/s Ratio Prot	0.00	c0.65			0.28							
v/s Ratio Perm	0.12		0.01			0.01	c0.11			0.05		0.00
v/c Ratio	0.16	0.86	0.02		0.42	0.01	0.68			0.33		0.01
Uniform Delay, d1	6.0	12.4	4.4		10.1	7.3	55.0			51.7		49.0
Progression Factor	1.00	1.00	1.00		0.22	1.00	1.00			1.00		1.00
Incremental Delay, d2	0.3	2.8	0.0		0.3	0.0	7.6			3.8		0.1
Delay (s)	6.3	15.2	4.5		2.4	7.3	62.7			55.5		49.1
Level of Service	A	B	A		A	A	E			E		D
Approach Delay (s/veh)		15.0			2.5			62.7			54.1	
Approach LOS		B			A			E			D	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	13.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.87				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	83.9%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2353	44	0	1795	11	0	0	21	0	0	93
Future Volume (vph)	0	2353	44	0	1795	11	0	0	21	0	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2558	48	0	1951	12	0	0	23	0	0	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2558	48	0	1963	0	0	0	23	0	0	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2353	44	0	1795	11	0	0	21	0	0	93
Future Volume (Veh/h)	0	2353	44	0	1795	11	0	0	21	0	0	93
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2558	48	0	1951	12	0	0	23	0	0	101
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.78			0.69			0.80	0.80	0.69	0.80	0.80	0.78
vC, conflicting volume	1963			2606			3309	4521	853	2833	4563	656
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1235			1763			1146	2654	0	553	2706	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	97	100	100	88
cM capacity (veh/h)	435			242			109	18	750	324	17	843

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	853	853	853	48	780	780	402	23	101
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	48	0	0	12	23	101
cSH	1700	1700	1700	1700	1700	1700	1700	750	843
Volume to Capacity	0.50	0.50	0.50	0.03	0.46	0.46	0.24	0.03	0.12
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.1
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	9.9
Lane LOS								A	A
Approach Delay (s/veh)	0.0				0.0			9.9	9.9
Approach LOS								A	A

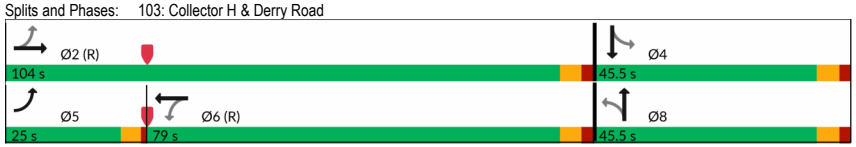
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	2226	51	14	1535	23	207	0	18	26	6	30
Future Volume (vph)	162	2226	51	14	1535	23	207	0	18	26	6	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.998			0.989			0.934	
Flt Protected	0.950			0.950				0.956			0.980	
Satd. Flow (prot)	1789	4507	0	1789	4511	0	0	1781	0	0	1724	0
Flt Permitted	0.064			0.044				0.706			0.893	
Satd. Flow (perm)	121	4507	0	83	4511	0	0	1315	0	0	1571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			55			31	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	2420	55	15	1668	25	225	0	20	28	7	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	2475	0	15	1693	0	0	245	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	25.0	104.0		79.0	79.0		45.5	45.5		45.5	45.5	
Total Split (%)	16.7%	69.6%		52.8%	52.8%		30.4%	30.4%		30.4%	30.4%	
Maximum Green (s)	20.5	98.0		73.0	73.0		39.5	39.5		39.5	39.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	111.3	109.8		91.0	91.0			27.7			27.7	
Actuated g/C Ratio	0.74	0.73		0.61	0.61			0.19			0.19	
v/c Ratio	0.71	0.75		0.30	0.62			0.85			0.22	
Control Delay (s/veh)	41.4	14.8		30.9	14.4			70.1			27.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	41.4	14.8		30.9	14.4			70.1			27.9	
LOS	D	B		C	B			E			C	
Approach Delay (s/veh)		16.6			14.5			70.1			27.9	
Approach LOS		B			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 18.8		Intersection LOS: B	
Intersection Capacity Utilization 95.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	176	2475	15	1693	245	68
v/c Ratio	0.71	0.75	0.30	0.62	0.85	0.22
Control Delay (s/veh)	41.4	14.8	30.9	14.4	70.1	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.4	14.8	30.9	14.4	70.1	27.9
Queue Length 50th (m)	26.2	165.6	1.4	86.4	57.1	8.5
Queue Length 95th (m)	54.1	243.3	m3.5	87.3	83.1	m19.4
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	320	3312	50	2747	387	437
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.75	0.30	0.62	0.63	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	2226	51	14	1535	23	207	0	18	26	6	30
Future Volume (vph)	162	2226	51	14	1535	23	207	0	18	26	6	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1789	4505		1789	4510			1781			1725	
Flt Permitted	0.06	1.00		0.04	1.00			0.71			0.89	
Satd. Flow (perm)	120	4505		83	4510			1314			1571	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	2420	55	15	1668	25	225	0	20	28	7	33
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	25	0
Lane Group Flow (vph)	176	2474	0	15	1692	0	0	200	0	0	43	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	109.8	109.8		91.0	91.0			27.7			27.7	
Effective Green, g (s)	109.8	109.8		91.0	91.0			27.7			27.7	
Actuated g/C Ratio	0.73	0.73		0.61	0.61			0.19			0.19	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	247	3308		50	2745			243			291	
v/s Ratio Prot	0.07	c0.55			0.38							
v/s Ratio Perm	0.45			0.18				c0.15			0.03	
v/c Ratio	0.71	0.75		0.30	0.62			0.82			0.15	
Uniform Delay, d1	32.7	11.7		14.0	18.3			58.6			51.0	
Progression Factor	1.00	1.00		0.69	0.65			1.00			0.96	
Incremental Delay, d2	9.3	1.6		12.7	0.9			19.7			0.2	
Delay (s)	42.0	13.3		22.4	12.9			78.3			49.0	
Level of Service	D	B		C	B			E			D	
Approach Delay (s/veh)		15.2			12.9			78.3			49.0	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

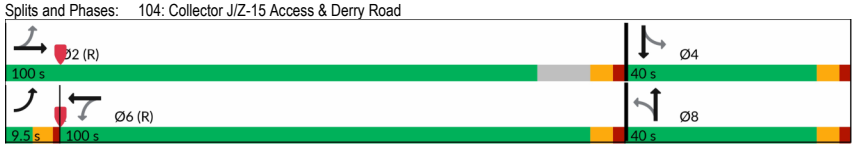
c Critical Lane Group

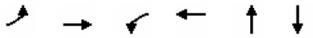
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	2109	67	8	1230	61	271	0	24	14	0	42
Future Volume (vph)	159	2109	67	8	1230	61	271	0	24	14	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.993			0.989			0.898	
Flt Protected	0.950			0.950				0.956			0.988	
Satd. Flow (prot)	1789	4498	0	1789	4489	0	0	1781	0	0	1671	0
Flt Permitted	0.100			0.046				0.723			0.910	
Satd. Flow (perm)	188	4498	0	87	4489	0	0	1347	0	0	1539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			55			55	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	2292	73	9	1337	66	295	0	26	15	0	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	173	2365	0	9	1403	0	0	321	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	9.5	100.0		100.0	100.0		40.0	40.0		40.0	40.0	
Total Split (%)	6.4%	66.9%		66.9%	66.9%		26.8%	26.8%		26.8%	26.8%	
Maximum Green (s)	5.0	94.0		94.0	94.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	101.3	99.8		86.4	86.4			37.7			37.7	
Actuated g/C Ratio	0.68	0.67		0.58	0.58			0.25			0.25	
v/c Ratio	0.78	0.79		0.18	0.54			0.84			0.14	
Control Delay (s/veh)	36.9	9.8		27.1	20.7			63.3			11.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	36.9	9.8		27.1	20.7			63.3			11.8	
LOS	D	A		C	C			E			B	
Approach Delay (s/veh)		11.7			20.7			63.3			11.8	
Approach LOS		B			C			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 18.4		Intersection LOS: B	
Intersection Capacity Utilization 97.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road

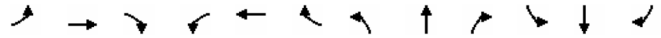




Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	173	2365	9	1403	321	61
v/c Ratio	0.78	0.79	0.18	0.54	0.84	0.14
Control Delay (s/veh)	36.9	9.8	27.1	20.7	63.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	9.8	27.1	20.7	63.3	11.8
Queue Length 50th (m)	9.7	221.5	1.4	113.9	77.1	1.4
Queue Length 95th (m)	m#38.2	26.8	5.9	124.0	111.4	12.6
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	222	3154	54	2836	391	442
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.75	0.17	0.49	0.82	0.14

Intersection Summary

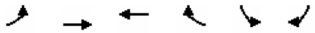
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	2109	67	8	1230	61	271	0	24	14	0	42
Future Volume (vph)	159	2109	67	8	1230	61	271	0	24	14	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4499		1789	4488			1781			1671	
Flt Permitted	0.10	1.00		0.05	1.00			0.72			0.91	
Satd. Flow (perm)	188	4499		87	4488			1347			1540	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	2292	73	9	1337	66	295	0	26	15	0	46
RTOR Reduction (vph)	0	2	0	0	3	0	0	41	0	0	41	0
Lane Group Flow (vph)	173	2363	0	9	1400	0	0	280	0	0	20	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	99.8	99.8		86.4	86.4			37.7			37.7	
Effective Green, g (s)	99.8	99.8		86.4	86.4			37.7			37.7	
Actuated g/C Ratio	0.67	0.67		0.58	0.58			0.25			0.25	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	220	3003		50	2593			339			388	
v/s Ratio Prot	0.05	c0.53			0.31							
v/s Ratio Perm	0.48			0.10				c0.21			0.01	
v/c Ratio	0.79	0.79		0.18	0.54			0.83			0.05	
Uniform Delay, d1	16.6	17.4		14.9	19.4			52.8			42.4	
Progression Factor	1.41	0.45		1.00	1.00			1.00			1.00	
Incremental Delay, d2	12.0	1.5		7.7	0.8			15.0			0.1	
Delay (s)	35.5	9.3		22.6	20.2			67.8			42.4	
Level of Service	D	A		C	C			E			D	
Approach Delay (s/veh)		11.0			20.2			67.8			42.4	
Approach LOS		B			C			E			D	

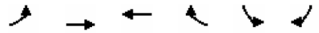
Intersection Summary					
HCM 2000 Control Delay (s/veh)	18.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.82				
Actuated Cycle Length (s)	149.5	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	97.0%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	3134	1312	23	0	48
Future Volume (vph)	0	3134	1312	23	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	3407	1426	25	0	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3407	1426	25	0	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	3134	1312	23	0	48
Future Volume (Veh/h)	0	3134	1312	23	0	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3407	1426	25	0	52
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.82				0.36	0.82
vC, conflicting volume	1451				2562	713
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1122				0	228
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	92
cM capacity (veh/h)	510				365	639

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	1136	1136	1136	713	713	25	52
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	25	52
cSH	1700	1700	1700	1700	1700	1700	639
Volume to Capacity	0.67	0.67	0.67	0.42	0.42	0.01	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Lane LOS							B
Approach Delay (s/veh)	0.0			0.0			11.1
Approach LOS							B

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	63.9%	ICU Level of Service		B
Analysis Period (min)	15			

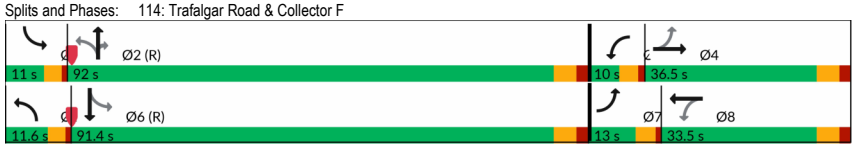
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	62	123	120	77	196	77	3447	170	195	2023	66
Future Volume (vph)	125	62	123	120	77	196	77	3447	170	195	2023	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	50.0		0.0	50.0		50.0	140.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.900			0.892				0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1621	0	1652	1606	0	1711	4421	1566	1711	4399	0
Flt Permitted	0.144			0.471			0.047			0.045		
Satd. Flow (perm)	250	1621	0	819	1606	0	85	4421	1566	81	4399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			75				84		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	67	134	130	84	213	84	3747	185	212	2199	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	201	0	130	297	0	84	3747	185	212	2271	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	9.5	40.0		9.5	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	13.0	36.5		10.0	33.5		11.6	92.0	92.0	11.0	91.4	
Total Split (%)	8.7%	24.4%		6.7%	22.4%		7.8%	61.5%	61.5%	7.4%	61.1%	
Maximum Green (s)	8.5	30.5		5.5	27.5		7.6	86.0	86.0	7.0	85.4	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		27.0			27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	37.8	27.8		31.8	24.8		95.4	86.0	86.0	98.9	88.3	
Actuated g/C Ratio	0.25	0.19		0.21	0.17		0.64	0.58	0.58	0.66	0.59	
v/c Ratio	0.96	0.57		0.64	0.91		0.62	1.47	0.20	1.33	0.87	
Control Delay (s/veh)	110.7	44.4		63.1	75.9		42.2	242.9	8.6	218.0	31.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.8	
Total Delay (s/veh)	110.7	44.4		63.1	75.9		42.2	242.9	8.6	218.0	32.0	
LOS	F	D		E	E		D	F	A	F	C	
Approach Delay (s/veh)		71.2			72.0			227.9			47.9	
Approach LOS		E			E			F			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.47		
Intersection Signal Delay (s/veh): 150.0	Intersection LOS: F	
Intersection Capacity Utilization 117.5%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	136	201	130	297	84	3747	185	212	2271
v/c Ratio	0.96	0.57	0.64	0.91	0.62	1.47	0.20	1.33	0.87
Control Delay (s/veh)	110.7	44.4	63.1	75.9	42.2	242.9	8.6	218.0	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total Delay (s/veh)	110.7	44.4	63.1	75.9	42.2	242.9	8.6	218.0	32.0
Queue Length 50th (m)	32.3	37.9	31.0	67.0	8.8	~644.0	13.3	~78.1	243.1
Queue Length 95th (m)	#66.0	64.6	49.9	#113.9	#29.9	#662.2	25.7	#131.9	271.3
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	70.0		50.0		50.0		50.0	140.0	
Base Capacity (vph)	142	379	204	356	137	2543	936	159	2601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	117
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.53	0.64	0.83	0.61	1.47	0.20	1.33	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	62	123	120	77	196	77	3447	170	195	2023	66
Future Volume (vph)	125	62	123	120	77	196	77	3447	170	195	2023	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.90		1.00	0.89		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)	1652	1621		1652	1607		1711	4421	1566	1711	4400	
Flt Permitted	0.14	1.00		0.47	1.00		0.05	1.00	1.00	0.05	1.00	
Satd. Flow (perm)	250	1621		819	1607		84	4421	1566	82	4400	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	67	134	130	84	213	84	3747	185	212	2199	72
RTOR Reduction (vph)	0	50	0	0	63	0	0	0	36	0	2	0
Lane Group Flow (vph)	136	151	0	130	234	0	84	3747	149	212	2269	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	36.3	27.8		30.3	24.8		93.4	86.0	86.0	98.0	88.3	
Effective Green, g (s)	36.3	27.8		30.3	24.8		93.4	86.0	86.0	98.0	88.3	
Actuated g/C Ratio	0.24	0.19		0.20	0.17		0.62	0.58	0.58	0.66	0.59	
Clearance Time (s)	4.5	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	140	301		196	266		133	2543	900	159	2598	
v/s Ratio Prot	c0.06	0.09		0.02	0.15		0.03	c0.85		c0.09	0.52	
v/s Ratio Perm	c0.18			0.11			0.36		0.10	0.79		
v/c Ratio	0.97	0.50		0.66	0.88		0.63	1.47	0.17	1.33	0.87	
Uniform Delay, d1	51.6	54.6		54.8	60.9		28.3	31.8	14.9	52.2	25.9	
Progression Factor	1.00	1.00		1.01	1.01		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	67.0	1.3		8.2	27.0		9.4	215.2	0.4	186.4	4.4	
Delay (s)	118.6	56.0		63.6	88.4		37.7	247.0	15.3	238.6	30.3	
Level of Service	F	E		E	F		D	F	B	F	C	
Approach Delay (s/veh)		81.2			80.8			231.9			48.1	
Approach LOS		F			F			F			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	153.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	20.5
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

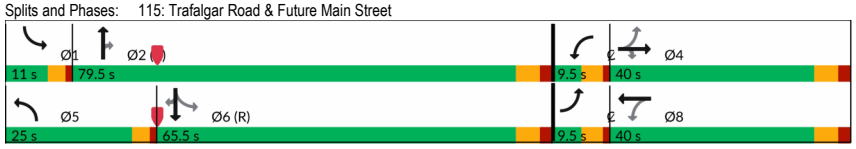
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	89	422	102	120	63	476	3127	306	153	1807	245
Future Volume (vph)	122	89	422	102	120	63	476	3127	306	153	1807	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.948				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3392	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.572			0.661			0.950			0.054		
Satd. Flow (perm)	1077	1883	2818	1245	3392	0	3319	4421	1566	97	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			426		64				96			158
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	123	90	426	103	121	64	481	3159	309	155	1825	247
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	90	426	103	185	0	481	3159	309	155	1825	247
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	9.5	40.0	40.0	9.5	40.0		25.0	79.5	79.5	11.0	65.5	65.5
Total Split (%)	6.8%	28.6%	28.6%	6.8%	28.6%		17.9%	56.8%	56.8%	7.9%	46.8%	46.8%
Maximum Green (s)	5.0	34.0	34.0	5.0	34.0		21.0	73.5	73.5	7.0	59.5	59.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	19.3	12.8	12.8	19.3	12.8		27.1	83.3	83.3	95.1	74.6	74.6
Actuated g/C Ratio	0.14	0.09	0.09	0.14	0.09		0.19	0.60	0.60	0.68	0.53	0.53
v/c Ratio	0.71	0.53	0.66	0.54	0.50		0.75	1.20	0.32	0.56	0.77	0.27
Control Delay (s/veh)	76.3	71.3	10.4	63.4	43.7		60.9	122.4	10.8	47.9	27.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.3	71.3	10.4	63.4	43.7		60.9	122.4	10.8	47.9	27.7	5.8
LOS	E	E	B	E	D		E	F	B	D	C	A
Approach Delay (s/veh)		31.6			50.7			106.2			26.6	
Approach LOS		C			D			F			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.20		
Intersection Signal Delay (s/veh): 72.3		Intersection LOS: E
Intersection Capacity Utilization 101.1%		ICU Level of Service G
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	123	90	426	103	185	481	3159	309	155	1825	247
v/c Ratio	0.71	0.53	0.66	0.54	0.50	0.75	1.20	0.32	0.56	0.77	0.27
Control Delay (s/veh)	76.3	71.3	10.4	63.4	43.7	60.9	122.4	10.8	47.9	27.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.3	71.3	10.4	63.4	43.7	60.9	122.4	10.8	47.9	27.7	5.8
Queue Length 50th (m)	31.4	24.7	0.0	26.0	17.2	66.2	~441.8	26.4	27.1	165.7	12.5
Queue Length 95th (m)	49.2	41.3	16.5	42.2	28.6	83.3	#497.5	50.2	45.4	215.0	32.3
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	173	457	1006	190	872	642	2630	970	278	2356	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.20	0.42	0.54	0.21	0.75	1.20	0.32	0.56	0.77	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	89	422	102	120	63	476	3127	306	153	1807	245
Future Volume (vph)	122	89	422	102	120	63	476	3127	306	153	1807	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.95		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	1883	2818	1789	3393		3319	4421	1566	1711	4421	1566
Flt Permitted	0.57	1.00	1.00	0.66	1.00		0.95	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1077	1883	2818	1244	3393		3319	4421	1566	97	4421	1566
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	123	90	426	103	121	64	481	3159	309	155	1825	247
RTOR Reduction (vph)	0	0	387	0	58	0	0	0	39	0	0	74
Lane Group Flow (vph)	123	90	39	103	127	0	481	3159	270	155	1825	173
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	17.8	12.8	12.8	17.8	12.8		27.1	83.3	83.3	93.0	74.6	74.6
Effective Green, g (s)	17.8	12.8	12.8	17.8	12.8		27.1	83.3	83.3	93.0	74.6	74.6
Actuated g/C Ratio	0.13	0.09	0.09	0.13	0.09		0.19	0.60	0.60	0.66	0.53	0.53
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	172	257	177	310		642	2630	931	276	2355	834
v/s Ratio Prot	c0.03	0.05		0.02	0.04		c0.14	c0.71		0.07	0.41	
v/s Ratio Perm	c0.07		0.01	0.05					0.17	0.30		0.11
v/c Ratio	0.76	0.52	0.15	0.58	0.41		0.75	1.20	0.29	0.56	0.77	0.21
Uniform Delay, d1	58.3	60.7	58.6	56.9	60.0		53.2	28.4	13.9	38.6	26.0	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.27	0.93	0.71
Incremental Delay, d2	18.3	2.9	0.3	4.8	0.9		4.8	94.4	0.8	2.4	2.3	0.5
Delay (s)	76.5	63.5	58.9	61.8	60.9		58.0	122.8	14.7	51.2	26.5	12.8
Level of Service	E	E	E	E	E		E	F	B	D	C	B
Approach Delay (s/veh)		62.9			61.2			106.4			26.7	
Approach LOS		E			E			F			C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	75.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

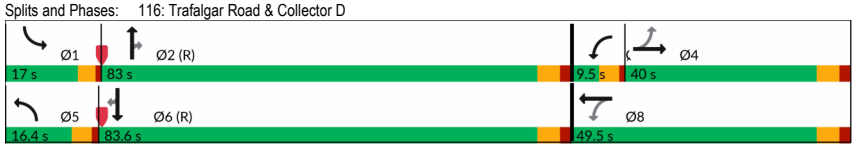
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	279	13	279	85	9	134	139	3427	230	365	1729	133
Future Volume (vph)	279	13	279	85	9	134	139	3427	230	365	1729	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	160.0		0.0	70.0		50.0	120.0		50.0
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt		0.857			0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1543	0	1652	1549	0	3319	4421	1566	3319	4421	1566
Flt Permitted	0.658			0.226			0.950			0.950		
Satd. Flow (perm)	1144	1543	0	393	1549	0	3319	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		161			146				88			88
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	303	14	303	92	10	146	151	3725	250	397	1879	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	303	317	0	92	156	0	151	3725	250	397	1879	145
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		9.5	26.0	26.0	11.0	26.0	26.0
Total Split (s)	40.0	40.0		9.5	49.5		16.4	83.0	83.0	17.0	83.6	83.6
Total Split (%)	26.8%	26.8%		6.4%	33.1%		11.0%	55.5%	55.5%	11.4%	55.9%	55.9%
Maximum Green (s)	34.0	34.0		5.0	43.5		11.9	77.0	77.0	13.0	77.6	77.6
Yellow Time (s)	4.0	4.0		3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	34.0	34.0		45.0	43.5		11.0	77.0	77.0	13.0	78.5	78.5
Actuated g/C Ratio	0.23	0.23		0.30	0.29		0.07	0.52	0.52	0.09	0.53	0.53
v/c Ratio	1.17	0.67		0.57	0.28		0.62	1.64	0.29	1.38	0.81	0.17
Control Delay (s/veh)	157.5	32.8		55.6	8.4		78.4	316.0	14.0	238.4	33.0	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	157.5	32.8		55.6	8.4		78.4	316.0	14.0	238.4	33.0	8.2
LOS	F	C		E	A		E	F	B	F	C	A
Approach Delay (s/veh)		93.7			25.9			289.0			65.2	
Approach LOS		F			C			F			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.64		
Intersection Signal Delay (s/veh): 190.8		Intersection LOS: F
Intersection Capacity Utilization 119.2%		ICU Level of Service H
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	303	317	92	156	151	3725	250	397	1879	145
v/c Ratio	1.17	0.67	0.57	0.28	0.62	1.64	0.29	1.38	0.81	0.17
Control Delay (s/veh)	157.5	32.8	55.6	8.4	78.4	316.0	14.0	238.4	33.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	157.5	32.8	55.6	8.4	78.4	316.0	14.0	238.4	33.0	8.2
Queue Length 50th (m)	~108.0	43.5	20.6	2.2	23.0	~672.9	26.2	~81.3	192.5	8.4
Queue Length 95th (m)	#168.5	78.8	35.4	19.3	35.1	#691.4	44.5	#115.1	216.5	20.0
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	70.0		160.0		70.0		50.0	120.0		50.0
Base Capacity (vph)	260	475	160	554	264	2277	849	288	2320	864
Starvation Cap Reductn	0	0	0	0	0	52	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.67	0.58	0.28	0.57	1.67	0.29	1.38	0.81	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	279	13	279	85	9	134	139	3427	230	365	1729	133
Future Volume (vph)	279	13	279	85	9	134	139	3427	230	365	1729	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		0.97	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.86		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)	1652	1542		1652	1548		3319	4421	1566	3319	4421	1566
Flt Permitted	0.66	1.00		0.23	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1144	1542		393	1548		3319	4421	1566	3319	4421	1566
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	303	14	303	92	10	146	151	3725	250	397	1879	145
RTOR Reduction (vph)	0	124	0	0	104	0	0	0	43	0	0	42
Lane Group Flow (vph)	303	193	0	92	52	0	151	3725	207	397	1879	103
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	34.0	34.0		43.5	43.5		11.0	77.0	77.0	13.0	78.5	78.5
Effective Green, g (s)	34.0	34.0		43.5	43.5		11.0	77.0	77.0	13.0	78.5	78.5
Actuated g/C Ratio	0.23	0.23		0.29	0.29		0.07	0.52	0.52	0.09	0.53	0.53
Clearance Time (s)	6.0	6.0		4.5	6.0		4.5	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	260	350		156	450		244	2277	806	288	2321	822
v/s Ratio Prot		0.12		c0.02	0.03		0.05	c0.84		c0.12	0.43	
v/s Ratio Perm	c0.26			0.15					0.13			0.07
v/c Ratio	1.17	0.55		0.59	0.12		0.62	1.64	0.26	1.38	0.81	0.13
Uniform Delay, d1	57.8	51.0		45.5	38.9		67.2	36.3	20.3	68.3	29.3	18.0
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	108.0	1.9		5.6	0.1		4.6	288.2	0.8	190.6	3.2	0.3
Delay (s)	165.8	52.9		51.1	39.0		71.8	324.4	21.0	258.9	32.5	18.4
Level of Service	F	D		D	D		E	F	C	F	C	B
Approach Delay (s/veh)		108.1			43.5			296.8			68.8	
Approach LOS		F			D			F			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	198.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

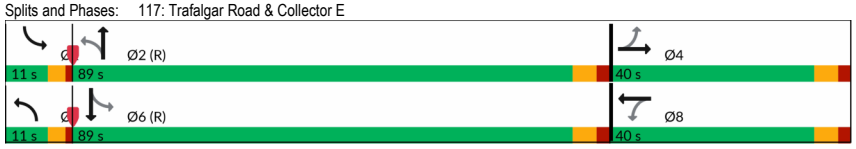
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	6	26	65	6	65	16	3682	70	97	2092	5
Future Volume (vph)	49	6	26	65	6	65	16	3682	70	97	2092	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.880			0.863			0.997				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1657	0	1789	1625	0	1711	4408	0	1711	4421	0
Flt Permitted	0.706			0.734			0.040			0.038		
Satd. Flow (perm)	1330	1657	0	1382	1625	0	72	4408	0	68	4421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			71			3				
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	7	28	71	7	71	17	4002	76	105	2274	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	35	0	71	78	0	17	4078	0	105	2279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.0	89.0		11.0	89.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		7.9%	63.6%		7.9%	63.6%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.0	83.0		7.0	83.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.2	13.2		13.2	13.2		108.8	100.3		116.8	110.6	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.78	0.72		0.83	0.79	
v/c Ratio	0.43	0.19		0.55	0.36		0.13	1.29		0.58	0.65	
Control Delay (s/veh)	69.4	25.8		75.7	19.3		5.3	156.0		39.3	8.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.5	
Total Delay (s/veh)	69.4	25.8		75.7	19.3		5.3	156.1		39.3	9.1	
LOS	E	C		E	B		A	F		D	A	
Approach Delay (s/veh)		52.1			46.2			155.4			10.4	
Approach LOS		D			D			F			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay (s/veh): 100.2		Intersection LOS: F	
Intersection Capacity Utilization 100.9%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	35	71	78	17	4078	105	2279
v/c Ratio	0.43	0.19	0.55	0.36	0.13	1.29	0.58	0.65
Control Delay (s/veh)	69.4	25.8	75.7	19.3	5.3	156.0	39.3	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay (s/veh)	69.4	25.8	75.7	19.3	5.3	156.1	39.3	9.1
Queue Length 50th (m)	14.4	1.8	19.5	1.8	0.6	~608.0	13.0	78.3
Queue Length 95th (m)	27.8	12.3	34.8	17.1	2.3	#665.1	32.8	163.9
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	323	423	335	448	138	3157	181	3493
Starvation Cap Reductn	0	0	0	0	0	38	0	687
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.08	0.21	0.17	0.12	1.31	0.58	0.81

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	6	26	65	6	65	16	3682	70	97	2092	5
Future Volume (vph)	49	6	26	65	6	65	16	3682	70	97	2092	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.88		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)	1789	1657		1789	1626		1711	4409		1711	4419	
Flt Permitted	0.71	1.00		0.73	1.00		0.04	1.00		0.04	1.00	
Satd. Flow (perm)	1330	1657		1383	1626		72	4409		69	4419	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	7	28	71	7	71	17	4002	76	105	2274	5
RTOR Reduction (vph)	0	25	0	0	64	0	0	1	0	0	0	0
Lane Group Flow (vph)	53	10	0	71	14	0	17	4077	0	105	2279	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.2	13.2		13.2	13.2		102.8	100.2		114.8	108.2	
Effective Green, g (s)	13.2	13.2		13.2	13.2		102.8	100.2		114.8	108.2	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.73	0.72		0.82	0.77	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	156		130	153		83	3155		180	3415	
v/s Ratio Prot		0.01			0.01		0.00	c0.92		c0.04	0.52	
v/s Ratio Perm	0.04			c0.05			0.15			0.43		
v/c Ratio	0.42	0.06		0.55	0.09		0.20	1.29		0.58	0.67	
Uniform Delay, d1	59.8	57.8		60.5	57.9		7.0	19.9		47.3	7.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.2		4.6	0.3		1.2	134.0		4.8	1.1	
Delay (s)	62.1	57.9		65.2	58.2		8.2	153.9		52.1	8.5	
Level of Service	E	E		E	E		A	F		D	A	
Approach Delay (s/veh)		60.5			61.5			153.3			10.4	
Approach LOS		E			E			F			B	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	99.3	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.15				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	100.9%	ICU Level of Service	G		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	222	0	0	0	0	175
Future Volume (vph)	222	0	0	0	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			52.5	161.7	
Travel Time (s)	55.9			3.9	12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	241	0	0	0	0	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	0	0	0	190
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	222	0	0	0	0	175
Future Volume (vph)	222	0	0	0	0	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	241	0	0	0	0	190

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	241	0	190
Volume Left (vph)	241	0	0
Volume Right (vph)	0	0	190
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.5	4.9	4.0
Degree Utilization, x	0.36	0.00	0.21
Capacity (veh/h)	636	726	844
Control Delay (s/veh)	10.4	6.7	8.1
Approach Delay (s/veh)	10.4		8.1
Approach LOS	B		A

Intersection Summary				
Delay	9.4			
Level of Service	A			
Intersection Capacity Utilization	15.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	62	30	60	70	81
Future Volume (vph)	49	62	30	60	70	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.910			
Flt Protected	0.978					0.977
Satd. Flow (prot)	1629	0	1639	0	0	1759
Flt Permitted	0.978					0.977
Satd. Flow (perm)	1629	0	1639	0	0	1759
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	67	33	65	76	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	98	0	0	164
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	49	62	30	60	70	81
Future Volume (Veh/h)	49	62	30	60	70	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	67	33	65	76	88
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	306	66			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	306	66			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	93			95	
cM capacity (veh/h)	652	998			1495	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	120	98	164
Volume Left	53	0	76
Volume Right	67	65	0
cSH	808	1700	1495
Volume to Capacity	0.15	0.06	0.05
Queue Length 95th (m)	4.0	0.0	1.2
Control Delay (s/veh)	10.2	0.0	3.7
Lane LOS	B		A
Approach Delay (s/veh)	10.2	0.0	3.7
Approach LOS	B		

Intersection Summary				
Average Delay		4.8		
Intersection Capacity Utilization		28.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	196	11	57	149	1	17	19	49	133	6	0
Future Volume (vph)	0	196	11	57	149	1	17	19	49	133	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.999			0.922				
Flt Protected					0.986			0.990			0.954	
Satd. Flow (prot)	0	1870	0	0	1774	0	0	1719	0	0	1797	0
Flt Permitted					0.986			0.990			0.954	
Satd. Flow (perm)	0	1870	0	0	1774	0	0	1719	0	0	1797	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	213	12	62	162	1	18	21	53	145	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	225	0	0	92	0	0	152	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	196	11	57	149	1	17	19	49	133	6	0
Future Volume (Veh/h)	0	196	11	57	149	1	17	19	49	133	6	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	213	12	62	162	1	18	21	53	145	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	163			225			509	506	219	569	512	163
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	163			225			509	506	219	569	512	163
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			96	95	94	62	98	100
cM capacity (veh/h)	1416			1344			452	447	821	377	444	882

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	225	225	92	152
Volume Left	0	62	18	145
Volume Right	12	1	53	0
cSH	1416	1344	608	379
Volume to Capacity	0.00	0.05	0.15	0.40
Queue Length 95th (m)	0.0	1.1	4.0	14.3
Control Delay (s/veh)	0.0	2.4	12.0	20.7
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	2.4	12.0	20.7
Approach LOS			B	C

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	46.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	351	64	23	147	42	53
Future Volume (vph)	351	64	23	147	42	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979				0.925	
Flt Protected				0.993	0.978	
Satd. Flow (prot)	1844	0	0	1870	1704	0
Flt Permitted				0.993	0.978	
Satd. Flow (perm)	1844	0	0	1870	1704	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	382	70	25	160	46	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	452	0	0	185	104	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	3	87	11	0	130
Future Volume (vph)	18	3	87	11	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982		0.985			
Flt Protected	0.958					
Satd. Flow (prot)	1636	0	1774	0	0	1801
Flt Permitted	0.958					
Satd. Flow (perm)	1636	0	1774	0	0	1801
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	3	95	12	0	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	107	0	0	141
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	18	3	87	11	0	130
Future Volume (Veh/h)	18	3	87	11	0	130
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	3	95	12	0	141
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	242	101			107	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	242	101			107	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	746	954			1484	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	107	141
Volume Left	20	0	0
Volume Right	3	12	0
cSH	768	1700	1484
Volume to Capacity	0.03	0.06	0.00
Queue Length 95th (m)	0.7	0.0	0.0
Control Delay (s/veh)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	49	6	8	17	13	3	70	4	5	69	0
Future Volume (vph)	2	49	6	8	17	13	3	70	4	5	69	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.954			0.993				
Flt Protected		0.998			0.989			0.998			0.997	
Satd. Flow (prot)	0	1709	0	0	1640	0	0	1784	0	0	1795	0
Flt Permitted		0.998			0.989			0.998			0.997	
Satd. Flow (perm)	0	1709	0	0	1640	0	0	1784	0	0	1795	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	53	7	9	18	14	3	76	4	5	75	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	41	0	0	83	0	0	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	49	6	8	17	13	3	70	4	5	69	0
Future Volume (Veh/h)	2	49	6	8	17	13	3	70	4	5	69	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	53	7	9	18	14	3	76	4	5	75	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	192	171	75	203	169	78	75			80		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	192	171	75	203	169	78	75			80		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	99	99	98	99	100			100		
cM capacity (veh/h)	739	718	986	705	720	983	1524			1518		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	62	41	83	80
Volume Left	2	9	3	5
Volume Right	7	14	4	0
cSH	742	788	1524	1518
Volume to Capacity	0.08	0.05	0.00*	0.00*
Queue Length 95th (m)	2.1	1.2	0.0	0.1
Control Delay (s/veh)	10.3	9.8	0.3	0.5
Lane LOS	B	A	A	A
Approach Delay (s/veh)	10.3	9.8	0.3	0.5
Approach LOS	B	A		

Intersection Summary				
Average Delay		4.1		
Intersection Capacity Utilization		17.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	115	19	0	25	0	30	161	32	0	90	8
Future Volume (vph)	5	115	19	0	25	0	30	161	32	0	90	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981						0.981			0.989	
Flt Protected		0.998						0.993				
Satd. Flow (prot)	0	1844	0	0	1883	0	0	1754	0	0	1781	0
Flt Permitted		0.998						0.993				
Satd. Flow (perm)	0	1844	0	0	1883	0	0	1754	0	0	1781	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	125	21	0	27	0	33	175	35	0	98	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	27	0	0	243	0	0	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	115	19	0	25	0	30	161	32	0	90	8
Future Volume (Veh/h)	5	115	19	0	25	0	30	161	32	0	90	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	125	21	0	27	0	33	175	35	0	98	9
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	375	379	103	445	366	193	107			210		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	375	379	103	445	366	193	107			210		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	77	98	100	95	100	98			100		
cM capacity (veh/h)	551	541	953	414	550	849	1484			1361		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	151	27	243	107
Volume Left	5	0	33	0
Volume Right	21	0	35	9
cSH	576	550	1484	1361
Volume to Capacity	0.26	0.05	0.02	0.00
Queue Length 95th (m)	7.9	1.2	0.5	0.0
Control Delay (s/veh)	13.5	11.9	1.2	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	13.5	11.9	1.2	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay		5.0		
Intersection Capacity Utilization		36.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	125	14	9	123	5	14	25	8	2	66	80
Future Volume (vph)	68	125	14	9	123	5	14	25	8	2	66	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.995			0.976			0.927	
Flt Protected		0.984			0.997			0.986			0.999	
Satd. Flow (prot)	0	1695	0	0	1786	0	0	1733	0	0	1668	0
Flt Permitted		0.984			0.997			0.986			0.999	
Satd. Flow (perm)	0	1695	0	0	1786	0	0	1733	0	0	1668	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	136	15	10	134	5	15	27	9	2	72	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	149	0	0	51	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	125	14	9	123	5	14	25	8	2	66	80
Future Volume (Veh/h)	68	125	14	9	123	5	14	25	8	2	66	80
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	136	15	10	134	5	15	27	9	2	72	87
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	253	186	116	264	225	32	159			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	253	186	116	264	225	32	159			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	81	98	98	80	100	99			100		
cM capacity (veh/h)	584	700	937	572	667	1043	1420			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	225	149	51	161
Volume Left	74	10	15	2
Volume Right	15	5	9	87
cSH	668	667	1420	1575
Volume to Capacity	0.34	0.22	0.01	0.00*
Queue Length 95th (m)	11.3	6.5	0.2	0.0
Control Delay (s/veh)	13.1	11.9	2.3	0.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	13.1	11.9	2.3	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay		8.3		
Intersection Capacity Utilization		39.9%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	159	0	12	118	50	1	17	5	35	36	12
Future Volume (vph)	11	159	0	12	118	50	1	17	5	35	36	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.963			0.972			0.980	
Flt Protected		0.997			0.997			0.998			0.979	
Satd. Flow (prot)	0	1795	0	0	1729	0	0	1747	0	0	1728	0
Flt Permitted		0.997			0.997			0.998			0.979	
Satd. Flow (perm)	0	1795	0	0	1729	0	0	1747	0	0	1728	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	173	0	13	128	54	1	18	5	38	39	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	0	0	195	0	0	24	0	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	159	0	12	118	50	1	17	5	35	36	12
Future Volume (Veh/h)	11	159	0	12	118	50	1	17	5	35	36	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	173	0	13	128	54	1	18	5	38	39	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	182			173			411	405	173	392	378	155
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	182			173			411	405	173	392	378	155
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	97	99	93	93	99
cM capacity (veh/h)	1393			1404			507	525	871	542	544	891

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	195	24	90
Volume Left	12	13	1	38
Volume Right	0	54	5	13
cSH	1393	1404	572	575
Volume to Capacity	0.00*	0.00*	0.04	0.16
Queue Length 95th (m)	0.2	0.2	1.0	4.2
Control Delay (s/veh)	0.6	0.6	11.6	12.4
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.6	0.6	11.6	12.4
Approach LOS			B	B

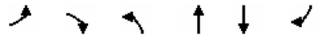
Intersection Summary				
Average Delay		3.3		
Intersection Capacity Utilization		30.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	124	106	42	144	34	63
Future Volume (vph)	124	106	42	144	34	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938				0.913	
Flt Protected	0.974		0.950			
Satd. Flow (prot)	1645	0	1711	0	1644	0
Flt Permitted	0.974		0.950			
Satd. Flow (perm)	1645	0	1711	0	1644	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	115	46	157	37	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	250	0	46	157	105	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	124	106	42	144	34	63
Future Volume (Veh/h)	124	106	42	144	34	63
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	135	115	46	157	37	68
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	320	71	105			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	71	105			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	88	97			
cM capacity (veh/h)	653	991	1486			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	250	46	105
Volume Left	135	46	0
Volume Right	115	0	68
cSH	774	1486	1700
Volume to Capacity	0.32	0.03	0.06
Queue Length 95th (m)	10.6	0.7	0.0
Control Delay (s/veh)	11.8	7.5	0.0
Lane LOS	B	A	
Approach Delay (s/veh)	11.8	Err	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	17	139	0	14	13	7
Future Volume (vph)	17	139	0	14	13	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.879				0.951	
Flt Protected					0.969	
Satd. Flow (prot)	1583	0	0	1801	1659	0
Flt Permitted					0.969	
Satd. Flow (perm)	1583	0	0	1801	1659	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	151	0	15	14	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	169	0	0	15	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	17	139	0	14	13	7
Future Volume (Veh/h)	17	139	0	14	13	7
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	151	0	15	14	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	36	0	192	32	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	0	192	32	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	98	86	100	98	99	
cM capacity (veh/h)	849	1085	646	853	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	169	15	22
Volume Left	0	0	14
Volume Right	151	0	8
cSH	1054	853	1623
Volume to Capacity	0.16	0.02	0.00*
Queue Length 95th (m)	4.3	0.4	0.2
Control Delay (s/veh)	9.1	9.3	4.6
Lane LOS	A	A	A
Approach Delay (s/veh)	9.1	9.3	4.6
Approach LOS	A	A	

Intersection Summary				
Average Delay		8.6		
Intersection Capacity Utilization		19.5%	ICU Level of Service	A
Analysis Period (min)		15		

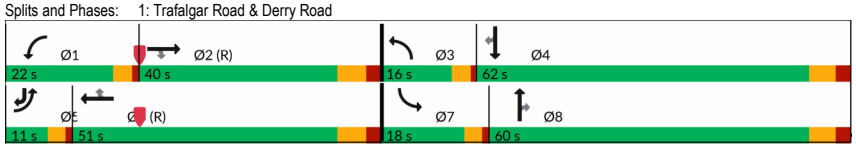
* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Future Volume (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			156			182			124			93
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		199.1			212.0			357.0			332.8	
Travel Time (s)		9.0			9.5			21.4			20.0	
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
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Adj. Flow (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	6.1	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	6.1	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	7.0
Minimum Split (s)	11.0	37.9	37.9	11.0	37.9	37.9	11.0	36.8	36.8	11.0	36.8	11.0
Total Split (s)	11.0	40.0	40.0	22.0	51.0	51.0	16.0	60.0	60.0	18.0	62.0	11.0
Total Split (%)	7.9%	28.6%	28.6%	15.7%	36.4%	36.4%	11.4%	42.9%	42.9%	12.9%	44.3%	7.9%
Maximum Green (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	7.0
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	3.0
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	1.0	2.6	2.6	1.0	2.6	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		24.0	24.0		24.0	24.0		23.0	23.0		23.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	8.0	35.1	35.1	19.0	46.1	46.1	13.0	55.2	55.2	15.0	57.2	71.0
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.09	0.39	0.39	0.11	0.41	0.51
v/c Ratio	1.15	0.60	0.31	0.93	1.25	0.50	1.38	1.23	0.28	1.52	1.43	0.75
Control Delay (s/veh)	173.3	44.0	5.4	93.4	153.8	21.5	229.2	136.3	7.1	274.9	231.5	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	173.3	44.0	5.4	93.4	153.8	21.5	229.2	136.3	7.1	274.9	231.5	38.3
LOS	F	D	A	F	F	C	F	F	A	F	F	D
Approach Delay (s/veh)		63.7			129.7			140.9			204.5	
Approach LOS		E			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 11 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.52			
Intersection Signal Delay (s/veh): 151.7		Intersection LOS: F	
Intersection Capacity Utilization 122.0%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Trafalgar Road & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
v/c Ratio	1.15	0.60	0.31	0.93	1.25	0.50	1.38	1.23	0.28	1.52	1.43	0.75
Control Delay (s/veh)	173.3	44.0	5.4	93.4	153.8	21.5	229.2	136.3	7.1	274.9	231.5	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	173.3	44.0	5.4	93.4	153.8	21.5	229.2	136.3	7.1	274.9	231.5	38.3
Queue Length 50th (m)	~39.1	70.3	0.1	66.4	~268.9	25.4	~79.5	~315.3	7.2	~105.7	~419.5	172.4
Queue Length 95th (m)	#67.6	85.0	11.5	m#88.0	#297.9	m54.2	m#64.5	m#242.3	m5.5	m#82.8	m#324.4	m146.2
Internal Link Dist (m)		175.1			188.0			333.0			308.8	
Turn Bay Length (m)	130.0		110.0	130.0		130.0	110.0		70.0	130.0		175.0
Base Capacity (vph)	192	1276	510	475	1709	649	294	1677	692	343	1738	840
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.60	0.31	0.93	1.25	0.50	1.38	1.23	0.28	1.52	1.43	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Future Volume (vph)	220	760	156	442	2132	325	405	2063	196	523	2494	627
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.9	4.9	3.0	4.9	4.9	3.0	4.8	4.8	3.0	4.8	2.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	*0.80	1.00	0.97	*0.80	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)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
Flt Permitted	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 (perm)	3372	5092	1570	3506	5193	1601	3173	4254	1566	3204	4254	1566
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)	220	760	156	442	2132	325	405	2063	196	523	2494	627
RTOR Reduction (vph)	0	0	117	0	0	122	0	0	75	0	0	49
Lane Group Flow (vph)	220	760	39	442	2132	203	405	2063	121	523	2494	578
Heavy Vehicles (%)	5%	3%	4%	1%	1%	2%	3%	6%	2%	2%	6%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	33.1	33.1	18.0	44.1	44.1	12.0	53.2	53.2	14.0	55.2	62.2
Effective Green, g (s)	8.0	35.1	35.1	19.0	46.1	46.1	13.0	55.2	55.2	15.0	57.2	66.2
Actuated g/C Ratio	0.06	0.25	0.25	0.14	0.33	0.33	0.09	0.39	0.39	0.11	0.41	0.47
Clearance Time (s)	4.0	6.9	6.9	4.0	6.9	6.9	4.0	6.8	6.8	4.0	6.8	4.0
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)	192	1276	393	475	1709	527	294	1677	617	343	1738	740
v/s Ratio Prot	c0.07	0.15		0.13	c0.41		0.13	0.48		c0.16	c0.59	0.05
v/s Ratio Perm			0.02			0.13			0.08			0.32
v/c Ratio	1.15	0.60	0.10	0.93	1.25	0.39	1.38	1.23	0.20	1.52	1.43	0.78
Uniform Delay, d1	66.0	46.2	40.3	59.8	47.0	36.1	63.5	42.4	27.8	62.5	41.4	30.8
Progression Factor	1.18	0.90	0.66	1.28	0.99	1.25	1.36	0.83	0.65	0.89	1.14	1.60
Incremental Delay, d2	108.5	2.0	0.5	17.4	114.3	1.2	171.9	104.1	0.0	237.5	196.0	0.6
Delay (s)	186.6	43.8	26.9	93.8	160.9	46.1	258.5	139.1	18.0	293.0	243.0	49.9
Level of Service	F	D	C	F	F	D	F	F	B	F	F	D
Approach Delay (s/veh)		69.1			137.8			148.3			217.0	
Approach LOS		E			F			F			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	160.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.36			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.7	
Intersection Capacity Utilization	122.0%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

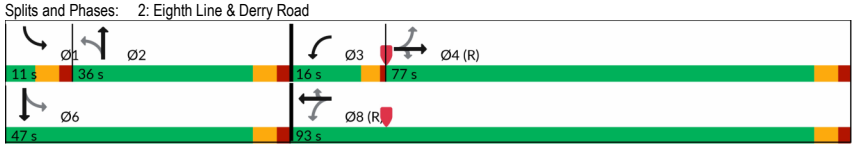
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1177	209	170	2431	11	160	21	156	31	56	10
Future Volume (vph)	14	1177	209	170	2431	11	160	21	156	31	56	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		70.0	140.0		70.0	120.0		0.0	35.0		70.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.868			0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1664	0	1825	1877	0
Flt Permitted	0.048			0.149			0.714			0.344		
Satd. Flow (perm)	92	4520	1555	286	4565	1633	1372	1664	0	661	1877	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209			70		156			5	
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		363.9			1167.6			383.1			438.8	
Travel Time (s)		16.4			52.5			19.7			22.6	
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
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	14	1177	209	170	2431	11	160	21	156	31	56	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	1177	209	170	2431	11	160	177	0	31	66	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	6.1	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	6.1	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	3	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	36.0	36.0	36.0	9.0	36.0	36.0	36.0	36.0		11.0	36.0	
Total Split (s)	77.0	77.0	77.0	16.0	93.0	93.0	36.0	36.0		11.0	47.0	
Total Split (%)	55.0%	55.0%	55.0%	11.4%	66.4%	66.4%	25.7%	25.7%		7.9%	33.6%	
Maximum Green (s)	71.0	71.0	71.0	12.0	87.0	87.0	30.0	30.0		5.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)	23.0	23.0	23.0		23.0	23.0	23.0	23.0			23.0	
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	
Act Effct Green (s)	84.9	84.9	84.9	100.8	98.8	98.8	21.6	21.6		29.2	29.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.72	0.71	0.71	0.15	0.15		0.21	0.21	
v/c Ratio	0.25	0.43	0.20	0.54	0.75	0.01	0.76	0.46		0.16	0.17	
Control Delay (s/veh)	33.9	17.2	2.7	14.4	17.1	0.0	66.1	18.6		41.0	38.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	33.9	17.2	2.7	14.4	17.1	0.0	66.1	18.6		41.0	38.8	
LOS	C	B	A	B	B	A	E	B		D	D	
Approach Delay (s/veh)		15.2			16.9			41.2			39.5	
Approach LOS		B			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 69 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.76		
Intersection Signal Delay (s/veh): 18.7		Intersection LOS: B
Intersection Capacity Utilization 100.8%		ICU Level of Service G
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 2: Eighth Line & Derry Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	1177	209	170	2431	11	160	177	31	66
v/c Ratio	0.25	0.43	0.20	0.54	0.75	0.01	0.76	0.46	0.16	0.17
Control Delay (s/veh)	33.9	17.2	2.7	14.4	17.1	0.0	66.1	18.6	41.0	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.9	17.2	2.7	14.4	17.1	0.0	66.1	18.6	41.0	38.8
Queue Length 50th (m)	1.9	77.7	0.0	15.3	187.8	0.0	46.3	21.1	6.6	13.2
Queue Length 95th (m)	9.8	104.7	12.9	27.5	241.0	0.0	m65.2	m33.0	14.1	24.4
Internal Link Dist (m)		339.9			1143.6			359.1		414.8
Turn Bay Length (m)	90.0		70.0	140.0		70.0	120.0		35.0	
Base Capacity (vph)	55	2741	1025	338	3221	1172	294	479	190	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.43	0.20	0.50	0.75	0.01	0.54	0.37	0.16	0.12

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1177	209	170	2431	11	160	21	156	31	56	10
Future Volume (vph)	14	1177	209	170	2431	11	160	21	156	31	56	10
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	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.87		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4520	1555	1825	4565	1633	1825	1663		1825	1877	
Flt Permitted	0.05	1.00	1.00	0.15	1.00	1.00	0.71	1.00		0.34	1.00	
Satd. Flow (perm)	93	4520	1555	286	4565	1633	1372	1663		660	1877	
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	1177	209	170	2431	11	160	21	156	31	56	10
RTOR Reduction (vph)	0	0	86	0	0	3	0	132	0	0	4	0
Lane Group Flow (vph)	14	1177	123	170	2431	8	160	45	0	31	62	0
Heavy Vehicles (%)	0%	2%	5%	0%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	82.5	82.5	82.5	96.4	96.4	96.4	21.6	21.6		31.6	31.6	
Effective Green, g (s)	82.5	82.5	82.5	96.4	96.4	96.4	21.6	21.6		31.6	31.6	
Actuated g/C Ratio	0.59	0.59	0.59	0.69	0.69	0.69	0.15	0.15		0.23	0.23	
Clearance Time (s)	6.0	6.0	6.0	4.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	2663	916	305	3143	1124	211	256		182	423	
v/s Ratio Prot		0.26		0.04	c0.53			0.03		0.00	c0.03	
v/s Ratio Perm	0.15		0.08	0.34		0.00	c0.12			0.03		
v/c Ratio	0.26	0.44	0.13	0.56	0.77	0.01	0.76	0.18		0.17	0.15	
Uniform Delay, d1	13.9	16.0	12.8	10.0	14.5	6.8	56.7	51.5		43.3	43.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.57		1.00	1.00	
Incremental Delay, d2	11.3	0.5	0.3	2.2	1.9	0.0	11.7	0.3		0.4	0.2	
Delay (s)	25.2	16.5	13.1	12.2	16.4	6.8	60.4	80.8		43.7	43.6	
Level of Service	C	B	B	B	B	A	E	F		D	D	
Approach Delay (s/veh)		16.1			16.1			71.1			43.6	
Approach LOS		B			B			E			D	

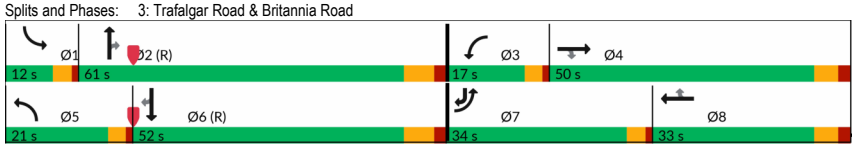
Intersection Summary				
HCM 2000 Control Delay (s/veh)	20.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	100.8%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Future Volume (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Storage Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212			156			132			86
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1398.7			1361.0			3086.5			739.4	
Travel Time (s)		83.9			81.7			185.2			44.4	
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
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Adj. Flow (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Shared Lane Traffic (%)												
Lane Group Flow (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.01	1.01	1.09	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	2.0	10.0	2.0	2.0	10.0	2.0	6.1	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	2.0	0.6	2.0	2.0	0.6	2.0	6.1	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	7.0	25.0	25.0	7.0	25.0	7.0
Minimum Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	11.0	41.0	41.0	11.0	41.0	11.0
Total Split (s)	34.0	50.0	50.0	17.0	33.0	33.0	21.0	61.0	61.0	12.0	52.0	34.0
Total Split (%)	24.3%	35.7%	35.7%	12.1%	23.6%	23.6%	15.0%	43.6%	43.6%	8.6%	37.1%	24.3%
Maximum Green (s)	30.0	44.0	44.0	13.0	27.0	27.0	17.0	54.0	54.0	8.0	45.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)		27.0	27.0		27.0	27.0		27.0	27.0		27.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	31.0	46.8	46.8	13.2	29.0	29.0	18.0	56.0	56.0	9.0	47.0	84.0
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.60
v/c Ratio	1.27	0.77	0.44	0.64	1.31	0.56	1.31	1.15	0.36	1.31	1.30	1.07
Control Delay (s/veh)	177.2	46.1	12.7	93.5	173.3	8.0	184.6	120.8	29.5	203.6	159.6	61.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	177.2	46.1	12.7	93.5	173.3	8.0	184.6	120.8	29.5	203.6	159.6	61.1
LOS	F	D	B	F	F	A	F	F	C	F	F	E
Approach Delay (s/veh)		90.7			139.2			124.9			131.4	
Approach LOS		F			F			F			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.31		
Intersection Signal Delay (s/veh): 121.4	Intersection LOS: F	
Intersection Capacity Utilization 114.0%	ICU Level of Service H	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 3: Trafalgar Road & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
v/c Ratio	1.27	0.77	0.44	0.64	1.31	0.56	1.31	1.15	0.36	1.31	1.30	1.07
Control Delay (s/veh)	177.2	46.1	12.7	93.5	173.3	8.0	184.6	120.8	29.5	203.6	159.6	61.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	177.2	46.1	12.7	93.5	173.3	8.0	184.6	120.8	29.5	203.6	159.6	61.1
Queue Length 50th (m)	~173.8	122.5	16.7	32.3	~185.9	15.3	~101.5	~274.9	38.2	~48.9	~286.6	~320.6
Queue Length 95th (m)	#218.5	143.5	42.5	m40.6	#209.9	m3.1	m#98.2	m#248.5	m37.5	m#32.6	m#175.2	m230.5
Internal Link Dist (m)		1374.7			1337.0			3062.5			715.4	
Turn Bay Length (m)	220.0		165.0	90.0		70.0	165.0		70.0	140.0		140.0
Base Capacity (vph)	675	1494	670	354	945	442	411	1734	705	200	1441	956
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.77	0.44	0.60	1.31	0.56	1.31	1.15	0.36	1.31	1.30	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Future Volume (vph)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5	3.5
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	2.0
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	*0.80	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	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	1536
Flt Permitted	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 (perm)	3052	4476	1585	3541	4565	1541	3204	4336	1566	3113	4295	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)	858	1149	295	213	1235	247	538	1994	251	262	1870	1021
RTOR Reduction (vph)	0	0	141	0	0	124	0	0	79	0	0	37
Lane Group Flow (vph)	858	1149	154	213	1235	123	538	1994	172	262	1870	984
Heavy Vehicles (%)	16%	3%	3%	0%	1%	6%	2%	4%	2%	5%	5%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	30.0	44.8	44.8	12.2	27.0	27.0	17.0	54.0	54.0	8.0	45.0	75.0
Effective Green, g (s)	31.0	46.8	46.8	13.2	29.0	29.0	18.0	56.0	56.0	9.0	47.0	79.0
Actuated g/C Ratio	0.22	0.33	0.33	0.09	0.21	0.21	0.13	0.40	0.40	0.06	0.34	0.56
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	675	1496	529	333	945	319	411	1734	626	200	1441	866
v/s Ratio Prot	c0.28	0.26		0.06	c0.27		c0.17	0.46		0.08	c0.44	0.26
v/s Ratio Perm			0.10			0.08			0.11			0.38
v/c Ratio	1.27	0.77	0.29	0.64	1.31	0.39	1.31	1.15	0.27	1.31	1.30	1.14
Uniform Delay, d1	54.5	41.7	34.4	61.1	55.5	47.8	61.0	42.0	28.3	65.5	46.5	30.5
Progression Factor	1.00	1.00	1.00	1.43	0.59	0.25	0.93	1.45	2.18	1.33	0.53	1.10
Incremental Delay, d2	133.4	2.4	0.3	2.7	143.3	0.5	140.7	68.2	0.1	142.8	134.5	62.6
Delay (s)	187.9	44.2	34.7	90.2	176.1	12.6	197.4	128.9	61.8	229.8	159.0	96.1
Level of Service	F	D	C	F	F	B	F	F	E	F	F	F
Approach Delay (s/veh)		96.5			141.5			136.1			144.5	
Approach LOS		F			F			F			F	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	130.5	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.29				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0		
Intersection Capacity Utilization	114.0%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

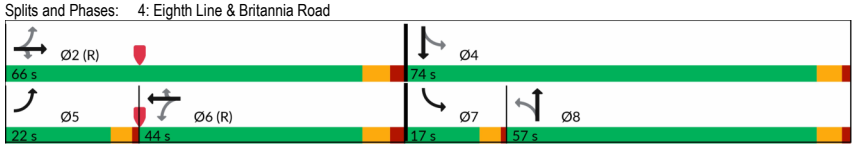
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	1032	51	30	1315	205	95	390	64	225	319	200
Future Volume (vph)	237	1032	51	30	1315	205	95	390	64	225	319	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		70.0	100.0		70.0	70.0		0.0	120.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.979			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1870	0	1825	1766	0
Flt Permitted	0.074			0.229			0.339			0.129		
Satd. Flow (perm)	142	4476	1328	440	4520	1633	651	1870	0	248	1766	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56			134		7			31	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		1361.0			1408.0			3089.7			2700.9	
Travel Time (s)		81.7			84.5			158.9			138.9	
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
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Adj. Flow (vph)	237	1032	51	30	1315	205	95	390	64	225	319	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	1032	51	30	1315	205	95	454	0	225	519	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	6	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0		5.0	15.0	
Minimum Split (s)	11.0	33.8	33.8	33.8	33.8	33.8	44.7	44.7		11.0	44.7	
Total Split (s)	22.0	66.0	66.0	44.0	44.0	44.0	57.0	57.0		17.0	74.0	
Total Split (%)	15.7%	47.1%	47.1%	31.4%	31.4%	31.4%	40.7%	40.7%		12.1%	52.9%	
Maximum Green (s)	17.5	59.2	59.2	37.2	37.2	37.2	51.3	51.3		12.5	68.3	
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2		3.5	4.2	
All-Red Time (s)	1.0	2.2	2.2	2.2	2.2	2.2	1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Don't Walk (s)		20.0	20.0	20.0	20.0	20.0	32.0	32.0			32.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0			0	
Act Effct Green (s)	73.3	71.0	71.0	49.3	49.3	49.3	39.5	39.5		57.7	56.5	
Actuated g/C Ratio	0.52	0.51	0.51	0.35	0.35	0.35	0.28	0.28		0.41	0.40	
v/c Ratio	0.84	0.45	0.07	0.19	0.83	0.31	0.52	0.85		0.93	0.71	
Control Delay (s/veh)	78.4	25.9	10.5	41.9	47.8	15.1	42.1	52.9		75.1	36.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	78.4	25.9	10.5	41.9	47.8	15.1	42.1	52.9		75.1	36.7	
LOS	E	C	B	D	D	B	D	D		E	D	
Approach Delay (s/veh)		34.7			43.3			51.0			48.3	
Approach LOS		C			D			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.93		
Intersection Signal Delay (s/veh): 42.5		Intersection LOS: D
Intersection Capacity Utilization 98.9%		ICU Level of Service F
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 4: Eighth Line & Britannia Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	237	1032	51	30	1315	205	95	454	225	519
v/c Ratio	0.84	0.45	0.07	0.19	0.83	0.31	0.52	0.85	0.93	0.71
Control Delay (s/veh)	78.4	25.9	10.5	41.9	47.8	15.1	42.1	52.9	75.1	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.4	25.9	10.5	41.9	47.8	15.1	42.1	52.9	75.1	36.7
Queue Length 50th (m)	59.7	58.5	0.7	5.9	143.0	13.5	22.9	120.1	38.1	119.9
Queue Length 95th (m)	m76.6	m77.4	m2.4	16.4	#207.7	37.3	m32.4	m144.5	#78.5	113.3
Internal Link Dist (m)		1337.0			1384.0			3065.7		2676.9
Turn Bay Length (m)	70.0		70.0	100.0		70.0	70.0		120.0	
Base Capacity (vph)	303	2271	701	154	1592	661	238	689	243	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.45	0.07	0.19	0.83	0.31	0.40	0.66	0.93	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	1032	51	30	1315	205	95	390	64	225	319	200
Future Volume (vph)	237	1032	51	30	1315	205	95	390	64	225	319	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	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	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4476	1328	1825	4520	1633	1825	1870		1825	1767	
Flt Permitted	0.07	1.00	1.00	0.23	1.00	1.00	0.34	1.00		0.13	1.00	
Satd. Flow (perm)	143	4476	1328	440	4520	1633	651	1870		247	1767	
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)	237	1032	51	30	1315	205	95	390	64	225	319	200
RTOR Reduction (vph)	0	0	25	0	0	87	0	5	0	0	18	0
Lane Group Flow (vph)	237	1032	26	30	1315	118	95	449	0	225	501	0
Heavy Vehicles (%)	0%	3%	23%	0%	2%	0%	0%	0%	4%	0%	4%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	71.0	71.0	71.0	49.3	49.3	49.3	39.5	39.5		56.5	56.5	
Effective Green, g (s)	71.0	71.0	71.0	49.3	49.3	49.3	39.5	39.5		56.5	56.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.35	0.35	0.35	0.28	0.28		0.40	0.40	
Clearance Time (s)	4.5	6.8	6.8	6.8	6.8	6.8	5.7	5.7		4.5	5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	2269	673	154	1591	575	183	527		240	713	
v/s Ratio Prot	c0.10	0.23			0.29			0.24		c0.08	0.28	
v/s Ratio Perm	c0.33		0.02	0.07		0.07	0.15			c0.29		
v/c Ratio	0.85	0.45	0.04	0.19	0.83	0.21	0.52	0.85		0.94	0.70	
Uniform Delay, d1	40.3	22.1	17.3	31.5	41.4	31.7	42.3	47.5		33.4	34.7	
Progression Factor	1.81	1.10	2.18	1.00	1.00	1.00	0.82	0.86		1.16	0.97	
Incremental Delay, d2	13.3	0.4	0.1	2.8	5.1	0.8	2.0	10.5		40.6	3.1	
Delay (s)	86.3	24.6	37.9	34.4	46.5	32.5	36.8	51.2		79.4	36.7	
Level of Service	F	C	D	C	D	C	D	D		E	D	
Approach Delay (s/veh)		36.2			44.4			48.7			49.7	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	43.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5	
Intersection Capacity Utilization	98.9%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

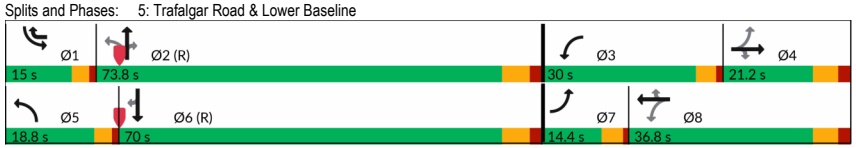
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Future Volume (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.394			0.205			0.059			0.950		
Satd. Flow (perm)	728	3579	1570	390	3614	1585	108	4378	1581	3319	4295	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			63			238			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1317.1			1434.4			913.5			3086.5	
Travel Time (s)		79.0			86.1			54.8			185.2	
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
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Adj. Flow (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	6.1	6.1	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	6.1	6.1	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	7.0	10.0	7.0	7.0	25.0	25.0	7.0	25.0	25.0
Minimum Split (s)	9.5	24.2	24.2	11.5	24.2	11.0	11.5	31.6	31.6	11.0	31.6	31.6
Total Split (s)	14.4	21.2	21.2	30.0	36.8	15.0	18.8	73.8	73.8	15.0	70.0	70.0
Total Split (%)	10.3%	15.1%	15.1%	21.4%	26.3%	10.7%	13.4%	52.7%	52.7%	10.7%	50.0%	50.0%
Maximum Green (s)	9.9	15.0	15.0	25.5	30.6	11.0	14.8	67.2	67.2	11.0	63.4	63.4
Yellow Time (s)	3.5	4.2	4.2	3.5	4.2	3.0	3.0	4.6	4.6	3.0	4.6	4.6
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.3	17.0	17.0	47.7	32.9	50.1	85.8	69.2	69.2	12.0	65.4	65.4
Actuated g/C Ratio	0.20	0.12	0.12	0.34	0.24	0.36	0.61	0.49	0.49	0.09	0.47	0.47
v/c Ratio	0.54	0.96	0.22	1.04	0.68	0.78	1.05	1.09	0.50	1.00	0.97	0.15
Control Delay (s/veh)	44.3	95.1	1.7	115.9	78.7	62.3	110.6	84.2	12.5	71.9	51.1	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.3	95.1	1.7	115.9	78.7	62.3	110.6	84.2	12.5	71.9	51.1	14.2
LOS	D	F	A	F	E	E	F	F	B	E	D	B
Approach Delay (s/veh)		74.4			84.0			76.0			51.7	
Approach LOS		E			F			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 140		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.09		
Intersection Signal Delay (s/veh): 69.8	Intersection LOS: E	
Intersection Capacity Utilization 102.5%	ICU Level of Service G	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 5: Trafalgar Road & Lower Baseline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
v/c Ratio	0.54	0.96	0.22	1.04	0.68	0.78	1.05	1.09	0.50	1.00	0.97	0.15
Control Delay (s/veh)	44.3	95.1	1.7	115.9	78.7	62.3	110.6	84.2	12.5	71.9	51.1	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.3	95.1	1.7	115.9	78.7	62.3	110.6	84.2	12.5	71.9	51.1	14.2
Queue Length 50th (m)	24.7	62.3	0.0	~129.4	89.6	111.0	~63.2	~314.2	37.1	~44.2	167.5	8.4
Queue Length 95th (m)	40.8	#95.4	0.0	#178.5	108.6	144.9	#118.5	#345.8	65.7	m38.9	m133.6	m7.4
Internal Link Dist (m)		1293.1			1410.4			889.5			3062.5	
Turn Bay Length (m)	90.0		70.0	120.0		70.0	100.0		70.0	170.0		70.0
Base Capacity (vph)	228	434	303	401	850	608	250	2163	901	284	2006	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.96	0.22	1.04	0.68	0.78	1.05	1.09	0.50	1.00	0.97	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Future Volume (vph)	122	417	68	419	575	476	263	2364	452	285	1936	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.5	4.2	4.2	3.5	4.2	2.0	3.0	4.6	4.6	3.0	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	*0.80	1.00	0.97	*0.80	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)	1755	3579	1570	1807	3614	1585	1745	4378	1581	3319	4295	1551
Flt Permitted	0.39	1.00	1.00	0.21	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	727	3579	1570	390	3614	1585	109	4378	1581	3319	4295	1551
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	417	68	419	575	476	263	2364	452	285	1936	120
RTOR Reduction (vph)	0	0	60	0	0	42	0	0	120	0	0	64
Lane Group Flow (vph)	122	417	8	419	575	434	263	2364	332	285	1936	56
Heavy Vehicles (%)	4%	2%	4%	1%	1%	3%	0%	3%	1%	2%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Actuated Green, G (s)	24.6	15.0	15.0	45.0	30.9	41.9	82.0	67.2	67.2	11.0	63.4	63.4
Effective Green, g (s)	26.6	17.0	17.0	46.0	32.9	45.9	83.2	69.2	69.2	12.0	65.4	65.4
Actuated g/C Ratio	0.19	0.12	0.12	0.33	0.24	0.33	0.59	0.49	0.49	0.09	0.47	0.47
Clearance Time (s)	4.5	6.2	6.2	4.5	6.2	4.0	4.0	6.6	6.6	4.0	6.6	6.6
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	215	434	190	396	849	519	249	2163	781	284	2006	724
v/s Ratio Prot	0.04	0.12		c0.20	0.16	0.08	c0.12	c0.54		0.09	0.45	
v/s Ratio Perm	0.06		0.01	c0.15		0.20	0.51		0.21			0.04
v/c Ratio	0.57	0.96	0.04	1.06	0.68	0.84	1.06	1.09	0.42	1.00	0.97	0.08
Uniform Delay, d1	49.4	61.2	54.3	41.7	48.7	43.6	47.6	35.4	22.7	64.0	36.2	20.6
Progression Factor	1.00	1.00	1.00	1.71	1.53	1.54	1.00	1.00	1.00	0.86	1.37	4.69
Incremental Delay, d2	3.4	33.6	0.2	57.3	2.3	9.4	72.6	50.0	1.7	16.9	2.0	0.0
Delay (s)	52.8	94.8	54.5	128.7	76.8	76.3	120.2	85.4	24.3	71.9	51.6	96.7
Level of Service	D	F	D	F	E	E	F	F	C	E	D	F
Approach Delay (s/veh)		81.8			91.5			79.4			56.4	
Approach LOS		F			F			E			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	74.8	HCM 2000 Level of Service		E	
HCM 2000 Volume to Capacity ratio	1.11				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		15.3	
Intersection Capacity Utilization	102.5%	ICU Level of Service		G	
Analysis Period (min)	15				

c Critical Lane Group

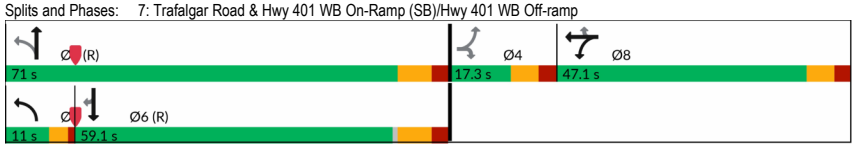
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Future Volume (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	90.0		80.0	60.0		0.0	0.0		85.0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (m)	2.5			60.0			95.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1825	0	1633	3372	1921	2737	1825	4309	0	0	4350	1306
Flt Permitted	0.500			0.950			0.068					
Satd. Flow (perm)	961	0	1633	3372	1921	2737	131	4309	0	0	4350	1306
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			176						124
Link Speed (k/h)		30			60			60			70	
Link Distance (m)		582.9			408.0			235.1			254.2	
Travel Time (s)		69.9			24.5			14.1			13.1	
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
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Adj. Flow (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2			2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			8	2					6
Detector Phase	4		4	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0	7.0	20.0			20.0	20.0
Minimum Split (s)	17.3		17.3	45.1	45.1	45.1	11.0	43.1			43.1	43.1
Total Split (s)	17.3		17.3	47.1	47.1	47.1	11.0	71.0			59.1	59.1
Total Split (%)	12.8%		12.8%	34.8%	34.8%	34.8%	8.1%	52.4%			43.6%	43.6%
Maximum Green (s)	10.0		10.0	40.0	40.0	40.0	7.0	62.9			51.0	51.0
Yellow Time (s)	4.5		4.5	4.5	4.5	4.5	3.0	5.4			5.4	5.4
All-Red Time (s)	2.8		2.8	2.6	2.6	2.6	1.0	2.7			2.7	2.7
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Don't Walk (s)	31.0		31.0	31.0	31.0	31.0		28.0			28.0	28.0
Pedestrian Calls (#/hr)	0		0	0	0	0		0			0	0
Act Effct Green (s)	10.0		10.0	44.9	44.9	44.9	65.6	61.5			59.3	59.3
Actuated g/C Ratio	0.07		0.07	0.33	0.33	0.33	0.48	0.45			0.44	0.44
v/c Ratio	0.46		0.11	1.05	0.08	2.40	0.07	0.79			0.80	0.13
Control Delay (s/veh)	81.3		0.9	84.9	34.9	652.0	18.3	34.8			37.3	1.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	81.3		0.9	84.9	34.9	652.0	18.3	34.8			37.3	1.4
LOS	F		A	F	C	F	B	C			D	A
Approach Delay (s/veh)		45.3			462.8			34.7			35.5	
Approach LOS		D			F			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 135.4		
Actuated Cycle Length: 135.4		
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 2.40		
Intersection Signal Delay (s/veh): 263.1	Intersection LOS: F	
Intersection Capacity Utilization 135.0%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 7: Trafalgar Road & Hwy 401 WB On-Ramp (SB)/Hwy 401 WB Off-ramp



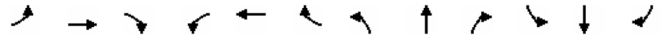


Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	32	26	1173	49	2454	10	1541	1532	81
v/c Ratio	0.46	0.11	1.05	0.08	2.40	0.07	0.79	0.80	0.13
Control Delay (s/veh)	81.3	0.9	84.9	34.9	652.0	18.3	34.8	37.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.3	0.9	84.9	34.9	652.0	18.3	34.8	37.3	1.4
Queue Length 50th (m)	8.4	0.0	~200.8	9.5	~638.5	1.3	148.2	145.1	0.0
Queue Length 95th (m)	#19.9	0.0	#243.9	19.3	#682.8	4.4	171.2	#197.3	3.4
Internal Link Dist (m)				384.0			211.1	230.2	
Turn Bay Length (m)		10.0	90.0		80.0	60.0			85.0
Base Capacity (vph)	70	241	1117	636	1024	151	2001	1904	641
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.11	1.05	0.08	2.40	0.07	0.77	0.80	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Future Volume (vph)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Lane Util. Factor	1.00		1.00	0.97	1.00	0.88	1.00	*0.80			*0.80	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1825		1633	3372	1921	2737	1825	4309			4350	1306
Flt Permitted	0.50		1.00	0.95	1.00	1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)	961		1633	3372	1921	2737	131	4309			4350	1306
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)	32	0	26	1173	49	2454	10	1541	0	0	1532	81
RTOR Reduction (vph)	0	0	24	0	0	118	0	0	0	0	0	48
Lane Group Flow (vph)	32	0	2	1173	49	2336	10	1541	0	0	1532	33
Heavy Vehicles (%)	0%	2%	0%	5%	0%	5%	0%	7%	2%	2%	6%	25%
Turn Type	Perm		Perm	Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases	4		4			8	2					6
Actuated Green, G (s)	8.0		8.0	44.9	44.9	44.9	60.0	60.0			54.6	54.6
Effective Green, g (s)	8.0		8.0	44.9	44.9	44.9	60.0	60.0			54.6	54.6
Actuated g/C Ratio	0.06		0.06	0.33	0.33	0.33	0.44	0.44			0.40	0.40
Clearance Time (s)	7.3		7.3	7.1	7.1	7.1	4.0	8.1			8.1	8.1
Vehicle Extension (s)	3.0		3.0	2.0	2.0	2.0	2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	56		96	1118	637	907	75	1909			1754	526
v/s Ratio Prot				0.35	0.03		0.00	c0.36			c0.35	
v/s Ratio Perm	c0.03		0.00			c0.85	0.06					0.03
v/c Ratio	0.57		0.02	1.05	0.08	2.58	0.13	0.81			0.87	0.06
Uniform Delay, d1	62.0		60.0	45.3	31.0	45.3	27.3	32.7			37.2	24.7
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	13.3		0.1	40.8	0.0	712.4	0.3	3.8			6.4	0.2
Delay (s)	75.3		60.1	86.0	31.1	757.6	27.5	36.5			43.6	25.0
Level of Service	E		E	F	C	F	C	D			D	C
Approach Delay (s/veh)		68.5			533.6			36.4			42.7	
Approach LOS		E			F			D			D	

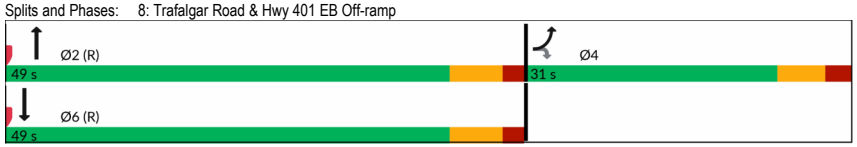
Intersection Summary					
HCM 2000 Control Delay (s/veh)	303.1	HCM 2000 Level of Service	F		
HCM 2000 Volume to Capacity ratio	1.56				
Actuated Cycle Length (s)	135.4	Sum of lost time (s)	26.5		
Intersection Capacity Utilization	135.0%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	260	1138	0	2232	2026	0
Future Volume (vph)	260	1138	0	2232	2026	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	125.0	0.0			0.0
Storage Lanes	2	1	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	0.97	0.91	1.00	*0.80	*0.80	1.00
Frt	0.897	0.850				
Flt Protected	0.985					
Satd. Flow (prot)	2940	1327	0	4309	4350	0
Flt Permitted	0.985					
Satd. Flow (perm)	2940	1327	0	4309	4350	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5	5				
Link Speed (k/h)	60			60	70	
Link Distance (m)	531.7			76.4	204.2	
Travel Time (s)	31.9			4.6	10.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Adj. Flow (vph)	260	1138	0	2232	2026	0
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	829	569	0	2232	2026	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (m)	2.0	2.0		10.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	2.0		0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		20.0	20.0	
Minimum Split (s)	17.0	17.0		27.0	37.0	
Total Split (s)	31.0	31.0		49.0	49.0	
Total Split (%)	38.8%	38.8%		61.3%	61.3%	
Maximum Green (s)	24.0	24.0		42.0	42.0	
Yellow Time (s)	4.5	4.5		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Recall Mode	None	None		C-Min	C-Min	
Walk Time (s)					7.0	
Flash Don't Walk (s)					23.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
v/c Ratio	1.29dr	1.42		0.99	0.89	
Control Delay (s/veh)	47.0	229.1		36.0	23.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	47.0	229.1		36.0	23.2	
LOS	D	F		D	C	
Approach Delay (s/veh)	121.1			36.0	23.2	
Approach LOS	F			D	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.42			
Intersection Signal Delay (s/veh): 52.4		Intersection LOS: D	
Intersection Capacity Utilization 97.8%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 8: Trafalgar Road & Hwy 401 EB Off-ramp



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	829	569	2232	2026
v/c Ratio	1.29dr	1.42	0.99	0.89
Control Delay (s/veh)	47.0	229.1	36.0	23.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.0	229.1	36.0	23.2
Queue Length 50th (m)	68.4	~143.4	137.7	112.1
Queue Length 95th (m)	#107.2	#214.8	#190.3	140.3
Internal Link Dist (m)	507.7		52.4	180.2
Turn Bay Length (m)		125.0		
Base Capacity (vph)	885	401	2262	2283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.94	1.42	0.99	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	260	1138	0	2232	2026	0
Future Volume (vph)	260	1138	0	2232	2026	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.97	0.91		*0.80	*0.80	
Frt	0.90	0.85		1.00	1.00	
Flt Protected	0.98	1.00		1.00	1.00	
Satd. Flow (prot)	2939	1327		4309	4350	
Flt Permitted	0.98	1.00		1.00	1.00	
Satd. Flow (perm)	2939	1327		4309	4350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	1138	0	2232	2026	0
RTOR Reduction (vph)	4	4	0	0	0	0
Lane Group Flow (vph)	826	566	0	2232	2026	0
Heavy Vehicles (%)	12%	12%	2%	7%	6%	2%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0		42.0	42.0	
Effective Green, g (s)	24.0	24.0		42.0	42.0	
Actuated g/C Ratio	0.30	0.30		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	881	398		2262	2283	
v/s Ratio Prot	0.28			c0.52	0.47	
v/s Ratio Perm		c0.43				
v/c Ratio	1.29dr	1.42		0.99	0.89	
Uniform Delay, d1	27.3	28.0		18.7	16.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.9	203.6		16.0	5.6	
Delay (s)	44.2	231.6		34.8	22.5	
Level of Service	D	F		C	C	
Approach Delay (s/veh)	120.5			34.8	22.5	
Approach LOS	F			C	C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		

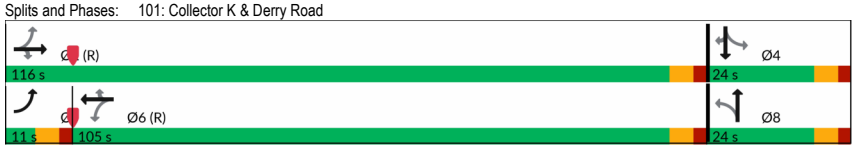
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
Future Volume (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	50.0		50.0	100.0		0.0	40.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	50.0			50.0			20.0			20.0		
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	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1789	5142	1601	1883	5142	1601	1789	1883	0	1789	1883	1601
Flt Permitted	0.038						0.757			0.757		
Satd. Flow (perm)	72	5142	1601	1883	5142	1601	1426	1883	0	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			70						70
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		1054.4			259.0			344.0			149.6	
Travel Time (s)		47.4			11.7			24.8			10.8	
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
Adj. Flow (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.0	26.0	26.0	26.0	26.0	26.0	24.0	24.0		24.0	24.0	24.0
Total Split (s)	11.0	116.0	116.0	105.0	105.0	105.0	24.0	24.0		24.0	24.0	24.0
Total Split (%)	7.9%	82.9%	82.9%	75.0%	75.0%	75.0%	17.1%	17.1%		17.1%	17.1%	17.1%
Maximum Green (s)	5.0	110.0	110.0	99.0	99.0	99.0	18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	110.0	110.0	110.0		101.2	101.2	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.72	0.72	0.13			0.13		0.13
v/c Ratio	0.50	0.33	0.08		0.97	0.01	0.44			0.14		0.03
Control Delay (s/veh)	26.9	4.6	0.7		13.7	0.0	64.6			56.4		0.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0			0.0		0.0
Total Delay (s/veh)	26.9	4.6	0.7		13.7	0.0	64.6			56.4		0.3
LOS	C	A	A		B	A	E			E		A
Approach Delay (s/veh)		5.2			13.6			64.6			43.2	
Approach LOS		A			B			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 101: Collector K & Derry Road



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBR
Lane Group Flow (vph)	58	1323	96	3601	11	80	26	8
v/c Ratio	0.50	0.33	0.08	0.97	0.01	0.44	0.14	0.03
Control Delay (s/veh)	26.9	4.6	0.7	13.7	0.0	64.6	56.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.9	4.6	0.7	13.7	0.0	64.6	56.4	0.3
Queue Length 50th (m)	3.1	33.6	0.0	126.8	0.0	21.1	6.6	0.0
Queue Length 95th (m)	15.2	38.5	3.4	m173.2	m0.0	38.6	16.1	0.0
Internal Link Dist (m)		1030.4		235.0				
Turn Bay Length (m)	100.0		50.0		50.0	100.0	40.0	30.0
Base Capacity (vph)	117	4040	1278	3717	1176	183	183	266
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.33	0.08	0.97	0.01	0.44	0.14	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
Future Volume (vph)	58	1323	96	0	3601	11	80	0	0	26	0	8
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	0.91	1.00		0.91	1.00	1.00			1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00			1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95			0.95		1.00
Satd. Flow (prot)	1789	5142	1601		5142	1601	1789			1789		1601
Flt Permitted	0.04	1.00	1.00		1.00	1.00	0.76			0.76		1.00
Satd. Flow (perm)	71	5142	1601		5142	1601	1426			1426		1601
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	1323	96	0	3601	11	80	0	0	26	0	8
RTOR Reduction (vph)	0	0	21	0	0	3	0	0	0	0	0	7
Lane Group Flow (vph)	58	1323	75	0	3601	8	80	0	0	26	0	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Effective Green, g (s)	110.0	110.0	110.0		100.0	100.0	18.0			18.0		18.0
Actuated g/C Ratio	0.79	0.79	0.79		0.71	0.71	0.13			0.13		0.13
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0			6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		3.0
Lane Grp Cap (vph)	104	4040	1257		3672	1143	183			183		205
v/s Ratio Prot	0.02	c0.26			c0.70							
v/s Ratio Perm	0.42		0.05			0.00	c0.06			0.02		0.00
v/c Ratio	0.56	0.33	0.06		0.98	0.01	0.44			0.14		0.01
Uniform Delay, d1	41.7	4.3	3.4		19.1	5.7	56.3			54.1		53.2
Progression Factor	1.00	1.00	1.00		0.63	1.00	1.00			1.00		1.00
Incremental Delay, d2	6.3	0.2	0.1		1.8	0.0	1.7			1.6		0.0
Delay (s)	48.0	4.5	3.5		13.8	5.7	58.0			55.8		53.2
Level of Service	D	A	A		B	A	E			E		D
Approach Delay (s/veh)		6.2			13.8			58.0			55.2	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1342	222	0	2881	12	0	0	92	0	0	65
Future Volume (vph)	0	1342	222	0	2881	12	0	0	92	0	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		1	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.865			0.865
Flt Protected												
Satd. Flow (prot)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Flt Permitted												
Satd. Flow (perm)	0	5142	1601	0	5137	0	0	0	1629	0	0	1629
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		212.0			359.6			356.3			336.6	
Travel Time (s)		9.5			16.2			25.7			24.2	
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
Adj. Flow (vph)	0	1342	222	0	2881	12	0	0	92	0	0	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1342	222	0	2893	0	0	0	92	0	0	65
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	66.6%	ICU Level of Service C	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1342	222	0	2881	12	0	0	92	0	0	65
Future Volume (Veh/h)	0	1342	222	0	2881	12	0	0	92	0	0	65
Sign Control		Free			Free			Stop			Stop	
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)	0	1342	222	0	2881	12	0	0	92	0	0	65
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		212			360							
pX, platoon unblocked	0.54			0.88			0.60	0.60	0.88	0.60	0.60	0.54
vC, conflicting volume	2893			1564			2367	4235	447	3426	4451	966
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1520			1176			0	2738	0	1385	3100	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	89
cM capacity (veh/h)	235			521			543	12	958	55	7	585

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	447	447	447	222	1152	1152	588	92	65
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	222	0	0	12	92	65
cSH	1700	1700	1700	1700	1700	1700	1700	958	585
Volume to Capacity	0.26	0.26	0.26	0.13	0.68	0.68	0.35	0.10	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.8
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	11.9
Lane LOS								A	B
Approach Delay (s/veh)	0.0				0.0			9.2	11.9
Approach LOS								A	B

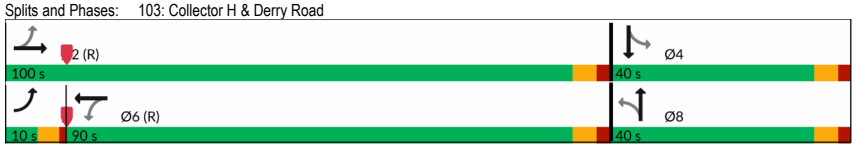
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1391	129	29	2751	14	108	0	14	31	22	60
Future Volume (vph)	80	1391	129	29	2751	14	108	0	14	31	22	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.999			0.985			0.928	
Flt Protected	0.950			0.950				0.958			0.986	
Satd. Flow (prot)	1789	4461	0	1789	4516	0	0	1777	0	0	1723	0
Flt Permitted	0.038			0.127				0.538			0.924	
Satd. Flow (perm)	72	4461	0	239	4516	0	0	998	0	0	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			1			58			38	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		359.6			443.2			364.0			369.5	
Travel Time (s)		16.2			19.9			26.2			26.6	
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
Adj. Flow (vph)	80	1391	129	29	2751	14	108	0	14	31	22	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	1520	0	29	2765	0	0	122	0	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		40.0	40.0		40.0	40.0	
Total Split (s)	10.0	100.0		90.0	90.0		40.0	40.0		40.0	40.0	
Total Split (%)	7.1%	71.4%		64.3%	64.3%		28.6%	28.6%		28.6%	28.6%	
Maximum Green (s)	5.5	94.0		84.0	84.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0		27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	115.1	113.6		101.3	101.3			14.4			14.4	
Actuated g/C Ratio	0.82	0.81		0.72	0.72			0.10			0.10	
v/c Ratio	0.52	0.42		0.17	0.85			0.79			0.56	
Control Delay (s/veh)	35.4	6.2		10.9	18.3			65.0			49.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	35.4	6.2		10.9	18.3			65.0			49.5	
LOS	D	A		B	B			E			D	
Approach Delay (s/veh)		7.6			18.3			65.0			49.5	
Approach LOS		A			B			E			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 140		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.85		
Intersection Signal Delay (s/veh): 16.6	Intersection LOS: B	
Intersection Capacity Utilization 85.1%	ICU Level of Service E	
Analysis Period (min) 15		
* User Entered Value		

Splits and Phases: 103: Collector H & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	80	1520	29	2765	122	113
v/c Ratio	0.52	0.42	0.17	0.85	0.79	0.56
Control Delay (s/veh)	35.4	6.2	10.9	18.3	65.0	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.4	6.2	10.9	18.3	65.0	49.5
Queue Length 50th (m)	12.6	41.2	2.2	194.8	18.1	20.4
Queue Length 95th (m)	m22.3	m46.8	8.7	312.7	39.3	38.5
Internal Link Dist (m)		335.6		419.2	340.0	345.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	155	3623	172	3266	286	420
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.42	0.17	0.85	0.43	0.27

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1391	129	29	2751	14	108	0	14	31	22	60
Future Volume (vph)	80	1391	129	29	2751	14	108	0	14	31	22	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.98			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4463		1789	4517			1776			1725	
Flt Permitted	0.04	1.00		0.13	1.00			0.54			0.92	
Satd. Flow (perm)	71	4463		239	4517			998			1616	
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)	80	1391	129	29	2751	14	108	0	14	31	22	60
RTOR Reduction (vph)	0	4	0	0	0	0	0	52	0	0	34	0
Lane Group Flow (vph)	80	1516	0	29	2765	0	0	70	0	0	79	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	113.6	113.6		101.3	101.3			14.4			14.4	
Effective Green, g (s)	113.6	113.6		101.3	101.3			14.4			14.4	
Actuated g/C Ratio	0.81	0.81		0.72	0.72			0.10			0.10	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	153	3621		172	3268			102			166	
v/s Ratio Prot	c0.03	0.34			c0.61							
v/s Ratio Perm	0.39			0.12				c0.07			0.05	
v/c Ratio	0.52	0.42		0.17	0.85			0.69			0.48	
Uniform Delay, d1	32.0	3.8		6.1	13.8			60.6			59.2	
Progression Factor	1.44	1.45		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.3	0.3		2.1	2.9			17.4			2.1	
Delay (s)	48.4	5.7		8.2	16.7			78.0			61.4	
Level of Service	D	A		A	B			E			E	
Approach Delay (s/veh)		7.9			16.6			78.0			61.4	
Approach LOS		A			B			E			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	16.3	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.81				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.5		
Intersection Capacity Utilization	85.1%	ICU Level of Service	E		
Analysis Period (min)	15				

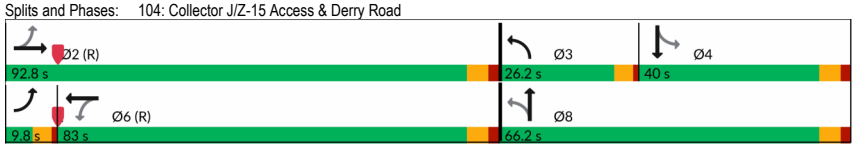
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1334	213	18	2530	21	144	0	20	49	0	168
Future Volume (vph)	54	1334	213	18	2530	21	144	0	20	49	0	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		50.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	50.0			50.0			2.5			2.5		
Lane Util. Factor	1.00	*0.80	0.91	1.00	*0.80	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.999			0.984			0.895	
Flt Protected	0.950			0.950				0.958			0.989	
Satd. Flow (prot)	1789	4425	0	1789	4516	0	0	1775	0	0	1667	0
Flt Permitted	0.036			0.115				0.433			0.914	
Satd. Flow (perm)	68	4425	0	217	4516	0	0	802	0	0	1541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			1			51			99	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		443.2			363.9			374.0			283.5	
Travel Time (s)		19.9			16.4			26.9			20.4	
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
Adj. Flow (vph)	54	1334	213	18	2530	21	144	0	20	49	0	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	1547	0	18	2551	0	0	164	0	0	217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0			10.0			10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6			0.6			0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	26.0		26.0	26.0		9.5	40.0		40.0	40.0	
Total Split (s)	9.8	92.8		83.0	83.0		26.2	66.2		40.0	40.0	
Total Split (%)	6.2%	58.4%		52.2%	52.2%		16.5%	41.6%		25.2%	25.2%	
Maximum Green (s)	5.3	86.8		77.0	77.0		21.7	60.2		34.0	34.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		3.5	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		2.0	2.0		1.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0			7.0		7.0	7.0	
Flash Don't Walk (s)		9.0		9.0	9.0			27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0		0	0			0		0	0	
Act Effct Green (s)	118.7	117.2		107.7	107.7			29.8			29.8	
Actuated g/C Ratio	0.75	0.74		0.68	0.68			0.19			0.19	
v/c Ratio	0.43	0.47		0.12	0.83			0.85			0.59	
Control Delay (s/veh)	26.0	10.3		17.2	25.1			76.5			35.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	26.0	10.3		17.2	25.1			76.5			35.7	
LOS	C	B		B	C			E			D	
Approach Delay (s/veh)		10.8			25.1			76.5			35.7	
Approach LOS		B			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 159			
Actuated Cycle Length: 159			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 22.4		Intersection LOS: C	
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 104: Collector J/Z-15 Access & Derry Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	54	1547	18	2551	164	217
v/c Ratio	0.43	0.47	0.12	0.83	0.85	0.59
Control Delay (s/veh)	26.0	10.3	17.2	25.1	76.5	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.0	10.3	17.2	25.1	76.5	35.7
Queue Length 50th (m)	4.1	74.9	2.0	247.0	36.7	34.8
Queue Length 95th (m)	18.7	124.5	8.3	#394.8	59.7	55.0
Internal Link Dist (m)		419.2		339.9	350.0	259.5
Turn Bay Length (m)	60.0		50.0			
Base Capacity (vph)	126	3266	147	3058	335	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.47	0.12	0.83	0.49	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1334	213	18	2530	21	144	0	20	49	0	168
Future Volume (vph)	54	1334	213	18	2530	21	144	0	20	49	0	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor	1.00	*0.80		1.00	*0.80			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1789	4427		1789	4515			1775			1668	
Flt Permitted	0.04	1.00		0.11	1.00			0.43			0.91	
Satd. Flow (perm)	68	4427		216	4515			802			1541	
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)	54	1334	213	18	2530	21	144	0	20	49	0	168
RTOR Reduction (vph)	0	7	0	0	0	0	0	41	0	0	80	0
Lane Group Flow (vph)	54	1540	0	18	2551	0	0	123	0	0	137	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	117.2	117.2		106.8	106.8			29.8			29.8	
Effective Green, g (s)	117.2	117.2		106.8	106.8			29.8			29.8	
Actuated g/C Ratio	0.74	0.74		0.67	0.67			0.19			0.19	
Clearance Time (s)	4.5	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	113	3263		145	3032			150			288	
v/s Ratio Prot	0.02	c0.35			c0.56							
v/s Ratio Perm	0.33			0.08				c0.15			0.09	
v/c Ratio	0.48	0.47		0.12	0.84			0.82			0.47	
Uniform Delay, d1	29.1	8.4		9.3	19.7			62.0			57.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.2	0.5		1.8	3.0			27.9			1.2	
Delay (s)	32.2	8.9		11.1	22.7			89.9			58.8	
Level of Service	C	A		B	C			F			E	
Approach Delay (s/veh)		9.7			22.6			89.9			58.8	
Approach LOS		A			C			F			E	

Intersection Summary					
HCM 2000 Control Delay (s/veh)	22.2	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	159.0	Sum of lost time (s)		21.0	
Intersection Capacity Utilization	86.6%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	1347	3590	38	0	22
Future Volume (vph)	0	1347	3590	38	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	5142	3579	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	5142	3579	1601	0	1629
Link Speed (k/h)		80	80		50	
Link Distance (m)		259.0	199.1		327.4	
Travel Time (s)		11.7	9.0		23.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1347	3590	38	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1347	3590	38	0	22
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.4	7.4		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (veh/h)	0	1347	3590	38	0	22
Future Volume (Veh/h)	0	1347	3590	38	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1347	3590	38	0	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		259	199			
pX, platoon unblocked	0.66				0.70	0.66
vC, conflicting volume	3628				4039	1795
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3950				3880	1178
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	82
cM capacity (veh/h)	30				2	121

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	449	449	449	1795	1795	38	22
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	38	22
cSH	1700	1700	1700	1700	1700	1700	121
Volume to Capacity	0.26	0.26	0.26	1.06	1.06	0.02	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	41.1
Lane LOS							E
Approach Delay (s/veh)	0.0			0.0			41.1
Approach LOS							E

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	109.2%	ICU Level of Service		H
Analysis Period (min)	15			

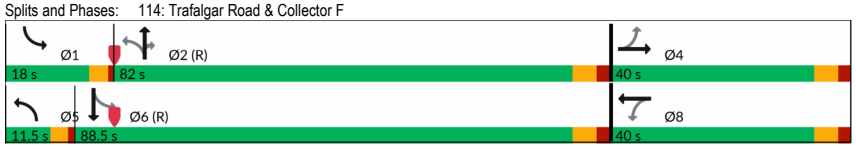
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	67	66	61	63	136	95	2144	211	188	3513	117
Future Volume (vph)	48	67	66	61	63	136	95	2144	211	188	3513	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	50.0		0.0	50.0		50.0	140.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	1.00	1.00	*0.80	0.91
Frt		0.926			0.897				0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1667	0	1652	1615	0	1711	4421	1566	1711	4399	0
Flt Permitted	0.290			0.522			0.045			0.043		
Satd. Flow (perm)	504	1667	0	908	1615	0	81	4421	1566	77	4399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			73				101		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		224.2			200.3			332.8			265.5	
Travel Time (s)		16.1			14.4			20.0			15.9	
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
Adj. Flow (vph)	48	67	66	61	63	136	95	2144	211	188	3513	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	133	0	61	199	0	95	2144	211	188	3630	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.0			6.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	40.0	40.0		40.0	40.0		11.5	26.0	26.0	11.0	26.0	
Total Split (s)	40.0	40.0		40.0	40.0		11.5	82.0	82.0	18.0	88.5	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		8.2%	58.6%	58.6%	12.9%	63.2%	
Maximum Green (s)	34.0	34.0		34.0	34.0		7.5	76.0	76.0	14.0	82.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Don't Walk (s)	27.0	27.0		27.0	27.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	17.1	17.1		17.1	17.1		101.1	89.8	89.8	112.8	97.6	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.72	0.64	0.64	0.81	0.70	
v/c Ratio	0.79	0.57		0.55	0.76		0.57	0.76	0.20	0.72	1.18	
Control Delay (s/veh)	124.1	52.0		75.3	55.6		29.2	36.7	13.7	51.4	108.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.1	
Total Delay (s/veh)	124.1	52.0		75.3	55.6		29.2	36.7	13.7	51.4	108.7	
LOS	F	D		E	E		C	D	B	D	F	
Approach Delay (s/veh)		71.1			60.2			34.5			105.9	
Approach LOS		E			E			C			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.18		
Intersection Signal Delay (s/veh): 77.1	Intersection LOS: E	
Intersection Capacity Utilization 114.6%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 114: Trafalgar Road & Collector F



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	133	61	199	95	2144	211	188	3630
v/c Ratio	0.79	0.57	0.55	0.76	0.57	0.76	0.20	0.72	1.18
Control Delay (s/veh)	124.1	52.0	75.3	55.6	29.2	36.7	13.7	51.4	108.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	124.1	52.0	75.3	55.6	29.2	36.7	13.7	51.4	108.7
Queue Length 50th (m)	13.4	26.9	16.6	35.1	9.3	259.5	29.6	35.0	~506.0
Queue Length 95th (m)	#29.3	45.4	30.3	59.3	m8.1	m222.4	m35.0	61.0	#582.3
Internal Link Dist (m)		200.2		176.3		308.8			241.5
Turn Bay Length (m)	70.0		50.0		50.0		50.0	140.0	
Base Capacity (vph)	122	429	220	447	169	2836	1040	269	3069
Starvation Cap Reductn	0	0	0	0	0	0	0	0	88
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.31	0.28	0.45	0.56	0.76	0.20	0.70	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	67	66	61	63	136	95	2144	211	188	3513	117
Future Volume (vph)	48	67	66	61	63	136	95	2144	211	188	3513	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80	1.00	1.00	*0.80	
Frt	1.00	0.93		1.00	0.90		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)	1652	1667		1652	1616		1711	4421	1566	1711	4400	
Flt Permitted	0.29	1.00		0.52	1.00		0.04	1.00	1.00	0.04	1.00	
Satd. Flow (perm)	503	1667		908	1616		80	4421	1566	77	4400	
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)	48	67	66	61	63	136	95	2144	211	188	3513	117
RTOR Reduction (vph)	0	29	0	0	64	0	0	0	36	0	2	0
Lane Group Flow (vph)	48	104	0	61	135	0	95	2144	175	188	3628	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	17.1	17.1		17.1	17.1		99.1	89.8	89.8	110.9	97.6	
Effective Green, g (s)	17.1	17.1		17.1	17.1		99.1	89.8	89.8	110.9	97.6	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.71	0.64	0.64	0.79	0.70	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	61	203		110	197		164	2835	1004	260	3067	
v/s Ratio Prot		0.06			0.08		0.04	0.48		c0.09	c0.82	
v/s Ratio Perm	c0.10			0.07			0.37		0.11	0.48		
v/c Ratio	0.79	0.51		0.55	0.68		0.58	0.76	0.17	0.72	1.18	
Uniform Delay, d1	59.7	57.5		57.9	58.9		38.4	17.5	10.1	42.8	21.2	
Progression Factor	1.01	1.00		1.01	1.01		1.07	1.88	2.06	1.00	1.00	
Incremental Delay, d2	47.5	2.2		5.9	9.5		0.5	0.2	0.0	9.5	86.0	
Delay (s)	107.5	59.8		64.2	68.8		41.5	33.0	21.0	52.3	107.2	
Level of Service	F	E		E	E		D	C	C	D	F	
Approach Delay (s/veh)		72.4			67.7			32.3			104.5	
Approach LOS		E			E			C			F	

Intersection Summary

HCM 2000 Control Delay (s/veh)	75.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

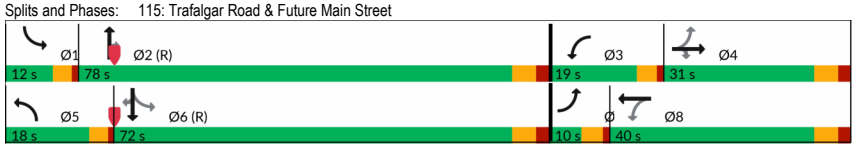
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	67	614	390	167	112	463	2015	150	120	2770	452
Future Volume (vph)	204	67	614	390	167	112	463	2015	150	120	2770	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	75.0		100.0	160.0		0.0	125.0		50.0	50.0		75.0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	0.97	*0.80	1.00	1.00	*0.80	1.00
Frt			0.850		0.940				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1883	2818	1789	3364	0	3319	4421	1566	1711	4421	1566
Flt Permitted	0.580			0.596			0.950			0.061		
Satd. Flow (perm)	1092	1883	2818	1123	3364	0	3319	4421	1566	110	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250		109				125			207
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		906.8			627.0			712.8			236.3	
Travel Time (s)		68.0			47.0			42.8			14.2	
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
Adj. Flow (vph)	204	67	614	390	167	112	463	2015	150	120	2770	452
Shared Lane Traffic (%)												
Lane Group Flow (vph)	204	67	614	390	279	0	463	2015	150	120	2770	452
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8					2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		6.5	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	9.5	40.0	40.0	9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	10.0	31.0	31.0	19.0	40.0		18.0	78.0	78.0	12.0	72.0	72.0
Total Split (%)	7.1%	22.1%	22.1%	13.6%	28.6%		12.9%	55.7%	55.7%	8.6%	51.4%	51.4%
Maximum Green (s)	5.5	25.0	25.0	14.5	34.0		14.0	72.0	72.0	8.0	66.0	66.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		27.0	27.0		27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	29.9	22.9	22.9	43.4	31.9		16.1	73.8	73.8	76.3	66.0	66.0
Actuated g/C Ratio	0.21	0.16	0.16	0.31	0.23		0.12	0.53	0.53	0.55	0.47	0.47
v/c Ratio	0.78	0.22	0.92	0.94	0.33		1.22	0.86	0.17	0.78	1.33	0.53
Control Delay (s/veh)	66.9	51.7	53.1	75.2	27.6		169.0	34.1	4.8	58.7	181.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.9	51.7	53.1	75.2	27.6		169.0	34.1	4.8	58.7	181.1	11.6
LOS	E	D	D	E	C		F	C	A	E	F	B
Approach Delay (s/veh)		56.2			55.4			56.2			153.8	
Approach LOS		E			E			E			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.33		
Intersection Signal Delay (s/veh): 99.5		Intersection LOS: F
Intersection Capacity Utilization 113.8%		ICU Level of Service H
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 115: Trafalgar Road & Future Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	204	67	614	390	279	463	2015	150	120	2770	452
v/c Ratio	0.78	0.22	0.92	0.94	0.33	1.22	0.86	0.17	0.78	1.33	0.53
Control Delay (s/veh)	66.9	51.7	53.1	75.2	27.6	169.0	34.1	4.8	58.7	181.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.9	51.7	53.1	75.2	27.6	169.0	34.1	4.8	58.7	181.1	11.6
Queue Length 50th (m)	43.7	16.3	59.4	94.7	20.2	~89.3	205.2	3.4	16.3	~423.3	49.5
Queue Length 95th (m)	#70.7	30.5	#92.6	#157.5	33.1	#123.9	231.8	14.5	m#35.3	#452.2	51.7
Internal Link Dist (m)		882.8			603.0		688.8			212.3	
Turn Bay Length (m)	75.0		100.0	160.0		125.0		50.0	50.0		75.0
Base Capacity (vph)	260	336	708	416	899	381	2331	885	154	2084	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.20	0.87	0.94	0.31	1.22	0.86	0.17	0.78	1.33	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	67	614	390	167	112	463	2015	150	120	2770	452
Future Volume (vph)	204	67	614	390	167	112	463	2015	150	120	2770	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.97	*0.80	1.00	1.00	*0.80	1.00
Frt	1.00	1.00	0.85	1.00	0.94		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	1883	2818	1789	3363		3319	4421	1566	1711	4421	1566
Flt Permitted	0.58	1.00	1.00	0.60	1.00		0.95	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1093	1883	2818	1123	3363		3319	4421	1566	109	4421	1566
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)	204	67	614	390	167	112	463	2015	150	120	2770	452
RTOR Reduction (vph)	0	0	209	0	84	0	0	0	59	0	0	109
Lane Group Flow (vph)	204	67	405	390	195	0	463	2015	91	120	2770	343
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	28.4	22.9	22.9	41.9	31.9		16.1	73.8	73.8	74.3	66.0	66.0
Effective Green, g (s)	28.4	22.9	22.9	41.9	31.9		16.1	73.8	73.8	74.3	66.0	66.0
Actuated g/C Ratio	0.20	0.16	0.16	0.30	0.23		0.12	0.53	0.53	0.53	0.47	0.47
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	249	308	460	405	766		381	2330	825	152	2084	738
v/s Ratio Prot	0.03	0.04		c0.10	0.06		c0.14	0.46		0.05	c0.63	
v/s Ratio Perm	0.13		0.14	c0.19					0.06	0.37		0.22
v/c Ratio	0.82	0.22	0.88	0.96	0.25		1.22	0.86	0.11	0.79	1.33	0.46
Uniform Delay, d1	51.9	50.8	57.2	47.1	44.3		62.0	28.8	16.6	30.5	37.0	25.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.21	0.91	0.72
Incremental Delay, d2	18.6	0.4	17.5	34.9	0.2		118.6	4.6	0.3	18.8	150.8	1.6
Delay (s)	70.5	51.1	74.7	82.1	44.5		180.6	33.4	16.9	55.5	184.6	19.8
Level of Service	E	D	E	F	D		F	C	B	E	F	B
Approach Delay (s/veh)		72.0			66.4			58.4			157.6	
Approach LOS		E			E			E			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	104.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.23			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	113.8%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

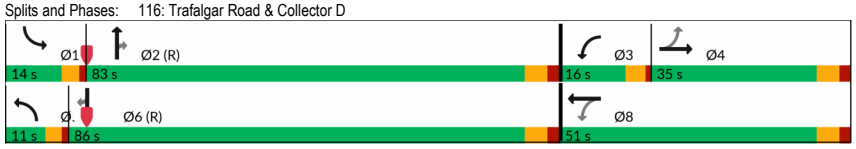
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	19	147	316	22	397	207	1909	81	179	3193	236
Future Volume (vph)	117	19	147	316	22	397	207	1909	81	179	3193	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	160.0		0.0	70.0		50.0	120.0		50.0
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (m)	50.0			50.0			50.0			70.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	*0.80	1.00	0.97	*0.80	1.00
Frt		0.867			0.858				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1561	0	1652	1545	0	3319	4421	1566	3319	4421	1566
Flt Permitted	0.352			0.446			0.950			0.950		
Satd. Flow (perm)	612	1561	0	775	1545	0	3319	4421	1566	3319	4421	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		94			97				85			85
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		108.9			355.4			224.5			712.8	
Travel Time (s)		7.8			25.6			13.5			42.8	
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
Adj. Flow (vph)	117	19	147	316	22	397	207	1909	81	179	3193	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	166	0	316	419	0	207	1909	81	179	3193	236
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0	26.0	11.0	26.0	26.0
Total Split (s)	35.0	35.0		16.0	51.0		11.0	83.0	83.0	14.0	86.0	86.0
Total Split (%)	23.6%	23.6%		10.8%	34.5%		7.4%	56.1%	56.1%	9.5%	58.1%	58.1%
Maximum Green (s)	29.0	29.0		11.5	45.0		7.0	77.0	77.0	10.0	80.0	80.0
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)	27.0	27.0			27.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effct Green (s)	29.0	29.0		46.5	45.0		7.0	77.0	77.0	10.0	80.0	80.0
Actuated g/C Ratio	0.20	0.20		0.31	0.30		0.05	0.52	0.52	0.07	0.54	0.54
v/c Ratio	0.98	0.44		1.02	0.78		1.33	0.83	0.09	0.80	1.34	0.27
Control Delay (s/veh)	136.4	26.6		101.3	47.1		235.2	34.0	3.3	92.8	184.7	12.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	1.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	136.4	26.6		101.3	47.1		235.2	35.6	3.3	92.8	184.7	12.1
LOS	F	C		F	D		F	D	A	F	F	B
Approach Delay (s/veh)		72.0			70.4			53.2			168.9	
Approach LOS		E			E			D			F	

Intersection Summary		
Area Type:	Other	
Cycle Length: 148		
Actuated Cycle Length: 148		
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.34		
Intersection Signal Delay (s/veh): 117.0	Intersection LOS: F	
Intersection Capacity Utilization 120.0%	ICU Level of Service H	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 116: Trafalgar Road & Collector D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	166	316	419	207	1909	81	179	3193	236
v/c Ratio	0.98	0.44	1.02	0.78	1.33	0.83	0.09	0.80	1.34	0.27
Control Delay (s/veh)	136.4	26.6	101.3	47.1	235.2	34.0	3.3	92.8	184.7	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	136.4	26.6	101.3	47.1	235.2	35.6	3.3	92.8	184.7	12.1
Queue Length 50th (m)	35.1	18.3	~81.7	90.2	~40.9	195.2	0.0	27.6	~514.5	22.4
Queue Length 95th (m)	#77.3	41.7	#154.0	134.0	#68.0	219.4	7.8	#46.8	#538.4	38.9
Internal Link Dist (m)		84.9		331.4		200.5			688.8	
Turn Bay Length (m)	70.0		160.0		70.0		50.0	120.0		50.0
Base Capacity (vph)	119	381	311	537	156	2300	855	224	2389	885
Starvation Cap Reductn	0	0	0	0	0	222	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.44	1.02	0.78	1.33	0.92	0.09	0.80	1.34	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	19	147	316	22	397	207	1909	81	179	3193	236
Future Volume (vph)	117	19	147	316	22	397	207	1909	81	179	3193	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		0.97	*0.80	1.00	0.97	*0.80	1.00
Frt	1.00	0.87		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)	1652	1561		1652	1545		3319	4421	1566	3319	4421	1566
Flt Permitted	0.35	1.00		0.45	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	613	1561		775	1545		3319	4421	1566	3319	4421	1566
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)	117	19	147	316	22	397	207	1909	81	179	3193	236
RTOR Reduction (vph)	0	76	0	0	68	0	0	0	39	0	0	39
Lane Group Flow (vph)	117	90	0	316	351	0	207	1909	42	179	3193	197
Turn Type	Perm	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	29.0	29.0		45.0	45.0		7.0	77.0	77.0	10.0	80.0	80.0
Effective Green, g (s)	29.0	29.0		45.0	45.0		7.0	77.0	77.0	10.0	80.0	80.0
Actuated g/C Ratio	0.20	0.20		0.30	0.30		0.05	0.52	0.52	0.07	0.54	0.54
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	120	305		303	469		156	2300	814	224	2389	846
v/s Ratio Prot		0.06		c0.08	0.23		c0.06	0.43		0.05	c0.72	
v/s Ratio Perm	0.19			c0.24					0.03			0.13
v/c Ratio	0.98	0.30		1.04	0.75		1.33	0.83	0.05	0.80	1.34	0.23
Uniform Delay, d1	59.1	50.8		50.7	46.4		70.5	30.0	17.5	68.0	34.0	17.9
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	73.7	0.5		63.3	6.5		184.5	3.6	0.1	17.8	154.4	0.6
Delay (s)	132.9	51.3		114.1	52.9		255.0	33.6	17.6	85.8	188.4	18.5
Level of Service	F	D		F	D		F	C	B	F	F	B
Approach Delay (s/veh)		85.0			79.2			53.9			172.2	
Approach LOS		F			E			D			F	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	120.5	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.27			
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	20.5	
Intersection Capacity Utilization	120.0%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

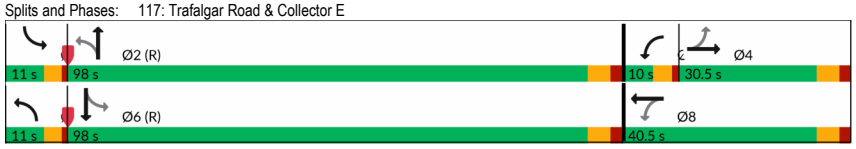
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	12	6	122	11	85	40	2172	49	72	3611	28
Future Volume (vph)	7	12	6	122	11	85	40	2172	49	72	3611	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	50.0			50.0			50.0			50.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*0.80	0.91	1.00	*0.80	0.91
Frt		0.950			0.867			0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	1789	0	1789	1633	0	1711	4408	0	1711	4416	0
Flt Permitted	0.695			0.426			0.038			0.036		
Satd. Flow (perm)	1309	1789	0	802	1633	0	68	4408	0	65	4416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			85			4			1	
Link Speed (k/h)		30			30			60			60	
Link Distance (m)		233.9			196.8			265.5			224.5	
Travel Time (s)		28.1			23.6			15.9			13.5	
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
Adj. Flow (vph)	7	12	6	122	11	85	40	2172	49	72	3611	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	18	0	122	96	0	40	2221	0	72	3639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			6.6			6.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.01	1.01	1.04	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		6.5	20.0		7.0	20.0	
Minimum Split (s)	40.0	40.0		9.5	40.0		11.0	26.0		11.0	26.0	
Total Split (s)	30.5	30.5		10.0	40.5		11.0	98.0		11.0	98.0	
Total Split (%)	20.4%	20.4%		6.7%	27.1%		7.4%	65.6%		7.4%	65.6%	
Maximum Green (s)	24.5	24.5		5.5	34.5		7.0	92.0		7.0	92.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Don't Walk (s)	27.0	27.0			27.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effct Green (s)	10.0	10.0		17.5	16.0		117.7	109.0		121.9	112.9	
Actuated g/C Ratio	0.07	0.07		0.12	0.11		0.79	0.73		0.82	0.76	
v/c Ratio	0.08	0.14		0.84	0.38		0.31	0.69		0.49	1.09	
Control Delay (s/veh)	67.9	52.6		103.7	18.9		16.2	13.3		32.1	67.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.3		0.0	3.8	
Total Delay (s/veh)	67.9	52.6		103.7	18.9		16.2	13.6		32.1	70.8	
LOS	E	D		F	B		B	B		C	E	
Approach Delay (s/veh)		56.8			66.4			13.7			70.0	
Approach LOS		E			E			B			E	

Intersection Summary		
Area Type:	Other	
Cycle Length: 149.5		
Actuated Cycle Length: 149.5		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.09		
Intersection Signal Delay (s/veh): 49.4	Intersection LOS: D	
Intersection Capacity Utilization 93.8%	ICU Level of Service F	
Analysis Period (min) 15		

* User Entered Value

Splits and Phases: 117: Trafalgar Road & Collector E



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	7	18	122	96	40	2221	72	3639
v/c Ratio	0.08	0.14	0.84	0.38	0.31	0.69	0.49	1.09
Control Delay (s/veh)	67.9	52.6	103.7	18.9	16.2	13.3	32.1	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	3.8
Total Delay (s/veh)	67.9	52.6	103.7	18.9	16.2	13.6	32.1	70.8
Queue Length 50th (m)	2.0	3.5	34.3	2.9	2.1	149.4	6.1	~537.2
Queue Length 95th (m)	7.3	12.0	#68.7	20.3	9.2	186.5	22.2	#561.0
Internal Link Dist (m)		209.9		172.8		241.5		200.5
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	214	298	145	442	132	3214	146	3334
Starvation Cap Reductn	0	0	0	0	0	392	0	188
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06	0.84	0.22	0.30	0.79	0.49	1.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	12	6	122	11	85	40	2172	49	72	3611	28
Future Volume (vph)	7	12	6	122	11	85	40	2172	49	72	3611	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	*0.80		1.00	*0.80	
Frt	1.00	0.95		1.00	0.87		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)	1789	1789		1789	1633		1711	4406		1711	4416	
Flt Permitted	0.69	1.00		0.43	1.00		0.04	1.00		0.04	1.00	
Satd. Flow (perm)	1309	1789		803	1633		68	4406		66	4416	
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)	7	12	6	122	11	85	40	2172	49	72	3611	28
RTOR Reduction (vph)	0	6	0	0	75	0	0	1	0	0	0	0
Lane Group Flow (vph)	7	12	0	122	21	0	40	2220	0	72	3639	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.0	6.0		18.4	18.4		112.0	106.6		118.2	109.7	
Effective Green, g (s)	6.0	6.0		18.4	18.4		112.0	106.6		118.2	109.7	
Actuated g/C Ratio	0.04	0.04		0.12	0.12		0.75	0.71		0.79	0.73	
Clearance Time (s)	6.0	6.0		4.5	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	71		150	200		110	3141		145	3240	
v/s Ratio Prot		0.01		c0.04	0.01		0.01	0.50		c0.03	c0.82	
v/s Ratio Perm	0.01			c0.06			0.26			0.36		
v/c Ratio	0.13	0.17		0.81	0.11		0.36	0.71		0.50	1.12	
Uniform Delay, d1	69.2	69.4		62.6	58.3		40.8	12.4		23.3	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2		27.4	0.2		2.0	1.4		2.7	60.1	
Delay (s)	70.4	70.5		90.0	58.5		42.9	13.8		26.0	80.0	
Level of Service	E	E		F	E		D	B		C	E	
Approach Delay (s/veh)		70.5			76.1			14.3			78.9	
Approach LOS		E			E			B			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	55.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	20.5
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	206	0	0	0	0	271
Future Volume (vph)	206	0	0	0	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950					
Satd. Flow (prot)	1789	1883	0	0	0	1629
Flt Permitted	0.950					
Satd. Flow (perm)	1789	1883	0	0	0	1629
Link Speed (k/h)	48			48	48	
Link Distance (m)	745.9			52.5	161.7	
Travel Time (s)	55.9			3.9	12.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	206	0	0	0	0	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	206	0	0	0	0	271
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	20.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	206	0	0	0	0	271
Future Volume (vph)	206	0	0	0	0	271
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	206	0	0	0	0	271

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total (vph)	206	0	271
Volume Left (vph)	206	0	0
Volume Right (vph)	0	0	271
Hadj (s)	0.53	0.00	-0.57
Departure Headway (s)	5.6	5.1	4.0
Degree Utilization, x	0.32	0.00	0.30
Capacity (veh/h)	612	687	871
Control Delay (s/veh)	10.1	6.9	8.6
Approach Delay (s/veh)	10.1		8.6
Approach LOS	B		A

Intersection Summary				
Delay	9.2			
Level of Service	A			
Intersection Capacity Utilization	20.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	114	27	49	29	42
Future Volume (vph)	20	114	27	49	29	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885		0.913			
Flt Protected	0.993					0.980
Satd. Flow (prot)	1582	0	1644	0	0	1765
Flt Permitted	0.993					0.980
Satd. Flow (perm)	1582	0	1644	0	0	1765
Link Speed (k/h)	50		50			50
Link Distance (m)	249.9		205.6			126.7
Travel Time (s)	18.0		14.8			9.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	114	27	49	29	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	0	76	0	0	71
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.3		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	114	27	49	29	42
Future Volume (Veh/h)	20	114	27	49	29	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)	20	114	27	49	29	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152	52			76	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	52			76	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	89			98	
cM capacity (veh/h)	824	1016			1523	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	134	76	71
Volume Left	20	0	29
Volume Right	114	49	0
cSH	982	1700	1523
Volume to Capacity	0.14	0.04	0.02
Queue Length 95th (m)	3.6	0.0	0.4
Control Delay (s/veh)	9.2	0.0	3.1
Lane LOS	A		A
Approach Delay (s/veh)	9.2	0.0	3.1
Approach LOS	A		

Intersection Summary				
Average Delay		5.2		
Intersection Capacity Utilization		25.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	102	19	122	244	6	35	39	97	58	7	0
Future Volume (vph)	0	102	19	122	244	6	35	39	97	58	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.998			0.923				
Flt Protected					0.984			0.990			0.957	
Satd. Flow (prot)	0	1844	0	0	1768	0	0	1721	0	0	1802	0
Flt Permitted					0.984			0.990			0.957	
Satd. Flow (perm)	0	1844	0	0	1768	0	0	1721	0	0	1802	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		249.9			142.9			204.7			275.7	
Travel Time (s)		18.0			10.3			14.7			19.9	
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
Adj. Flow (vph)	0	102	19	122	244	6	35	39	97	58	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	0	0	372	0	0	171	0	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.09	1.04	1.04	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	102	19	122	244	6	35	39	97	58	7	0
Future Volume (Veh/h)	0	102	19	122	244	6	35	39	97	58	7	0
Sign Control		Free			Free			Stop			Stop	
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)	0	102	19	122	244	6	35	39	97	58	7	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					252							
pX, platoon unblocked												
vC, conflicting volume	250			121			606	606	112	719	612	247
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	250			121			606	606	112	719	612	247
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			91	90	90	78	98	100
cM capacity (veh/h)	1316			1467			378	377	942	266	374	792

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	121	372	171	65
Volume Left	0	122	35	58
Volume Right	19	6	97	0
cSH	1316	1467	572	275
Volume to Capacity	0.00	0.08	0.30	0.24
Queue Length 95th (m)	0.0	2.1	9.5	6.8
Control Delay (s/veh)	0.0	3.0	14.0	22.1
Lane LOS		A	B	C
Approach Delay (s/veh)	0.0	3.0	14.0	22.1
Approach LOS			B	C

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	92	45	479	94	61
Future Volume (vph)	144	92	45	479	94	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.947	
Flt Protected				0.996	0.971	
Satd. Flow (prot)	1784	0	0	1876	1732	0
Flt Permitted				0.996	0.971	
Satd. Flow (perm)	1784	0	0	1876	1732	0
Link Speed (k/h)	50			48	50	
Link Distance (m)	355.4			240.4	252.4	
Travel Time (s)	25.6			18.0	18.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	144	92	45	479	94	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	236	0	0	524	155	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	8	68	8	5	57
Future Volume (vph)	4	8	68	8	5	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.986			
Flt Protected	0.984					0.996
Satd. Flow (prot)	1557	0	1775	0	0	1793
Flt Permitted	0.984					0.996
Satd. Flow (perm)	1557	0	1775	0	0	1793
Link Speed (k/h)	30		50			50
Link Distance (m)	255.3		270.0			205.6
Travel Time (s)	30.6		19.4			14.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	8	68	8	5	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	76	0	0	62
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	8	68	8	5	57
Future Volume (Veh/h)	4	8	68	8	5	57
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	8	68	8	5	57
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	139	72			76	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	139	72			76	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	851	990			1523	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	76	62
Volume Left	4	0	5
Volume Right	8	8	0
cSH	939	1700	1523
Volume to Capacity	0.01	0.04	0.00*
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s/veh)	8.9	0.0	0.6
Lane LOS	A		A
Approach Delay (s/veh)	8.9	0.0	0.6
Approach LOS	A		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	13	12	14	42	25	15	142	15	20	124	4
Future Volume (vph)	4	13	12	14	42	25	15	142	15	20	124	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944			0.958			0.988			0.996	
Flt Protected		0.993			0.991			0.996			0.993	
Satd. Flow (prot)	0	1630	0	0	1651	0	0	1772	0	0	1781	0
Flt Permitted		0.993			0.991			0.996			0.993	
Satd. Flow (perm)	0	1630	0	0	1651	0	0	1772	0	0	1781	0
Link Speed (k/h)		30			30			50			50	
Link Distance (m)		255.3			233.9			276.2			204.7	
Travel Time (s)		30.6			28.1			19.9			14.7	
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
Adj. Flow (vph)	4	13	12	14	42	25	15	142	15	20	124	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	81	0	0	172	0	0	148	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	13	12	14	42	25	15	142	15	20	124	4
Future Volume (Veh/h)	4	13	12	14	42	25	15	142	15	20	124	4
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)	4	13	12	14	42	25	15	142	15	20	124	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	392	353	126	364	348	150	128			157		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	392	353	126	364	348	150	128			157		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	98	99	98	93	97	99			99		
cM capacity (veh/h)	511	558	924	563	562	897	1458			1423		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	29	81	172	148
Volume Left	4	14	15	20
Volume Right	12	25	15	4
cSH	658	636	1458	1423
Volume to Capacity	0.04	0.13	0.01	0.01
Queue Length 95th (m)	1.1	3.3	0.2	0.3
Control Delay (s/veh)	10.7	11.5	0.7	1.1
Lane LOS	B	B	A	A
Approach Delay (s/veh)	10.7	11.5	0.7	1.1
Approach LOS	B	B		

Intersection Summary				
Average Delay		3.6		
Intersection Capacity Utilization		25.1%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	46	22	0	84	0	80	200	13	0	191	40
Future Volume (vph)	15	46	22	0	84	0	80	200	13	0	191	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.7	3.0	3.7	3.7	3.7	3.3	3.3	3.7	3.7	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964						0.994			0.977	
Flt Protected		0.991						0.987				
Satd. Flow (prot)	0	1799	0	0	1883	0	0	1767	0	0	1759	0
Flt Permitted		0.991						0.987				
Satd. Flow (perm)	0	1799	0	0	1883	0	0	1767	0	0	1759	0
Link Speed (k/h)		30			48			50			50	
Link Distance (m)		262.7			156.9			226.4			252.4	
Travel Time (s)		31.5			11.8			16.3			18.2	
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
Adj. Flow (vph)	15	46	22	0	84	0	80	200	13	0	191	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	84	0	0	293	0	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	0.99	1.09	0.99	0.99	0.99	1.04	1.04	0.99	0.99	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	46	22	0	84	0	80	200	13	0	191	40
Future Volume (Veh/h)	15	46	22	0	84	0	80	200	13	0	191	40
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)	15	46	22	0	84	0	80	200	13	0	191	40
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	620	584	211	623	598	207	231			213		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	620	584	211	623	598	207	231			213		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	88	97	100	79	100	94			100		
cM capacity (veh/h)	320	398	829	338	391	834	1337			1357		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	83	84	293	231
Volume Left	15	0	80	0
Volume Right	22	0	13	40
cSH	439	391	1337	1357
Volume to Capacity	0.19	0.21	0.06	0.00
Queue Length 95th (m)	5.2	6.1	1.4	0.0
Control Delay (s/veh)	15.1	16.7	2.5	0.0
Lane LOS	C	C	A	
Approach Delay (s/veh)	15.1	16.7	2.5	0.0
Approach LOS	C	C		

Intersection Summary				
Average Delay		4.9		
Intersection Capacity Utilization	49.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	36	2	0	42	15	4	40	15	11	31	19
Future Volume (vph)	21	36	2	0	42	15	4	40	15	11	31	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.0	3.0	3.0	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.964			0.966			0.958	
Flt Protected		0.983						0.997			0.991	
Satd. Flow (prot)	0	1700	0	0	1736	0	0	1734	0	0	1710	0
Flt Permitted		0.983						0.997			0.991	
Satd. Flow (perm)	0	1700	0	0	1736	0	0	1734	0	0	1710	0
Link Speed (k/h)		30			50			50			50	
Link Distance (m)		123.0			243.6			188.6			270.0	
Travel Time (s)		14.8			17.5			13.6			19.4	
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
Adj. Flow (vph)	21	36	2	0	42	15	4	40	15	11	31	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	0	0	57	0	0	59	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	36	2	0	42	15	4	40	15	11	31	19
Future Volume (Veh/h)	21	36	2	0	42	15	4	40	15	11	31	19
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)	21	36	2	0	42	15	4	40	15	11	31	19
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								338				
pX, platoon unblocked												
vC, conflicting volume	154	126	41	138	128	48	50			55		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	154	126	41	138	128	48	50			55		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	95	100	100	94	99	100			99		
cM capacity (veh/h)	761	758	1031	795	756	1022	1557			1550		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	59	57	59	61
Volume Left	21	0	4	11
Volume Right	2	15	15	19
cSH	766	811	1557	1550
Volume to Capacity	0.08	0.07	0.00*	0.00*
Queue Length 95th (m)	1.9	1.7	0.1	0.2
Control Delay (s/veh)	10.1	9.8	0.5	1.4
Lane LOS	B	A	A	A
Approach Delay (s/veh)	10.1	9.8	0.5	1.4
Approach LOS	B	A		

Intersection Summary				
Average Delay		5.4		
Intersection Capacity Utilization		22.9%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	73	0	7	87	142	7	24	7	129	15	6
Future Volume (vph)	6	73	0	7	87	142	7	24	7	129	15	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.919			0.975			0.995	
Flt Protected		0.996			0.999			0.991			0.959	
Satd. Flow (prot)	0	1793	0	0	1653	0	0	1740	0	0	1718	0
Flt Permitted		0.996			0.999			0.991			0.959	
Satd. Flow (perm)	0	1793	0	0	1653	0	0	1740	0	0	1718	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		243.6			224.2			327.4			276.2	
Travel Time (s)		17.5			16.1			23.6			19.9	
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
Adj. Flow (vph)	6	73	0	7	87	142	7	24	7	129	15	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	236	0	0	38	0	0	150	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	73	0	7	87	142	7	24	7	129	15	6
Future Volume (Veh/h)	6	73	0	7	87	142	7	24	7	129	15	6
Sign Control		Free			Free			Stop			Stop	
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)	6	73	0	7	87	142	7	24	7	129	15	6
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					224							
pX, platoon unblocked												
vC, conflicting volume	229			73			271	328	73	276	257	158
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229			73			271	328	73	276	257	158
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	96	99	80	98	99
cM capacity (veh/h)	1339			1527			661	585	989	646	641	887

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	79	236	38	150
Volume Left	6	7	7	129
Volume Right	0	142	7	6
cSH	1339	1527	648	653
Volume to Capacity	0.00*	0.00*	0.06	0.23
Queue Length 95th (m)	0.1	0.1	1.4	6.7
Control Delay (s/veh)	0.6	0.3	10.9	12.2
Lane LOS	A	A	B	B
Approach Delay (s/veh)	0.6	0.3	10.9	12.2
Approach LOS			B	B

Intersection Summary				
Average Delay		4.7		
Intersection Capacity Utilization		36.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	218	84	99	79	78	152
Future Volume (vph)	218	84	99	79	78	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962				0.911	
Flt Protected	0.965		0.950			
Satd. Flow (prot)	1672	0	1711	0	1640	0
Flt Permitted	0.965		0.950			
Satd. Flow (perm)	1672	0	1711	0	1640	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	292.6			369.5	226.4	
Travel Time (s)	21.1			26.6	16.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	218	84	99	79	78	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	302	0	99	79	230	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.3			3.3	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	218	84	99	79	78	152
Future Volume (Veh/h)	218	84	99	79	78	152
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)	218	84	99	79	78	152
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				369		
pX, platoon unblocked						
vC, conflicting volume	431	154	230			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	431	154	230			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	60	91	93			
cM capacity (veh/h)	538	892	1338			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	302	99	230
Volume Left	218	99	0
Volume Right	84	0	152
cSH	605	1338	1700
Volume to Capacity	0.50	0.07	0.14
Queue Length 95th (m)	21.2	1.8	0.0
Control Delay (s/veh)	16.7	7.9	0.0
Lane LOS	C	A	
Approach Delay (s/veh)	16.7	Err	0.0
Approach LOS	C		

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	54	65	0	56	27	18
Future Volume (vph)	54	65	0	56	27	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.3	3.3	3.3	3.3	3.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926				0.946	
Flt Protected					0.971	
Satd. Flow (prot)	1667	0	0	1801	1654	0
Flt Permitted					0.971	
Satd. Flow (perm)	1667	0	0	1801	1654	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.4			142.5	275.7	
Travel Time (s)	17.9			10.3	19.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	54	65	0	56	27	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	0	0	56	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.3	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Free	

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	54	65	0	56	27	18
Future Volume (Veh/h)	54	65	0	56	27	18
Sign Control	Stop			Stop	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	54	65	0	56	27	18
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	72	0	155	63	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	72	0	155	63	0	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	93	94	100	93	98	
cM capacity (veh/h)	805	1085	715	814	1623	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	119	56	45
Volume Left	0	0	27
Volume Right	65	0	18
cSH	937	814	1623
Volume to Capacity	0.13	0.07	0.02
Queue Length 95th (m)	3.3	1.7	0.4
Control Delay (s/veh)	9.4	9.7	4.4
Lane LOS	A	A	A
Approach Delay (s/veh)	9.4	9.7	4.4
Approach LOS	A	A	

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		