Environmental Study Report

Wyecroft Road Improvements from Bronte Road to Kerr Street

Appendix I: Traffic Analysis

Submitted to Town of Oakville
by IBI Group
January 2020

Wyecroft Road EA Improvements from Bronte Road to Kerr Street

Traffic Operations Analysis

Prepared for Town of Oakville
by IBI Group
October 25, 2019

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1 Introduction

1.1 Study Purpose

The Town of Oakville (the "Town") has retained IBI Group to undertake a Schedule 'C' Municipal Class Environmental Assessment (EA) for Wyecroft Road and portions of South Service Road West between Bronte Road and Kerr Street.

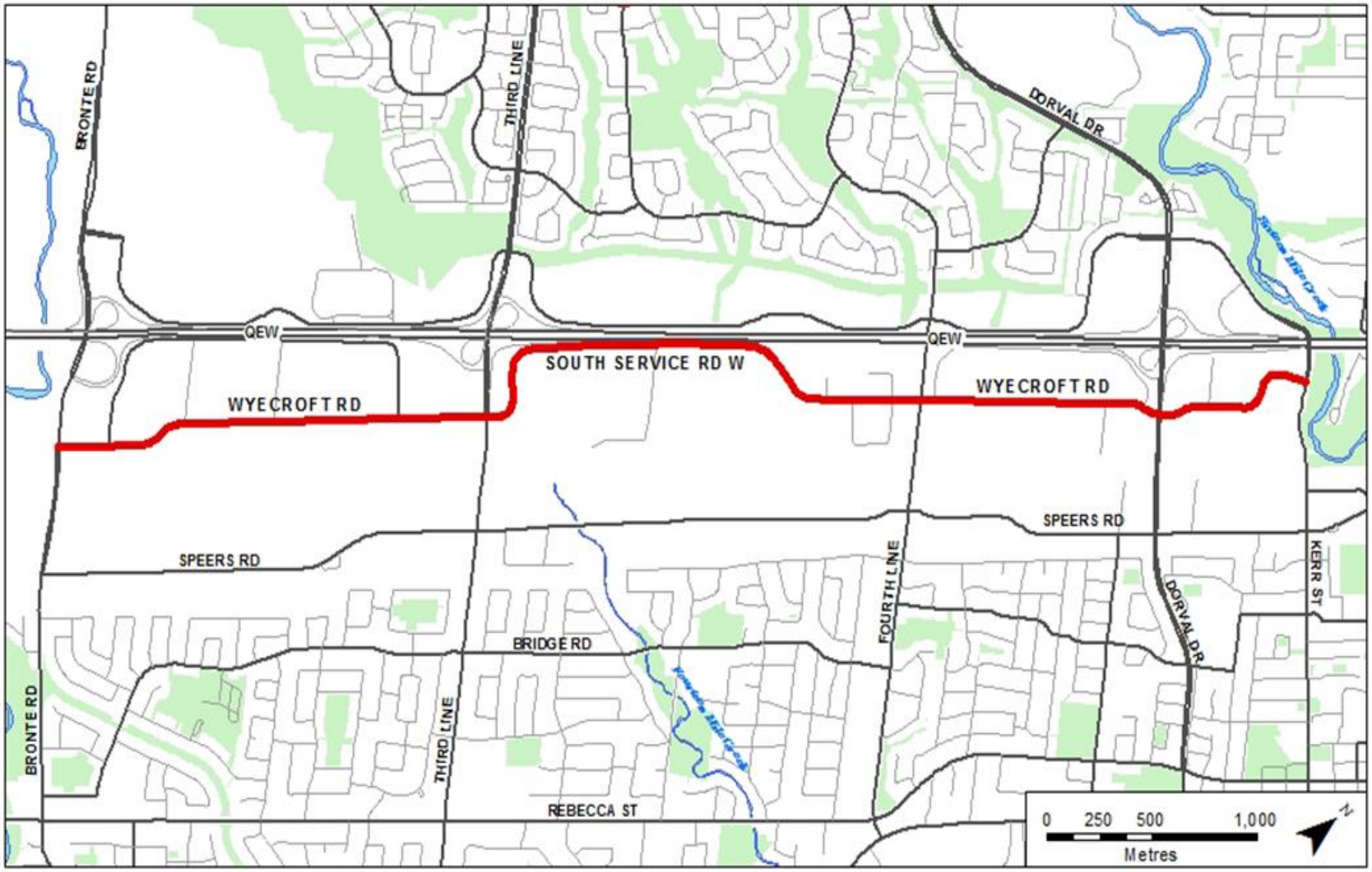
Wyecroft Road is a busy corridor that is primarily two-lanes and is intersected by Town and Regional arterials. Wyecroft Road provides access to important employment areas south of the Queen Elizabeth Way. Furthermore, the Bronte GO Station, situated in the west portion of the corridor, is identified as a Major Transit Station Area (MTSA) in the Province's Growth Plan for the Greater Golden Horseshoe (the "Growth Plan"), the Halton Official Plan and the Town's Official Plan, titled the Livable Oakville Plan. MTSAs are planned to accommodate intensification. The EA will determine appropriate improvements to meet the needs of the Town to 2041, including satisfying travel demand for all modes to and across the study area, accommodating growth, and supporting the Town's vision.

This report summarizes the traffic analysis in support of the EA and includes traffic forecasts, existing and future traffic operations, and analysis of potential improvements to be considered in the evaluation of design alternatives. The traffic safety review is provided under separate cover.

1.2 Study Area

The study area, as shown in Exhibit 1-1, extends approximately 6.4 kilometres from Bronte Road (west limit) to Kerr Street (east limit). Wyecroft Road is designated as a Multi-Purpose Arterial in the Livable Oakville Plan.

Exhibit 1-1: Study Area



2 Data Collection

2.1 Traffic Data

Turning movement counts (TMCs), speed survey data, and signal timings were provided by the Town of Oakville. The traffic counts are provided in Appendix A.

2.2 Field Investigations

Site visits were conducted on October 4 and November 7, 2018, to confirm traffic operations, safety, commercial vehicle, active transportation operations, and to identify areas for closer study. The two site visits were completed during full work weeks with favourable weather (sunny with slight rain / overcast).

The site visits consisted of in-person observations of major intersections during both the AM and PM peak hours to observe queues, delays, and traffic operations for all modes of travel, including active transportation users and heavy trucks. The field investigations also included driving through the corridor to observe conditions including unusual sight-lines, operational concerns such as whether there are significant delays associated with the frequent driveways along the corridor, and traffic operations.

Detailed traffic operation notes are provided on a segment-by-segment basis in Section 3.2 of this report. Generally, the observations confirmed that Wyecroft Road operates with delay for east and west traveling vehicles. There are also specific locations or intersections with congested operations, usually with delay experienced by the intersecting street, as further discussed in Section 3.2.

3 Existing Conditions

3.1 Study Area

3.1.1 Road Network

The following section provides an overview of Wyecroft Road and intersecting roads:

Wyecroft Road is classified as a Multi-Purpose Arterial road and has a posted speed limit of 50 km/h. The road is located in the Town of Oakville, and connects to Bronte Road, Third Line, Fourth Line and Kerr Street. Wyecroft Road primarily serves business employment and industrial uses. To the west of Bronte Road, a future extension of Wyecroft Road has been identified in the Town's Official Plan and Transportation Master Plan to connect Wyecroft Road across Bronte Creek with expected construction by 2031.

South Service Road West connects Wyecroft Road west of Third Line and east of Fourth Line. This segment is classified as a Multi-Purpose Arterial road. Outside of the section between Third Line and Fourth Line, South Service Road West connects to Wyecroft Road via intersections and is classified as a Minor Collector road. South Service Road West primarily serves business employment and industrial uses. Between Third Line and Fourth Line, South Service Road West has a posted speed limit of 60 km/h.

Bronte Road is classified as a north-south Major Arterial road under the jurisdiction of Halton Region north of Speers Road. The road connects Lakeshore Road West to Steeles Avenue West. The road also provides access to the Queen Elizabeth Way. Bronte Road has a posted speed limit of 60 km/h.

Pacific Road is a north-south local road that serves local business employment uses.

Westgate Road is a north-south local road that serves local business employment uses.

Third Line is a classified as a north-south Minor Arterial road under the jurisdiction of the Town of Oakville. The road connects Lakeshore Road West to William Halton Parkway. The road also provides access to the Queen Elizabeth Way. Third Line has a posted speed limit of 60 km/h.

Progress Court is a north-south local road that serves local business employment and industrial uses.

Cranberry Court is a north-south local road that serves local business employment uses.

Redwood Square is a north-south local road that serves local business employment and industrial uses.

Equestrian Court is a north-south local road that serves local business employment uses.

Fourth Line is classified as a north-south Minor Arterial road under the jurisdiction of the Town of Oakville. The road connects Lakeshore Road West to North Service Road West. Fourth Line has a posted speed limit of 50 km/h.

Weller Court is a north-south local road that serves local business employment and industrial uses.

Dorval Drive is classified as a north-south Major Arterial road under the jurisdiction of Halton Region. The road connects Lakeshore Road West to Upper Middle Road West. The road also provides access to the Queen Elizabeth Way. Dorval Drive has a posted speed limit of 60 km/h.

Sinclair Road is a north-south local road that serves local business employment uses.

Kerr Street is classified as a Minor Arterial road north of Wyecroft Road, and a Multi-Purpose Arterial road south of Wyecroft Road. The road connects Lakeshore Road West to North Service Road West. Kerr Street has a posted speed limit of 50 km/h.

Exhibit 3-1 and Exhibit 3-2 illustrate the existing intersection control types and lane configurations at each of the studied intersections within the study area.

Exhibit 3-1: Existing Lane Configuration – From Bronte Road to Progress Court

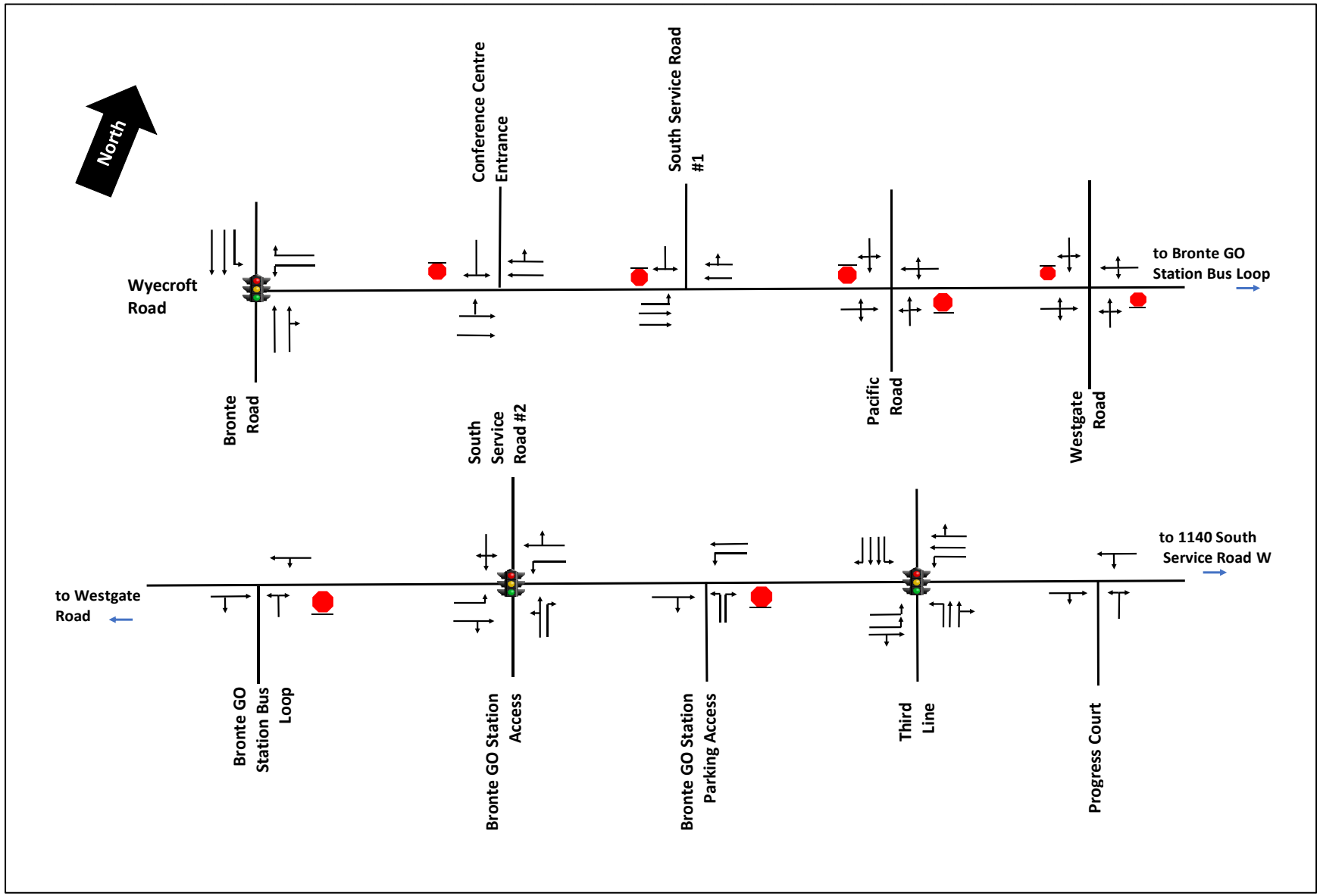
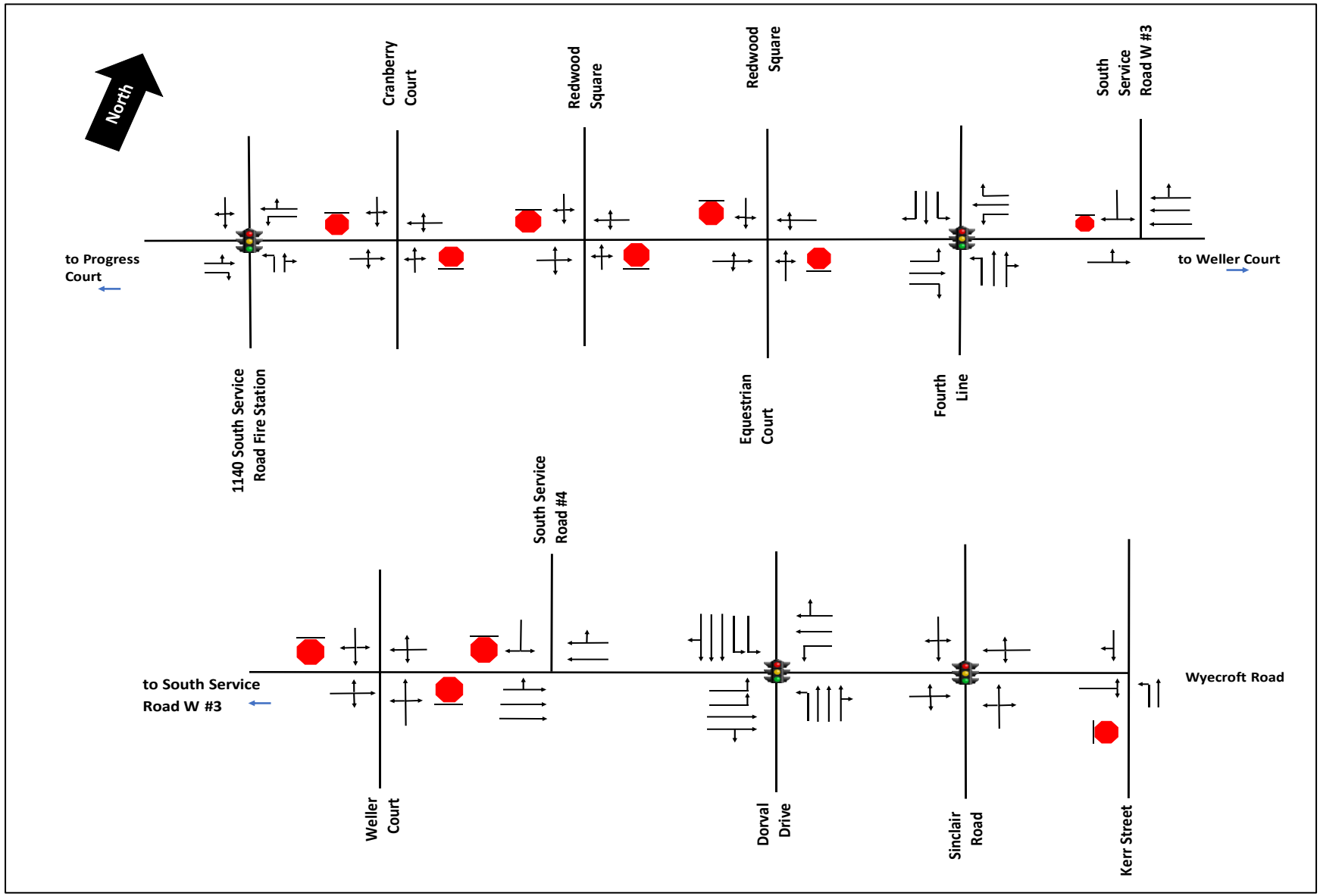


Exhibit 3-2: Existing Lane Configuration –From 1140 South Service Road to Kerr Street



3.1.2 Transit Network

The following section provides an overview of the transit services along the corridor:

Lakeshore West GO Rail runs between Hamilton and Union Station, passing through the study area at Bronte GO Station. GO Rail represents a major commuter service within the Greater Toronto and Hamilton area, while also serving recreational travel in the evenings and weekends.

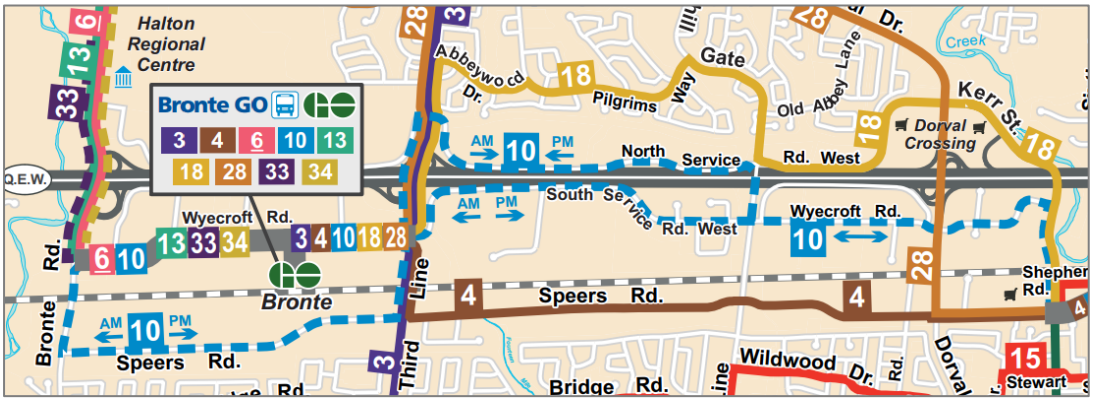
GO Bus Route 18 (Lakeshore West) runs regularly between Hamilton and Union Station, passing through the study area at Bronte GO Station.

Oakville Transit operates a number of local bus routes that pass through the study area. Routes are as listed below and shown in Exhibit 3-3:

- **Route 3 (Third Line)** runs between South Oakville Centre and Oakville Trafalgar Memorial Hospital along Third Line at 15 minute peak hour headways;
- **Route 4 (Speers – Cornwall)** runs between Bronte GO Station and Clarkson GO Station along Speers Road at 15 minute peak hour headways;
- **Route 6 (Upper Middle)** runs between Bronte GO Station and Laird & Ridgeway Station along Upper Middle Road West at 30 minute peak hour headways;
- **Route 10 (West Industrial)** connects Bronte GO Station and Oakville GO Station with industrial lands between Bronte Road and Kerr Street. The route only operates during weekday peak hour periods with 30 minute headways;
- **Route 13 (Westoak Trails)** runs between Bronte GO Station and Oakville GO Station along Westoak Trails Boulevard at 15 minute peak hour headways;
- **Route 18 (Glen Abbey South)** runs between Bronte GO Station and Oakville GO Station along the residential areas just north of the Queen Elizabeth Way at 30 minute peak hour headways;
- **Route 28 (Glen Abbey North)** runs between Bronte GO Station and Oakville GO Station along the residential areas just south of Upper Middle Road West at 30 minute peak hour headways;
- **Route 33 (Palermo)** runs between Bronte GO Station and the Colonel William & Dundas Street West intersection along Bronte Road. The route only operates during weekday peak hour periods with 30 minute headways; and,

- **Route 34 (Pine Glen)** connects Bronte GO Station with residential areas just south of Oakville Trafalgar Memorial Hospital. The route only operates during weekday peak hour periods with 45 minute headways.

Exhibit 3-3: Oakville Transit Routes in Study Area



3.2 Field Observations

Site visits were conducted to review corridor traffic operations, geometry, and the operating environment. Active transportation, goods movement, and driver behaviour, speed limits and interactions between corridor and adjacent land-use were considered in this review. The following provides a summary of observations and findings. To account for the different characteristics of Wyecroft Road, the corridor has been divided into three segments, consistent with the segments used for the separate traffic safety report.

1. Bronte Road to Third Line, characterized by two-lane undivided configuration with trucks to industrial areas and sharp peaks in traffic to and from the Bronte GO Station;
2. Third Line to Cranberry Court, characterized by a shift in alignment directly adjacent to the Queen Elizabeth Way; and,
3. Cranberry Court to Kerr Street, with accesses to industrial and commercial uses on both sides.

3.2.1 West Segment – Bronte Road to Third Line

Between Bronte Road and Third Line, east-west traffic along Wyecroft Road was operating with moderate congestion on the two observation days. Busy traffic operations were observed for north-south movements at Bronte Road and at Third Line. The following notes are included:

- Drivers generally appeared to travel above the 50 km/h posted speed limit. Collected speed survey data (see separate safety report) indicates low compliance to the posted speed limit of

50 km/h with 85th and 95th percentile speeds of 64 km/h and 70 km/h, indicating that non-compliance is a concern.

- Frequent driveways serving business employment and industrial properties are located along the corridor with no two-way left-turn (TWLT) lanes for through traffic to bypass left-turning vehicles (e.g. trucks). It was observed that opposing traffic volumes are generally low enough that turning trucks and vehicles are able to complete left-turns with minimal delay. It was also noted that the roadway along this section is wide enough to allow smaller vehicles to pass most queued turning vehicles.
- There is limited space between the eastern driveway at 2009 Wyecroft Road and the Third Line intersection (separated by 40 m). During the afternoon peak, it was observed that vehicles used the west access to avoid the eastbound left-turn queues at the Third Line intersection.
- This portion of Wyecroft Road is a signed cycling route. The cycling route is likely underutilized, as only one cyclist was observed during the initial site visit.
- There are three signalized intersections in this section, including Bronte Road, South Service Road, and Third Line. All three are equipped with pedestrian facilities.
- Traffic to and from the Bronte GO Station was observed in both peak hours. During the morning peak, the majority of traffic travelling to the Bronte GO Station was via Third Line from the north (traffic to the station from the south has an alternative parking lot located on Speers Road). As illustrated in Exhibit 3-1, most traffic used the South Service Road #2 intersection to access the parking lot. Traffic operations for entering traffic were generally good; the southbound right-turn at Third Line was observed to operate busy due to high demands.
- Similarly, during the afternoon peak, traffic leaving the Bronte GO Station to access the Queen Elizabeth Way was observed to exhibit sharp peaks for the eastbound left-turning movement to Third Line, as depicted in Exhibit 3-4. As confirmed during the two site visits, the eastbound approach frequently had 15-20 vehicles queued, indicating that additional green time should be considered. The observed eastbound queues are likely caused by arriving trains from the GO station, which causes long delays and blockages, particularly to transit vehicles leaving the station.

- Wyecroft Road widens through the Third Line intersection to provide additional capacity for the eastbound left-turn (dual left-turn lanes). In the westbound direction, the approach widens to three lanes to separate through and turning traffic.

  Few pedestrians (i.e., less than 5) were observed at Wyecroft Road at Third Line. Generally the pedestrian operations were acceptable, though the environment is somewhat unfriendly due to busy, wide roads. The low density industrial and commercial nature of the corridor means that there are few destinations within easy walking distance along this portion of Wyecroft Road.

Exhibit 3-4: South Service Road #2 intersection AM peak (top) and Third Line intersection PM peak (bottom).

3.2.2 Middle Segment – East of Third Line to Cranberry Court

In this section of the corridor, Wyecroft Road connects to South Service Road and the road alignment shifts directly south of the Queen Elizabeth Way via reverse curves just east of Third Line. Traffic appeared to operate well in the middle segment. Observations from the site visits are included below:

- The segment has posted speed limits of 60 km/h west of Progress Court and 50 km/h east to Cranberry Court. There is low compliance to the posted limit between Third Line and Progress Court with 85th and 95th percentile speeds of 77 km/h and 97 km/h.
- This portion of Wyecroft Road is a signed bike route, however, no cyclists were observed during the site visits.
- Few pedestrians were observed during the two site visits. Pedestrian volumes are low due to a lack of walkable destinations. No sidewalks are provided on Wyecroft Road for this section.

3.2.3 East Segment – Cranberry Court to Kerr Street

Traffic in the east segment generally operated well during both peak periods, with the exception of the Dorval Drive and South Service Road #4 intersections. Notes are provided below:

- Speed data indicated that there was higher speed limit compliance in the east segment compared to other segments. With a posted speed limit of 50 km/h, 85th and 95th percentile speeds were 60 km/h and 64 km/h, respectively.
- Few pedestrians were observed during site visits. Pedestrian volumes are likely low due to the low density land uses and lack of walkable destinations.
- This segment of Wyecroft Road is a signed cyclist route. No cyclists were observed during the site visits.
- There is a driveway at 1007 South Service Road West, which is located approximately 33 m west of Fourth Line (illustrated in Exhibit 3-5). The businesses served by the private driveway did not seem to generate sufficient traffic volumes for queues to form. However, the short distance between the intersection and the driveway remains a concern as there are conflicts for entering and exiting traffic.
- Just east of Fourth Line, operations at the South Service Road #3 intersection were not noted to be a problem. Queuing traffic from Fourth Line did not reach the South Service Road #3

intersection. However, if traffic queues were to extend past the intersection, there would be potential conflicts between the southbound and eastbound left-turning movements.

- The segment is predominately a two-lane road. A small portion of this segment has a centre TWLT lane (between South Service Road #3 and #4 intersections), as well as exclusive left-turn lanes at major intersections. Similar to the rest of the corridor, opposing traffic volumes are low and do not present a problem for vehicles behind the left-turning vehicles.
- There is limited space between the Dorval Drive and South Service Road #4 intersection with approximately 65 m spacing, as depicted in Exhibit 3-6. The short distance between intersections is a major concern, especially in the afternoon, where queued vehicles block traffic from exiting South Service Road.
- During the afternoon peak, it was noted that eastbound left-turn movements from Wyecroft Road onto Dorval Drive were severely congested. At some points, queues extended past Weller Crescent. The eastbound left-turn movement is limited by the curved alignment on its west approach. The site visits confirmed that some vehicles wait up to three cycles to clear the intersection. Due to the high demand and curved alignment, the inside left-turn lane tends to be underutilized, as most cars queue up on the outside left-turn lane. This utilization pattern prevents results in additional queuing and congestion.
- Observations also indicated that some vehicles attempt to bypass the eastbound left-turn lanes by travelling through the intersection, making a U-turn immediately east, then making a westbound right-turn to go north on Dorval Drive. These U-turns may contribute to the collision history at this intersection.
- At the entrance of 690-710 Dorval Drive, eastbound left-turn queues for the Dorval Drive intersection prevent safe operations for entering and egressing traffic.
  - In order to make a westbound left-turn into the entrance, drivers must find gaps in stalled traffic (eastbound left-turn queues). However, this conflicts with vehicles making eastbound through and right-turn movements at Wyecroft Road and Dorval Drive. Stalled vehicles making the westbound left-turns into the driveway also cause queues to form, however queues spilling back to Dorval Drive intersection were not observed.

- Exiting vehicles predominantly make a northbound right-turn onto Wyecroft Road and subsequently merge into the eastbound left-turn lanes to access the Queen Elizabeth Way. Drivers making left-turns out of the access typically have to wait a few minutes to manoeuvre through the stalled eastbound left-turn queues to then find available gaps in westbound traffic.

Exhibit 3-5: Fourth Line Spacing (1007 South Service Road West and South Service Road West #3 Intersection)

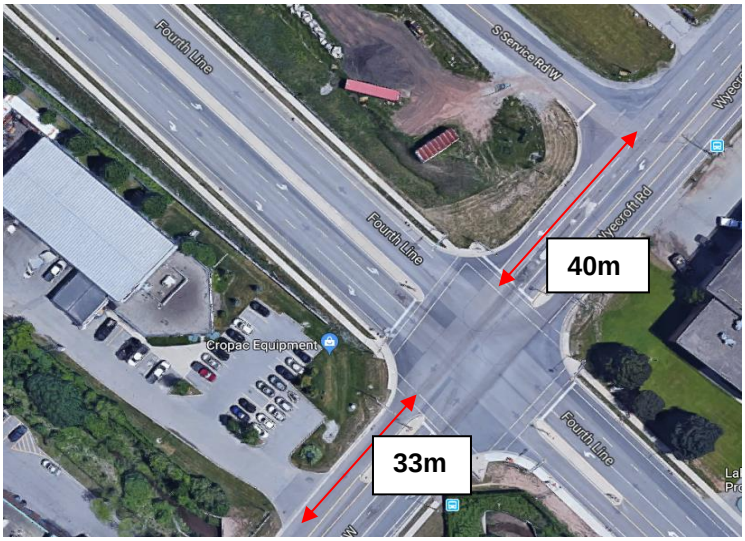
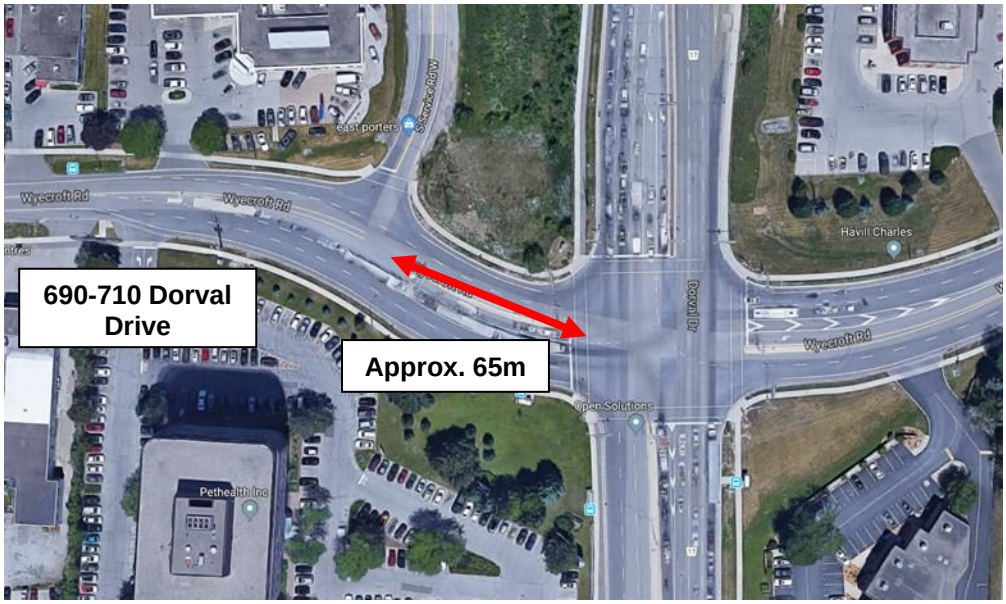


Exhibit 3-6: Wyecroft Road at Dorval Drive (West Approach)



3.3 Existing Traffic Operations

3.3.1 Traffic Analysis Approach

The traffic analysis was conducted using Synchro (version 9) following Highway Capacity Manual (HCM 2000) methodologies of intersection analysis. Analysis periods were limited to the weekday AM and PM peak hours, when traffic volumes along the corridor are highest.

All critical traffic movements identified through the Synchro analysis are outlined and discussed in the succeeding sections, as per the following conditions from Halton Region TIS guidelines:

- For signalized intersections,
  - Volume/capacity (V/C) ratios for movements greater than 0.85; or,
  - Queues for an individual movement are projected to exceed available turning lane storage.
- For unsignalized intersections,
  - Level of service (LOS), based on average delay per vehicle, on individual movements that exceed LOS “D”; or,
  - The estimated 95th percentile queue length for an individual movement that exceeds the available queue storage.

Level of service is a measure of performance based on the control delay, as defined in Exhibit 3-7.

Exhibit 3-7: Intersection LOS Reference

HCM LOS	CONTROL DELAY PER VEHICLE (S)	
	Signalized	Unsignalized
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

3.3.2 Synchro Model Calibration

The Synchro traffic models were calibrated to better reflect measured field conditions. The calibration was accomplished by adjusting the parameters detailed below. Additional local adjustments were made as described in Section 4.

The models “lane utilization factor” (LUF) was altered when calibrating through-movements. This parameter is used to dictate the distribution of traffic across the available lanes, with a value of ‘1.0’ representing a uniform distribution across all lanes (of the corresponding movement).

During non-congested periods, typical driver behaviour tends to have traffic being skewed towards the lanes located further towards the right-hand side of the road. However, in oversaturated conditions, drivers are more likely to fill any available gaps in the traffic stream, and so vehicles often are distributed more evenly across all available lanes.

In the existing models, the LUF was adjusted to a value of ‘1.0’ for all through-movements initially identified as having a v/c ratio greater than ‘1.0’. These adjustments were also carried forward to those same movements in the future models (for the same peak period). Additionally, since this type of driver behaviour is fairly predictable, the same LUF adjustment was also made to any “new” through-movements identified in the future models as having a v/c ratio > ‘1.0’.

Another calibration tool was Lost Time Adjustment (LTA), which was altered when calibrating left-turn movements. Adjusting this parameter to a negative value in effect increases the amount of time available for traffic to clear the intersection during the amber and/or all-red signal phases after the green phase.

During oversaturated conditions, where queues are excessively long and/or there are limited gaps available in the opposing traffic to make left-turns, drivers are typically more aggressive during the amber/all-red phases.

In the existing models, the LTA was changed to a value of '-2' for all movements identified as being well over capacity – defined as having a v/c ratio greater than '1.2' – so to better match observed conditions.

All changes to the LTA made in the existing models were carried forward to those same movements in the future models (for the same peak period). However, no additional LTA changes were made to "new" left-turn movements identified in the future models (that did not already exist in the existing model) as having v/c ratio greater than '1.2'.

Additionally, commuters that are frustrated by traffic conditions on the Queen Elizabeth Way may use Wyecroft Road to avoid congestion, and are more likely to display aggressive driving behaviour. This could be a factor influencing more aggressive driving during amber/all-red phases throughout the corridor.

3.3.3 2018 Traffic Operations

Traffic volume data and current signal timing plans were provided by the Town of Oakville. Analysis was conducted for weekday AM and PM peak hour conditions. Existing traffic volumes are illustrated in Exhibit 3-8 and Exhibit 3-9.

A summary of critical movements identified in the existing conditions analysis follows in Exhibit 3-10 for the AM peak, and Exhibit 3-11 for the PM peak. Detailed Synchro results are provided in Appendix B.

Exhibit 3-8: Existing (2018) Traffic Volumes – From Bronte Road to Progress Court

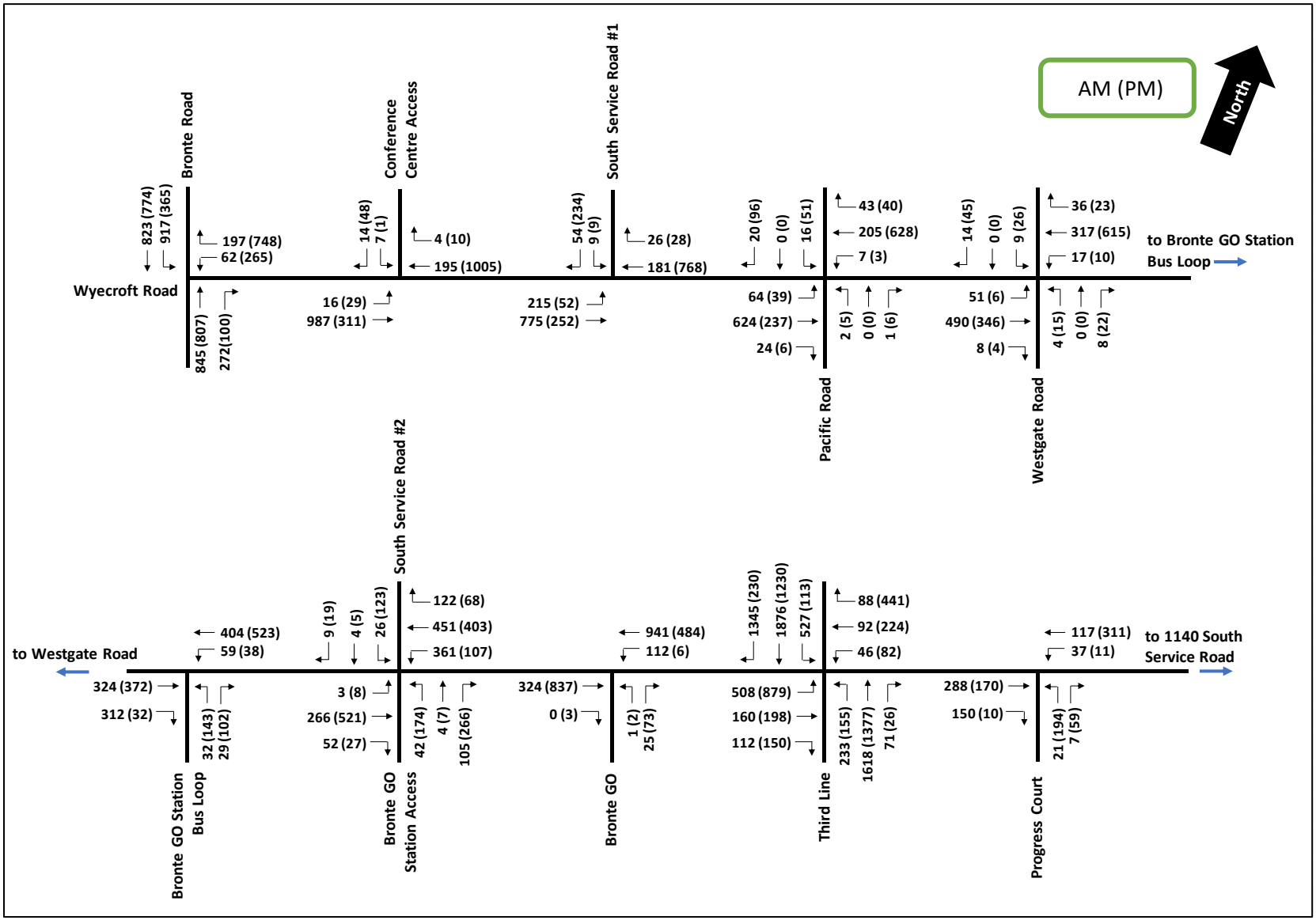
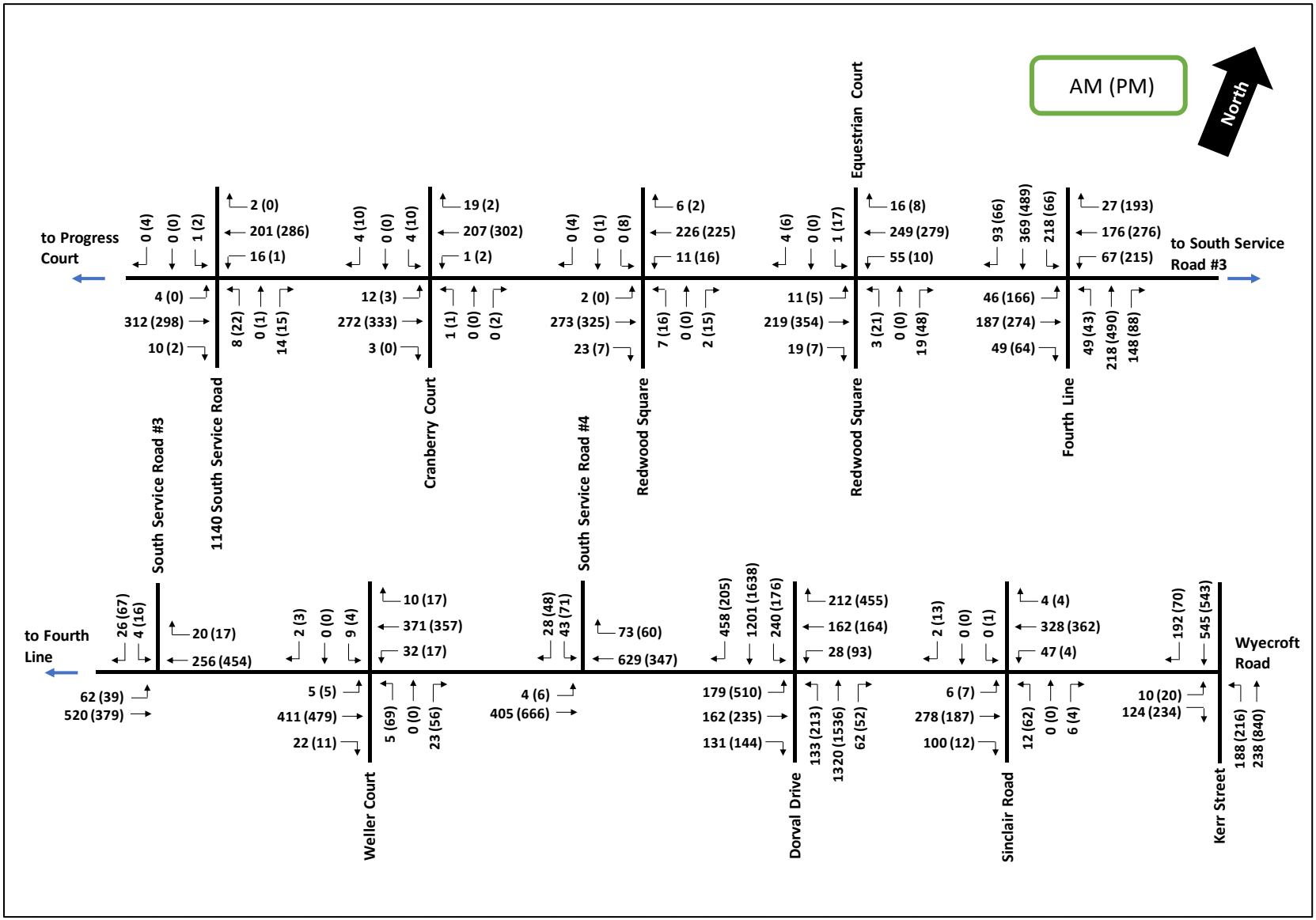


Exhibit 3-9: Existing (2018) Traffic Volumes – From 1140 South Service Road to Kerr Street



AM Peak

As shown in Exhibit 3-10, the overall corridor operates with slight congestion during the AM peak period. The Bronte Road and Third Line intersections have multiple critical movements in the AM Peak hour (v/c > 0.85).

The Bronte Road intersection has two critical movements: northbound through and southbound left-turn. Both these movements are operating near-capacity (v/c = 0.96 & 0.97). The site visit generally confirmed that the north-south operations at this intersection were operating at or near capacity.

The Third Line intersection required additional calibration of the Synchro model to reflect observed conditions. The initial Synchro results found that existing traffic operations were far above capacity, with v/c ratios for northbound traffic in the AM period greater than 1.30. During site visits, it was observed that most vehicles are able to travel through the intersection on a single cycle, indicating operations better than the initial Synchro results.

To calibrate the model to the observed conditions, the ideal flow rate for the northbound through movement was increased to 2100 vehicles per hour (vph) from the default 1900 vph value. In addition to the calibration methods discussed in Section 3.3.2, the type of phasing for the signal timing was changed to ‘split phasing’. This type of phasing represents an assignment of right-of-way to all movements of a particular approach, followed by all the movements of the opposing approach. This allows better management of the eastbound and westbound traffic demands, as there are higher left-turn volumes than through volumes.

With the additional calibration, the v/c ratios for the Third Line intersection are near to or slightly over capacity, as shown in Exhibit 3-10. This indicates the intersection has little to no residual capacity to accommodate future traffic growth.

Exhibit 3-10: Existing (2018) – Critical Movements (AM Peak)

Wyecroft Road Intersection	Intersection LOS	Critical Movement				
		Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Bronte Road (signalized)	D	NBT	E	60	0.96	154
		SBL	D	48	0.97	335
Conference Centre Access (unsignalized)	-	(No critical movements)				
South Service Road #1 (unsignalized)	-	(No critical movements)				
Pacific Road (unsignalized)	-	(No critical movements)				
Westgate Road (unsignalized)	-	(No critical movements)				
Bronte GO Station Bus Loop (unsignalized)	-	(No critical movements)				
South Service Road #2 (signalized)	A	(No critical movements)				
Bronte GO Station Parking Access (unsignalized)	-	(No critical movements)				
Third Line* (signalized)	F	EBL	F	81	0.96	92
		EBT	E	80	0.90	104
		NBL	F	94	1.00	86
		NBT	E	79	1.06	251
		SBL	F	98	1.07	180
		SBT	D	37	0.93	234
		SBR	E	80	1.11	401
Progress Court (unsignalized)	-	(No critical movements)				
1140 South Service Road / Fire Station Access (signalized)	A	(No critical movements)				
Cranberry Court (unsignalized)	-	(No critical movements)				
Redwood Square (unsignalized)	-	(No critical movements)				
Equestrian Court/Redwood Square (unsignalized)	-	(No critical movements)				
Fourth Line (signalized)	C	(No critical movements)				
South Service Road #3 (unsignalized)	-	(No critical movements)				
Weller Court (unsignalized)	-	(No critical movements)				
South Service Road #4 (unsignalized)	-	(No critical movements)				
Dorval Drive (signalized)	C	(No critical movements)				
Sinclair Road (signalized)	A	(No critical movements)				
Kerr Street (unsignalized)	-	(No critical movements)				

**Traffic operations reported are following additional calibration effort described in the report.*

PM Peak

As shown in Exhibit 3-11, the overall corridor operates with slight congestion during the PM peak period. Three signalized intersections have critical movements (v/c > 0.85). There are unsignalized intersections where some movements experience longer delays (LOS 'D' or greater) though the v/c ratios are below critical levels (less than 0.85).

At the Bronte Road intersection, the westbound right-turn movement reaches the critical threshold with v/c ratio of 0.89. During the two site visits, queues at the downstream intersection (Queen Elizabeth Way on-ramp, northbound right-turns) frequently extended south to the Wyecroft Road intersection and further obstructing flow for the westbound right-turn.

With the additional model calibration of the Third Line intersection, described for the AM Peak, the v/c ratios show the eastbound left-turn is at capacity (v/c = 1.00), and other movements have v/c ratios below 1.0. Similar to the AM peak, this indicates the intersection has little to no residual capacity and where geometric improvements should be considered.

The Dorval Drive intersection has two critical movements in the PM peak, the eastbound left-turn and the southbound through. During site visits, most movements were operating acceptably, except for the eastbound left-turn. Eastbound left-turn queues may conflict with vehicles turning left into the driveway at 690-710 Dorval Drive, creating congestion in the westbound direction. Further details are provided in Section 3.2.3.

Exhibit 3-11: Existing (2018) – Critical Movements (PM Peak)

Wyecroft Road Intersection	Intersection LOS	Critical Movement				
		Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Bronte Road (signalized)	C	WBR	D	39	0.89	170
Conference Centre Access (unsignalized)	-	(No critical movements)				
South Service Road #1 (unsignalized)	-	SB	E	41	0.74	43
Pacific Road (unsignalized)	-	(No critical movements)				
Westgate Road (unsignalized)	-	(No critical movements)				
Bronte GO Station Bus Loop (unsignalized)	-	NB	D	28	0.58	25
South Service Road #2 (signalized)	B	(No critical movements)				
Bronte GO Station Parking Access (unsignalized)	-	(No critical movements)				
Third Line* (signalized)	E	EBL	E	77	1.00	145
		WBT	E	71	0.85	90
		WBR	E	71	0.92	117
		NBT	D	46	0.92	203
		SBT	D	40	0.85	162
Progress Court (unsignalized)	-	(No critical movements)				
1140 South Service Road / Fire Station Access (signalized)	A	(No critical movements)				
Cranberry Court (signalized)	-	(No critical movements)				
Redwood Square (unsignalized)	-	(No critical movements)				
Equestrian Court/Redwood Square (unsignalized)	-	(No critical movements)				
Fourth Line (signalized)	C	(No critical movements)				
South Service Road #3 (unsignalized)	-	(No critical movements)				
Weller Court (unsignalized)	-	NB	D	29	0.49	19
South Service Road #4 (unsignalized)	-	(No critical movements)				
Dorval Drive (signalized)	D	EBL	F	99	1.02	95
		SBT	E	60	0.99	173
Sinclair Road (signalized)	A	(No critical movements)				
Kerr Street (unsignalized)	-	EB	F	51	0.81	51

**Traffic operations reported are following additional calibration effort described in the report.*

3.4 Summary of Existing Traffic Operations and Field Observations

Wyecroft Road and South Service Road West currently operate with some congestion for traffic during peak periods. East and west through movements along the corridor operate with acceptable levels-of-service with the exception of Bronte Road and Third Line, where turning movements are approaching capacity. North-south intersecting roads tend to have longer delays, with traffic demand near capacity at the intersections of Third Line, Bronte Road, and Dorval Drive.

While existing traffic operations are generally acceptable along Wyecroft Road and South Service Road West, the analysis identified the following issues for consideration:

- At the Bronte Road intersection, turning movements are near capacity, limiting potential to accommodate development-related traffic growth. Queues from the Queen Elizabeth Way on-ramp intersection on Bronte Road have the potential to extend to the intersection with Wyecroft Road.
- Around the Bronte GO Station, traffic operations are characterized by sharp peaks in traffic volumes related to train arrivals and departures.
- At the Third Line intersection, long queues form for the southbound right-turn in the AM peak hour. In the PM peak hour, the opposite movement of eastbound left-turn has higher demands.
- Along Wyecroft Road between Bronte Road and Third Line, there is a high frequency of driveways. Provision of a two-way left-turn lane is evaluated in Section 5.
- The intersection with South Service Road #4 is close to the intersection of Dorval Drive. Queues for the eastbound left-turn extend past this intersection, adding to congestion and creating safety concerns. The driveway at 690-710 Dorval Drive adds conflict points with westbound left-turning traffic adding to congestion and safety concerns.
- Speeding is a concern, with 85th percentile speeds generally more than 10 km/h above the posted speed limit. Speed mitigation is assessed further in the traffic safety review, provided as a separate Appendix to the Environmental Study Report.

Existing traffic operations and the specific findings above were considered during the development and evaluation of alternatives.

4 Traffic Forecasts

To determine the future need for improvements and lane capacity requirements, volumes were projected for 2031 and 2041 conditions. Truck percentages and pedestrian volumes were carried forward from existing conditions.

4.1 Future Projects

Two major infrastructure projects are planned to be completed in the study area by 2041. Both projects will increase traffic volumes along the Wyecroft Road corridor, particularly at the west end. The two projects are described in the next sections:

4.1.1 Wyecroft Road Extension

A new four-lane, east-west urban roadway (Multi-Purpose Arterial) over Bronte Creek is planned to connect the intersection of Harvester Road and Burloak Drive to Wyecroft Road at Bronte Road. The extension is expected to be constructed by 2031, and was included in the 2031 analysis and the 2041 sensitivity analysis.

Trip generation for this new connection was based on forecasts from the 2011 addendum to the 1994 ESR. Link volumes were extracted for the PM peak and projected using a 0.5% growth rate to horizon years 2031 and 2041. The generated PM peak volumes used for this study are 1038 and 1092 trips for years 2031 and 2041, respectively. In the absence of AM peak hour link volumes, a 70% split was applied to the PM peak volume.

The lane configuration for the intersection of Wyecroft Road and Bronte Road was assumed to include:

- North leg: two SBL, two SBT, dedicated SBR;
- East leg: one WBL, two WBT, dedicated WBR;
- South leg: one NBL, two NBT, dedicated NBR; and,
- West leg: two EBL, two EBT, dedicated EBR.

These lane configurations will be confirmed by Halton Region and Ministry of Transportation Ontario during the detailed design phase of the Wyecroft Road extension.

4.1.2 Bronte GO Major Transit Station Area (MTSA)

Intensification surrounding Bronte GO Station is planned as part of the MTSA requirements of the Growth Plan. Regional and municipal official plan amendments will be required to direct the planned intensification. For the purpose of this study, the MTSA is assumed to be 50% developed by 2031 and fully developed by 2041. This is based on a review of existing land uses and development applications and has been approved by the Town.

Trip Generation for Bronte GO MTSA

To estimate the number of inbound and outbound trips generated for the AM and PM peaks, average hourly trip generation rates were calculated based on Transportation Tomorrow Survey (TTS) 2016 data. These rates are summarized in Exhibit 4-1. Residential trip generation rates were calculated using home-based trips destined to and originating from Oakville and divided by the Town's population. Meanwhile, employment trip rates were calculated using work-based trips destined to and originating from Oakville and divided by the number of jobs in Oakville (89,149 – value taken from *Region's 2017 Employment Survey Results Report*).

Exhibit 4-1: TTS Trip Generation Rates for Bronte GO MTSA

Type	Units	AM PEAK		PM Peak	
		Trip Rate	Inbound / Outbound	Trip Rate	Inbound / Outbound
Employment	Auto-trips / job	0.48	79% / 21%	0.45	25% / 75%
Residential	Auto-trips / resident	0.18	11% / 89%	0.15	82% / 18%

Source: Region of Halton's Employment Survey Results (2017)

Development potential and assumptions used for the Bronte GO MTSA were discussed with the Town of Oakville. Town staff has confirmed the Bronte GO MTSA as being a 500 m radius surrounding the GO station, which reflects the Growth Plan. The area includes full properties within or intersecting the boundary, as illustrated in Exhibit 4-5. The MTSA area is also divided by a rail corridor. As such, all traffic generated by the north side is assumed to be captured along Wyecroft Road. Similarly, all traffic generated by the south side is assumed to be captured along Speers Road.

Existing and future land uses, along with employment and residential densities obtained from the Town, are summarized in Exhibit 4-2. The densities reflect a minimum density of 150 residents and jobs combined per hectare, as directed to be accommodated by the Growth Plan. For the purpose of this study, it was assumed that 40% of intensification would be jobs (employment), and 60% would be residents (residential). These values were used to calculate the number of jobs and residents introduced north of the rail corridor – 1,911 (60 x 47.85 - 960) jobs and 4,307 (90 x 47.85) residents.

Generated trips for Wyecroft Road were then calculated and adjusted to account for "internal trips." This 10% reduction rate reflects trips that are contained entirely within the development area and have less of an impact on the surrounding road network. In addition, due to the development's proximity to a major rail corridor station (i.e. Bronte GO station) coupled with current active transportation (walking & cycling) work as part of this EA, a strong sustainable modal adjustment of a 30% reduction was also applied. A summary of the total generated trips for Wyecroft Road is summarized in Exhibit 4-3.

Exhibit 4-2: Land Areas and Employment Densities

LAND AREA / EMPLOYMENT DENSITY	VALUE	UNITS
Land Area of parcels that intersect or fall within the 500 m boundary, north of rail corridor – public land removed	47.85	ha
Land Area of 500 m boundary – public lands removed	60.29	ha
Land Area of 500 m boundary, north of rail corridor – public lands removed	32.73	ha
Land Area of 500 m boundary, south of rail corridor – public lands removed	27.56	ha
Existing number of jobs, north of rail corridor	960	jobs
Future Employment Density	60	jobs / ha
Future Resident Density	90	residents / ha

Exhibit 4-3: Trip Generation Summary for Bronte GO MTSA, North of Rail Corridor (along Wyecroft Road)

LAND USE	UNITS / ADJUSTMENTS	AM PEAK			PM PEAK		
		In	Out	Total	In	Out	Total
Employment (# of new jobs = 1,911)	*Trip Rates*	*0.38*	*0.10*	*0.48*	*0.11*	*0.34*	*0.45*
	%	*79%*	*21%*	*100%*	*25%*	*75%*	*100%*
	Gross Trips	725	193	917	215	645	860
	Internal Trips (10%)	-73	-19	-92	-22	-65	-86
	Sustainable Modal (30%)	-218	-58	-275	-65	-194	-258
Subtotal of Employment Trips:		434	116	550	128	386	516
Residential (# of new residents = 4,307)	*Trip Rates*	*0.02*	*0.16*	*0.18*	*0.12*	*0.03*	*0.15*
	%	*11%*	*89%*	*100%*	*82%*	*18%*	*100%*
	Gross Trips	85	690	775	530	116	646
	Internal Trips (10%)	-9	-69	-78	-53	-12	-65
	Sustainable Modal (30%)	-26	-207	-233	-159	-35	-194
Subtotal of Residential Trips		50	414	464	318	69	387
2031 Total Generated Trips (50% of 2041 Generated Trips)		***243***	***265***	***508***	***224***	***229***	***452***
2041 Total Generated Trips		***486***	***530***	***1015***	***447***	***457***	***904***

**Assumes Bronte GO MTSA as being 50% developed by 2031*
***Trip rates from Exhibit 4-1*

To estimate generated trips south of the rail corridor, several assumptions and factors were used and are outlined below:

- 84% of the total generated trips for the north side was used for the south, as the south side is approximately 84% (27.56 ha / 32.73 ha) of the size of the Wyecroft development area;

- Using TTS data and existing travel patterns (i.e. TMCs), 40% of generated trips are distributed to/from the north side via Third Line for both peak periods, thereby affecting northbound through and southbound through at Wyecroft Road and Third Line; and,
- Using TTS data and existing travel patterns (i.e. TMCs), 13% of generated trips are distributed to/from the north side via Bronte Road for both peak periods, thereby affecting northbound through and southbound through at Wyecroft Road and Bronte Road.

Total generated trips for south of the rail corridor are summarized below in Exhibit 4-4.

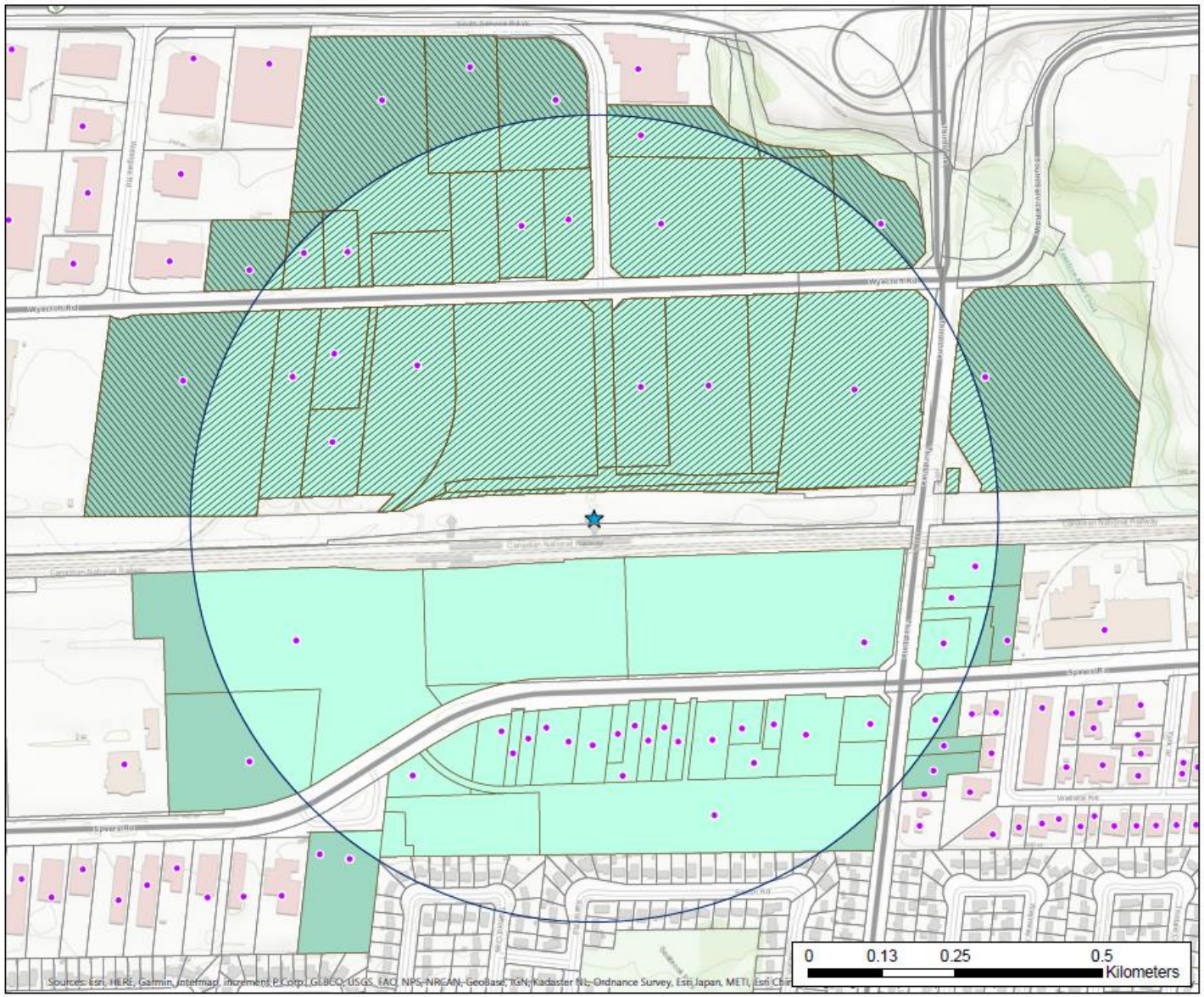
Exhibit 4-4: Trip Generation Summary for Bronte GO MTSA, South of Rail Corridor (along Speers Road)

INTERSECTION	Movement (In/Out)	AM PEAK	PM PEAK
Wyecroft Road & Bronte Road	NBT (Out)	59	51
	SBT (In)	54	49
Wyecroft Road & Third Line	NBT (Out)	176	152
	SBT (In)	161	148
2031 Total Generated Trips – 50%	-	***225***	***200***
2041 Total Generated Trips – 100%	-	***450***	***400***

**Assumes Bronte GO MTSA as being 50% developed by 2031*

Note that a 2041 sensitivity analysis with full development of the MTSA was completed and is described in Section 6.

Exhibit 4-5: Bronte GO MTSA



OAKVILLE

Bronte GO
Major Transit Station Area

- Halton Businesses
- 1 - 500m Boundary
- 2a - Parcels, 500m Clip, No Public
- 2b - Parcels, 500m Clip, No Public, North
- 3a - Parcels, No Public
- 3b - Parcels, No Public, North

Refer to the associated Excel sheet for a clearer explanation of the land areas

November 2018

Strategic Business Services
Community Development Commission

S:\DEPARTME\SBS\Kelly L_Service Requests
\2000-2500 (Sept 2018 to _)
\REQ2185_Bronte GO Part 3

4.2 Background Growth

To estimate future background growth (i.e. growth not accounted for from the Wyecroft Road Extension and the Bronte GO MTSA), a 0.8% compound annual growth was applied to existing volumes. This corresponds to a growth of approximately 11% and 20% to year 2031 and 2041, respectively.

This rate was established through a background review of the study area:

- Region of Halton's *Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2011-2031* – employment growth rate of 0.8% per year; and,
- Town of Oakville's *Transportation Master Plan 2011-2031* PM Peak Hour EMME Model (Scenario D) – screenline analysis of eastbound and westbound volumes yields a 0.1% annual traffic growth.

Although the EMME model results show relatively low traffic growth along Wyecroft Road, it was observed that growth at major intersections is more consistent with the 0.8% employment growth rate. As such, the 0.8% rate was carried forward.

This rate was applied to all 'major' movements, which is defined as either through movements along arterial roads or turning movements between two arterial roads. The growth rate was not applied to any movements to and from intersecting local development roads, as the connecting developments are assumed to be fully developed and should not see a significant increase in pass-through traffic.

4.3 Traffic Distribution

4.3.1 Wyecroft Road Extension

Wyecroft Road Extension traffic was distributed based on local conditions and potential travel routes of the area. The general direction of origin and destination for inbound and outbound trips was assumed to be that indicated in Exhibit 4-6.

Inbound and outbound traffic for the extension was distributed more heavily north of Bronte Road. This represents commuting behaviour from the industrial and commercial properties west of Bronte Road accessing Queen Elizabeth Way. Furthermore, drivers would likely use the extension as a cut-through road to bypass the Queen Elizabeth Way during congested conditions. To represent this, a portion of traffic was distributed east of Third Line and carried out to other major arterials and local roads. Trips were then carried through the rest of the road network and affected intersection movements based on shortest path.

Exhibit 4-6: General Distribution of Trips for Wyecroft Road Extension

ORIGIN / DESTINATION	INBOUND DISTRIBUTION	OUTBOUND DISTRIBUTION
To/From North: Bronte Road	60%	60%
To/From South: Bronte Road	10%	10%
To/From South: South Service Road #2 (Bronte GO Station)	10%	10%
To/From North: Third Line	5%	5%
To/From South: Third Line	5%	5%
To/From East: Third Line	10%	10%

4.3.2 Bronte GO MTSA

Bronte GO MTSA traffic was distributed using TTS data and adjusted considering local conditions and travel routes (i.e. TMC) of the area. The survey data used was queried to determine the municipality of origin for trips to the Bronte GO MTSA, and conversely the municipality of destination for trips leaving the Bronte GO MTSA. Under these considerations, general direction of origin and destination for inbound and outbound trips was assumed to be as indicated in Exhibit 4-7 .

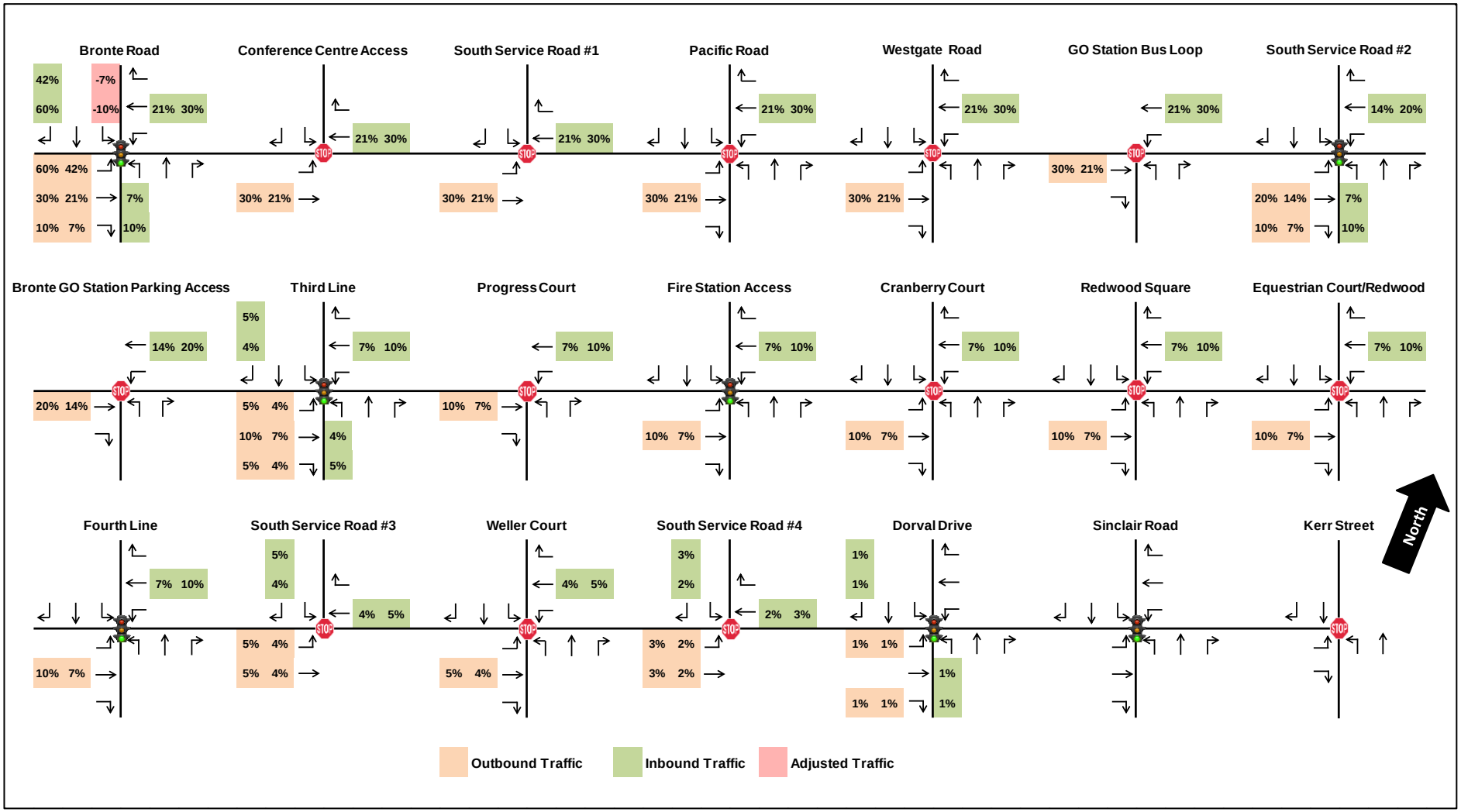
Exhibit 4-7: General Distribution of Trips for Bronte GO MTSA

ORIGIN / DESTINATION	INBOUND DISTRIBUTION	OUTBOUND DISTRIBUTION
To/From North: Bronte Road	40%	40%
To/From South: Bronte Road	5%	5%
To/From North: Third Line	50%	50%
To/From South: Third Line	5%	5%

Inbound and outbound traffic for the development in the MTSA was distributed more heavily to the north for both Bronte Road and Third Line to reflect commuters going to and from the Queen Elizabeth Way. Similarly, traffic generated for the Speers Road-side of the Bronte GO MTSA was added to northbound and southbound through movements for both Bronte Road and Third Line.

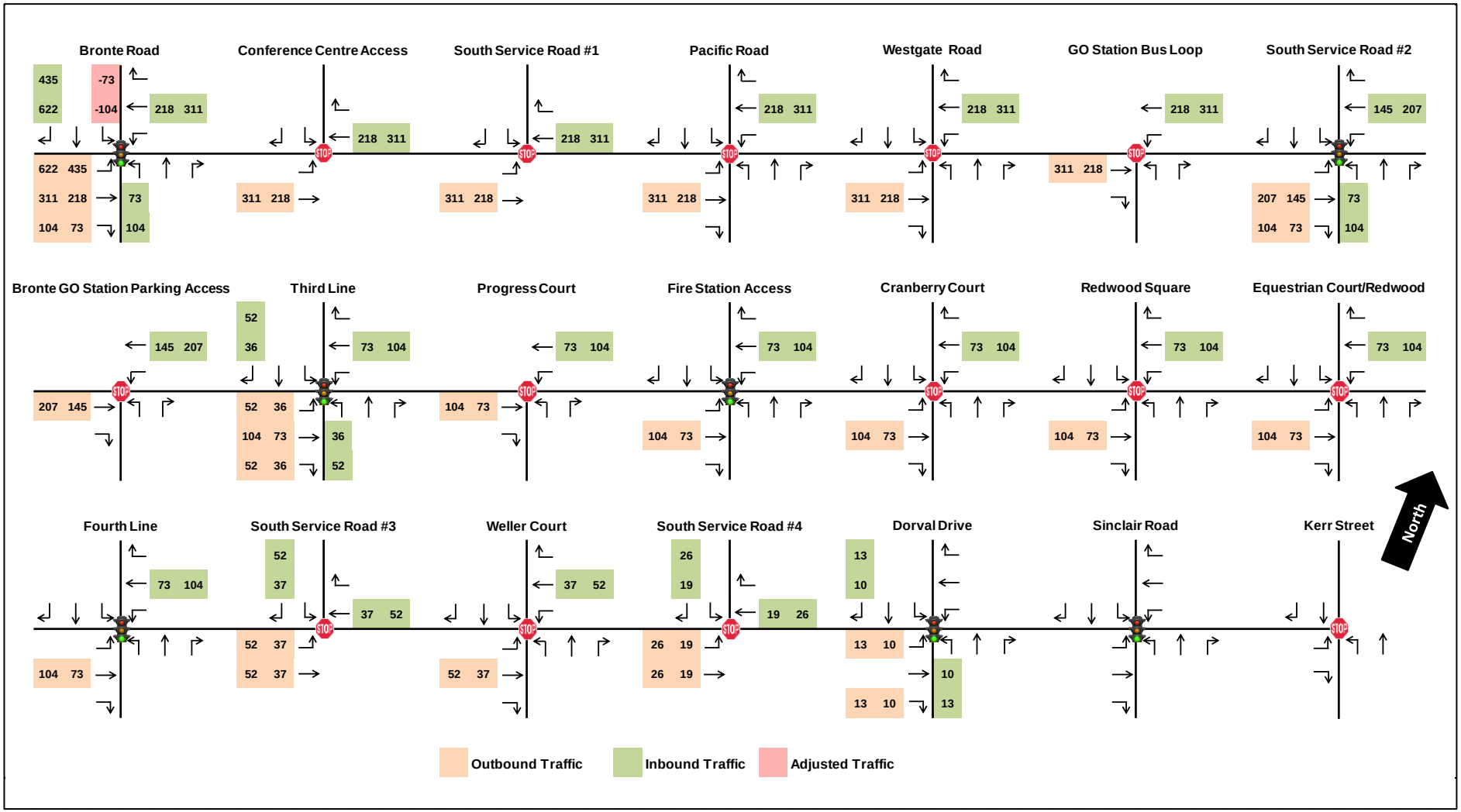
Based on the 500 metre radius from the Bronte GO Station, the area between Westgate Road and the GO Station Bus Loop is being studied as part of the Bronte GO MTSA for potential future development. Inbound trips will pass through the two intersections and end. Conversely, outbound trips will begin between these two intersections and then exit the study area. Trips were carried through the rest of the road network and affected intersection movements based on shortest path.

Exhibit 4-8: Trip Distribution for Wyecroft Road Extension



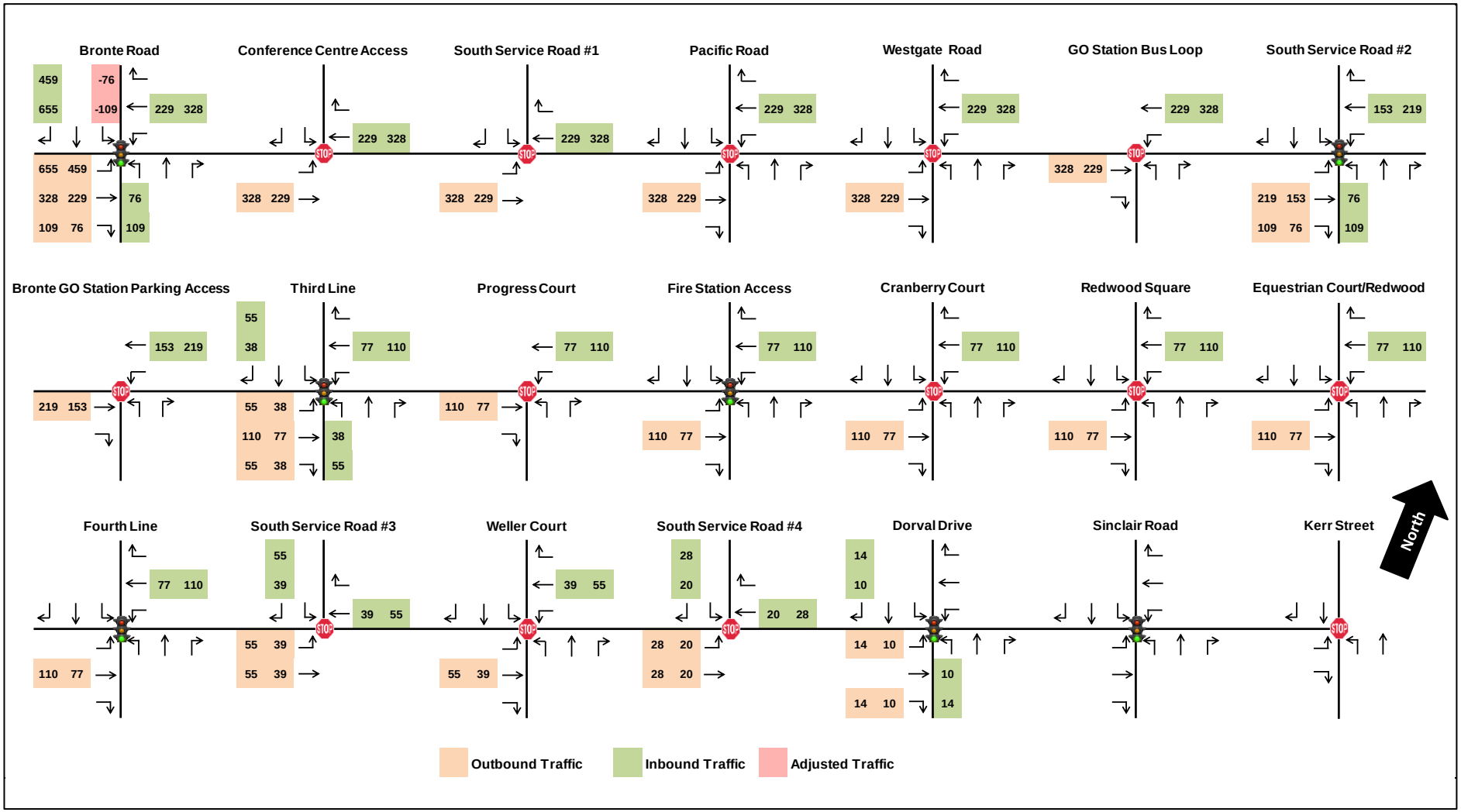
Note: No trips distributed east of Dorval Drive.

Exhibit 4-9: Added Site Traffic Generated for Wyecroft Road Extension (2031)



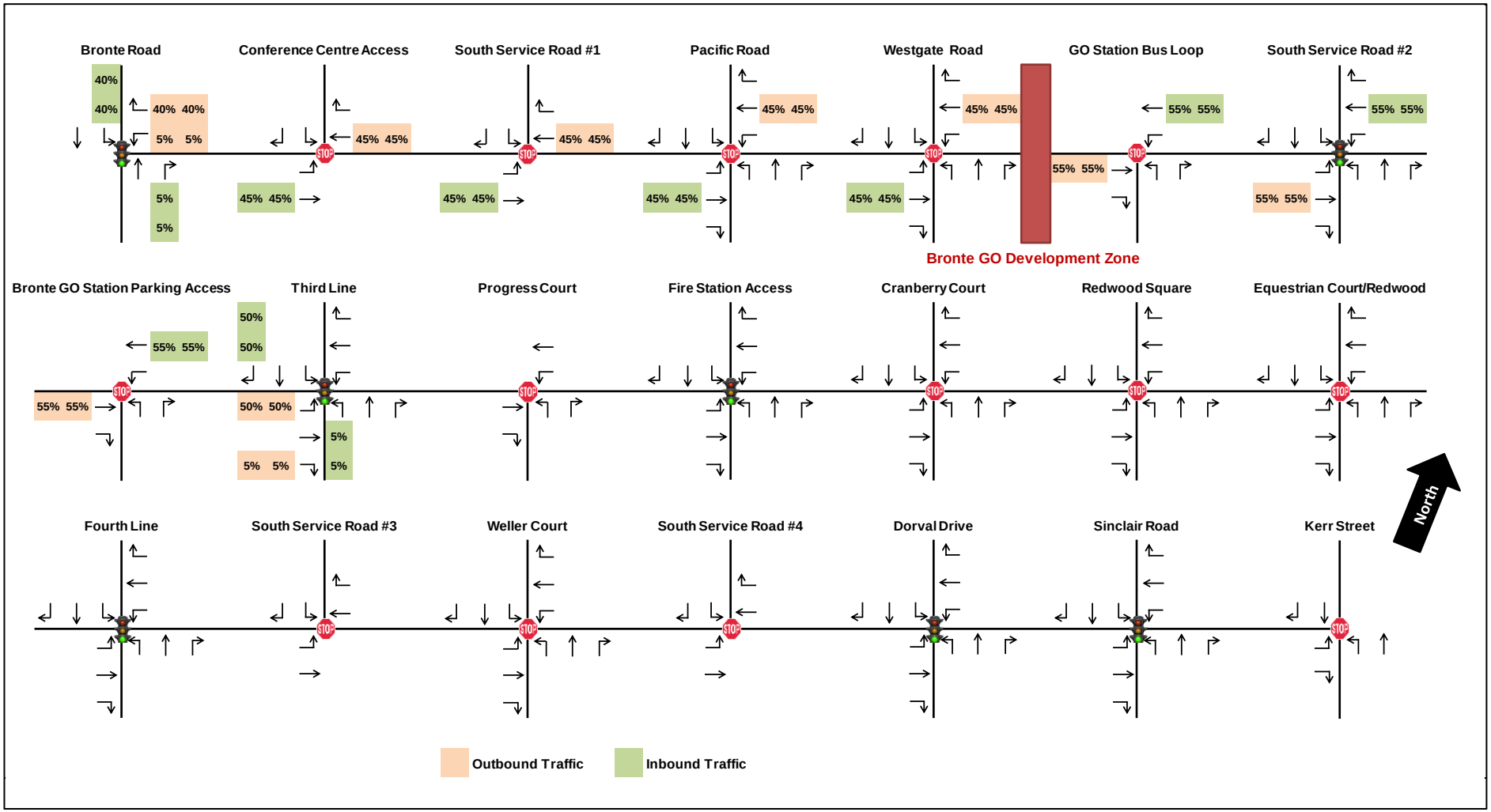
Note: No trips distributed east of Dorval Drive.

Exhibit 4-10: Added Site Traffic Generated for Wyecroft Road Extension (2041)



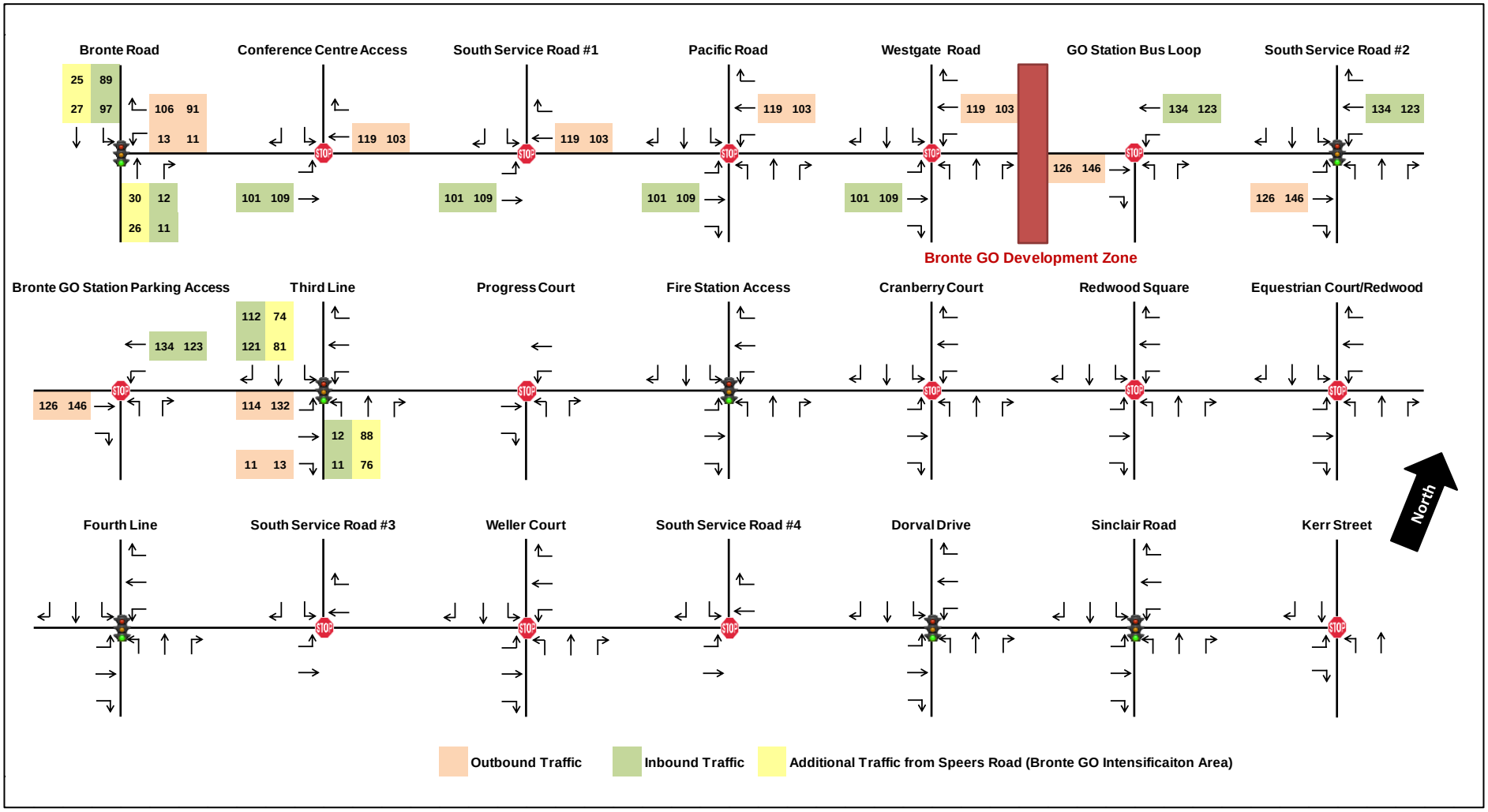
Note: No trips distributed east of Dorval Drive.

Exhibit 4-11: Trip Distribution for Bronte GO MTSA



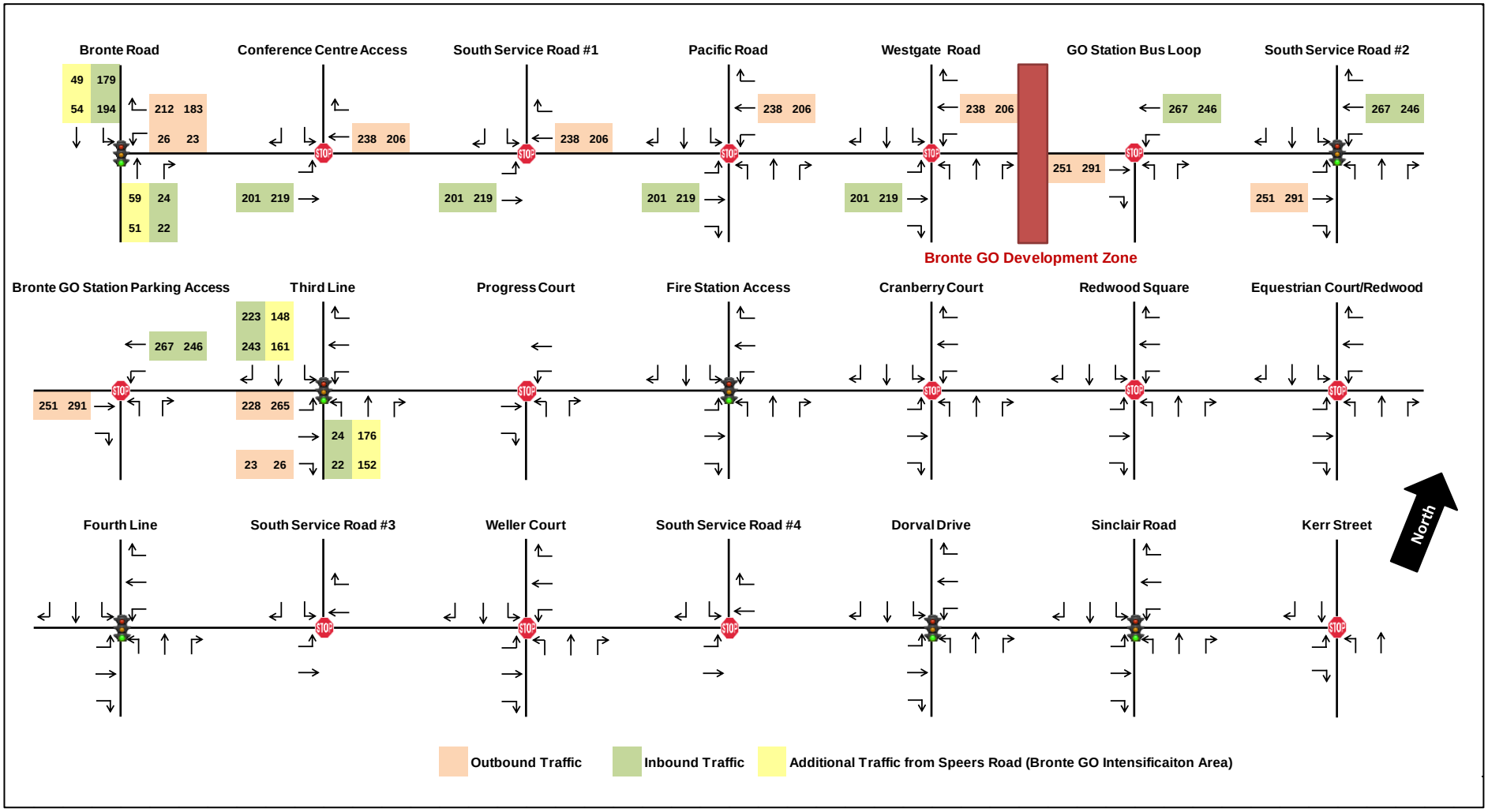
Note: No trips distributed east of Dorval Drive.

Exhibit 4-12: Added Site Traffic Generated for Bronte GO MTSA (2031)



Note: No trips distributed east of Dorval Drive.

Exhibit 4-13: Added Site Traffic Generated for Bronte GO MTSA (2041)



Note: No trips distributed east of Dorval Drive.

5 Future Conditions – Traffic Operations

5.1 2031 Traffic Operations

The future total volumes, representing all vehicular traffic expected in the 2031 horizon (including background growth, Wyecroft Extension, and 50% Bronte GO MTSA) are illustrated in Exhibit 5-1 and Exhibit 5-2. A description of the results follows the exhibits.

For the purpose of the 2031 analysis, the scenarios use optimized signal timings for all signalized intersections.

Exhibit 5-1: Future (2031) Total Volumes – From Bronte Road to Progress Court

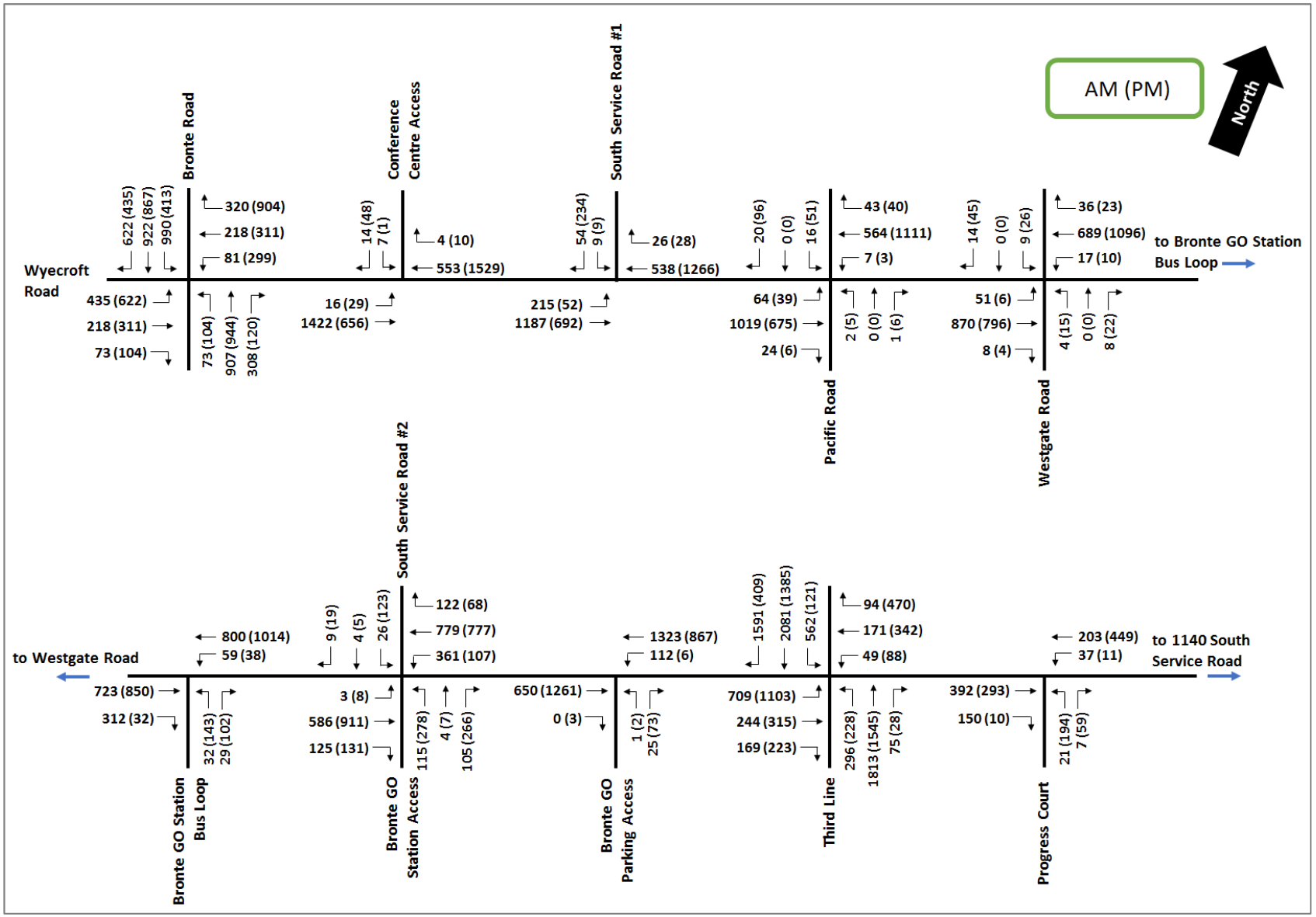
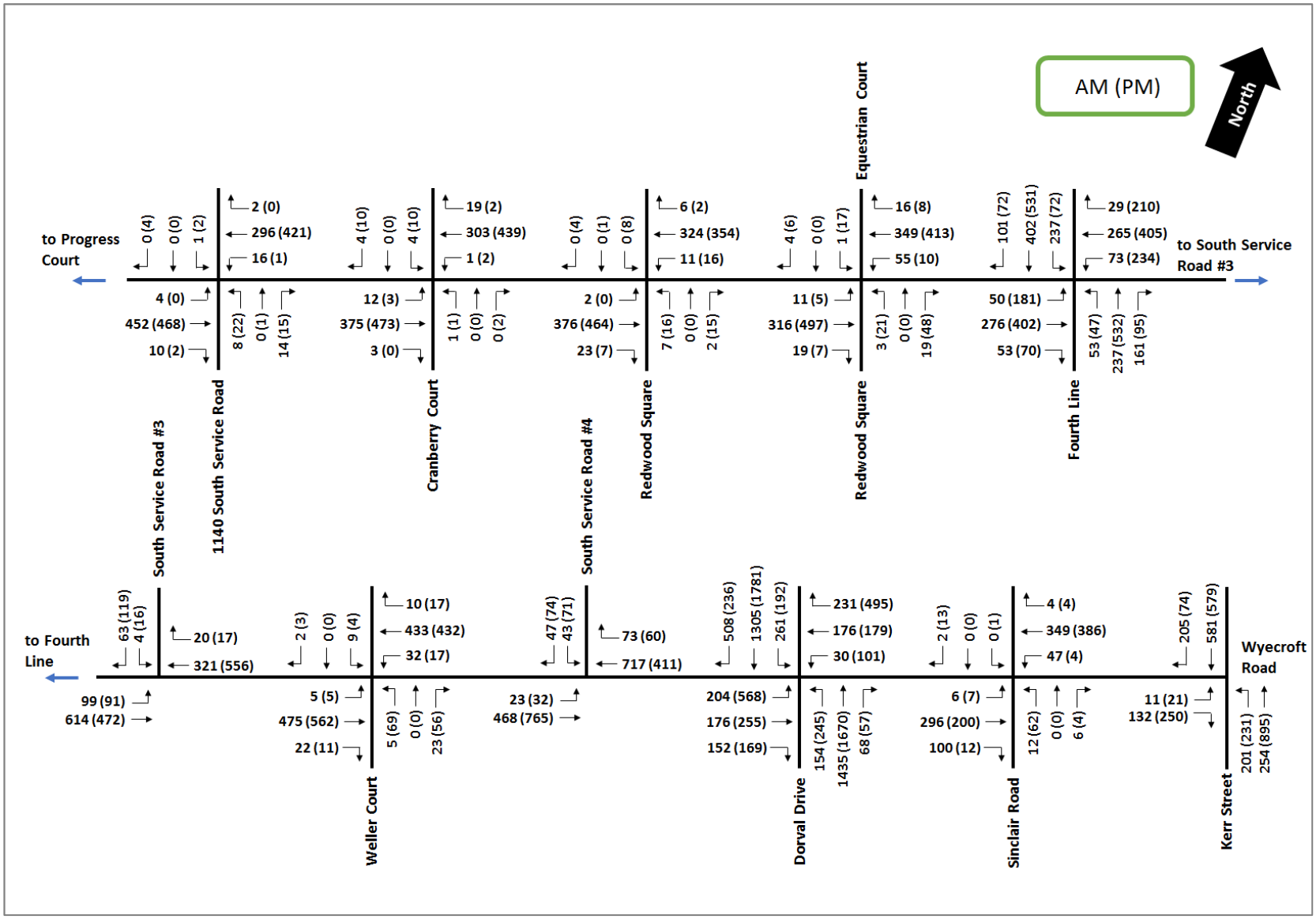


Exhibit 5-2: Future (2031) Total Volumes – From 1140 South Service Road to Kerr Street



5.1.1 2031 Do Nothing

West Segment – Bronte Road to Third Line

A summary of the west segment analysis is provided in Exhibit 5-3, with detailed Synchro results provided in Appendix B. Key findings include:

- Wyecroft Road at Bronte Road is not expected to sufficiently accommodate traffic demands and will operate at LOS F during both peak periods. In the AM peak, with future demand from the Bronte GO MTSA, the southbound left-turn demand will exceed capacity resulting in significant delays and long queues. In the PM peak, severe congestion is expected for the westbound right-turn movement.
- Wyecroft Road at South Service Road #2 is expected to operate poorly with LOS F in the PM. During the PM peak, the northbound and southbound through movements will be approaching capacity and the eastbound through demand will exceed capacity.
- Unsignalized side-streets and accesses experience delays along this segment, although the volumes from these minor approaches are relatively low, particularly left-turn movements.

In summary, future demand is expected to exceed the capacity of the existing infrastructure of the west segment.

Middle Segment – Third Line to Cranberry Court

A summary of the middle segment analysis is provided in Exhibit 5-4, with detailed Synchro results provided in Appendix B. Key findings include:

- Wyecroft Road at Third Line is not expected to sufficiently accommodate traffic demand and will operate at LOS F during both peak periods. Future demand, particularly the traffic from Bronte GO MTSA, results in all movements at this intersection operating either at or above capacity. The southbound approach in the AM, and the eastbound and northbound approaches in the PM, are expected to operate with severe congestion and long queues.
- The unsignalized intersection of Progress Court operates well with one critical movement (i.e. northbound left-turn) during the PM peak.
- Along the segment, demand is less than 500 vehicles per direction in the peak hour. This demand can be accommodated with a single lane per direction.

In summary, future demand is expected to exceed the capacity of the Third Line intersection. The segment overall operates well with a single lane per direction.

East Segment – Cranberry Court to Kerr Street

A summary of the east segment analysis is provided in Exhibit 5-5, with detailed Synchro results provided in Appendix B. Key findings include:

- Wyecroft Road at Fourth Line is expected to experience moderate delays and operate with LOS C during both peak periods. Eastbound and westbound through movements are expected to be fairly congested with acceptable delays (40 to 45 seconds).
- Wyecroft Road at Dorval Drive is anticipated to operate poorly with LOS D and LOS E in the AM and PM peaks, respectively. During the AM peak, with the majority of green time allocated for the northbound and southbound movements, the eastbound left-turn becomes a critical movement with v/c > 0.85. In the PM peak, the eastbound left-turn will operate above-capacity (e.g., v/c = 1.27), requiring drivers to wait more than one cycle to clear the intersection. This long queueing is a safety concern with conflicts between vehicles turning left out of South Service Road #4, in combination with the close intersection spacing and the curvature of the road alignment. Southbound through demand competes with available green times during the northbound left-turn movement.
- Unsignalized intersections along this segment are expected to operate well with only two critical movements in the PM peak: the shared northbound left-right turn movement at Weller Court (LOS D, and the shared eastbound left-right turn movement at Kerr Street (LOS F).
- Along the segment, west of Fourth Line, demand is less than 600 vehicles per direction in the peak hour. This demand can be accommodated with a single lane per direction.
- Along the segment, between Fourth Line and Dorval Drive, demand approaches 800 vehicles per direction in the peak hour. This demand can be accommodated with a single lane per direction.
- Along the segment, east of Dorval Drive, demand is less than 500 vehicles per direction in the peak hour. This demand can be accommodated with a single lane per direction.

In summary, future demand is expected to approach capacity of the Dorval Drive intersection; however, improvements to this Regional road intersection is outside the scope of this Environmental Assessment. The segment overall operates well with a single lane per direction.

Exhibit 5-3: 2031 Critical Movements (Do-Nothing) – West Segment (Bronte Road to Third Line)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Bronte Road (signalized)	AM	F	EBL	E	64	0.86	76
			EBT	D	46	0.38	38
			WBL	E	67	0.66	34
			WBT	E	59	0.68	43
			NBT	E	75	1.00	170
			NBR	D	40	0.28	32
			SBL	F	206	1.37	370
	PM	F	EBL	E	73	0.96	110
			EBT	E	57	0.72	69
			WBL	E	58	0.81	94
			WBR	F	289	1.54	341
			NBT	E	60	0.94	155
			SBL	E	64	0.94	145
Conference Centre Access (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
South Service Road #1 (unsignalized)	AM	-	(No critical movements)				
	PM	-	SB1	F	387	1.68	133
Pacific Road (unsignalized)	AM	-	NB1	E	50	0.04	1
			SB1	E	44	0.28	8
	PM	-	NB1	F	85	0.20	5
			SB1	F	304	1.40	80
Westgate Road (unsignalized)	AM	-	NB1	E	44	0.12	3
			SB1	E	40	0.18	5
	PM	-	NB1	F	112	0.56	18
			SB1	F	111	0.74	29
Bronte GO Station Bus Loop (unsignalized)	AM	-	NB1	F	370	1.05	27
	PM	-	NB1	F	Err*	4.34	Err*
South Service Road #2 (signalized)	AM	B	(No critical movements)				
	PM	F	EBT	F	214	1.41	313
			NBT	D	48	0.86	82
			SBT	D	40	0.72	47
Bronte GO Station Parking Access (unsignalized)	AM	-	NB1	E	45	0.01	1
	PM	-	NB1	F	105	0.05	1
			NB2	F	83	0.65	25

**Err – indicates severe congestion may occur outside of model parameters*

Exhibit 5-4: 2031 Critical Movements (Do-Nothing) – Middle Segment (Third Line to Cranberry Court)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Third Line (signalized)	AM	F	EBL	D	40	0.66	84
			EBT	D	48	0.77	123
			WBL	D	54	0.37	23
			WBT	E	60	0.67	37
			NBL	F	206	1.32	127
			NBT	F	161	1.26	302
			SBL	F	378	1.73	240
			SBT	F	221	1.40	365
			SBR	F	224	1.45	588
	PM	F	EBL	F	128	1.16	203
			EBT	F	105	1.07	200
			WBL	D	46	0.32	33
			WBT	F	173	1.30	140
			NBL	F	228	1.36	98
			NBT	F	121	1.16	259
			SBL	D	52	0.78	42
			SBT	E	67	1.01	211
Progress Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	NB1	D	25	0.60	29
1140 South Service Road / Fire Station Access (signalized)	AM	A	(No critical movements)				
	PM	A	(No critical movements)				
Cranberry Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				

Exhibit 5-5: 2031 Critical Movements (Do-Nothing) – East Segment (Cranberry Court to Kerr Street)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Redwood Square (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Equestrian Court/Redwood Square (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Fourth Line (signalized)	AM	C	EBT	D	37	0.68	64
	PM	C	EBT	D	45	0.84	107
			WBT	D	40	0.80	103
South Service Road #3 (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Weller Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	NB1	D	29	0.46	17
South Service Road #4 (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Dorval Drive (signalized)	AM	D	EBL	F	97	0.93	47
			EBT	D	43	0.35	27
			WBL	E	75	0.59	17
			WBT	D	47	0.44	30
			NBL	E	57	0.67	76
			SBL	E	57	0.68	50
	PM	E	EBL	F	193	1.27	114
			EBT	D	38	0.37	38
			WBL	D	54	0.54	39
			WBT	D	47	1.01	66
			NBL	D	51	0.70	119
			SBL	E	56	0.60	41
			SBT	F	87	1.08	196
Sinclair Road (signalized)	AM	A	(No critical movements)				
	PM	A	(No critical movements)				
Kerr Street (unsignalized)	AM	-	(No critical movements)				
	PM	-	EB1	F	59.0	0.86	57

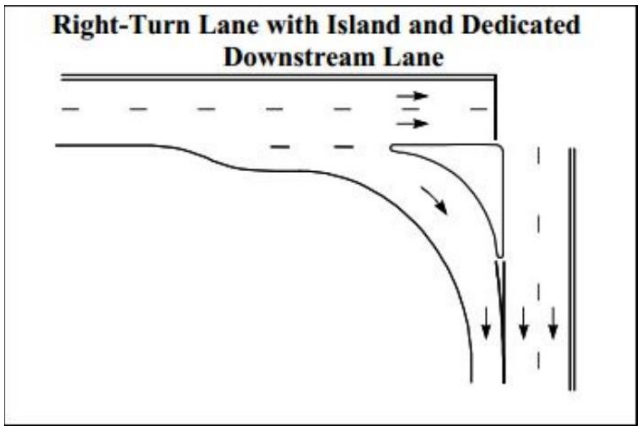
5.1.2 2031 Mitigation Measures: West Segment – Bronte Road to Third Line

Bronte Road Intersection

Volumes at this intersection are high on all approaches with the majority of movements either critical or overcapacity. To address heavy southbound left-turn movements in the AM peak, dual left-turn lanes (with protected phasing) was tested as a base improvement. For the PM peak, three alternatives were considered to provide additional capacity to the westbound right-turn movement (over 900 vehicles in the PM peak hour).

- The first alternative is a forced westbound right-turn lane. Although this option does not provide adequate capacity for the westbound right-turn demand (v/c = 1.19), it was carried forward as a basis for comparison, as it closely represents the existing lane configuration.
- The second alternative is a westbound right-turn lane with an island and a dedicated downstream lane on the north leg, also referred to as a free-flow lane, conceptually illustrated in Exhibit 5-6. This option provides adequate capacity for the westbound right-turn demand, as vehicles do not experience traffic signal delay. By optimizing signal timings, some green time was reallocated to the other approaches to improve overall intersection operations. However, this alternative provides a less desirable environment for pedestrians and cyclists. There are also potential weaving issues on the north leg with northbound traffic changing lanes to access the QEW on-ramp.

Exhibit 5-6: Right-turn Lane with Island and Dedicated Downstream Lane (Free-flow lane)



Source: Operation and Safety of Right-Turn Lane Designs Transportation Research Board: Journal of the Transportation Research Board (2006)

- The last alternative includes widening the east leg to provide dual westbound right-turn lanes. This option provides adequate capacity

for the westbound right-turn demand with LOS D (v/c = 0.87). However, similar to the free-flow alternative, dual right-turn lanes are less desirable for pedestrians and cyclists by increasing the intersection crossing distance. There are also potential weaving issues on the north leg with northbound traffic changing lanes to access the QEW on-ramp.

A summary of the analysis results is provided in Exhibit 5-7. Since the free-flow and dual westbound right-turn alternatives share similar design constraints, the free-flow alternative is preferable based solely on the resulting traffic operations performance of the westbound right-turn. However, even with westbound right-turn improvements, this movement may be limited by weaving and queuing on Bronte Road between Wyecroft Road and the QEW on-ramp (refer to Section 3.3.3). Therefore, it is recommended that that the Town work with Halton Region to review traffic operations on Bronte Road.

A sensitivity analysis assessed the ultimate improvement options using 2041 forecasts (Section 4) and the results are discussed in Section 6.

Exhibit 5-7: Evaluation of Mitigation Options at Bronte Road (2031) – PM Peak

Improvement Option	Intersection LOS	Intersection Delay	Intersection V/C Ratio	Critical Movement				
				Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
1 – Force WBR	E	78.7	1.19	EBL	F	143	1.16	125
				EBT	D	52	0.64	51
				EBR	D	45	0.07	8
				WBL	F	154	1.15	137
				WBT	D	54	0.68	51
				WBR	**F**	**132**	**1.19**	**332**
				NBL	E	58	0.60	42
				NBT	E	80	1.02	164
2 – Free Flow WBR – Right-turn Lane with Island and Dedicated Downstream Lane	C	36.5	0.80	EBL	E	57	0.86	94
				EBT	D	49	0.56	53
				EBR	D	44	0.06	6
				WBL	D	46	0.73	77
				WBT	E	65	0.80	61
				NBL	E	59	0.60	42
				NBT	D	39	0.75	133
				SBL	E	59	0.80	67
3 – Dual WBR	D	43.6	0.90	EBL	E	62	0.90	103
				EBT	D	38	0.36	47
				EBR	D	35	0.07	8
				WBT	D	43	0.45	49
				WBR	**D**	**44**	**0.87**	**152**
				NBL	E	67	0.70	48
				NBT	D	44	0.82	133
				SBL	E	66	0.87	75

South Service Road #1 Intersection

An unsignalized T-intersection with stop control on its minor approach. The southbound minor approach will encounter significant delays with demand

exceeding capacity during the PM peak due to westbound through demand. The southbound approach can be improved by expanding Wyecroft Road to four lanes. Widening Wyecroft Road to four lanes (two per direction) will allow more gaps for southbound turning traffic at this unsignalized intersection. A left-turn lane warrant for the main street (Wyecroft Road) was completed following ITE Guidelines. As shown in Exhibit 5-8, the warrant indicates that an eastbound left-turn lane is warranted for this location. Left-turn warrants are attached in Appendix C.

Exhibit 5-8: Left-turn Warrant for Wyecroft Road at South Service Road #1

Approach	Left-turn %	Opposing Traffic Volume	Advancing Traffic Volume Threshold	Actual Advancing Traffic Volume	Warranted
EBL (AM)	15.3%	579	137	1,402	YES
EBL (PM)	7.0%	1294	38	744	YES

With the above improvements, the v/c for the southbound approach improves during the PM peak from 1.68 to 0.70, indicating a satisfactory level-of-service, as shown in Exhibit 5-9.

Exhibit 5-9: Evaluation of Mitigation at South Service Road #1

Improvement Option	Peak Hour	Intersection LOS	Movements				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Wyecroft Four-Lane Configuration w/ dedicated EBL lane	AM	-	SB1	C	17	0.17	5
	PM	-	SB1	E	37	0.70	39

A traffic signal warrant was completed indicating that a signal is not warranted at this intersection in 2031. Results are provided below in Exhibit 5-10, with details in Appendix D.

Exhibit 5-10: Signal Warrant for Wyecroft Road at South Service Road #1

Justification		Compliance	Justified
1) Minimum Vehicular Volume	A) Total Volume	120%	No
	B) Crossing Volume	30%	
2) Delay to Cross Traffic	A) Total Volume	120%	No
	B) Crossing Volume	7%	
3) Combination	A) Justification 1	30%	No
	B) Justification 2	7%	

Pacific Road Intersection

This intersection is currently unsignalized with stop control on the minor approaches. The southbound approach is expected to operate with significant delays and queuing during both peak periods. There are heavy through volumes on Wyecroft Road resulting in few gaps for turning vehicles.

To improve the performance of the southbound approach, providing a dedicated left-turn lane was assessed, in addition to widening Wyecroft Road to four lanes (two per direction) which allows more gaps for southbound turning traffic. Results of the traffic analysis with improvements are shown in Exhibit 5-11. With the addition of a left-turn lane, the movement will operate below the capacity threshold, indicating an acceptable level-of-service.

Exhibit 5-11: Evaluation of Mitigation at Pacific Road

Improvement Option	Peak Hour	Intersection LOS	Movements				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Wyecroft Four-Lane Configuration w/ SBL Lane	AM	-	NB1	E	38	0.03	1
			SBL	D	35	0.12	3
			SBR	B	10	0.03	1
	PM	-	NB1	D	30	0.07	2
			SBL	F	137	0.72	25
			SBR	C	15	0.22	6

As shown in Exhibit 5-12, the warrant indicates that an eastbound left-turn lane is warranted for this location. Left-turn warrants are attached in Appendix C.

Exhibit 5-12: Left-turn Warrant for Wyecroft Road at Pacific Road

Approach	Left-turn %	Opposing Traffic Volume	Advancing Traffic Volume Threshold	Actual Advancing Traffic Volume	Warranted
EBL (AM)	5.8%	614	199	1107	YES
EBL (PM)	3.5%	1154	74	1107	YES

A traffic signal warrant was completed indicating that a signal is not warranted at this intersection in 2031. Results are provided in Exhibit 5-13, with details in Appendix D.

Exhibit 5-13: Signal Warrant for Wyecroft Road at Pacific Road

Justification		Compliance	Justified
1) Minimum Vehicular Volume	A) Total Volume	120%	No
	B) Crossing Volume	29%	
2) Delay to Cross Traffic	A) Total Volume	120%	No
	B) Crossing Volume	25%	
3) Combination	A) Justification 1	29%	No
	B) Justification 2	25%	

Westgate Road Intersection

This intersection is currently unsignalized intersection with stop control on the minor approaches. These minor approaches are expected to operate with some delay and an acceptable v/c ratio. As such, no improvements to this intersection were assessed for 2031.

Bronte GO Station Bus Loop Intersection

This intersection is currently an unsignalized T-intersection, with stop control on the south approach. The intersection is located approximately 170 m west of the signalized intersection with South Service Road #2. Currently, there are no left-turn lanes on Wyecroft Road. The minor approach has one northbound left-turn lane and one right-turn lane.

To improve transit access to the GO Station, providing a dedicated westbound left-turn lane was assessed, in addition to widening Wyecroft Road to four lanes (two per direction). Results of the left-turn warrant are shown in Exhibit 5-14. The warrant indicates that a westbound left-turn lane is warranted. Left-turn warrants are provided in Appendix C.

Exhibit 5-14: Left-turn Warrant for Wyecroft Road at Bronte GO Station Bus Loop

Approach	Left-turn %	Opposing Traffic Volume	Advancing Traffic Volume Threshold	Actual Advancing Traffic Volume	Warranted
WBL (AM)	6.9%	1035	73	859	YES
WBL (PM)	3.6%	882	143	1052	YES

A traffic signal warrant was completed. Results are provided in Exhibit 5-15, with details in Appendix D. A traffic signal is not warranted at this intersection in 2031.

The *GO Rail Station Access Plan*, 2016, indicates that the bus loop is planned to be relocated south to Speers Road by 2031. Depending on the timing of construction, adding a traffic signal here would assist with transit priority and provide a signalized pedestrian crossing to the GO Station. This intersection should be considered for signalization, depending on the timing of improvements in coordination with station operations and the potential future MTSA development.

Exhibit 5-15: Signal Warrant for Wyecroft Road at Bronte GO Station Bus Loop

Justification		Compliance	Justified
1) Minimum Vehicular Volume	A) Total Volume	120%	No
	B) Crossing Volume	30%	
2) Delay to Cross Traffic	A) Total Volume	120%	No
	B) Crossing Volume	59%	
3) Combination	A) Justification 1	30%	No
	B) Justification 2	59%	

South Service Road #2 Intersection (Bronte GO Station Access)

This intersection is currently signalized with dedicated eastbound left-turn, westbound left-turn, and northbound right-turn lanes. The northbound right-turn movement operates with an overlap phase.

In 2031, eastbound through demand is above capacity (LOS F) in the PM peak hour, as described in Section 5.1.1. Widening Wyecroft Road to four lanes (two

per direction), with left-turn lanes for both eastbound and westbound approaches, will effectively relieve congestion for mainline traffic. Results are summarized in Exhibit 5-16.

Exhibit 5-16: Evaluation of Mitigation at South Service Road #2

Improvement Option	Peak Hour	Intersection LOS	Movements				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Wyecroft Four-Lane Configuration	AM	B	EBL	A	9	0.01	2
			EBT	B	11	0.44	54
			WBL	A	8	0.66	44
			WBT	A	5	0.40	50
			NBT	C	32	0.58	29
			NBR	B	20	0.06	8
			SBT	C	27	0.16	11
	PM	C	EBL	B	13	0.03	3
			EBT	B	20	0.71	91
			WBL	B	10	0.34	13
			WBT	A	9	0.44	49
			NBT	D	47	0.85	82
			NBR	B	20	0.39	36
			SBT	D	39	0.72	47

Bronte GO Station East Access

This intersection is currently unsignalized with stop control for northbound traffic. The minor approach has one northbound left-turn lane and one right-turn lane. Wyecroft Road has a westbound left-turn lane, which extends to the signalized intersection at South Service Road #2. The minor approaches are expected to operate with acceptable v/c ratio. As such, no improvements to this intersection were assessed for 2031.

West Segment: Two-Way Left-turn Lane Review

As identified in Sections 5.1.1 and 5.1.2, a four-lane configuration is recommended from Bronte Road to Third Line to accommodate through traffic from background and development growth (i.e. two lanes per direction). Four-lane undivided arterials with frequent commercial driveways can operate more safely and efficiently with a centre two-way left-turn (TWLT) lane.

A TWLT lane is a continuous paved lane on an undivided road that provides a deceleration and storage area for left-turning vehicles travelling in either direction. The *Geometric Design Guide for Canadian Roads*[1] *(GDG)* notes that the most common use of a TWLT lane is along arterial roads with frequent accesses on both sides that cannot be closed or consolidated, and where a raised centre median is not feasible. The GDG also notes that the five-lane undivided cross-section is the most common implementation of a TWLT lane.

[1] Chapter 8: Access of "Geometric Design Guide for Canadian Roads", Transportation Association of Canada, June 2017.

The GDG indicates that a TWLT may be appropriate under certain key conditions, summarized in the first column of Exhibit 5-17. There is no warrant or checklist to confirm the need and justification for a TWLT lane. The GDG also provides a Collision Modification Factor for the provision of a TWLT lane, based on the number of access points per kilometre.

The suitability of a TWLT lane on the west segment was considered (Exhibit 5-17), assuming the base case is a four-lane undivided road. Based on this review, a TWLT lane from Bronte Road to Third Line is recommended for inclusion in the development of design alternatives in the EA process.

Exhibit 5-17: Two-Way Left-turn Lane Conditions and Suitability (West Segment)

KEY CONDITIONS	SUITABILITY OF WEST SEGMENT
– High trucking activity	– Moderate-high truck volumes (Heavy vehicle % = 10% Eastbound, 10% Westbound)
– On an arterial roadway with reasonably straight and flat alignments	– Straight and flat alignment between west of Pacific Road and west of Third Line – Reverse horizontal curve between South Service Road #1 and Pacific Road
– Commercial or industrial on both sides of the roadway with numerous accesses	– Commercial / industrial developments on both sides of the roadway with 29 driveways per km (total of 41 driveways)
– Operating speeds of 70 km/h or under	– Posted speed limit 60 km/h – Average speeds 51-52 km/h, 85th percentile speeds 62-64 km/h

Note: Speed Survey conducted by the Town on July 10, 2018

5.1.3 2031 Mitigation Measures: Middle Segment – Third Line to Cranberry Court

Third Line Intersection

Wyecroft Road at Third Line is not expected to sufficiently accommodate traffic demand and will operate at LOS F during both peak periods. Future demand, particularly the traffic from Bronte GO MTSA, results in all movements at this intersection operating either at or above capacity. The southbound approach in the AM, and the eastbound and northbound approaches in the PM, are expected to operate with severe congestion and long queues, as detailed in Section 5.1.1.

However, improvement options are limited by the reverse curves on the east, commercial / industrial properties on the NW, SW and SE quadrants, the CN Rail Bridge (300 m south) and the Queen Elizabeth Way bridge (300 m north). The following ultimate improvement options were tested. Results are provided in Exhibit 5-18.

- Additional NBT and SBT lanes (six lanes on Third Line);
- Dual SBL – protected phasing (with two receiving lanes on the east approach);
- Convert the current WBTR lane to dedicated WBR lane with overlap phase;
- Dedicated EBR and NBR lane; and,

- Free flow SBR lane with traffic island and dedicated downstream lane.

With all of the above listed improvements combined, the intersection will operate at LOS D and E in the AM and PM peaks, respectively. While several movements continue to operate either near or at capacity, the overall intersection performs better, evidenced by the queue lengths in Exhibit 5-18 compared to the 2031 Do Nothing scenario (Exhibit 5-4).

A sensitivity analysis assessed the ultimate improvement options using 2041 forecasts (Section 4) and the results are discussed in Section 6.

As mentioned above, the area is heavily constrained and will require further review of Third Line to the north and south. In particular, widening Third Line to six lanes has impacts to the QEW interchange to the north and the rail bridge to the south. Based on the Bronte GO MTSA land use and mode split assumptions used for this study, it appears the current road network cannot accommodate the traffic growth associated with the potential future land use changes. It is recommended that the Town consider the broader transportation network needs to support growth in the Bronte GO MTSA.

Given the additional analysis required for Third Line, for the purposes of this Environmental Assessment, only improvements to Wyecroft Road will be considered. Specifically:

- North leg: one SBL, two SBT, dedicated SBR;
- East leg: one WBL, one WBT, one shared WBTR;
- South leg: one NBL, one NBT, one shared NBTR; and,
- West leg: two EBL, one EBT, one shared EBTR.

Exhibit 5-18: Evaluation of Mitigation at Third Line

Improvement Option	Peak Hour	Intersection LOS	Movements				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Additional NBT and SBT, Free Flow SBR, dedicated EBR and NBR, convert WBTR to dedicated WBR with overlap phase, Dual SBL (protected) with two receiving lanes	AM	D	EBL	F	84	1.01	127
			EBT	D	46	0.61	79
			EBR	D	38	0.11	17
			WBL	D	52	0.32	23
			WBT	F	110	0.96	84
			NBL	F	166	1.18	137
			NBT	D	41	0.85	150
			SBL	E	59	0.87	93
			SBT	D	45	0.94	186
			SBR	B	19	0.98	68
	PM	E	EBL	F	81	1.04	185
			EBT	D	37	0.57	92
			WBL	D	46	0.33	35
			WBT	F	132	1.10	148
			WBR	E	73	0.94	139
			NBL	F	134	1.07	109
			NBT	D	45	0.87	133
			SBL	D	55	0.52	24
			SBT	E	73	1.02	156

Progress Court Intersection

This intersection is currently unsignalized with stop control on the minor northbound approach. The intersection operates well in 2031 with one critical movement (i.e. northbound left-turn) during the PM peak.

A left-turn lane warrant analysis was completed and results are shown in Exhibit 5-19. A westbound left-turn lane is warranted for the AM peak period. Left-turn warrants are attached in Appendix C.

Exhibit 5-19: Left-turn Warrant for Wyecroft Road at Progress Court

Approach	Left-turn %	Opposing Traffic Volume	Advancing Traffic Volume Threshold	Actual Advancing Traffic Volume	Warranted
WBL (AM)	15.4%	542	173	240	YES
WBL (PM)	2.4%	303	612	460	NO

5.1.4 2031 Mitigation Measures: East Segment - Cranberry Court to Kerr Street

A need for improvements was identified at South Service Road #3 and South Service Road #4 during the site visits, and confirmed with the analysis of existing and future conditions. Due to the proximity of the intersections of Fourth Line & South Service Road #3, and Dorval Drive & South Service Road #4, these intersections were assessed as pairs.

Fourth Line & South Service Road #3 (Intersection Pair)

The intersection with Fourth Line is signalized, and the intersection with South Service Road #3 is an unsignalized three-leg intersection approximately 40 m east of Fourth Line.

Fourth Line operates well with LOS C during both peak periods. The eastbound and westbound through movements are expected to operate with some delay, but has sufficient residual capacity for future development or background traffic.

Westbound queues from the Fourth Line intersection extend past South Service Road #3, which can block the southbound left-turn movement.

South Service Road #4 and Dorval Drive (Intersection Pair)

Wyecroft Road intersects Dorval Drive at a signalized intersection with reverse curves on both the east and west approaches. During the PM peak, there are high eastbound left-turn demands with significant queues. As a result, a number of adjacent accesses are blocked, particularly at South Service Road #4 and the entrance of 690-710 Dorval Drive. The eastbound movement is further inhibited by the curved alignment, and outside left-turn lane queues that block vehicles from entering the inside left-turn lane.

To encourage eastbound drivers to use the appropriate lane and manage queues at Dorval Drive, it is recommended to improve or add signage indicating the inside left-turn lane for Dorval Drive northbound / QEW westbound, and the outside left-turn lane for QEW eastbound.

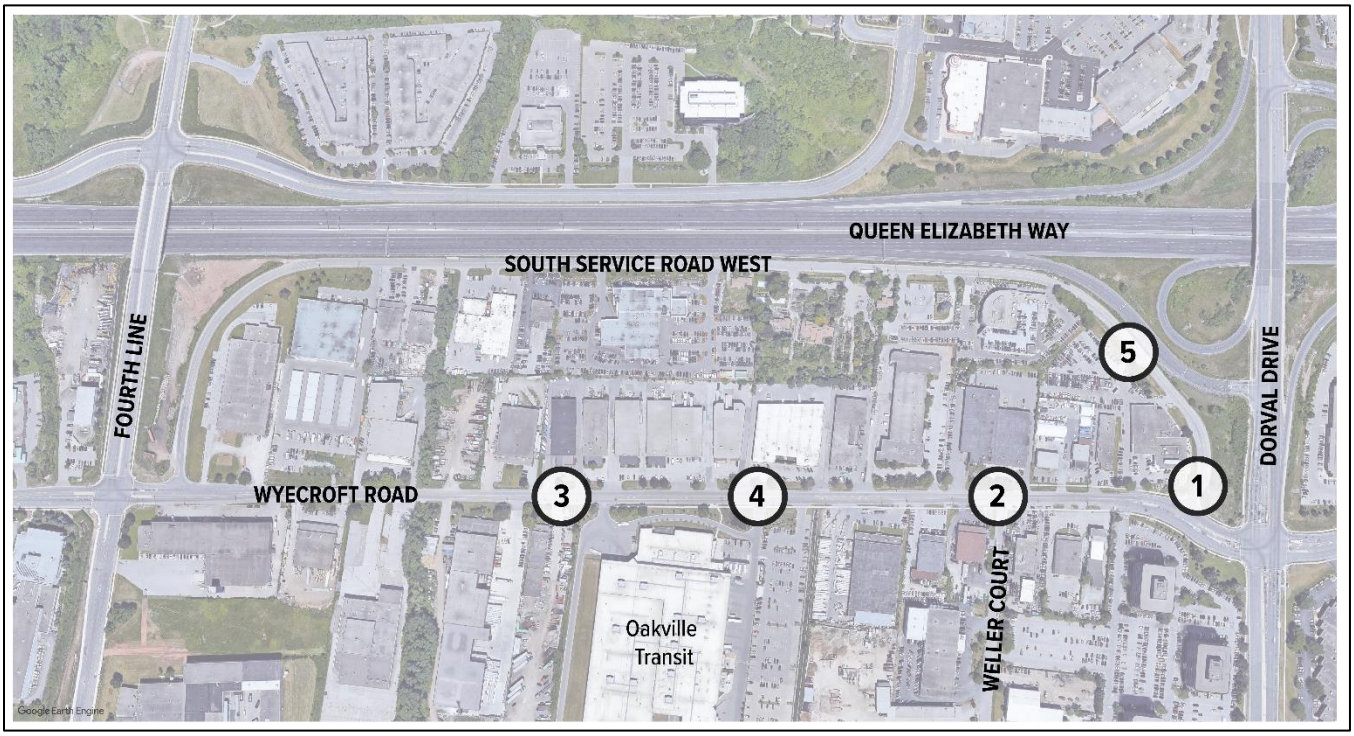
Five potential design alternatives were considered to improve traffic and road safety concerns at the intersection of South Service Road West #4. The general location of the five design alternatives is shown in Exhibit 5-20:

1. Convert the intersection to right-in right-out by extending the existing median by approximately 45 metres west.
2. Realign South Service Road West to align with Weller Court with cul-de-sac on South Service Road West to maintain driveway accesses.
3. New north-south road between Fourth Line and Dorval Drive, west of Weller Court with cul-de-sac at South Service Road West to maintain driveway accesses.
4. Convert the intersection to right-in right-out plus a roundabout at Oakville Transit to facilitate U-turns.

5. Close the intersection of South Service Road West #4 with a cul-de-sac.

The evaluation of these five design alternatives is documented in the Environmental Study Report, Section 6.

Exhibit 5-20: East Segment - South Service Road West #4 Design Alternatives



Convert South Service Road #4 to Right-in, Right-out only

The traffic impacts of Option 1 were explored in detail, as this option was identified as technically recommended through the evaluation of design alternatives. The intersection can be converted to right-in/right-out (RIRO) for the north approach by extending the centre island on Wyecroft Road. The RIRO will eliminate conflict points with eastbound left-turn queues at Dorval Drive.

This option will change how drivers from South Service Road West between Fourth Line and Dorval Drive access the Queen Elizabeth Way. To access the Queen Elizabeth Way, Dorval Drive, or other destinations to the east, drivers would have three options:

1. Make a U-turn at mid-block (i.e. make southbound right-turn at South Service Road #4 then a U-turn on Wyecroft Road to travel east);
2. Travel west on South Service Road and make a southbound left-turn at South Service Road #3; or
3. Make a southbound right-turn to westbound on Wyecroft Road and continue to Third Line to access the Queen Elizabeth Way.

All three of these options have other implications:

- Mid-block U-turn – Mid-block U-turns on a three-lane road cannot be completed by larger vehicles with larger turning radius. U-turns are permitted under the Highway Traffic Act anywhere the driver can make the manoeuvre safely without impacting traffic. This option could be strengthened if a dedicated U-turn facility such as a midblock traffic signal, roundabout, or a mid-block U-turn with road widening and median was built.
- Travel west to South Service Road #3 – Drivers on South Service Road West could go west to this intersection to turn left onto Wyecroft Road. Adding traffic to this intersection, given the short spacing between South Service Road #3 and Fourth Line, and the interference between the southbound left-turn and the westbound left-turn storage lane, may result in increased delays and congestion at the Fourth Line & South Service Road West intersection pair. However, given the constraints around the Dorval Drive intersection, it is anticipated that this traffic pattern near Fourth Line will be preferable to today's condition.
- Traffic using the larger network – Drivers may change their travel pattern and use the broader transportation to be able to access the South Service Road #4 intersection as a right-in/right-out, such as Fourth Line, Dorval Drive, North Service Road West, or Speers Road. This may change demand at adjacent intersections; however given the turning volumes at South Service Road #4 are relatively low, the impacts are expected to be minimal.

Given the above implications, Option 2 and Option 3, which would maintain full-moves access to South Service Road West, are recommended for further study by the Town. Other properties that may be affected by the conversion to RIRO:

- The access to 280 South Service Road West (Kennedy Ford) could be monitored for potential restrictions for left-in and left-out, to reduce conflict points with eastbound queued traffic on Wyecroft Road.
- The 690-710 Dorval Drive access (south side of Wyecroft Road), restricting left-turns via a median (similar to above) appears desirable and left-turns are available via Weller Court.

Overall, the intersection of Dorval Drive and Wyecroft Road is significantly constrained and Option 1, converting the South Service Road #4 intersection to right-in, right-out only, is technically recommended as part of this study. Options 2 and 3 are recommended for further study by the Town.

Kerr Street Intersection

Wyecroft Road intersects Kerr Street, the east limit of the study, at an unsignalized T-intersection. There is a northbound left-turn lane on Kerr Street, and a single approach lane on Wyecroft Road. During the PM peak, it is observed that there are high northbound and southbound volumes along Kerr Street, causing the eastbound approach to be critical.

As a separate project, Kerr Street is undergoing a grade separation at the Metrolinx/CN rail crossing located 350 m south of this intersection. The *Kerr Street at CNR Grade Separation Class EA Study (Kerr Street EA)*, 2009, recommended traffic signals and separate eastbound left-turn and right-turn lanes as the recommended improvements. It is noted, however, that the Kerr Street EA did not provide a signal warrant analysis. The Kerr Street EA also assumed that Wyecroft Road would be re-constructed as four lanes west of Kerr Street, which is not the recommendation of this study.

A new signal warrant analysis was completed as part of this study which shows that a signal is not warranted in 2031. These results are summarized in Exhibit 5-21. However, it is recommended that the detailed design protect for a traffic signal at this intersection. During detailed design, this intersection should be reassessed, including a sightline analysis.

Exhibit 5-21: Signal Warrant for Wyecroft Road at Kerr Street

Justification		Compliance	Justified
1) Minimum Vehicular Volume	A) Total Volume	119%	No
	B) Crossing Volume	41%	
2) Delay to Cross Traffic	A) Total Volume	105%	No
	B) Crossing Volume	11%	
3) Combination	A) Justification 1	41%	No
	B) Justification 2	11%	

Although signals are not warranted, providing a separate eastbound left and right-turn lane will effectively relieve congestion along the Wyecroft Road approach indicating acceptable levels-of-service, with results in **Error! Not a valid bookmark self-reference.**.

Exhibit 5-22: Evaluation of Mitigation Options at Kerr Street

Improvement Option	Peak Hour	Intersection LOS	Movements				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Dedicated EBL and EBR lanes	AM	-	EBL	D	33	0.08	2
		-	EBR	C	16	0.28	9
	PM	-	EBL	D	26	0.49	20
		-	EBR	D	26	0.49	20

East Segment: Two-Way Left-turn Lane Review

Similar to the review completed for the West Segment (see page 52), TWLT lanes were reviewed for three sections of the East Segment: 1) between 1140 South Service Road and Fourth Line, 2) between Fourth Line and Dorval Drive, and 3) between Dorval Drive and Kerr Street.

Using the key conditions from the GDG[2], the suitability of a TWLT lane for the east segment is summarized in Exhibit 5-23, assuming the base case is a two-

[2] Chapter 8: Access of "Geometric Design Guide for Canadian Roads", Transportation Association of Canada, June 2017.

lane undivided road. Based on this review, providing a TWLT lane from 1140 South Service Road to Kerr Street, while maintaining existing dedicated left-turn lanes at intersections, is recommended.

Exhibit 5-23: Two-Way Left-turn Lane Conditions and Suitability (East Segment)

KEY CONDITIONS	SUITABILITY		
	1140 SOUTH SERVICE ROAD – FOURTH LINE	FOURTH LINE – DORVAL DRIVE	DORVAL DRIVE TO KERR STREET
– High trucking activity	– High truck volume (19% Eastbound, 22% Westbound)	– High truck volume (19% Eastbound, 17% Westbound)	– Moderate truck volume (6% Eastbound, 7% Westbound)
– On an arterial roadway with reasonably straight and flat alignments	– Generally straight and flat alignment	– Straight and flat alignment (between east of Fourth Line and west of 690-710 Dorval Drive Access)	– Straight and flat alignment (between Sinclair Road and 225 Wyecroft Road) – Reverse horizontal curve between 225 Wyecroft and Kerr Street
– Commercial or industrial on both sides of the roadway with numerous accesses	– Commercial / industrial developments on both sides of the roadway with 33 driveways per km (total of 20 driveways)	– Commercial / industrial developments on both sides of the roadway with 46 driveways per km (total of 46 driveways)	– Commercial / industrial developments on both sides of the roadway with 35 driveways per km (total of 7 driveways)
– Operating speeds of 70 km/h or under	– Posted speed limit 60 km/h – Average speeds 62-70 km/h, 85th percentile speeds 73-89 km/h	– Posted speed limit 50 km/h – Average speeds 55-57 km/h, 85th percentile speeds 64-66 km/h	– Posted speed limit 50 km/h – Average speeds 49-53 km/h, 85th percentile speeds 59-60 km/h

Note: Speed Surveys conducted by the Town on 1) June 26, 2) April 19, 3) July 19 in 2018

5.1.5 Summary of 2031 Mitigation Measures

Exhibit 5-24 summarizes all right-turn and left-turn lane improvements along Wyecroft Road. Exhibit 5-25 and Exhibit 5-26 illustrate the 2031 lane configurations with all improvements considered at each of the studied intersections, with the exception of the TWLT lanes. It is noted that the Regional intersections are outside the scope of this Environmental Assessment. It is recommended that the Town work with Halton Region to review traffic operations at the Bronte Road and Dorval Drive intersections. It is also recommended that the Town consider the broader transportation network needs to support growth in the Bronte GO MTSA.

Exhibit 5-24: Summary of Left-turn and Right-turn Lane Improvements

WYECROFT ROAD INTERSECTION	TURN LANE	JUSTIFICATION
Bronte Road *Regional intersection improvements are outside the scope of this EA	EBL (dual)	HCM Results
	EBR	
	WBR (free-flow)	
	NBL	
	NBR	
	SBL (dual)	
	SBR	
South Service Road #1	EBL	ITE
Pacific Road	EBL	ITE
	SBL	HCM Results
	SBR	
Bronte GO Station Bus Loop	WBL	ITE
Third Line	EBR	HCM Results
	WBR	
	NBR	
	SBL (dual)	
	SBR (free-flow)	
Progress Court	WBL	ITE
Kerr Street	EBL	HCM Results
	EBR	

**Recommendations for Regional Intersections are outside the scope of this Environmental Assessment*

Exhibit 5-25: 2031 Lane Configurations (all Improvements except TWLT lanes) – From Bronte Road to Progress Court

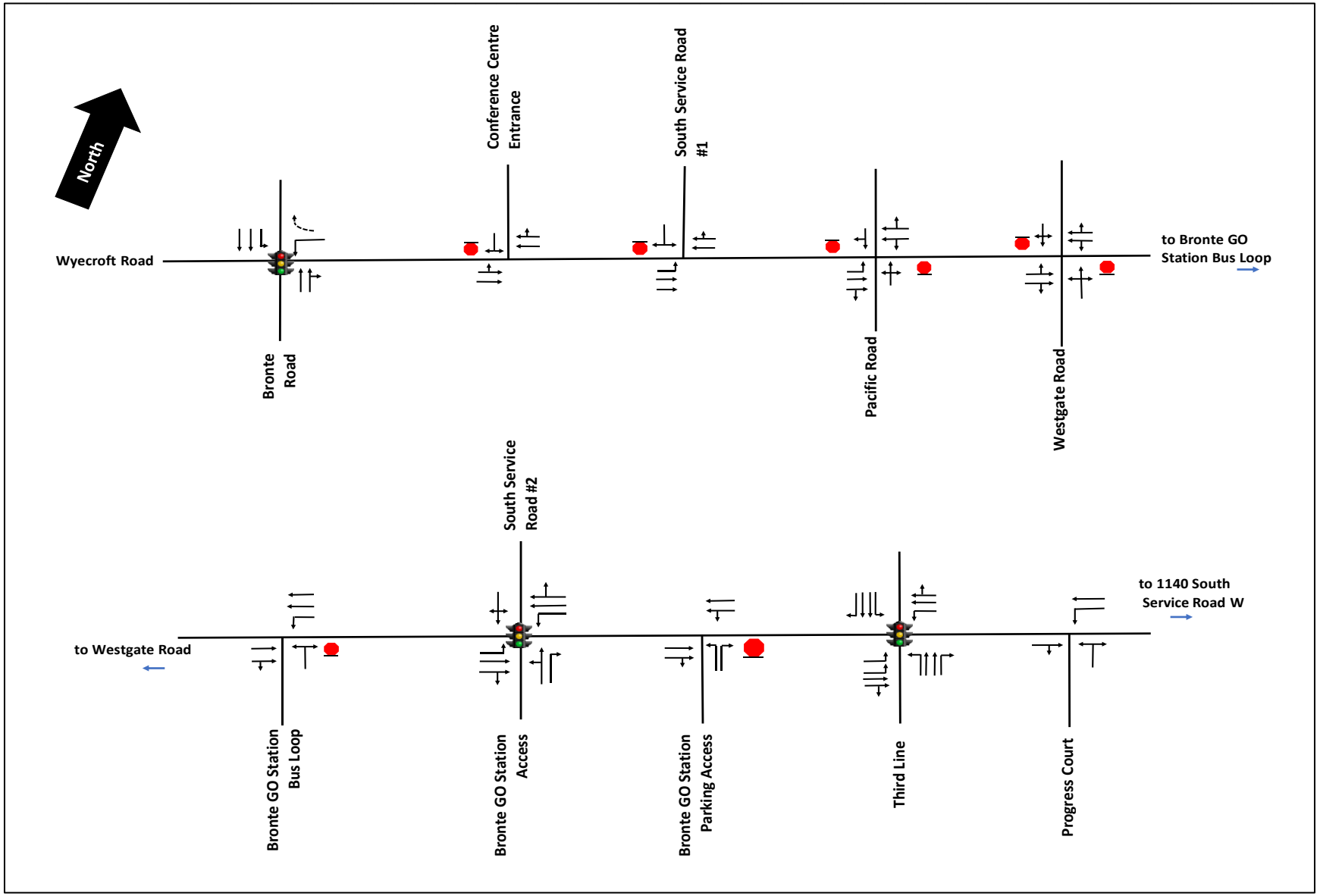
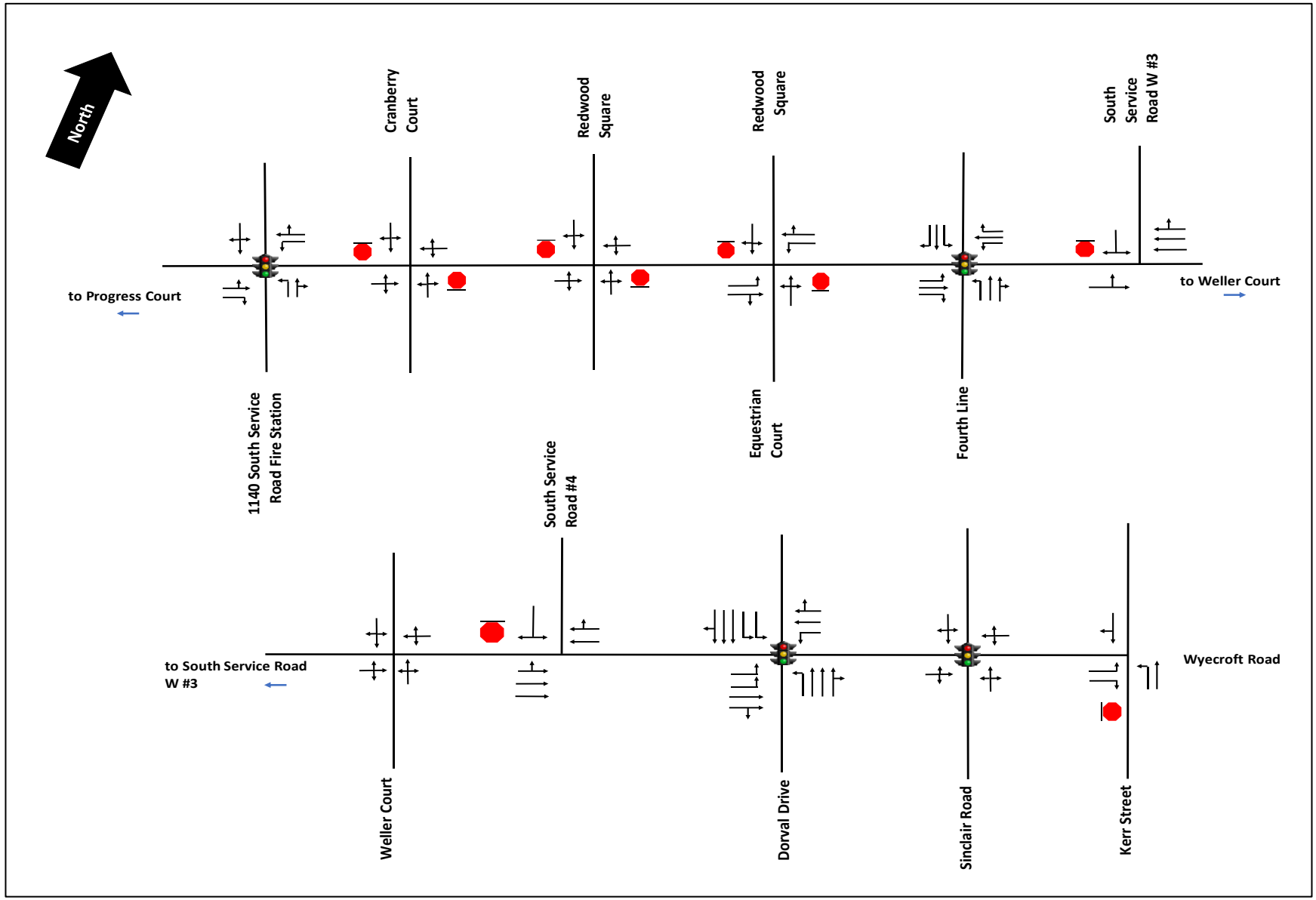


Exhibit 5-26: 2031 Lane Configurations (all Improvements except TWLT lanes) - From 1140 South Service Road to Kerr S



6 2041 Sensitivity Analysis

A sensitivity analysis assessed the 2031 lane configurations with improvements for Wyecroft Road using 2041 forecasts (refer to Section 4). These volumes are summarized in Exhibit 6-1 and Exhibit 6-2. The purpose of this analysis was to determine whether the proposed 2031 improvements can accommodate the traffic generated from the full potential development of the Bronte GO MTSA.

Critical movements identified for the west segment sensitivity analysis are provided in Exhibit 6-3, with outputs in Appendix B. From the analysis results, the following was observed:

- Wyecroft Road at Bronte Road is expected to operate near capacity at LOS D during both peak periods. During the AM peak, the southbound left-turn movement will operate near or at capacity (v/c = 0.98), as it competes for green time from heavy northbound through volumes. However, with the proposed free-flow lane (as described in Section 5), there is sufficient capacity for the westbound right-turn movement in the PM peak.
- Wyecroft Road at South Service Road #2 is expected to operate acceptably with LOS B and C in the AM and PM peaks, respectively. During the PM peak, with the additional eastbound through lane proposed for 2031 (i.e. two eastbound lanes), the eastbound through movement operates below capacity. However, due to high through demands along Wyecroft Road, northbound and southbound through movements are critical as noted in Exhibit 6-3.
- Unsignalized side-streets and accesses are expected to experience delays, particularly for turning traffic.
- Mid-block demand is well-served in 2041 with 4-lanes on Wyecroft Road (two eastbound, two westbound).

Critical movements identified for the middle segment sensitivity analysis are provided in Exhibit 6-4, with outputs in Appendix B. From the analysis results, the following was observed:

- Wyecroft Road at Third Line is expected to continue to operate well above capacity thresholds at LOS F during both peak periods (v/c = 1.37 & 1.21) despite six-lanes on Third Line and the other intersection improvements described in Section 5.1.2. All movements are either critical or overcapacity with long delays and queues.
- Unsignalized side-streets and accesses are expected to operate well during the PM peak.
- Mid-block demand is well-served in 2041 with 2-lanes on South Service Road (one eastbound, one westbound).

Critical movements identified for the east segment sensitivity analysis are provided in Exhibit 6-5, with outputs in Appendix B. From the analysis results, the following was observed:

- Wyecroft Road at Fourth Line is expected to experience moderate delays and operate at LOS C and D for AM and PM peaks, respectively. In the AM peak, eastbound and westbound through movements are moderately congested, but with sufficient residual capacity. During the PM peak, with the increase in traffic growth, both eastbound and westbound through movements along with opposing left-turns are critical. Notably, the westbound left-turn is near the capacity threshold (v/c = 0.98).
- Wyecroft Road at Dorval Drive is expected to operate poorly with LOS D and LOS F in the AM and PM peaks, respectively. During the AM peak, with the majority of green time allocated for the high northbound and southbound movements, the eastbound left-turn movement will operate at capacity with high delays (v/c = 1.04). In the PM peak, the westbound through movement (v/c = 1.09) and opposing eastbound left-turn will operate past capacity thresholds (v/c =1.55), requiring drivers to wait multiple cycles to clear the intersection. There are also high southbound through demands, which compete for available green times during the northbound left-turn movement.
- Unsignalized intersections along this segment are expected to operate without critical movements, except for Weller Court in the PM peak.
- Mid-block demand is well-served in 2041 with 2-lanes on South Service Road and Wyecroft (one eastbound, one westbound).

As part of the sensitivity analysis, signal warrants were re-examined using 2041 volumes. With low cross road volumes, the study intersections remain unwarranted for traffic signals, with outputs provided in Appendix D.

Overall, the sensitivity analysis illustrates that the full potential development of the Bronte GO MTSA will require strategic improvements to increase the non-auto mode share and the capacity of several intersections and north-south roads, particularly Bronte Road and Third Line.

As previously noted, it is recommended that the Town consider the broader transportation network needs to support growth in the Bronte GO MTSA. It is also recommended that that the Town continue to work with Halton Region to review traffic operations on Bronte Road.

Exhibit 6-1: Future (2041) Total Volumes – From Bronte Road to Progress Court

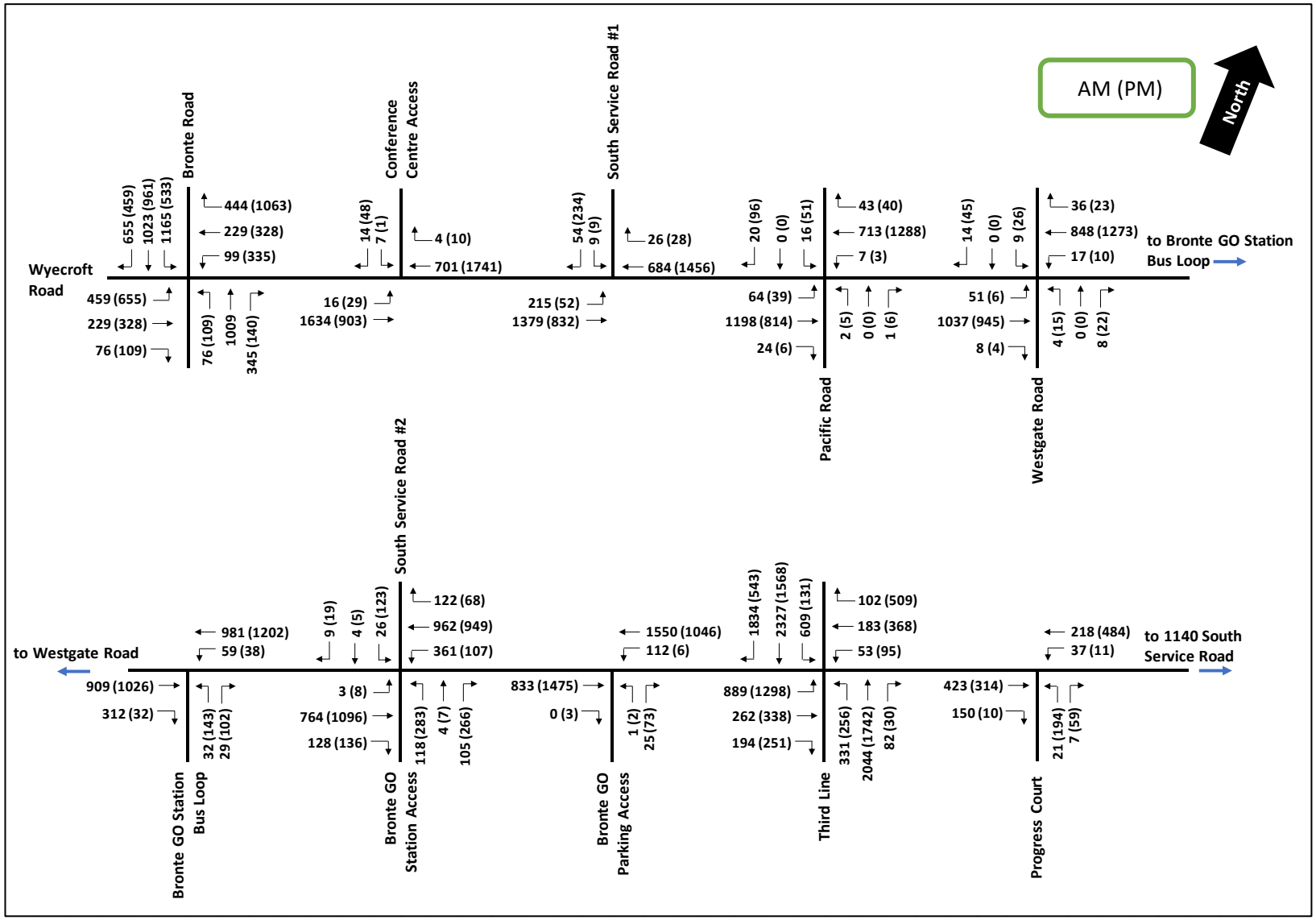


Exhibit 6-2: Future (2041) Total Volumes – From Progress Court to Kerr Street

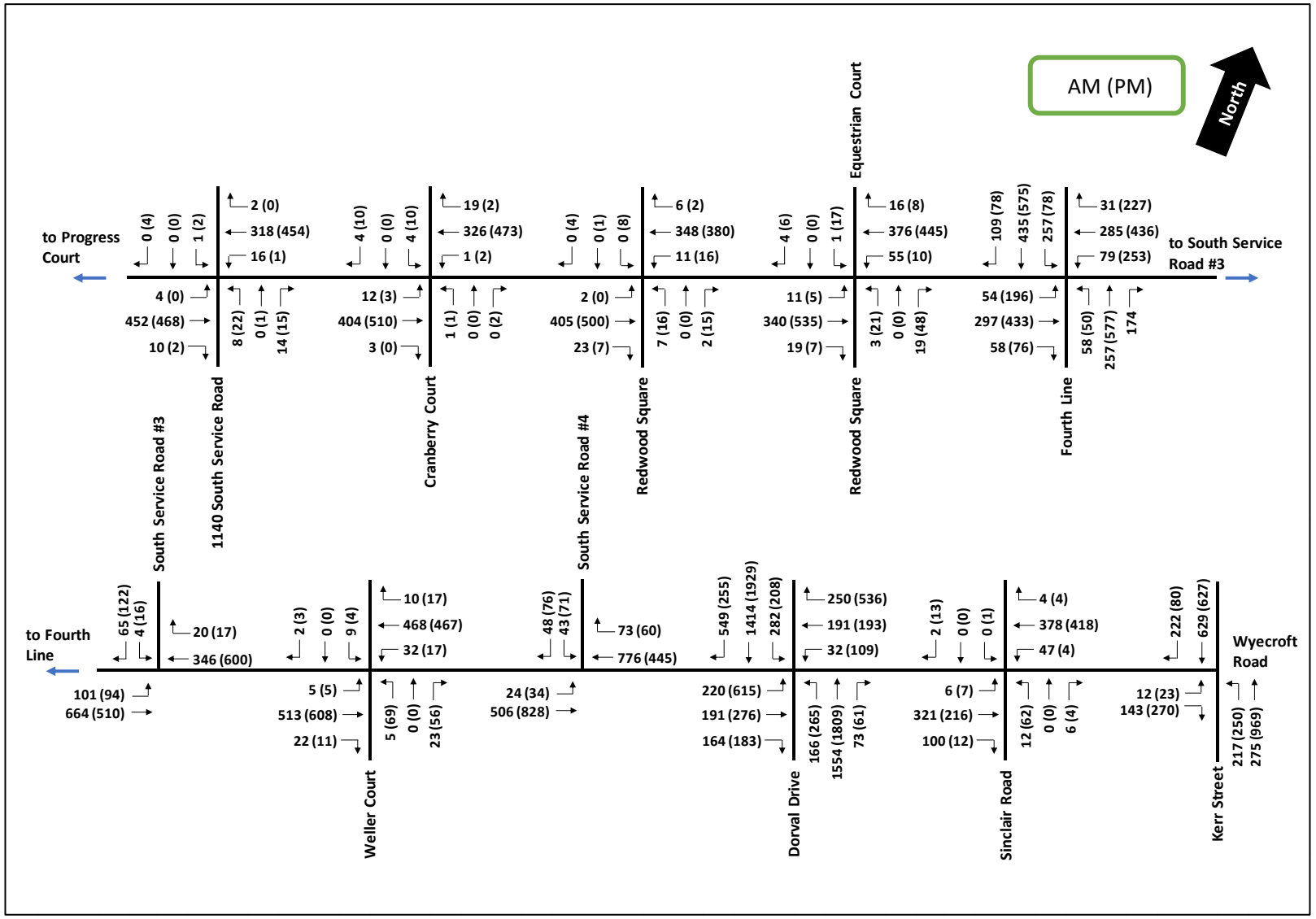


Exhibit 6-3: 2041 Sensitivity Analysis Critical Movements – West Segment (Bronte Road to Third Line)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Bronte Road (signalized)	AM	D	EBL	E	78	0.94	87
			EBT	D	49	0.48	40
			EBR	D	46	0.05	-
			WBL	E	64	0.67	43
			WBT	E	66	0.77	46
			NBL	E	62	0.60	33
			NBT	E	61	0.96	156
			NBR	D	38	0.39	47
			SBL	E	61	0.98	185
	PM	D	EBL	E	62	0.91	108
			EBT	D	50	0.62	54
			EBR	D	44	0.07	7
			WBL	E	56	0.85	96
			WBT	E	77	0.90	68
			NBL	E	60	0.64	43
			NBT	D	46	0.86	151
			SBL	E	68	0.91	94
Conference Centre Access (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
South Service Road #1 (unsignalized)	AM	-	(No critical movements)				
	PM	-	SB1	F	59	0.84	54
Pacific Road (unsignalized)	AM	-	NB1	F	56	0.04	1
			SB1	F	33	0.20	5
	PM	-	NB1	E	48	0.12	3
			SB1	F	316	1.13	36
Westgate Road (unsignalized)	AM	-	NB1	F	50	0.13	3
			SB1	E	40	0.18	5
	PM	-	NB1	F	83	0.46	14
			SB1	F	93	0.68	26
Bronte GO Station Bus Loop (unsignalized)*	AM	-	NB1	F	103	0.49	15
	PM	-	NB1	F	456	1.72	91
South Service Road #2 (signalized)	AM	B	(No critical movements)				
	PM	C	NBT	D	49	0.86	84
			SBT	D	40	0.72	48
Bronte GO Station Parking Access (unsignalized)	AM	-	NB1	F	60	0.01	0
	PM	-	NB1	F	57	0.03	1

Exhibit 6-4: 2041 Sensitivity Analysis Critical Movements – Middle Segment (Third Line to Cranberry Court)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Third Line (signalized)	AM	F	EBL	F	165	1.24	172
			EBT	D	47	0.64	85
			EBR	D	38	0.13	18
			WBL	D	53	0.37	25
			WBT	F	152	1.10	94
			NBL	F	163	1.18	150
			NBT	D	45	0.93	172
			SBL	F	90	1.01	113
			SBT	F	92	1.10	234
			SBR	F	129	1.13	187
	PM	F	EBL	F	152	1.23	235
			EBT	D	38	0.61	99
			WBL	D	48	0.38	37
			WBT	F	187	1.25	166
			WBR	F	123	1.10	134
			NBL	F	259	1.39	131
			NBT	D	49	0.93	154
			SBL	E	60	0.64	27
			SBT	F	81	1.05	177
Progress Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	NB1	D	31	0.66	34
1140 South Service Road / Fire Station Access (signalized)	AM	A	(No critical movements)				
	PM	A	(No critical movements)				
Cranberry Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				

Exhibit 6-5: 2041 Sensitivity Analysis Critical Movements – East Segment (Cranberry Court to Kerr Street)

Wyecroft Road Intersection	Peak Hour	Intersection LOS	Critical Movement				
			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)
Redwood Square (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Equestrian Court/Redwood Square (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Fourth Line (signalized)	AM	C	EBT	D	41	0.75	73
			WBT	D	37	0.69	69
	PM	D	EBL	D	36	0.77	38
			EBT	D	53	0.90	124
			WBL	E	77	0.98	61
			WBT	D	51	0.90	124
South Service Road #3 (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Weller Court (unsignalized)	AM	-	(No critical movements)				
	PM	-	NB1	E	37	0.54	22
		-	SB1	D	26	0.04	1
South Service Road #4 (unsignalized)	AM	-	(No critical movements)				
	PM	-	(No critical movements)				
Dorval Drive (signalized)	AM	D	EBL	F	128	1.04	54
			EBT	D	42	0.37	30
			WBL	F	85	0.65	18
			WBT	D	47	0.53	38
			NBL	D	53	0.63	82
			SBL	D	53	0.65	59
			SBT	D	42	0.93	221
	PM	F	EBL	F	312	1.55	136
			EBT	D	37	0.41	45
			WBT	D	47	1.09	81
			NBL	F	91	0.95	140
			NBT	D	42	0.89	171
			SBL	D	55	0.60	51
			SBT	F	116	1.16	228
Sinclair Road (signalized)	AM	A	(No critical movements)				
	PM	A	(No critical movements)				
Kerr Street (unsignalized)	AM	-	EB1	E	44	0.11	3
	PM	-	EB1	F	209	0.63	17
			EB2	D	25	0.61	30

7 Summary and Preliminary Recommendations

This report summarizes the traffic analysis in support of the EA and includes traffic forecasts, existing and future traffic operations, and analysis of potential improvements to be considered in the evaluation of design alternatives.

Traffic forecasts have been developed to include background growth, the Wyecroft Road Extension over Bronte Creek, and the potential development of the Bronte GO MTSA to year 2031 and year 2041. Both the weekday AM and PM peak hours were evaluated.

Exhibit 7-1 summarizes the preliminary improvements for consideration, including a discussion on future works. All listed improvements are from a traffic operations standpoint and require further design review and cost analysis as part of the Environmental Assessment process.

Exhibit 7-1: Wyecroft Road Preliminary 2031 Improvement Measures and Future Work

WYECROFT ROAD INTERSECTION	PRELIMINARY 2031 IMPROVEMENTS	NOTES / FUTURE WORK
West Segment (Bronte Road to Third Line)		
Bronte Road (Signalized) *Regional intersection, improvements are outside the scope of this study	Dual SBL Free flow WBR with island and dedicated downstream lane on the north leg	– Coordinate with Halton Region – Potential weaving concerns on Bronte Road between Wyecroft Road and Queen Elizabeth Way on-ramp – Confirm lane configuration of Wyecroft Road Extension – Consider design and operational measures to improve pedestrian / cycling operations and safety – Review right-of-way requirements
South Service Road #1 (Unsignalized)	Four lane configuration (two eastbound, two westbound) Dedicated EBL lane	Review right-of-way requirements
Pacific Road (Unsignalized)	Four lane configuration (two eastbound, two westbound) Dedicated SBL and EBL lanes	Review right-of-way requirements
Westgate Road (Unsignalized)	Four lane configuration (two eastbound, two westbound)	Review right-of-way requirements
Bronte GO Station Bus Loop (Unsignalized)	Four lane configuration (two eastbound, two westbound) Dedicated WBL lane	Review right-of-way requirements The *GO Rail Station Access Plan (2016)*, states that the bus station is planned to be relocated to Speers Road by 2031. This access should be reassessed to suit future purposes, including future signal warrant.
South Service Road #2 (Signalized)	Four lane configuration (two eastbound, two westbound)	Review right-of-way requirements

WYECROFT ROAD INTERSECTION	PRELIMINARY 2031 IMPROVEMENTS	NOTES / FUTURE WORK
Bronte GO Parking Access (Unsignalized)	Four lane configuration (two eastbound, two westbound)	Review right-of-way requirements
South Service Road #1 to Third Line	Four lane configuration (two eastbound, two westbound) TWLT lane between South Service Road #1 and Third Line	Review right-of-way requirements TWLT lane to be considered during development of design alternatives. It is recommended that cost and safety performance analysis be conducted to determine the need and justification of extending TWLT lane west of Pacific Road.
Middle Segment (Third Line to Cranberry Court)		
Third Line (Signalized)	Dedicated EBR and NBR Convert current WBTR lane to dedicated WBR lane with overlap phase.	Further study required to determine design of Third Line approaches. Town should consider broader transportation network needs to support growth in the Bronte GO MTSA.
Progress Court (Unsignalized)	Dedicated WBL	Review right-of-way requirements
East Segment (Cranberry Court to Kerr Street)		
South Service Road #4 (Unsignalized)	Convert north approach to right-in/right-out with directional island and extension of concrete median. Long-term consideration: New access road (connecting South Service Road to Wyecroft Road) or Realign westerly to align with Weller Court.	The preferred alternative results in increased travel distances for traffic currently turning left in or out of the intersection. Further study is recommended to develop a long-term solution, to identify potential alignments for a new road between Fourth Line and Dorval Drive, or re-alignment of South Service Road to connect at Weller Court.
Dorval Drive (Signalized) *Regional intersection, improvements are outside the scope of this study	Additional / Improved Signage for wayfinding	Direct signs to direct drivers to the inside lane for Dorval Drive (north) and QEW westbound, outside lane for QEW eastbound.
Kerr Street (Unsignalized)	Dedicated EBL and EBR lanes	Review right-of-way requirements Reassess and protect the intersection for traffic signals upon or prior to the completion of the rail grade separation.
1140 South Service Road to Fourth Line	TWLT lane between 1140 South Service Road to Fourth Line	Review right-of-way requirements TWLT lane to be considered during development of design alternatives
Fourth Line to Weller Court	Extend existing TWLT lane westerly to Fourth Line	Review right-of-way requirements TWLT lane to be considered during development of design alternatives
Sinclair Road to 208 Wyecroft Road	TWLT lane between Sinclair Road to 208 Wyecroft Road	Review right-of-way requirements

WYECROFT ROAD INTERSECTION	PRELIMINARY 2031 IMPROVEMENTS	NOTES / FUTURE WORK
		TWLT lane to be considered during development of design alternatives

**Improvement measures require further design review and cost analysis as part of the EA*

7.1 Next Steps

The findings of this report will be carried forward for the multi-modal assessment of the corridor, including active transportation, and inform the evaluation of alternatives during the Environmental Assessment process including environmental, social, and cultural criteria.

Following the combined evaluation, a conceptual design will be developed for further consultation with the public and stakeholders.

Appendix A

Turning Movement Counts

Bronte Rd @ Wyecroft Rd

Morning Peak Diagram

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

One Hour Peak
From: 7:45:00
To: 8:45:00

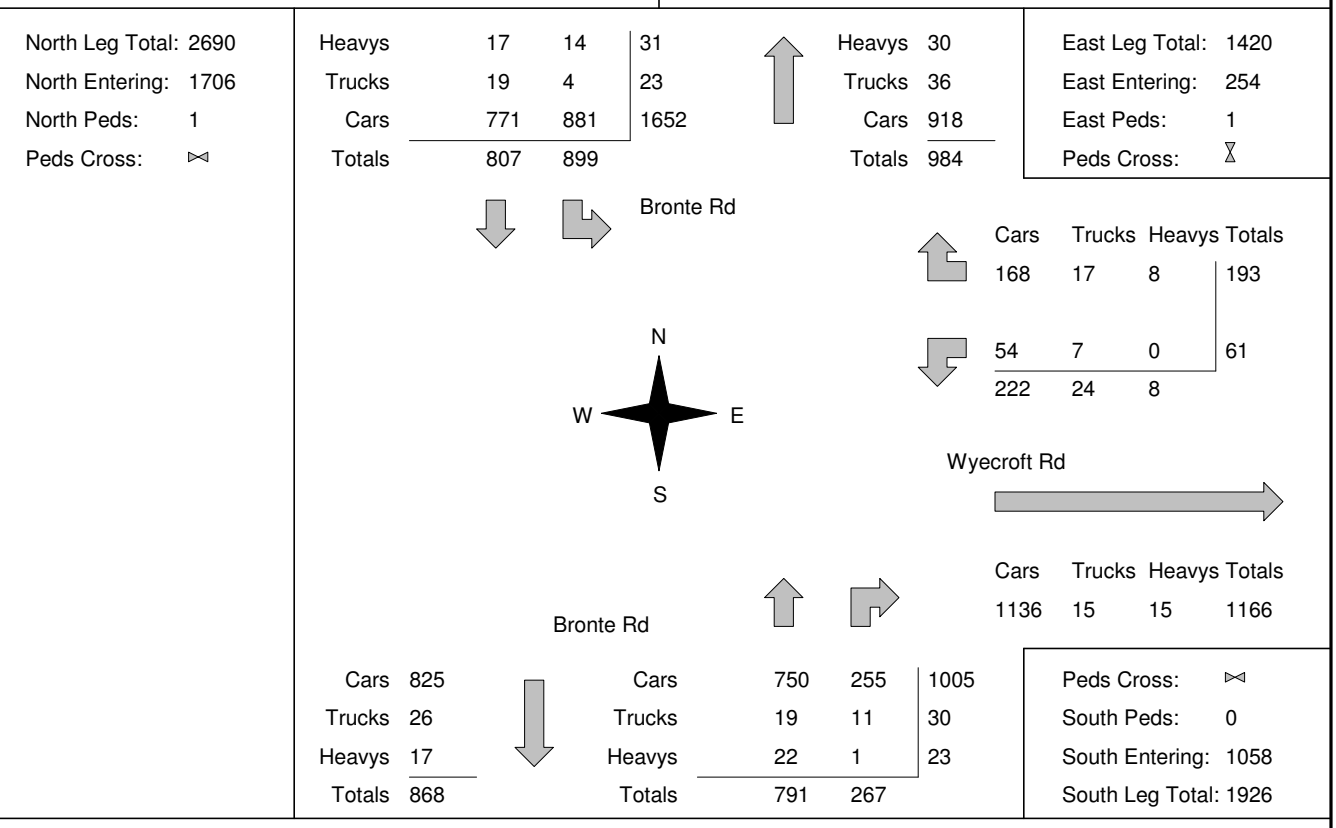
Municipality: Halton Region
Site #: 0000003002
Intersection: Bronte Rd & Wyecroft Rd
TFR File #: 2
Count date: 17-Oct-2017

Weather conditions:
Clear/Dry

Person(s) who counted:
Diane
Armando

**** Signalized Intersection ****

Major Road: Bronte Rd runs N/S



Comments

Bronte Rd @ Wyecroft Rd

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 14:00:00

One Hour Peak
From: 12:00:00
To: 13:00:00

Municipality: Halton Region
Site #: 0000003002
Intersection: Bronte Rd & Wyecroft Rd
TFR File #: 2
Count date: 17-Oct-2017

Weather conditions:
Clear/Dry

Person(s) who counted:
Diane
Armando

**** Signalized Intersection ****

Major Road: Bronte Rd runs N/S

North Leg Total: 1703
North Entering: 811
North Peds: 2
Peds Cross: ⋈

Heavys	15	17	32
Trucks	16	19	35
Cars	505	239	744
Totals	536	275	

Heavys	30
Trucks	34
Cars	828
Totals	892

East Leg Total: 814
East Entering: 446
East Peds: 0
Peds Cross: ⋈

Bronte Rd

Cars	Trucks	Heavys	Totals
310	21	14	345
96	4	1	101
406	25	15	

N
W E
S

Wyecroft Rd

Cars	Trucks	Heavys	Totals
325	26	17	368

Bronte Rd

Cars	601
Trucks	20
Heavys	16
Totals	637

Cars	518	86	604
Trucks	13	7	20
Heavys	16	0	16
Totals	547	93	

Peds Cross: ⋈
South Peds: 0
South Entering: 640
South Leg Total: 1277

Comments

Bronte Rd @ Wyecroft Rd

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Halton Region
Site #: 0000003002
Intersection: Bronte Rd & Wyecroft Rd
TFR File #: 2
Count date: 17-Oct-2017

Weather conditions:
Clear/Dry

Person(s) who counted:
Diane
Armando

**** Signalized Intersection ****

Major Road: Bronte Rd runs N/S

North Leg Total: 2678
North Entering: 1117
North Peds: 4
Peds Cross: ⋈

Heavys	8	12	20
Trucks	5	5	10
Cars	746	341	1087
Totals	759	358	

Heavys	7
Trucks	33
Cars	1521
Totals	1561

East Leg Total: 1449
East Entering: 993
East Peds: 3
Peds Cross: ⋈

Bronte Rd

	Cars	Trucks	Heavys	Totals
	712	15	6	733
	252	8	0	260
	964	23	6	

N
W E
S

Wyecroft Rd

Cars	Trucks	Heavys	Totals
435	9	12	456

Bronte Rd

Cars	998
Trucks	13
Heavys	8
Totals	1019

Cars	809	94	903
Trucks	18	4	22
Heavys	1	0	1
Totals	828	98	

Peds Cross: ⋈
South Peds: 0
South Entering: 926
South Leg Total: 1945

Comments

Bronte Rd @ Wyecroft Rd

Total Count Diagram

Municipality: Halton Region
Site #: 0000003002
Intersection: Bronte Rd & Wyecroft Rd
TFR File #: 2
Count date: 17-Oct-2017

Weather conditions:
Clear/Dry

Person(s) who counted:
Diane
Armando

**** Signalized Intersection ****

Major Road: Bronte Rd runs N/S

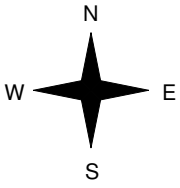
North Leg Total: 17071
North Entering: 8278
North Peds: 28
Peds Cross: ⋈

Heavys	123	109	232
Trucks	96	85	181
Cars	4667	3198	7865
Totals	4886	3392	

Heavys	199	
Trucks	287	
Cars	8307	
Totals	8793	

East Leg Total: 8599
East Entering: 4244
East Peds: 9
Peds Cross: ⋈

Cars	3001	140	82	3223
Trucks	971	46	4	1021
Heavys	3972	186	86	



Cars	4106	135	114	4355
Trucks				
Heavys				
Totals				

Cars	5638		
Trucks	142		
Heavys	127		
Totals	5907		

Cars	5306	908	6214
Trucks	147	50	197
Heavys	117	5	122
Totals	5570	963	

Peds Cross: ⋈
South Peds: 0
South Entering: 6533
South Leg Total: 12440

Comments

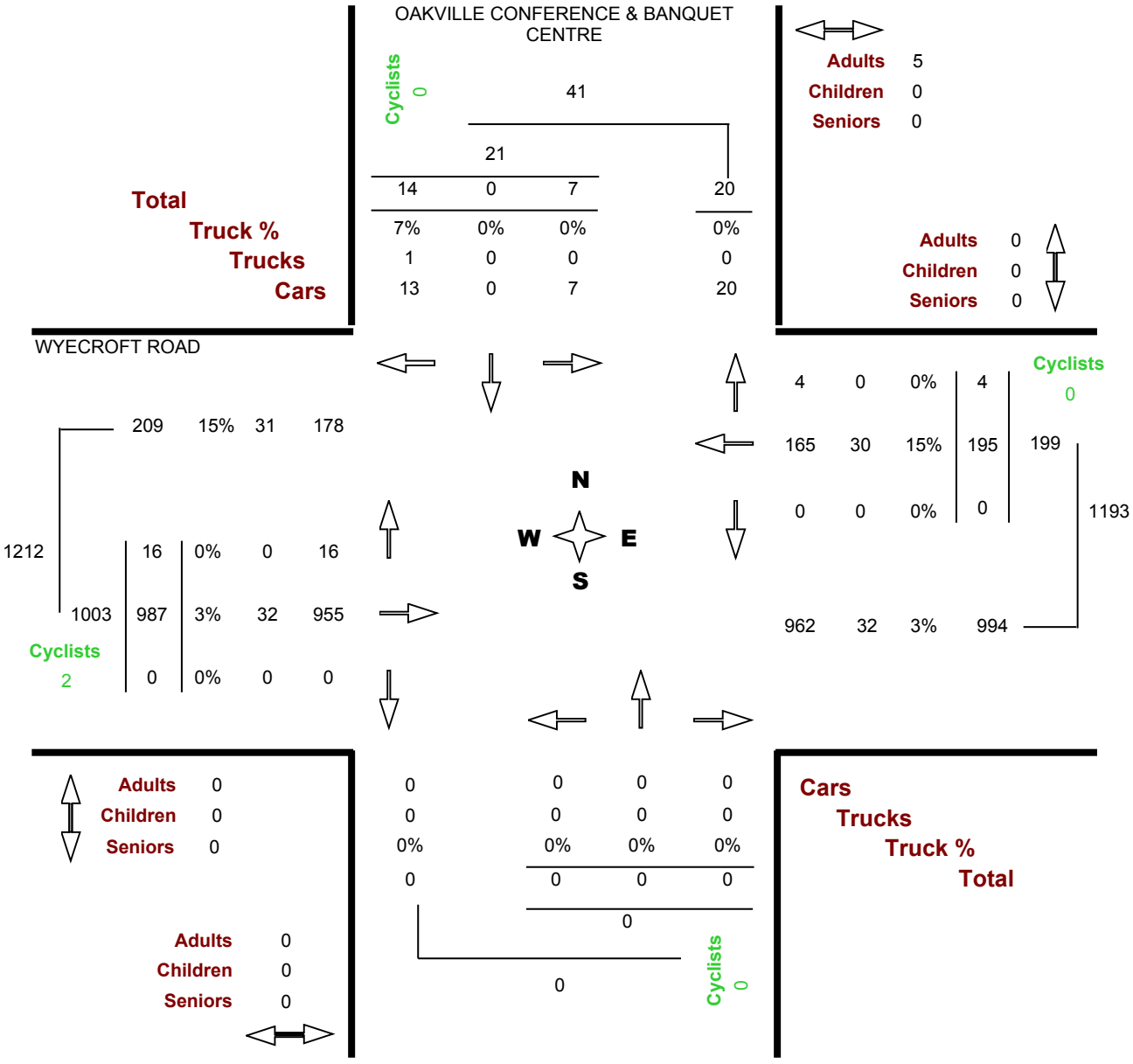
Turning Movements Report - AM Period

Location..... OAKVILLE CONFERENCE & BANQUET CENTRE @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!

Count Date..... Monday, 07 May, 2018 **Peak Hour.....** 07:30 AM — 08:30 AM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

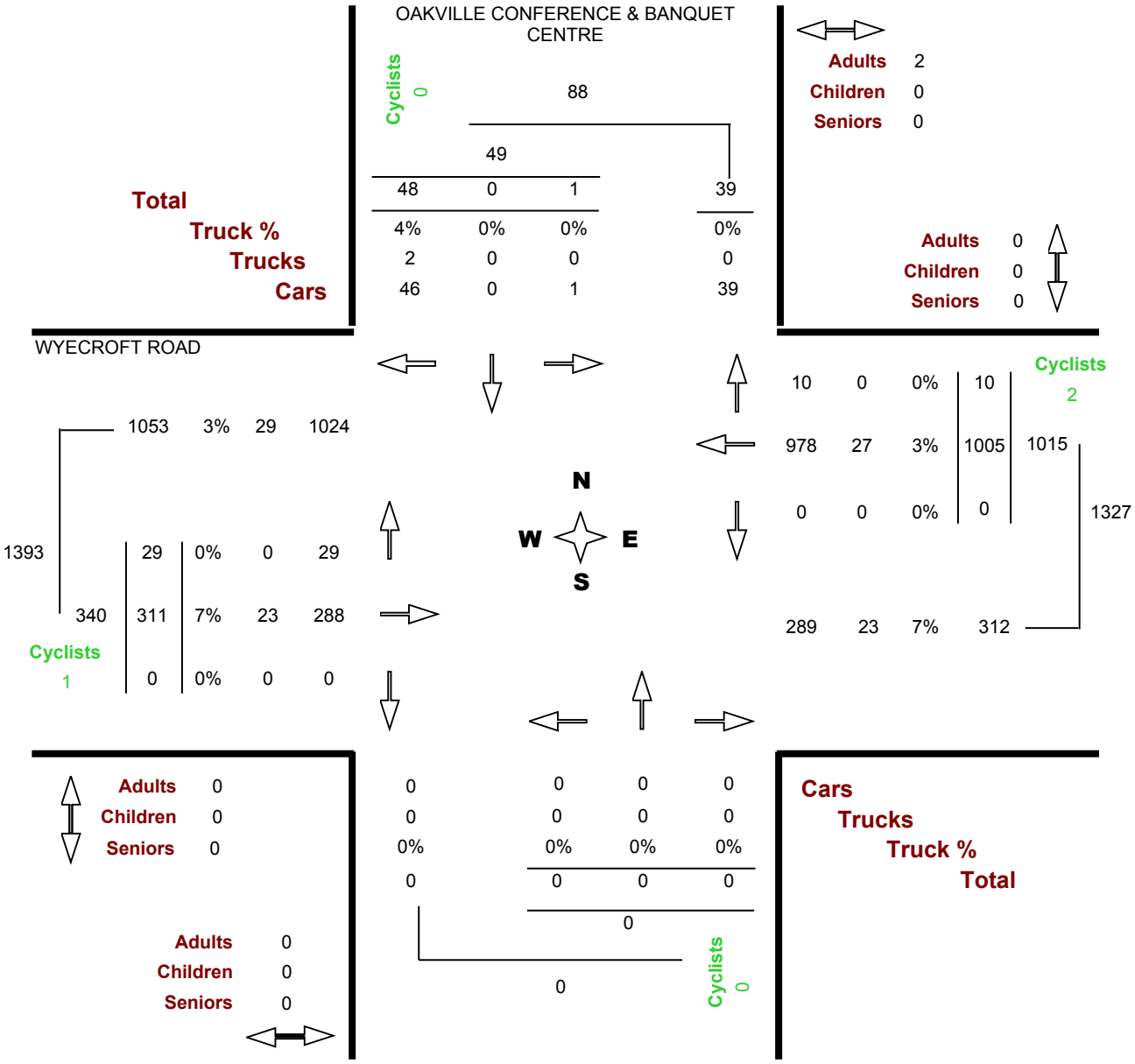
Turning Movements Report - PM Period

Location..... OAKVILLE CONFERENCE & BANQUET CENTRE @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!

Count Date..... Monday, 07 May, 2018 **Peak Hour.....** 05:00 PM — 06:00 PM

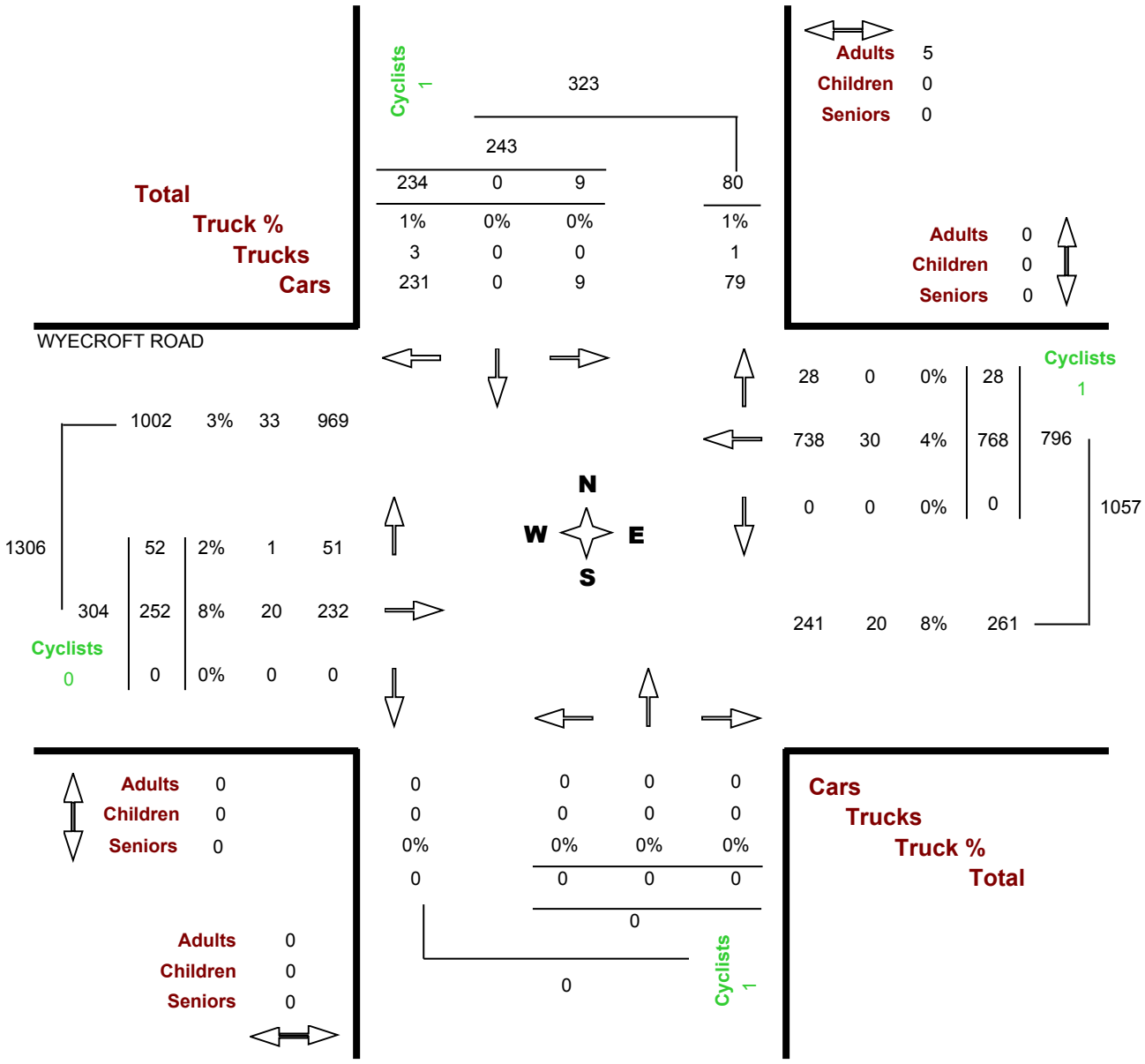


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30147801
Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 04:30 PM — 05:30 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

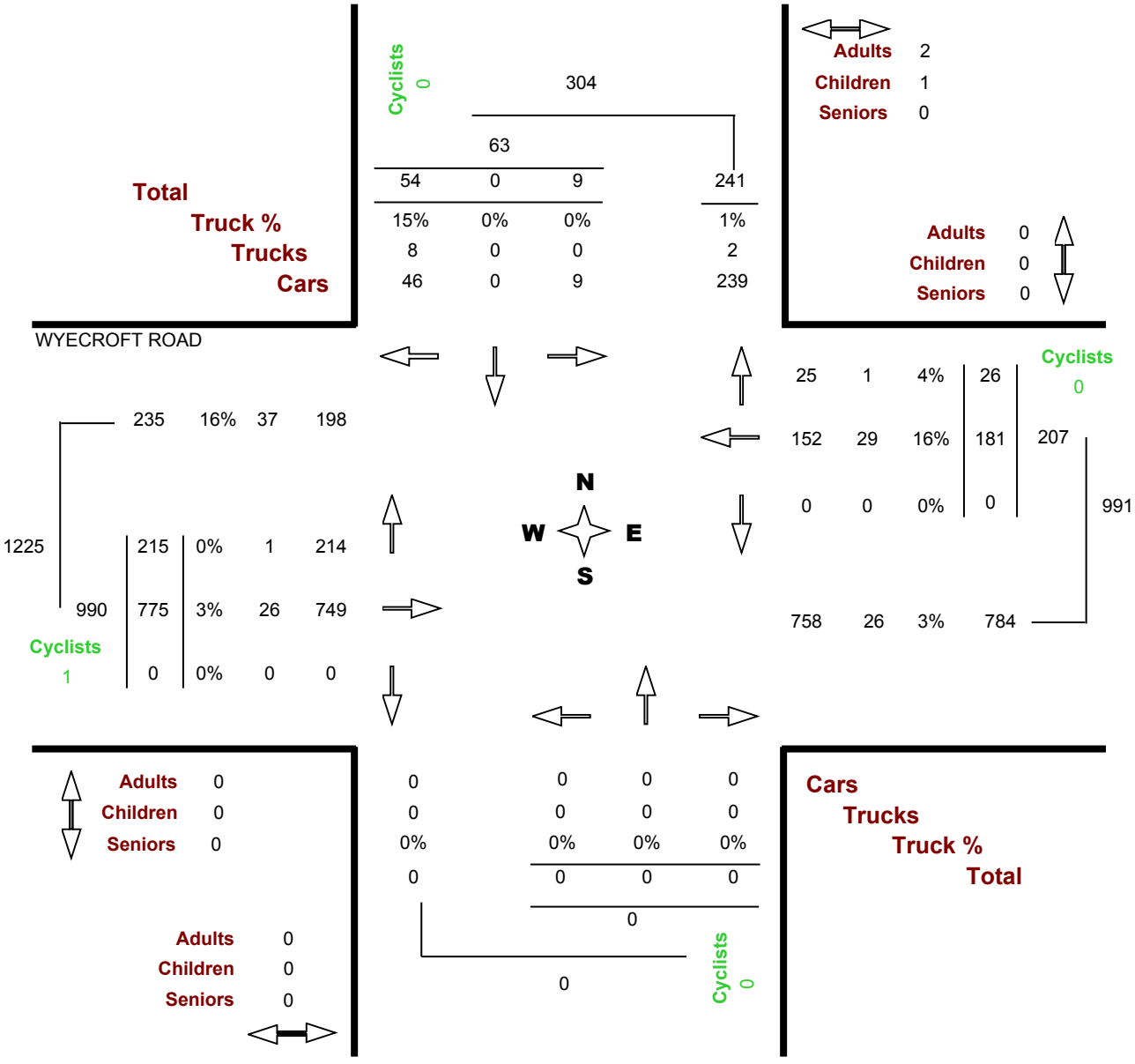
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... 30147801

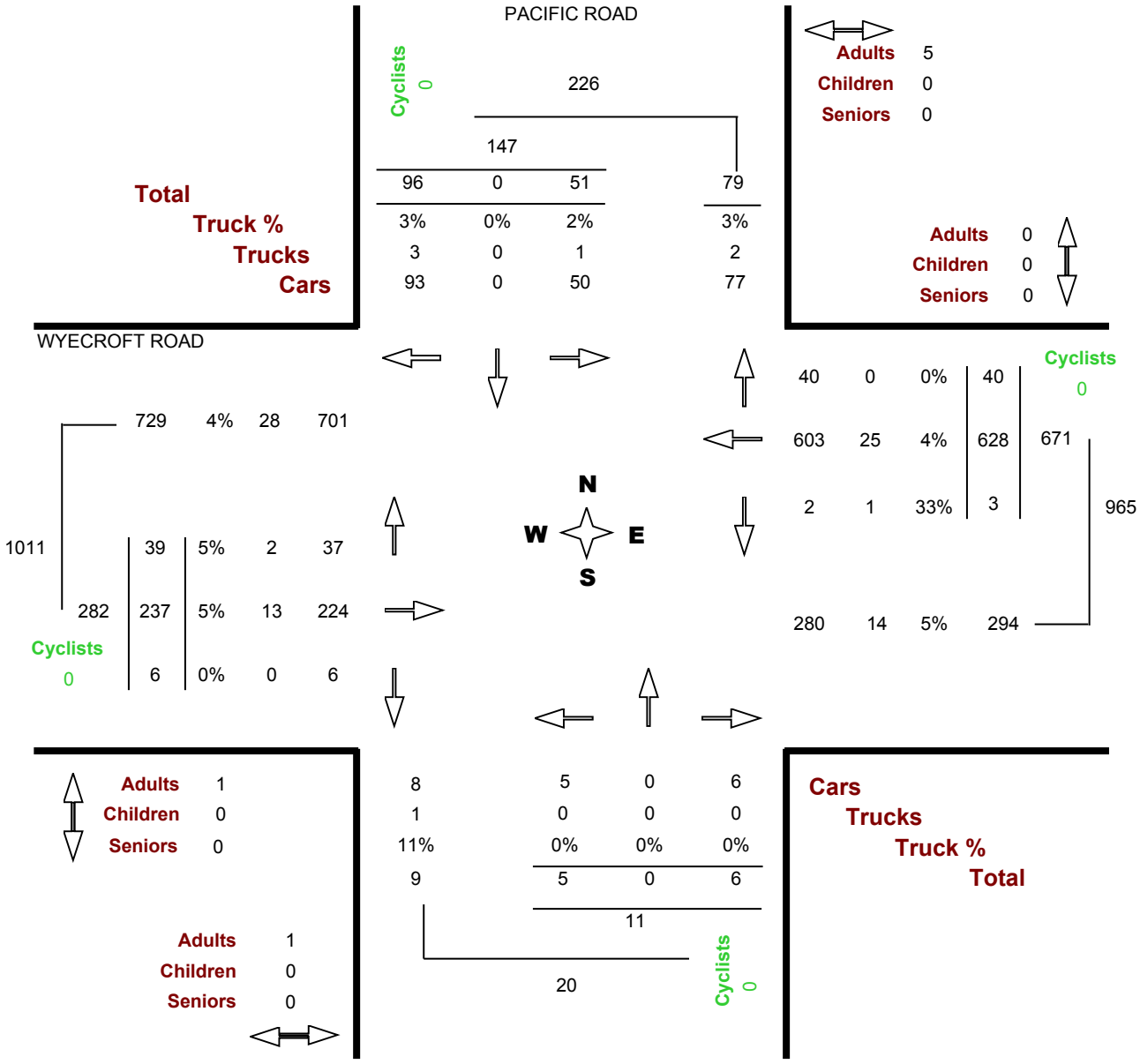
Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 07:45 AM — 08:45 AM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ PACIFIC ROAD
Municipality..... OAKVILLE
GeoID..... 30148001
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 04:30 PM — 05:30 PM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

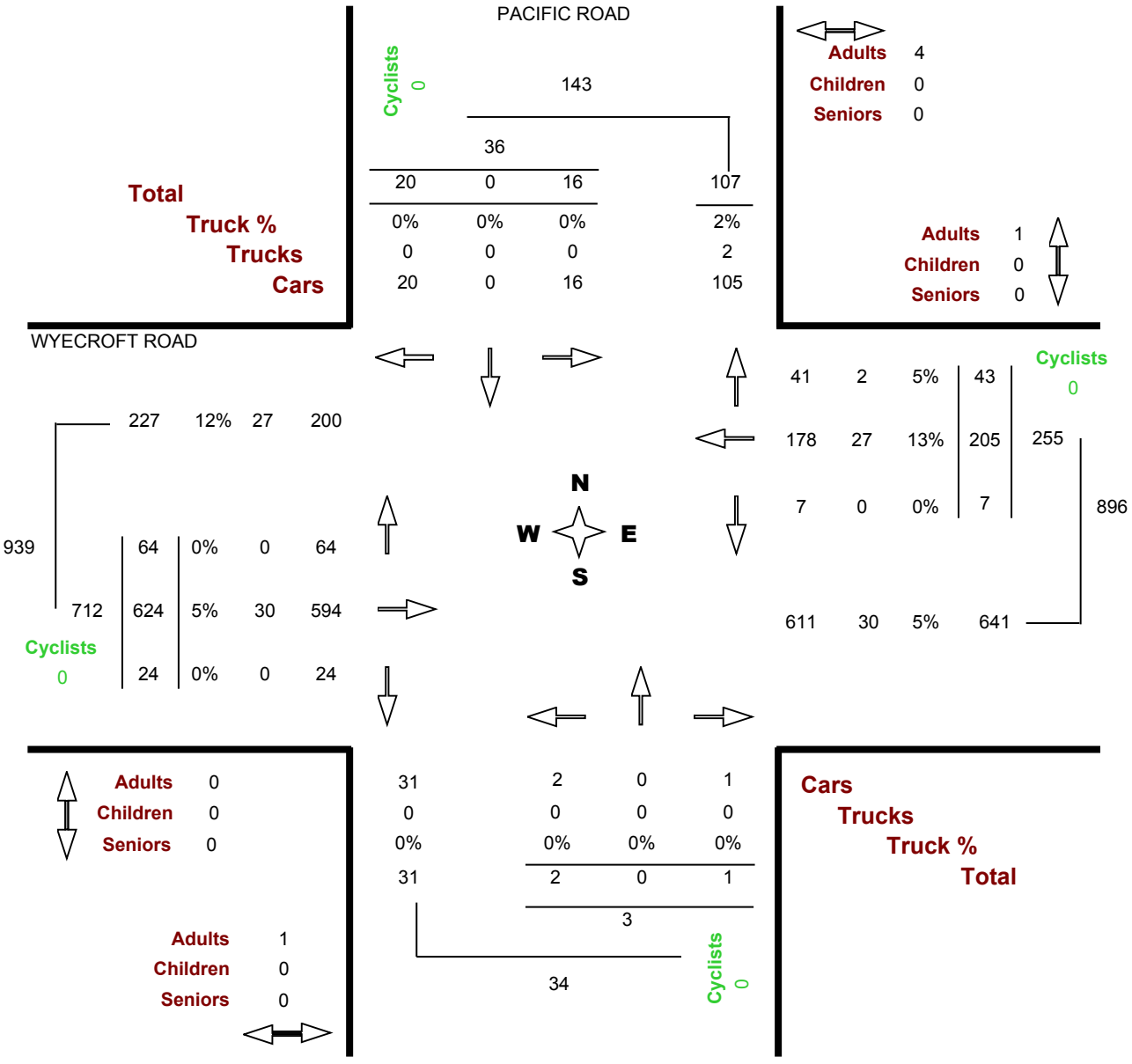
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ PACIFIC ROAD

Municipality..... OAKVILLE

GeoID..... 30148001

Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 07:45 AM — 08:45 AM

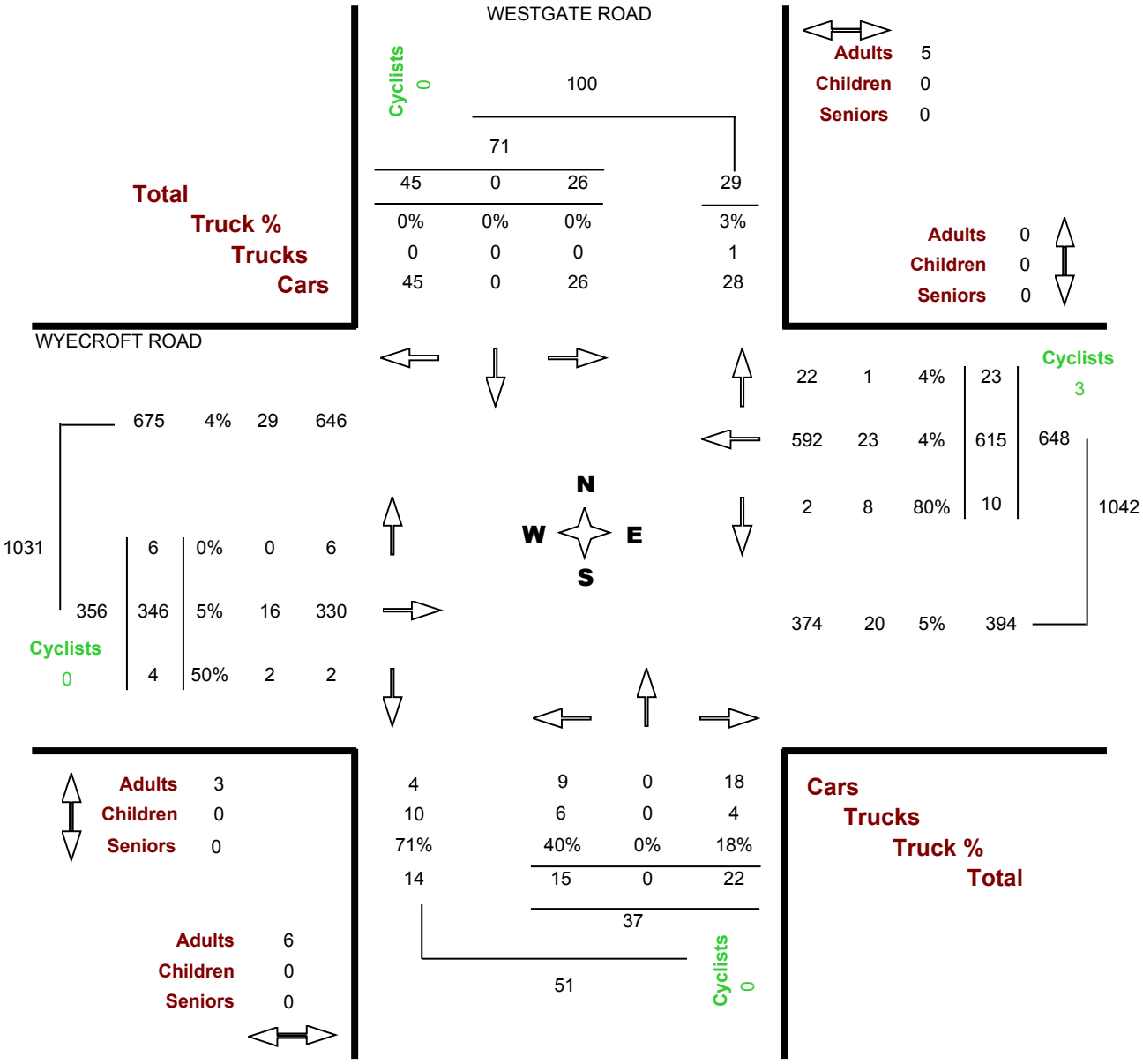


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ WESTGATE ROAD
Municipality..... OAKVILLE
GeoID..... 30148201
Count Date..... Monday, 30 April, 2018 **Peak Hour.....** 05:00 PM — 06:00 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

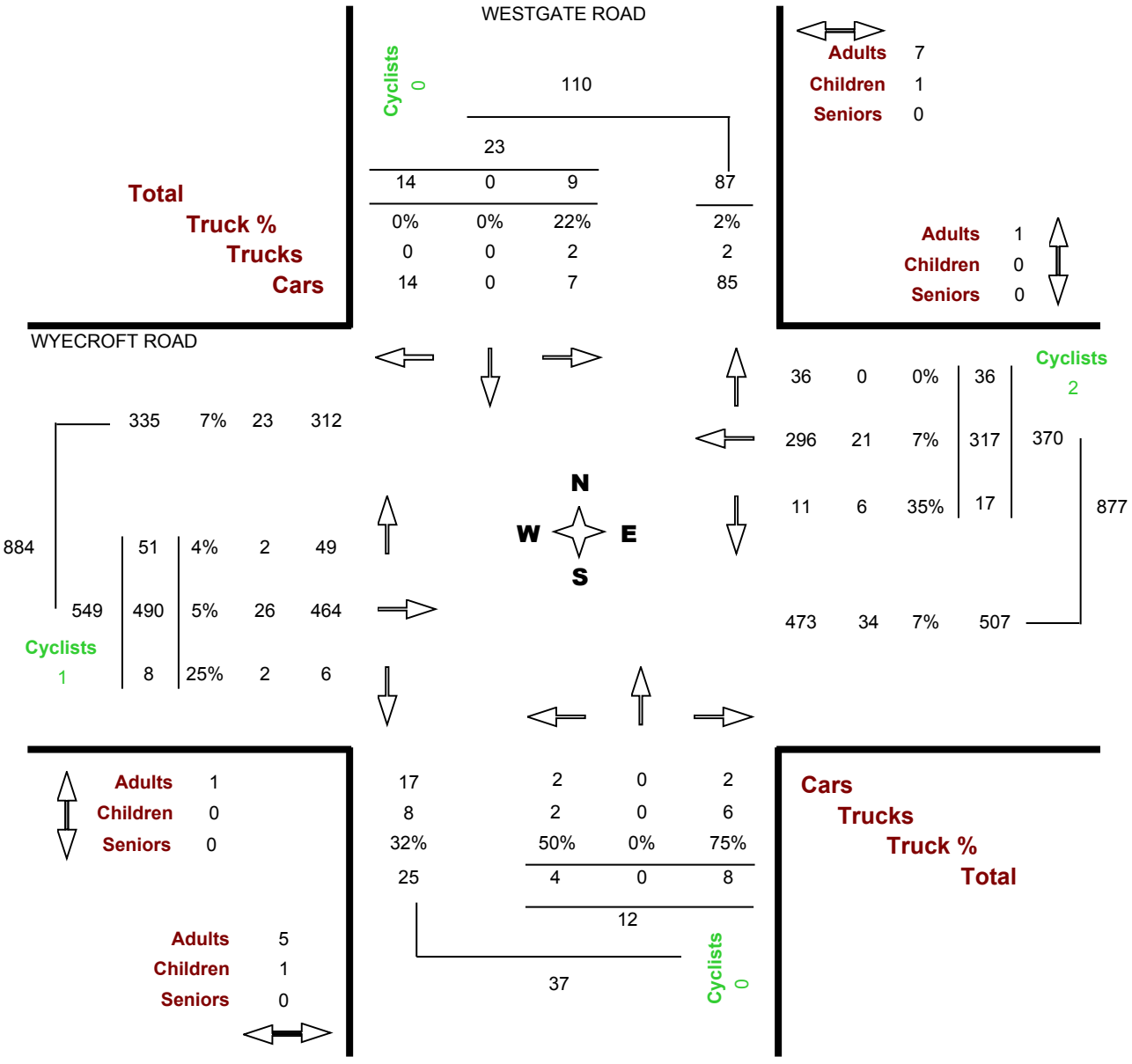
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ WESTGATE ROAD

Municipality..... OAKVILLE

GeoID..... 30148201

Count Date..... Monday, 30 April, 2018 **Peak Hour.....** 08:00 AM — 09:00 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

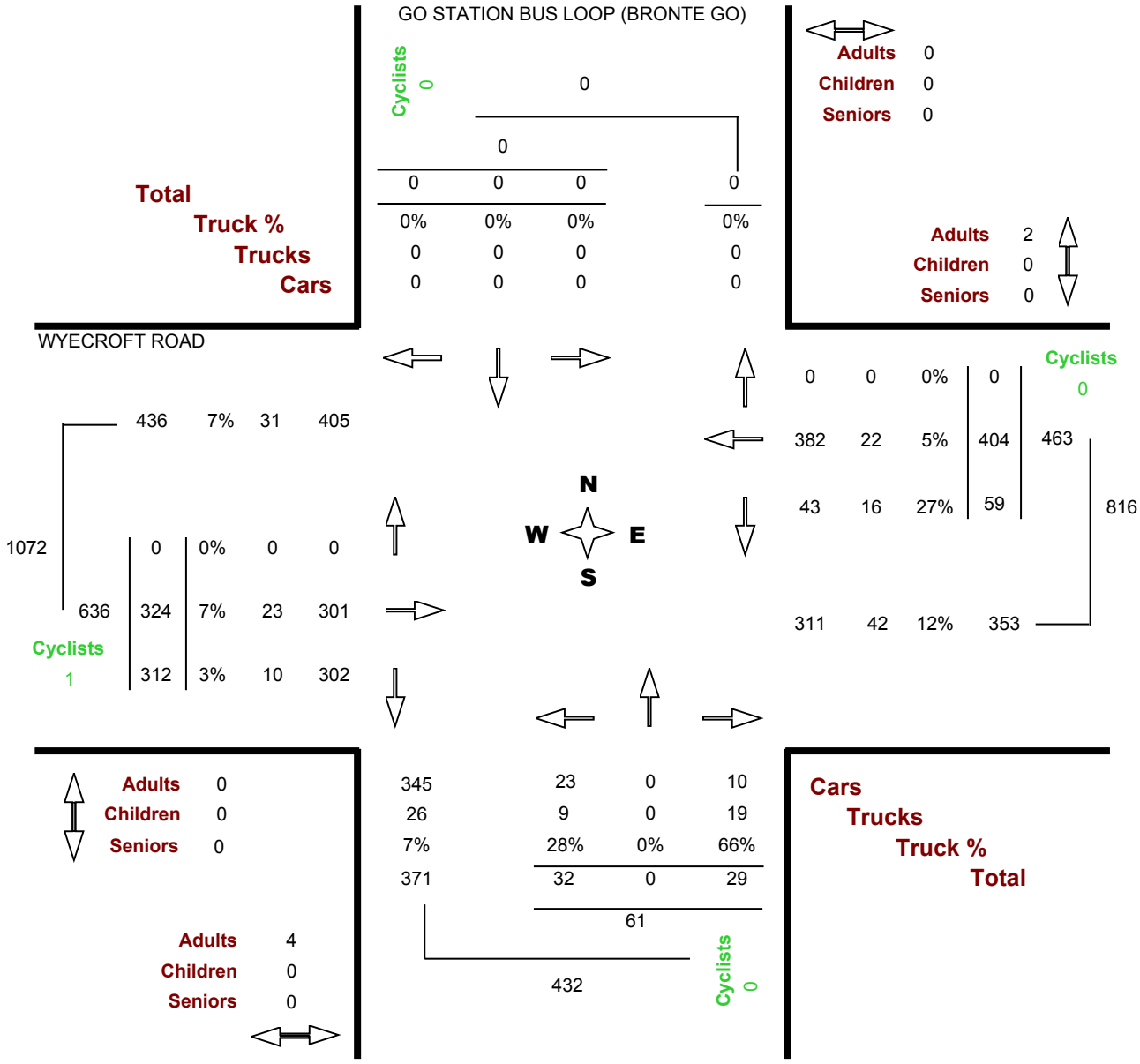
Turning Movements Report - AM Period

Location..... GO STATION BUS LOOP (BRONTE GO) @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!!

Count Date..... Tuesday, 01 May, 2018 **Peak Hour.....** 07:30 AM — 08:30 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

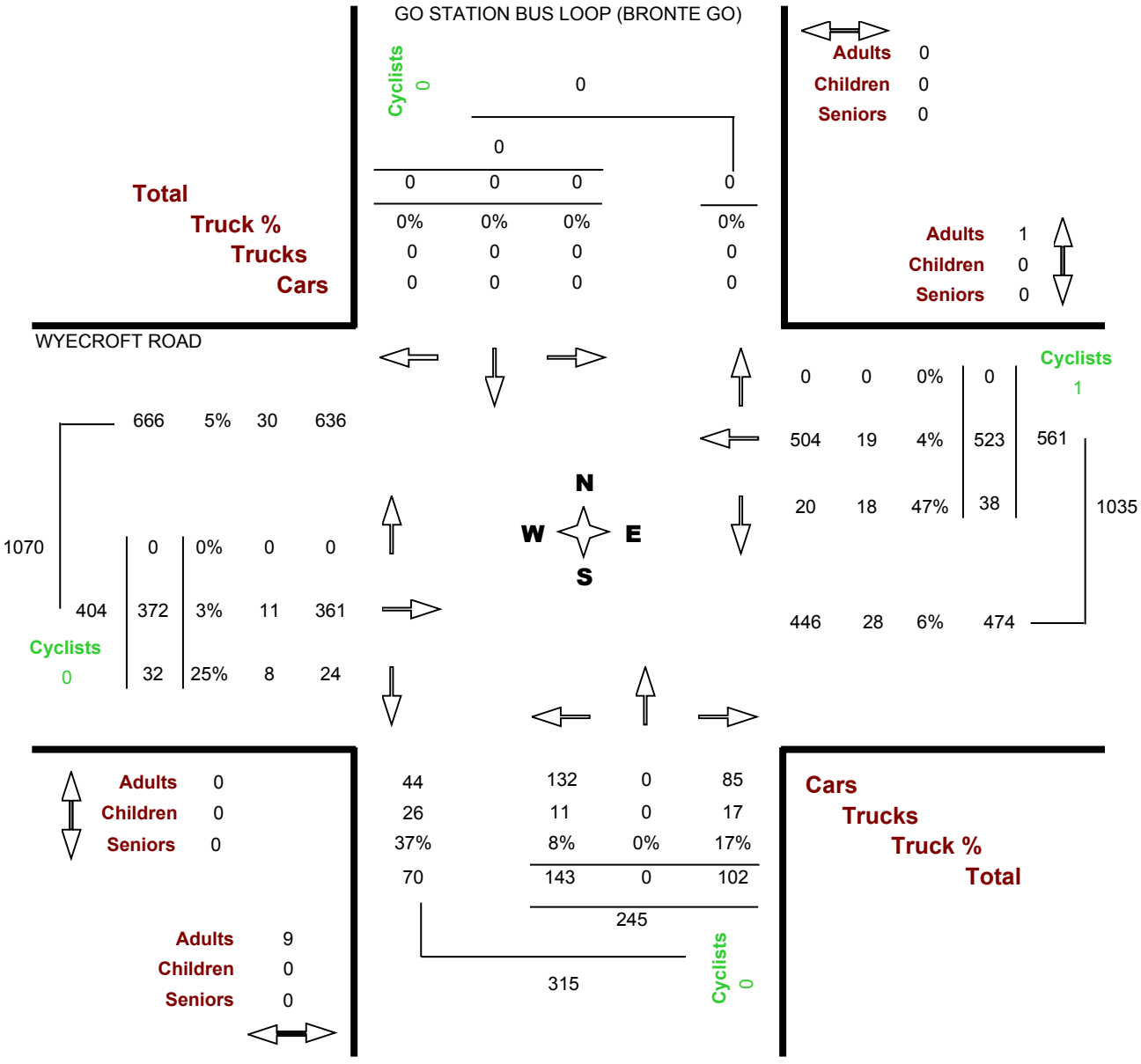
Turning Movements Report - PM Period

Location..... GO STATION BUS LOOP (BRONTE GO) @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!!

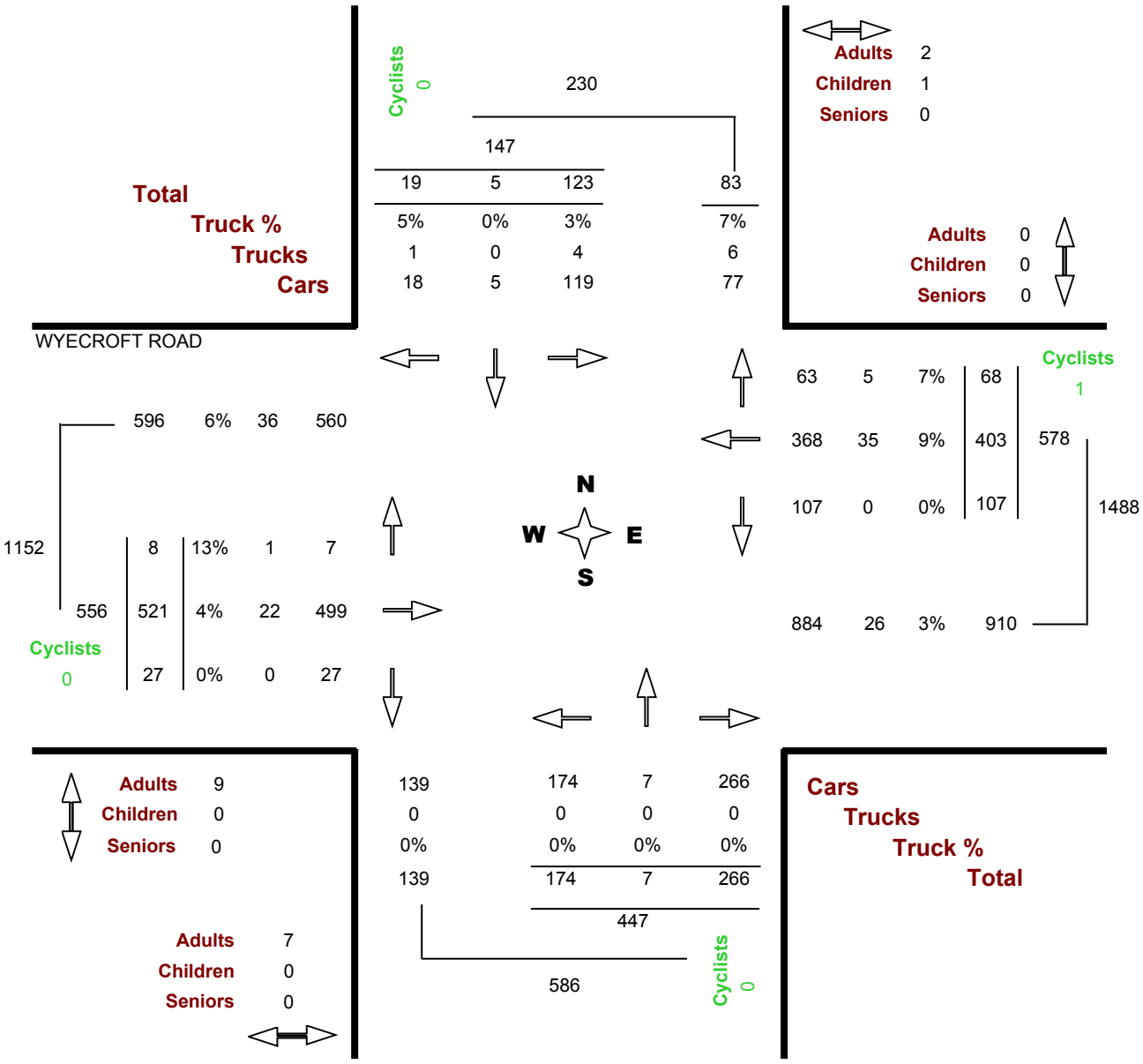
Count Date..... Tuesday, 01 May, 2018 **Peak Hour.....** 05:00 PM — 06:00 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30148401
Count Date..... Monday, 25 June, 2018 **Peak Hour.....** 05:00 PM — 06:00 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

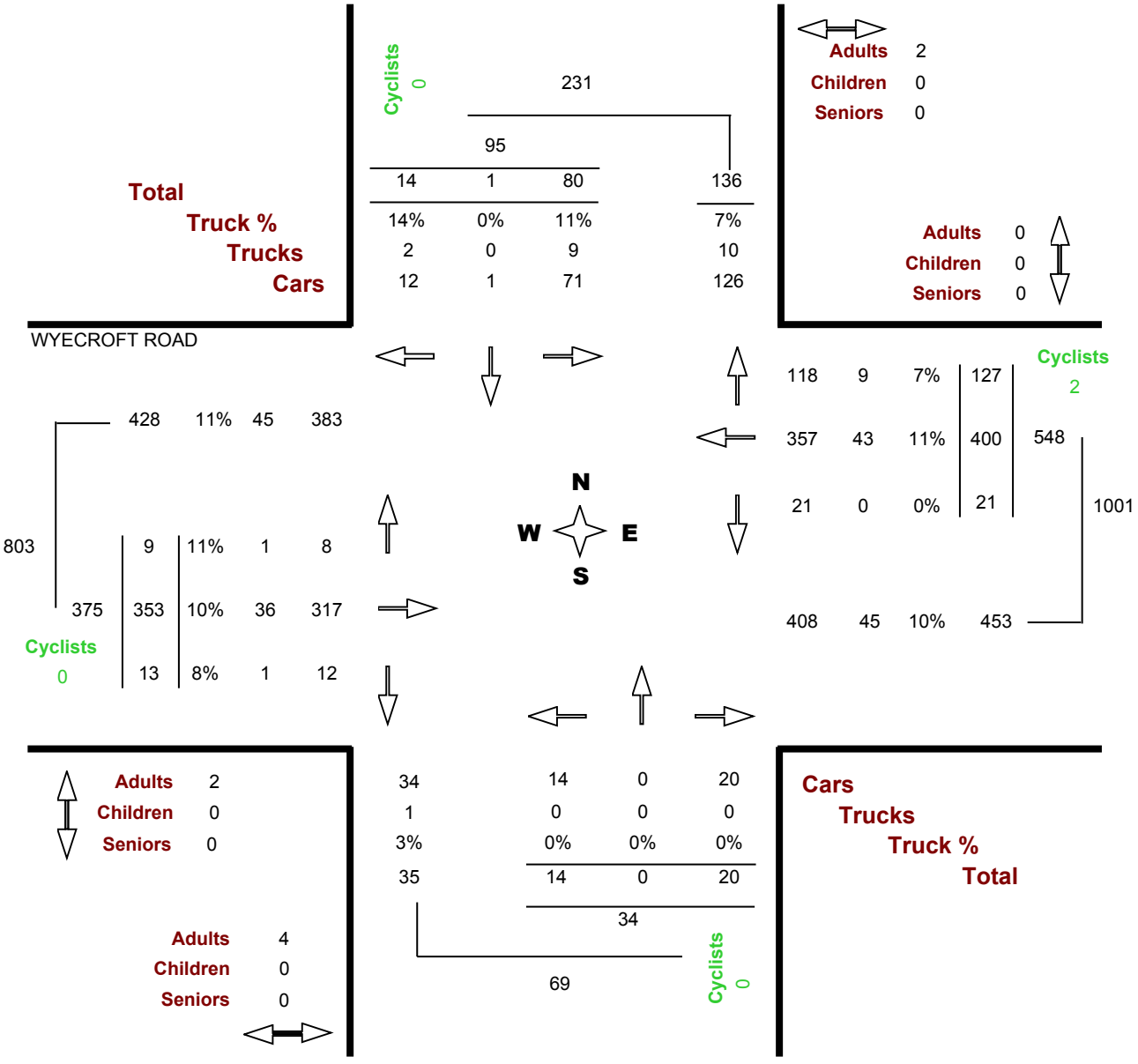
Turning Movements Report - MD Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... 30148401

Count Date..... Monday, 25 June, 2018 **Peak Hour.....** 01:00 PM — 02:00 PM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

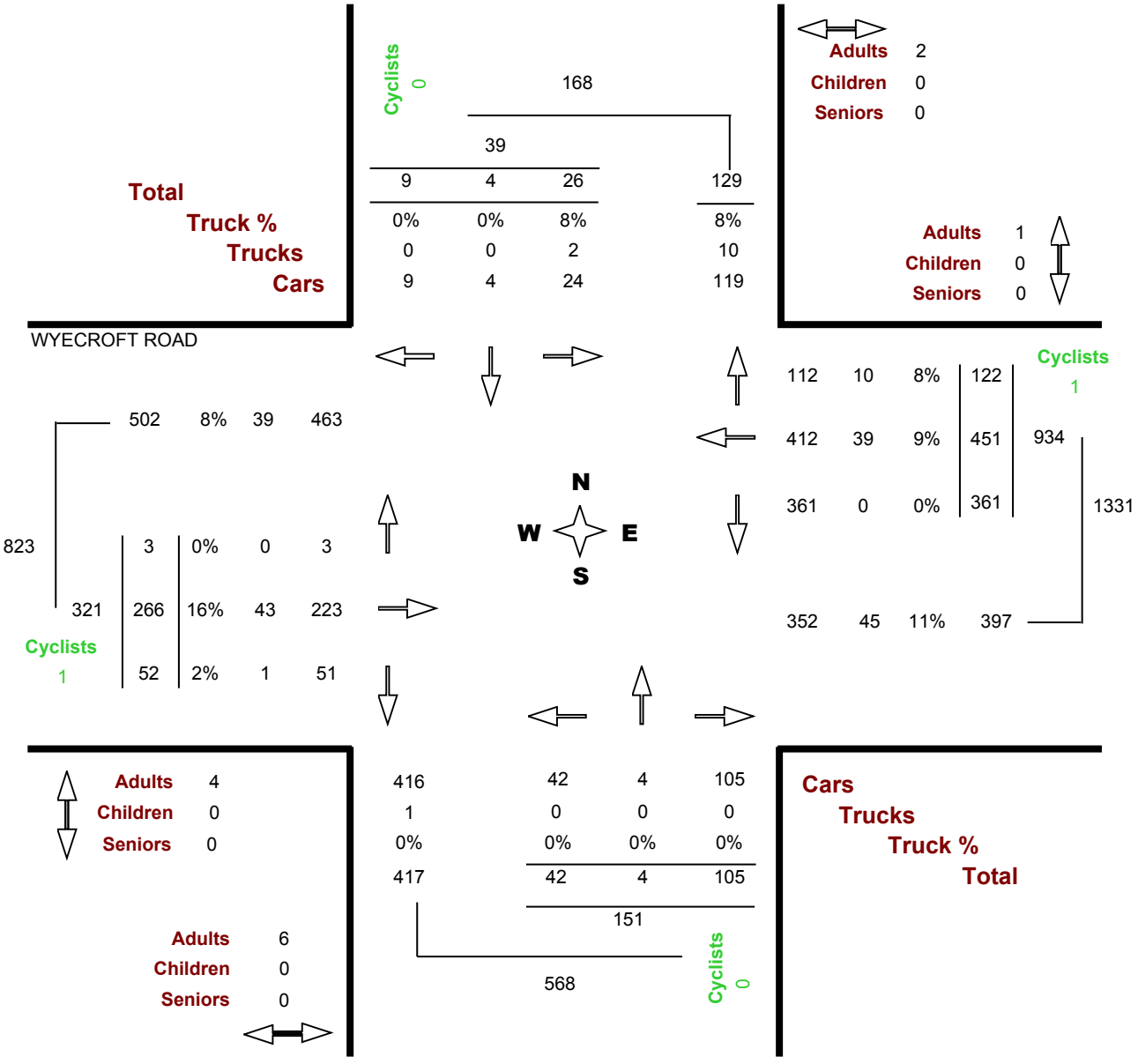
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... 30148401

Count Date..... Monday, 25 June, 2018 **Peak Hour.....** 07:30 AM — 08:30 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

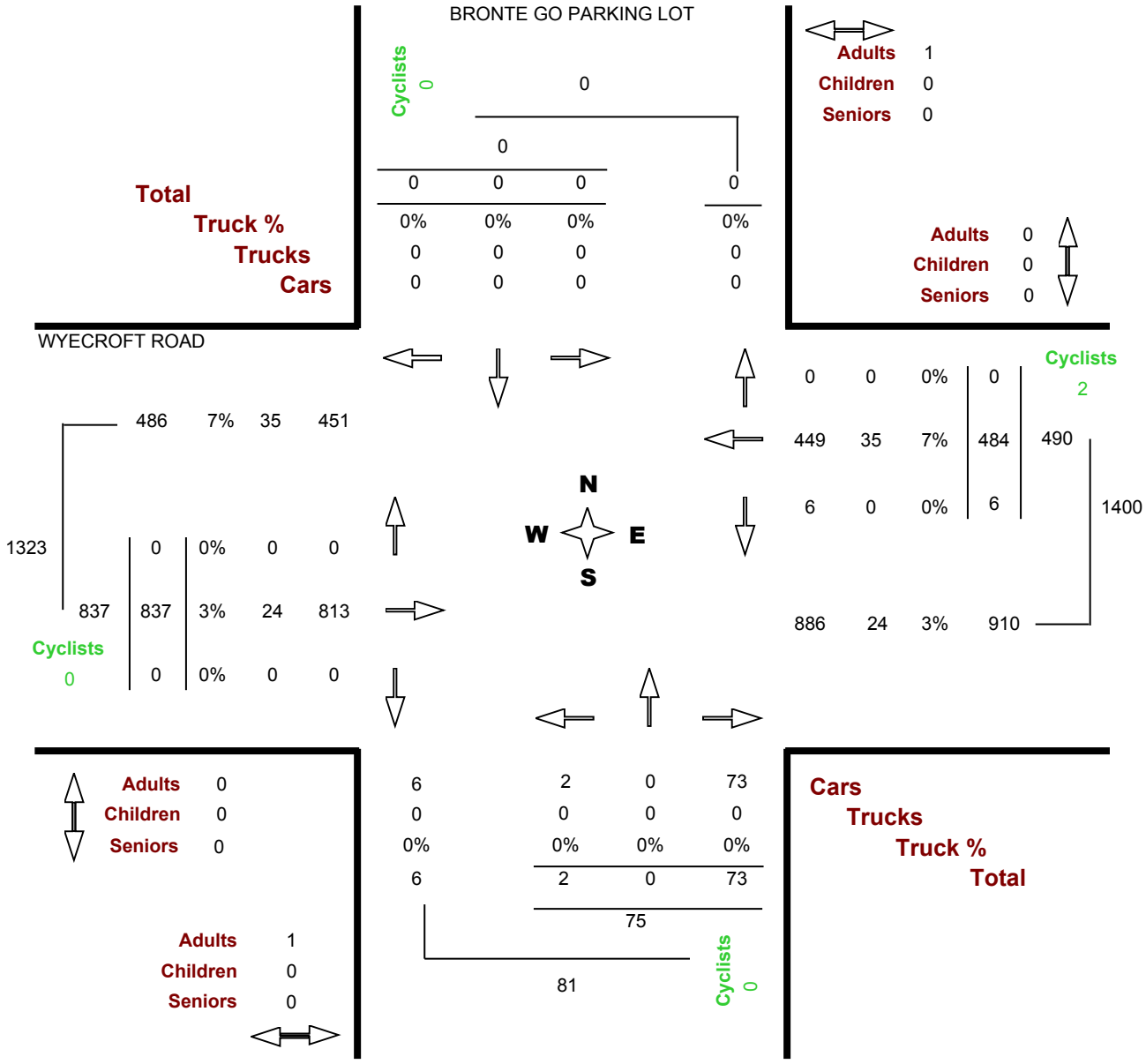
Turning Movements Report - PM Period

Location..... BRONTE GO PARKING LOT @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!!!

Count Date..... Wednesday, 02 May, 2018 **Peak Hour.....** 05:00 PM — 06:00 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

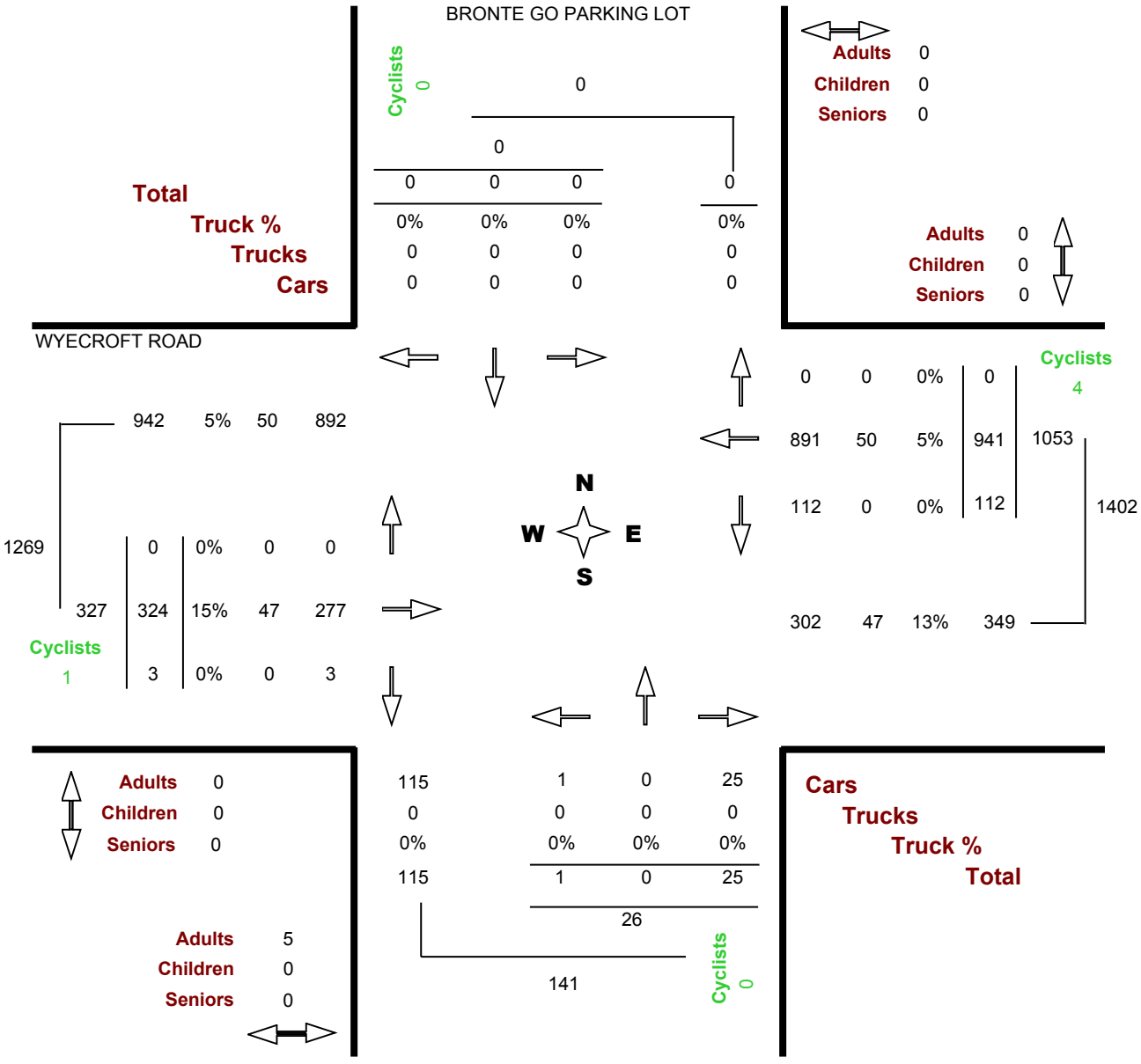
Turning Movements Report - AM Period

Location..... BRONTE GO PARKING LOT @ WYECROFT ROAD

Municipality.....

GeoID..... !!!!!!!!

Count Date..... Wednesday, 02 May, 2018 **Peak Hour.....** 07:15 AM — 08:15 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

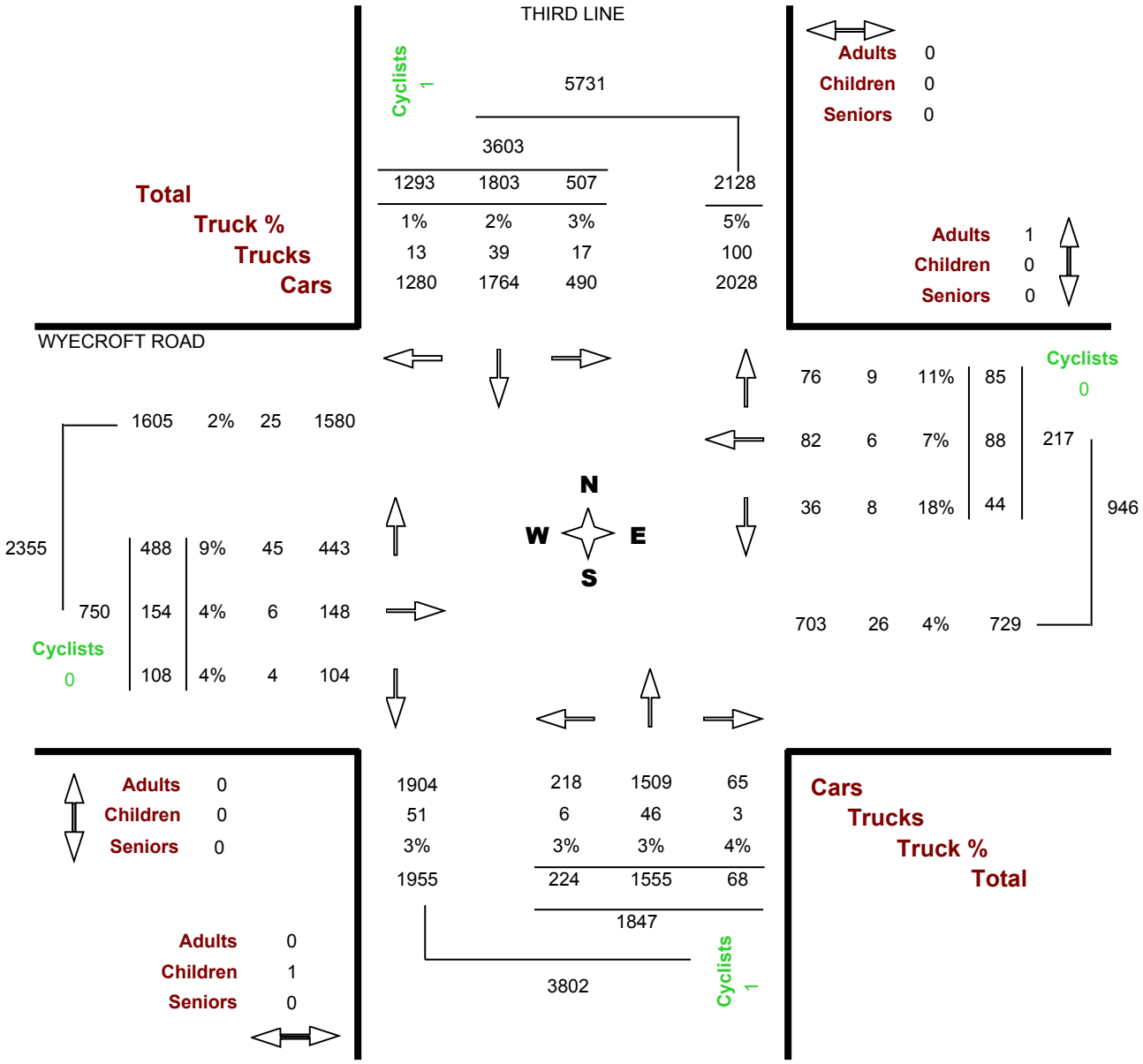
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ THIRD LINE

Municipality..... OAKVILLE

GeoID..... 30148601

Count Date..... Thursday, 03 November, 2016 **Peak Hour.....** 07:15 AM — 08:15 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

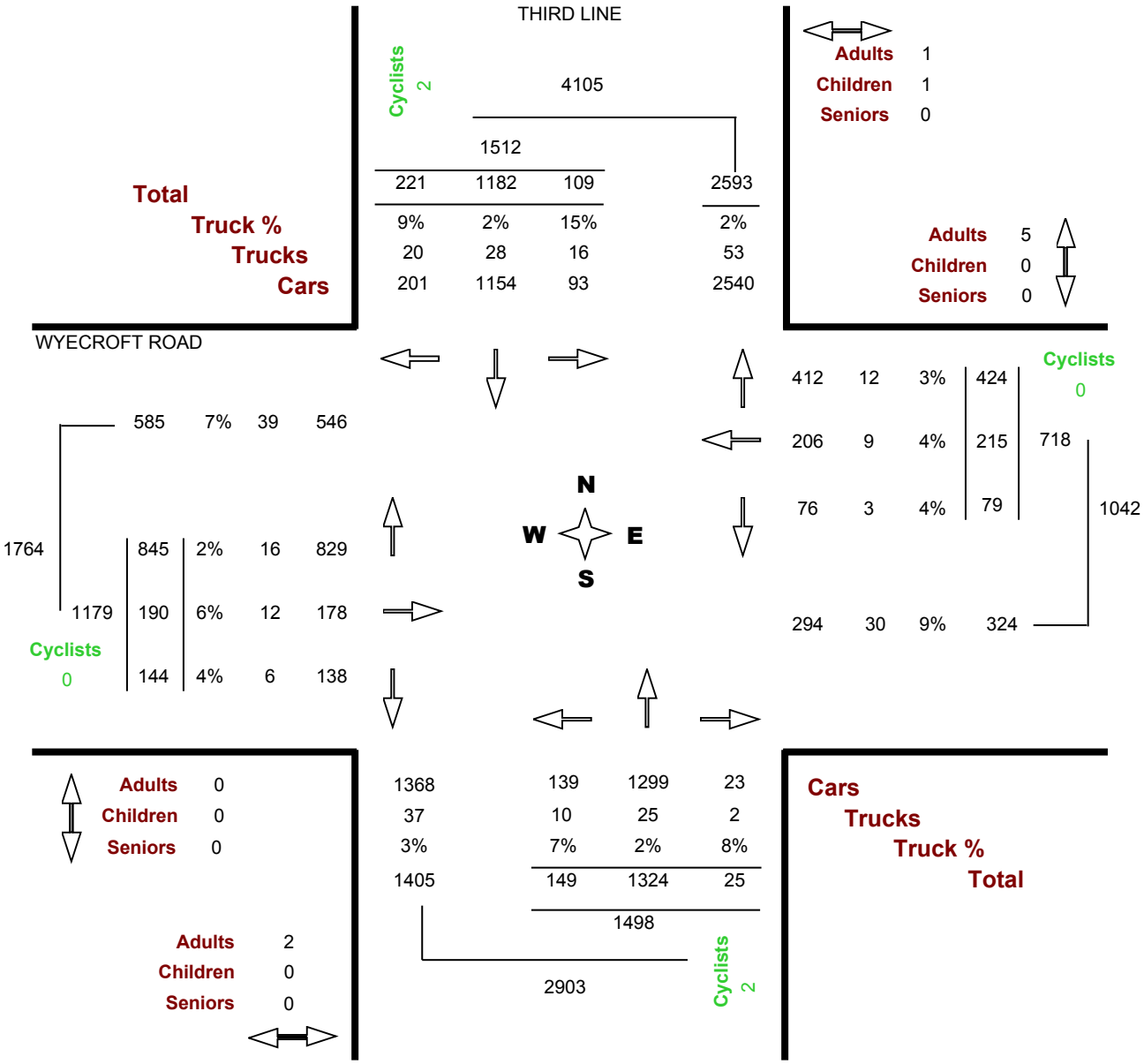
Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ THIRD LINE

Municipality..... OAKVILLE

GeoID..... 30148601

Count Date..... Thursday, 03 November, 2016 **Peak Hour.....** 04:30 PM — 05:30 PM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

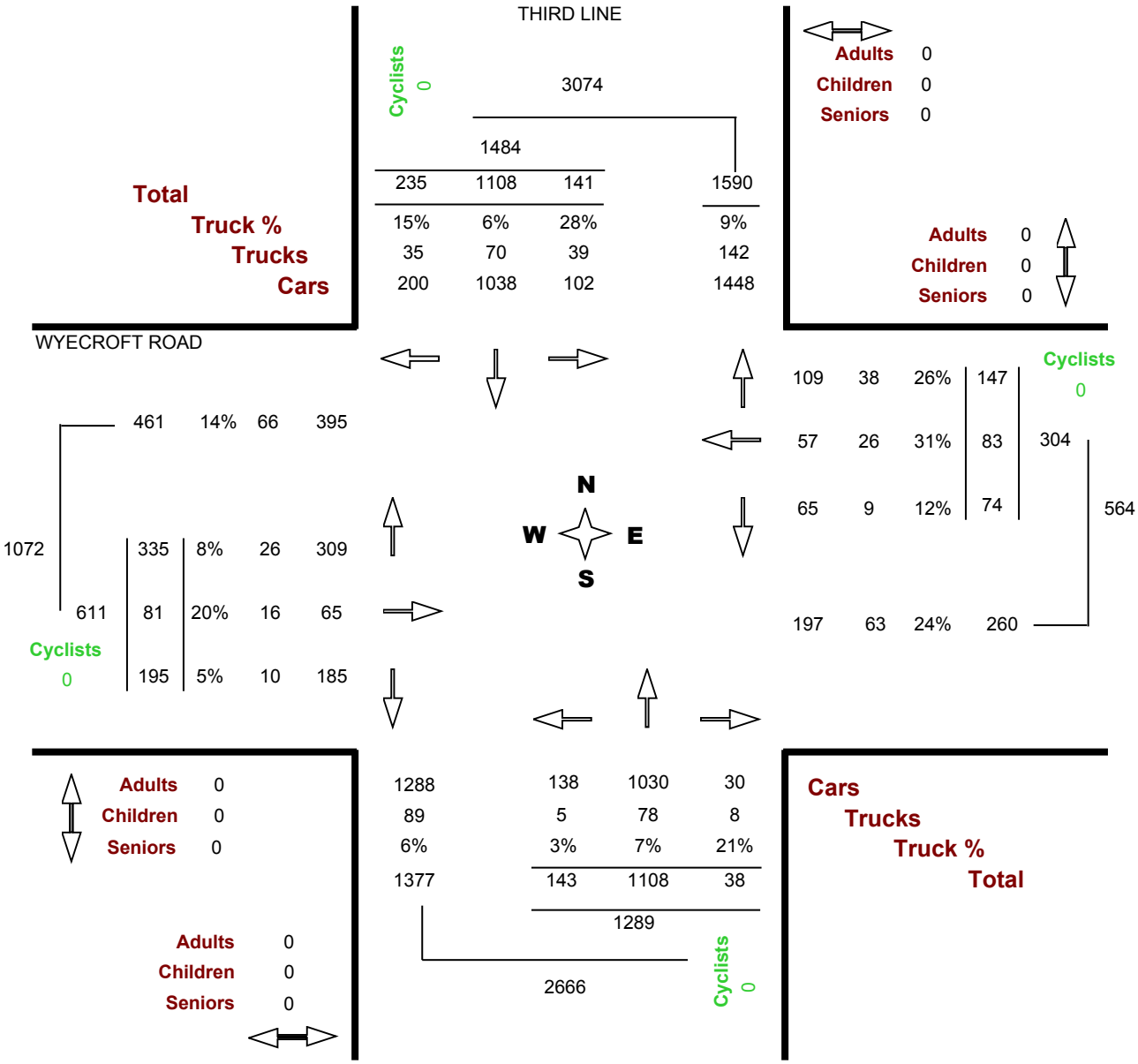
Turning Movements Report - MD Period

Location..... WYECROFT ROAD @ THIRD LINE

Municipality..... OAKVILLE

GeoID..... 30148601

Count Date..... Thursday, 03 November, 2016 **Peak Hour.....** 12:00 PM — 01:00 PM

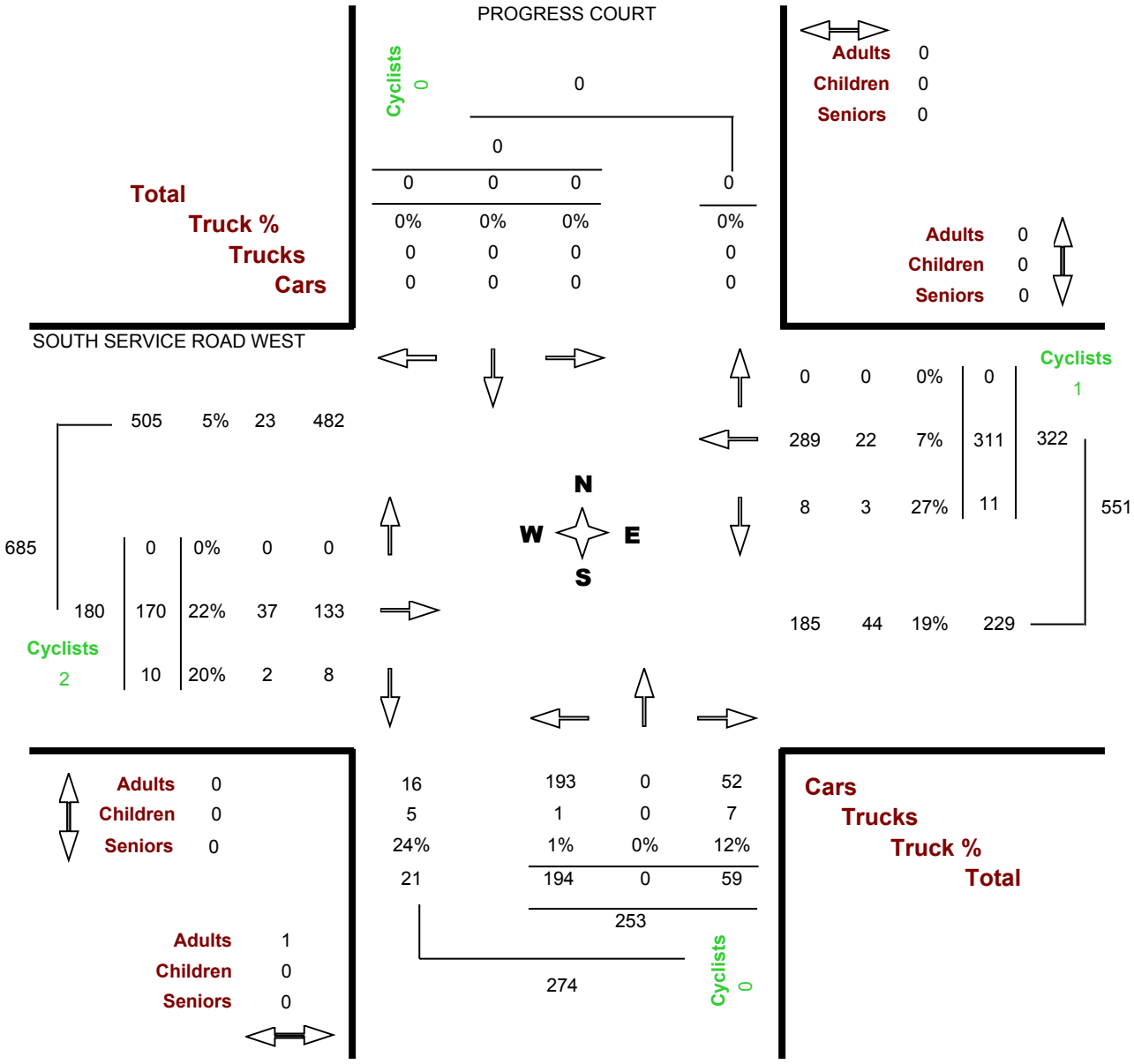


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... SOUTH SERVICE ROAD WEST @ PROGRESS COURT
Municipality..... OAKVILLE
GeoID..... 30144301
Count Date..... Tuesday, 01 May, 2018 **Peak Hour.....** 03:30 PM — 04:30 PM

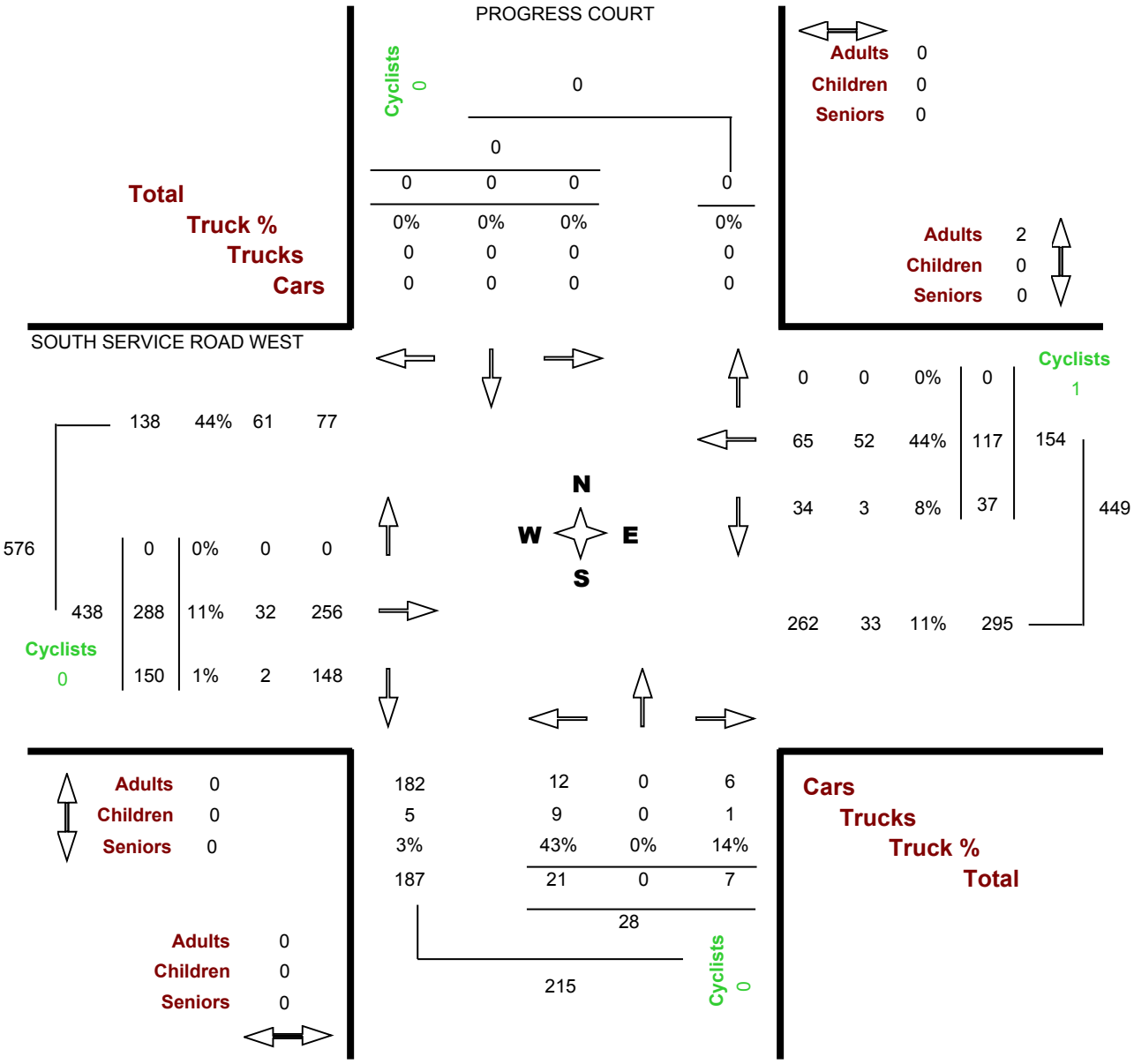


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... SOUTH SERVICE ROAD WEST @ PROGRESS COURT
Municipality..... OAKVILLE
GeoID..... 30144301
Count Date..... Tuesday, 01 May, 2018 **Peak Hour.....** 07:30 AM — 08:30 AM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

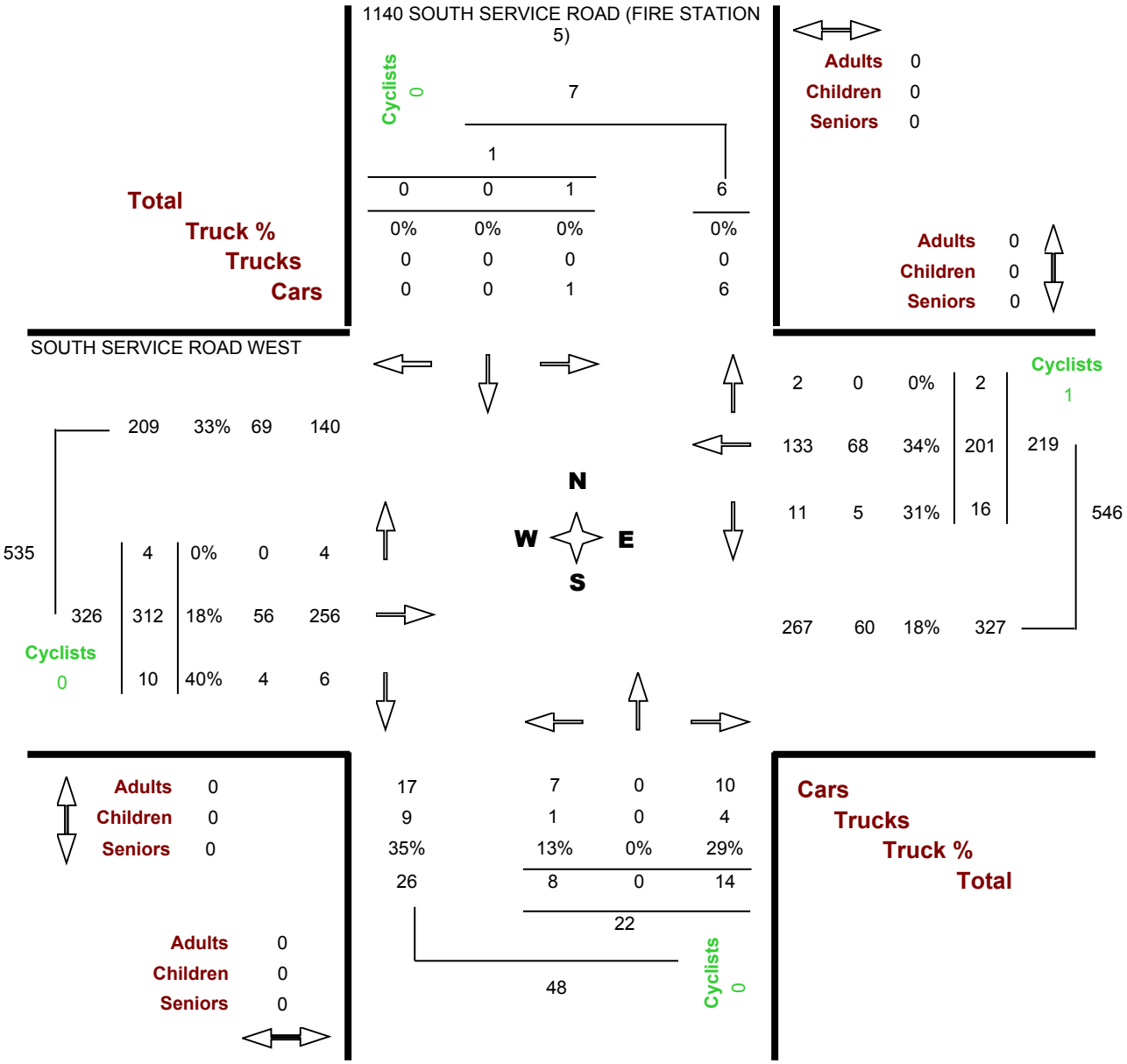
Turning Movements Report - AM Period

Location..... 1140 SOUTH SERVICE ROAD (FIRE STATION 5) @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... !!!!!!!!!

Count Date..... Monday, 23 April, 2018 **Peak Hour.....** 08:00 AM — 09:00 AM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

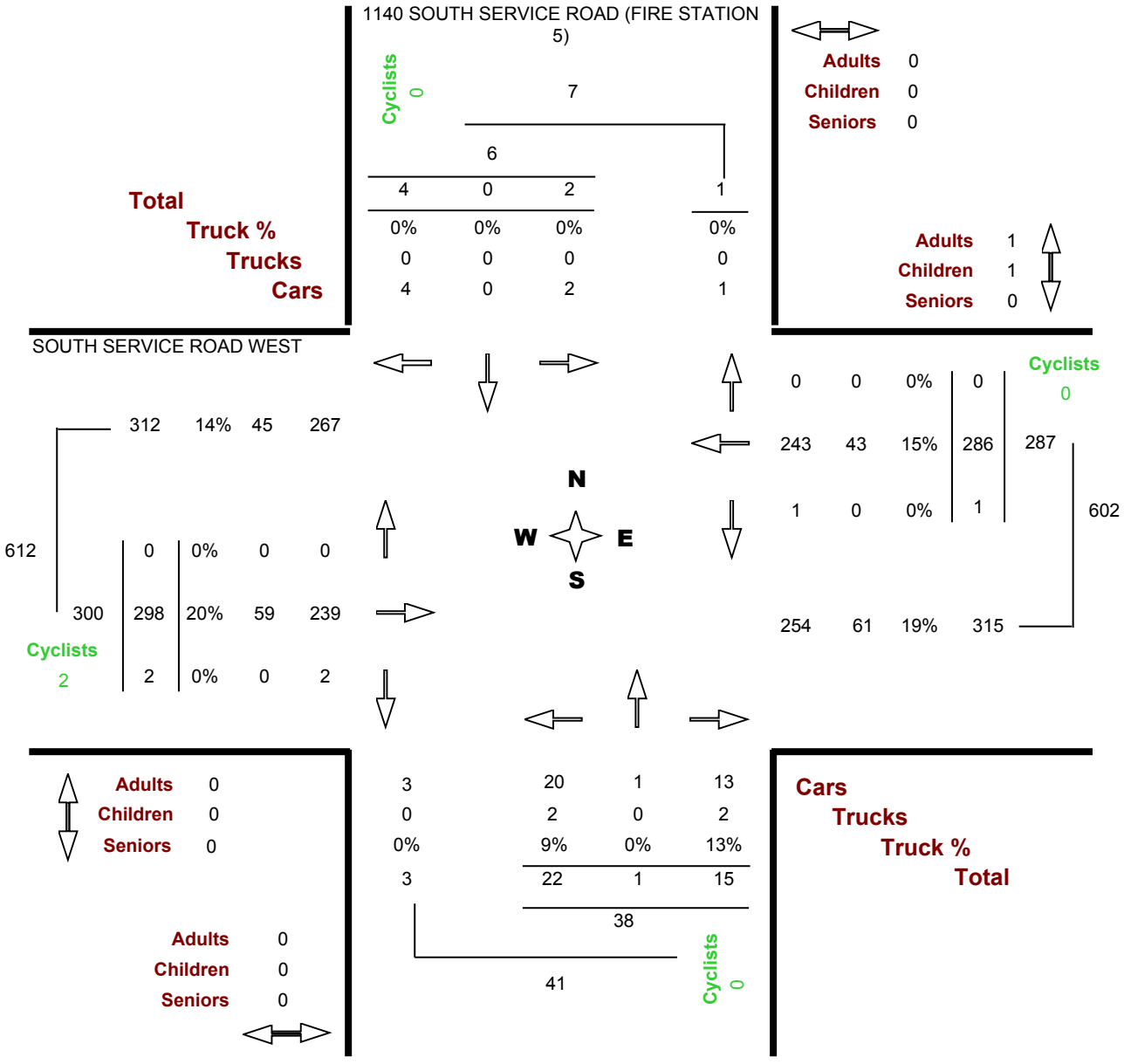
Turning Movements Report - PM Period

Location..... 1140 SOUTH SERVICE ROAD (FIRE STATION 5) @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... !!!!!!!!!

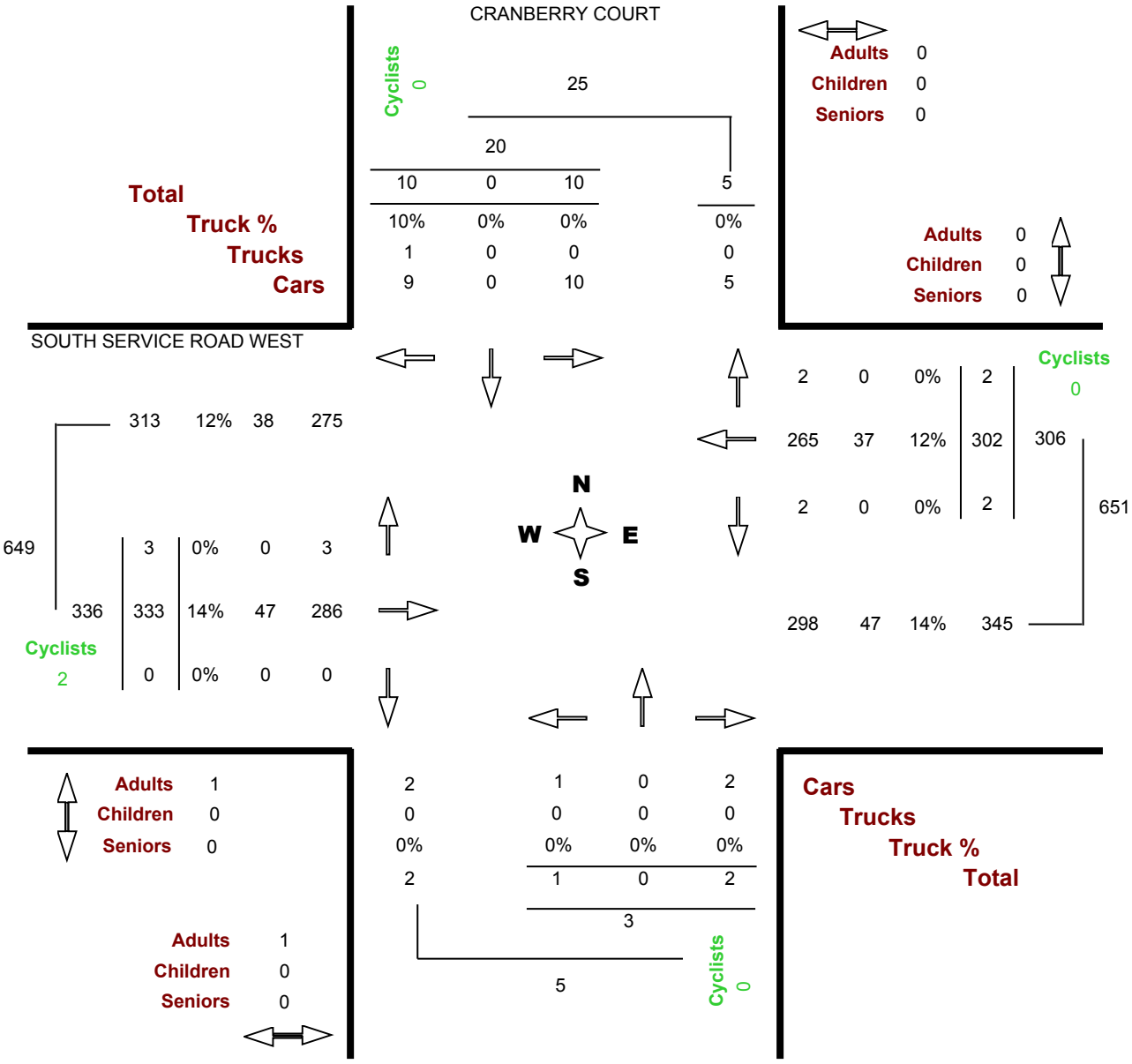
Count Date..... Monday, 23 April, 2018 **Peak Hour.....** 04:00 PM — 05:00 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... SOUTH SERVICE ROAD WEST @ CRANBERRY COURT
Municipality..... OAKVILLE
GeoID..... 30144401
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 04:15 PM — 05:15 PM

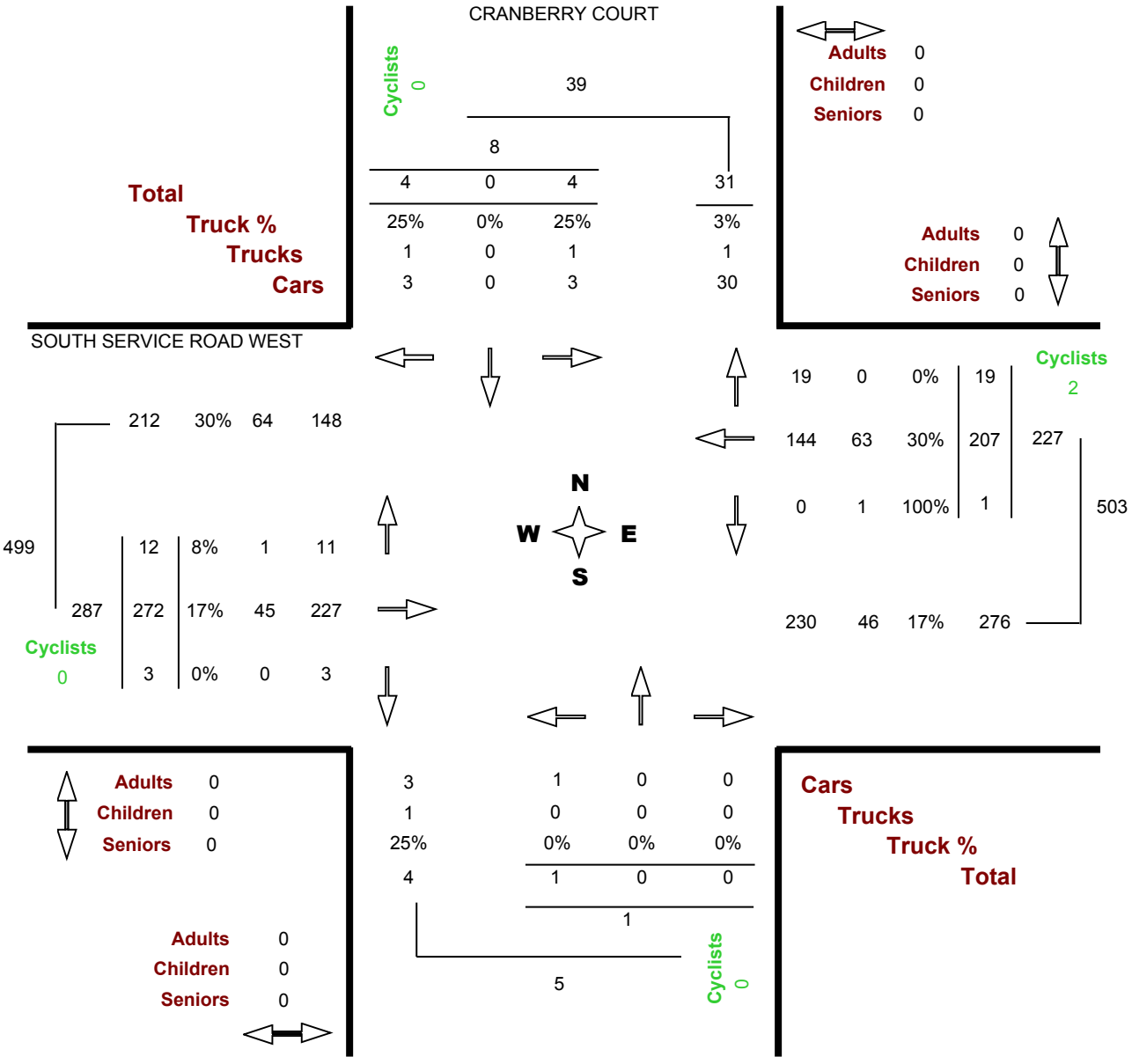


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... SOUTH SERVICE ROAD WEST @ CRANBERRY COURT
Municipality..... OAKVILLE
GeoID..... 30144401
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 07:45 AM — 08:45 AM

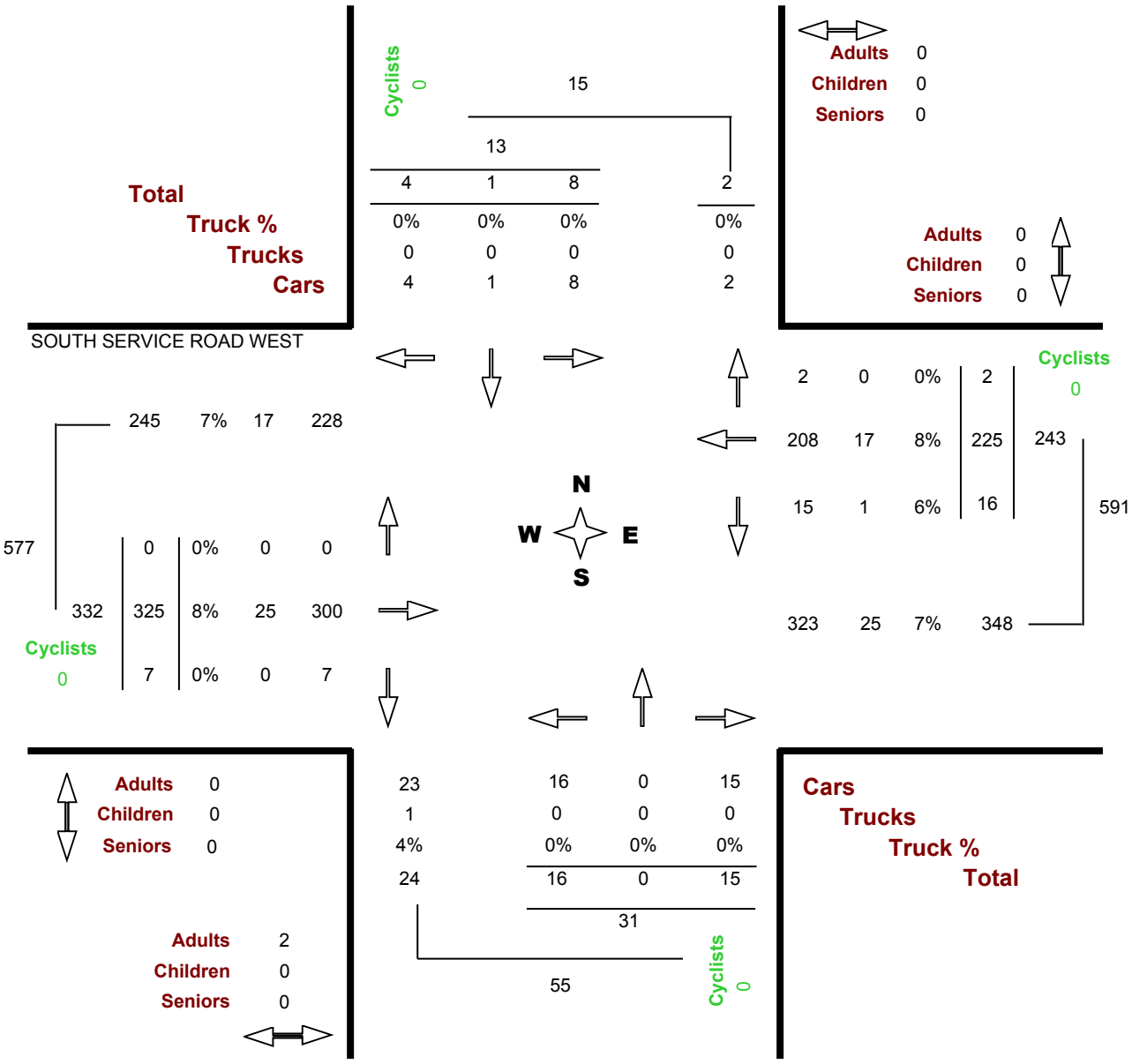


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... SOUTH SERVICE ROAD WEST @ REDWOOD SQUARE
Municipality..... OAKVILLE
GeoID..... 30144501
Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 04:30 PM — 05:30 PM

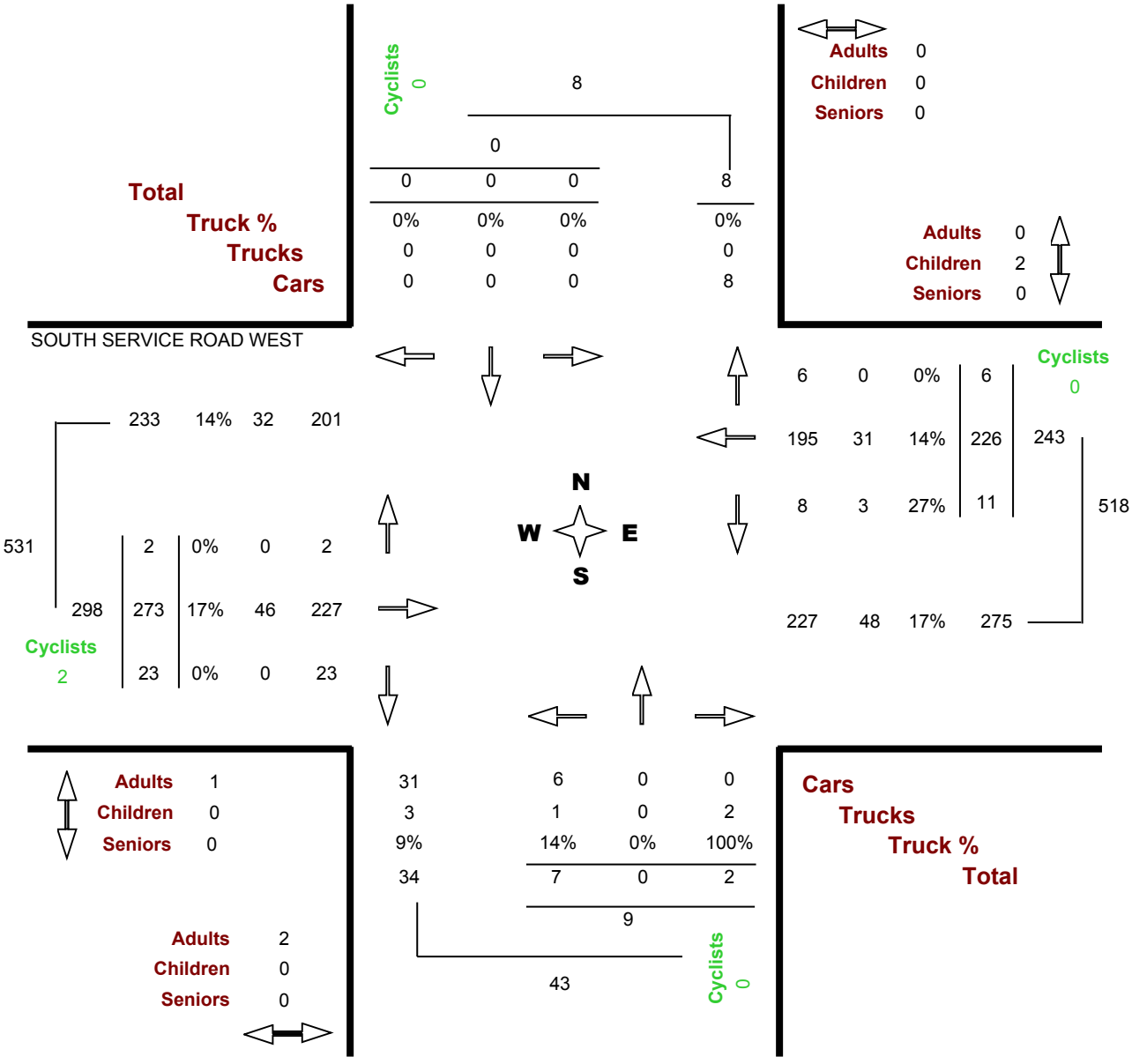


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... SOUTH SERVICE ROAD WEST @ REDWOOD SQUARE
Municipality..... OAKVILLE
GeoID..... 30144501
Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 08:00 AM — 09:00 AM

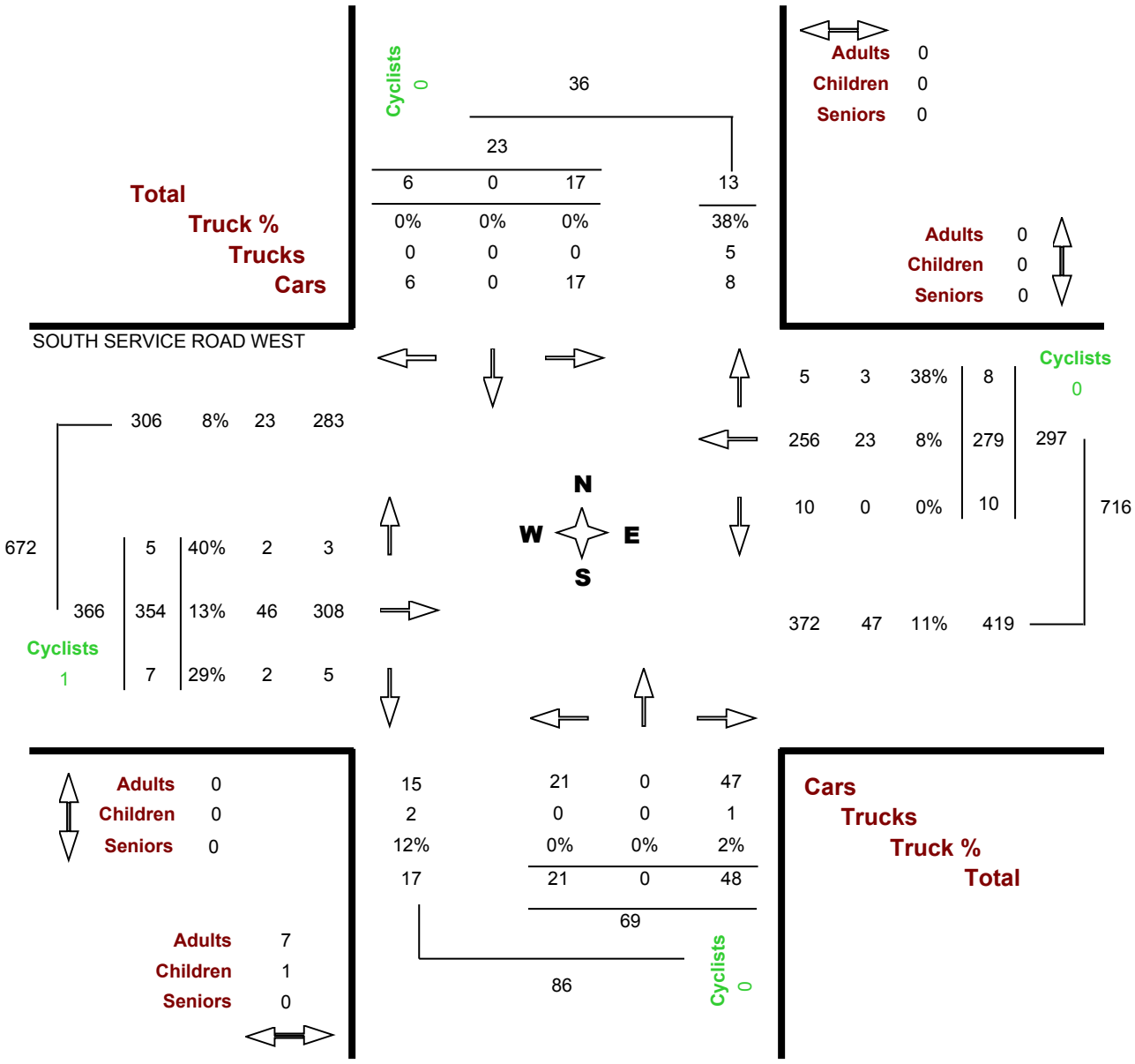


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... SOUTH SERVICE ROAD WEST @ REDWOOD SQUARE
Municipality..... OAKVILLE
GeoID..... 30144601
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 04:00 PM — 05:00 PM

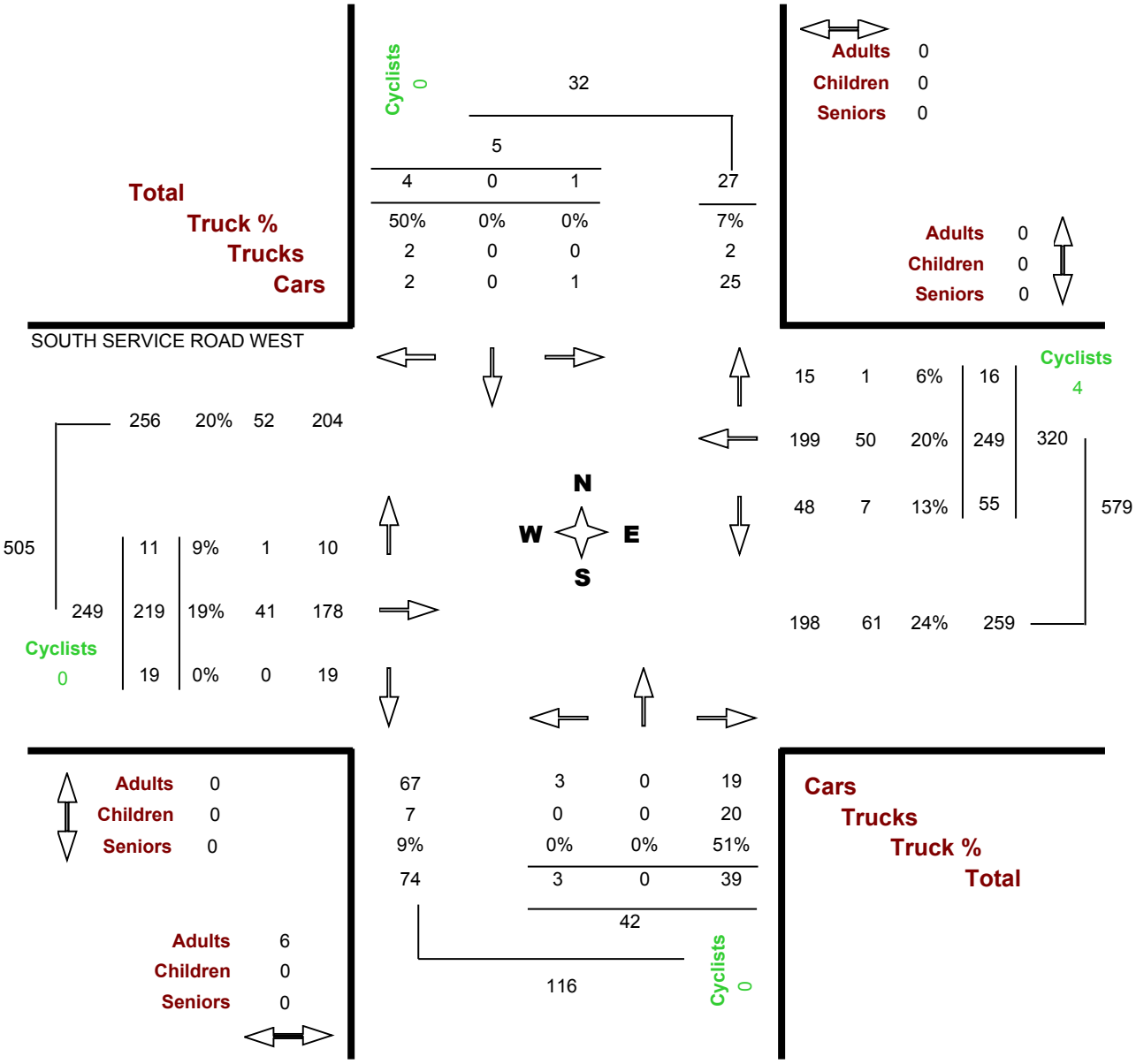


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... SOUTH SERVICE ROAD WEST @ REDWOOD SQUARE
Municipality..... OAKVILLE
GeoID..... 30144601
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 07:45 AM — 08:45 AM

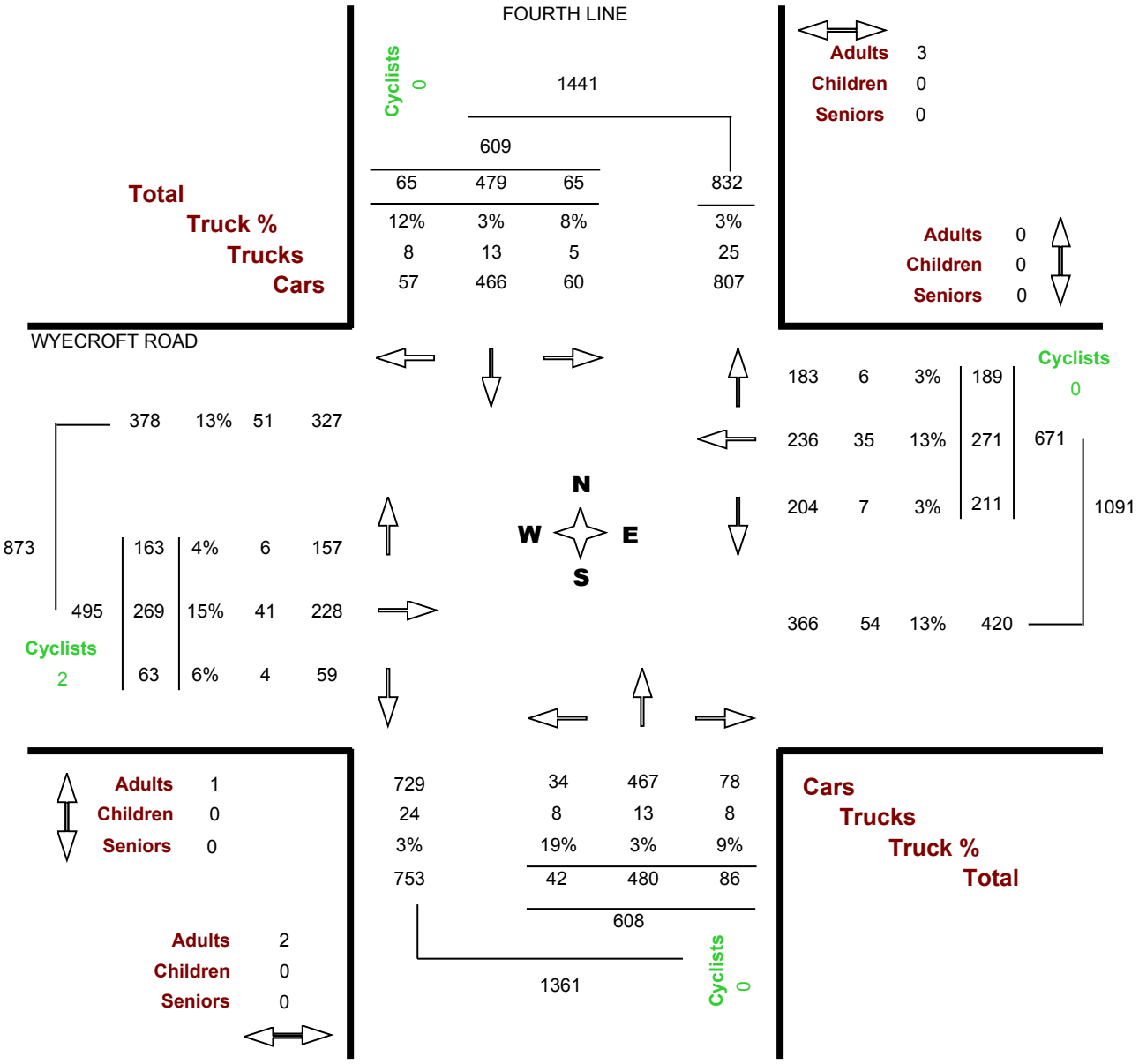


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

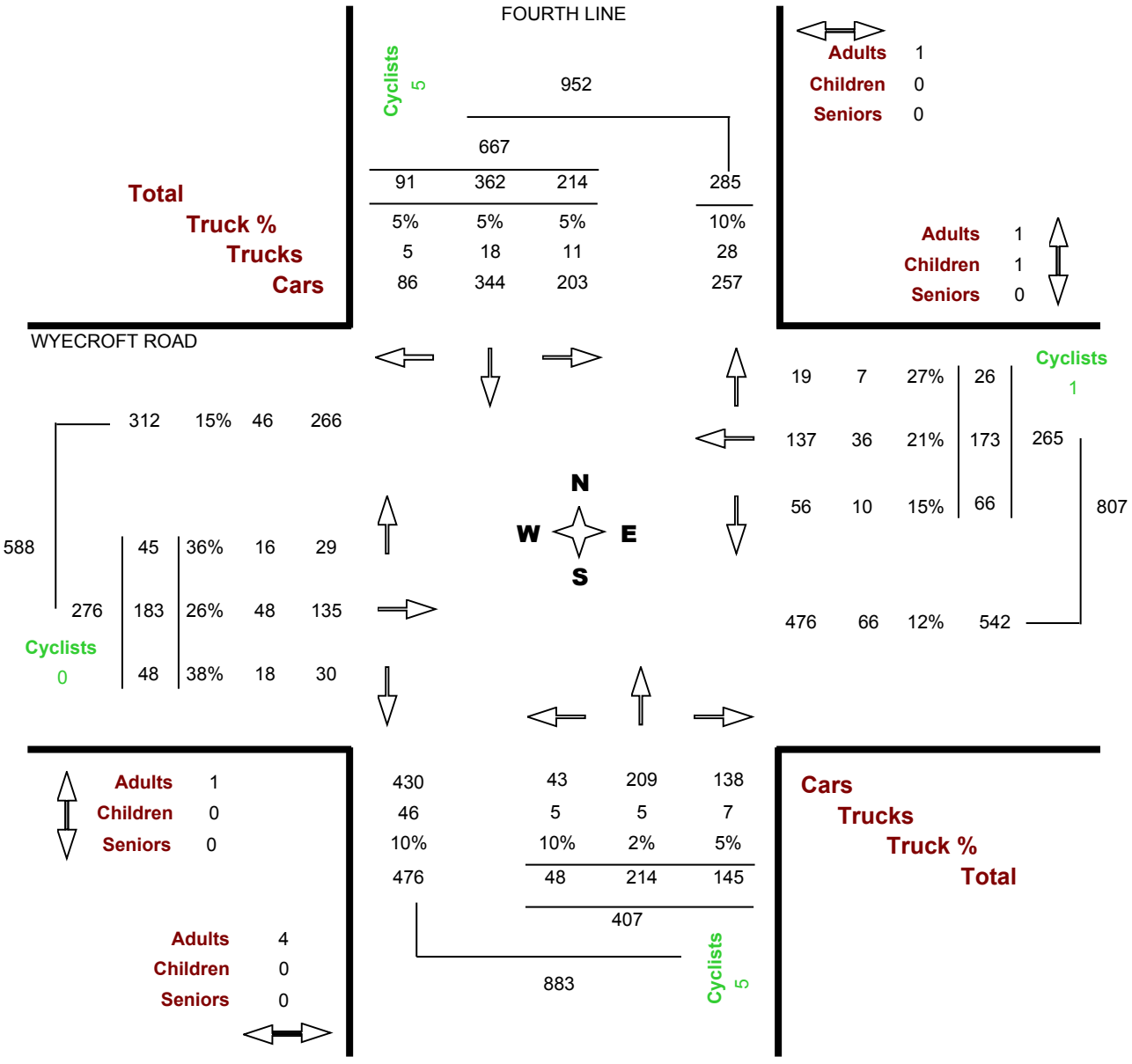
Location..... WYECROFT ROAD @ FOURTH LINE
Municipality..... OAKVILLE
GeoID..... 30148701
Count Date..... Wednesday, 10 May, 2017 **Peak Hour.....** 04:30 PM — 05:30 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

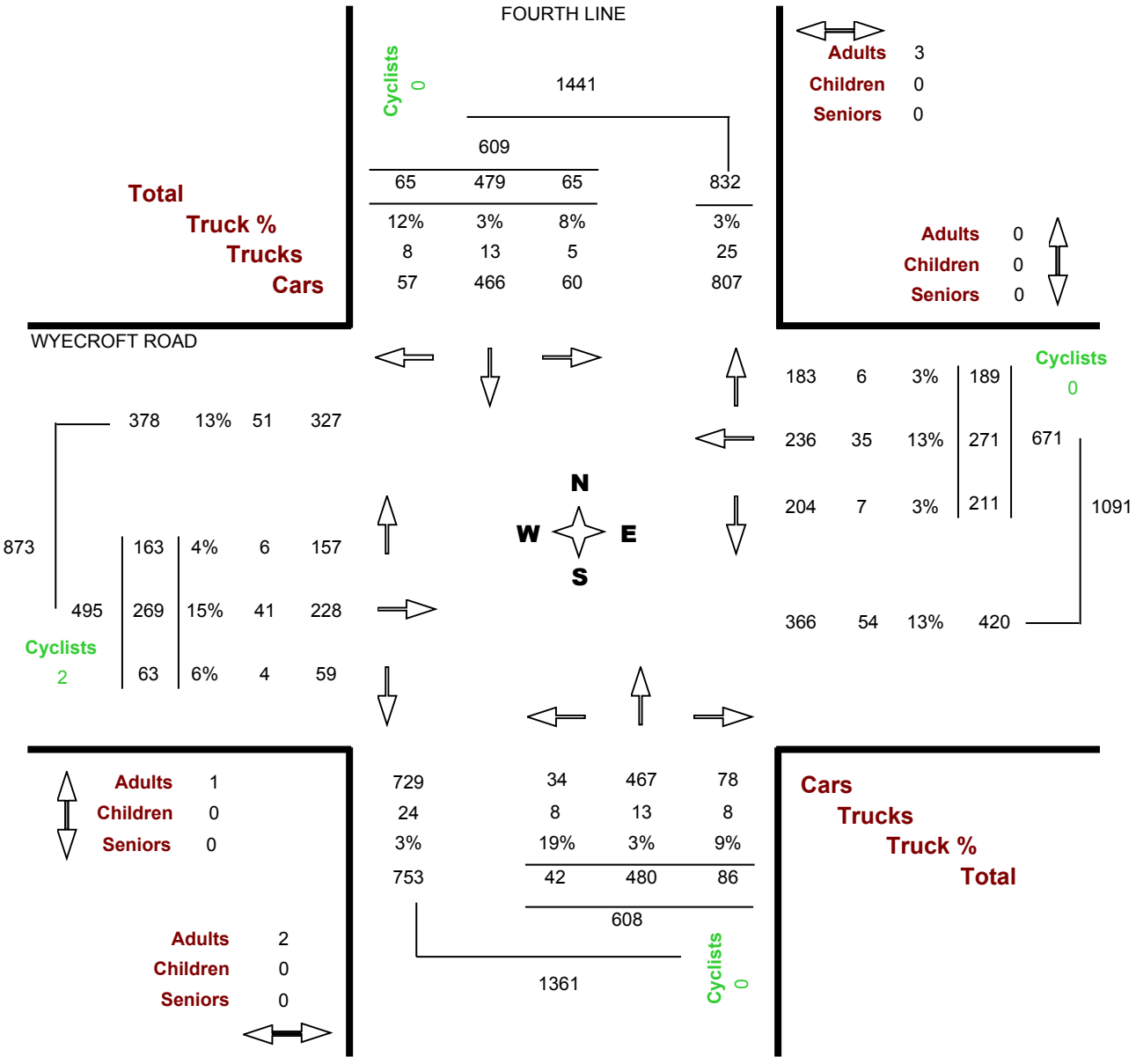
Location..... WYECROFT ROAD @ FOURTH LINE
Municipality..... OAKVILLE
GeoID..... 30148701
Count Date..... Wednesday, 10 May, 2017 **Peak Hour.....** 07:30 AM — 08:30 AM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - Full Study

Location..... WYECROFT ROAD @ FOURTH LINE
Municipality..... OAKVILLE
GeoID..... 30148701
Count Date..... Wednesday, 10 May, 2017 **Peak Hour.....** 04:30 PM — 05:30 PM



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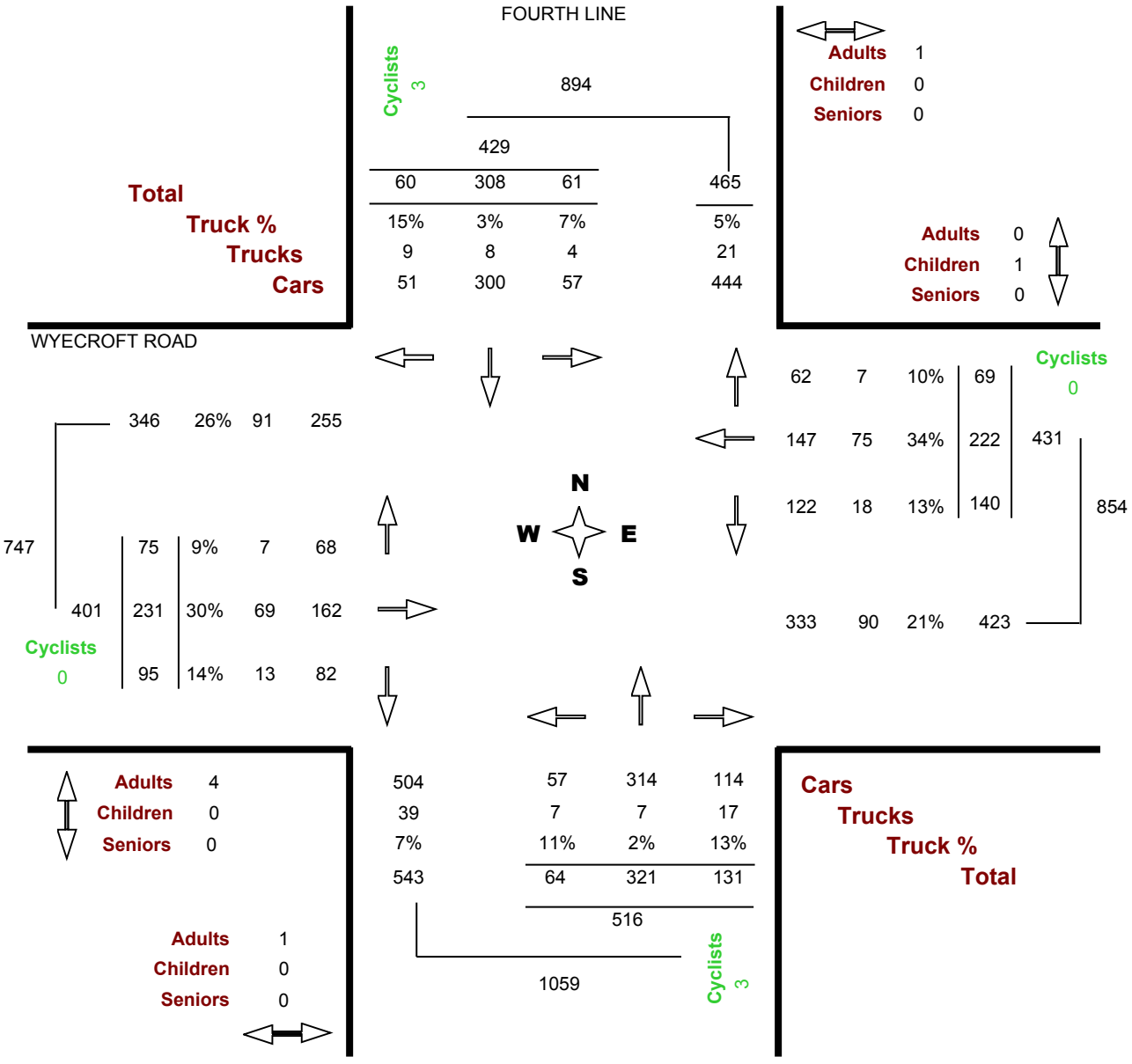
In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - MD Period

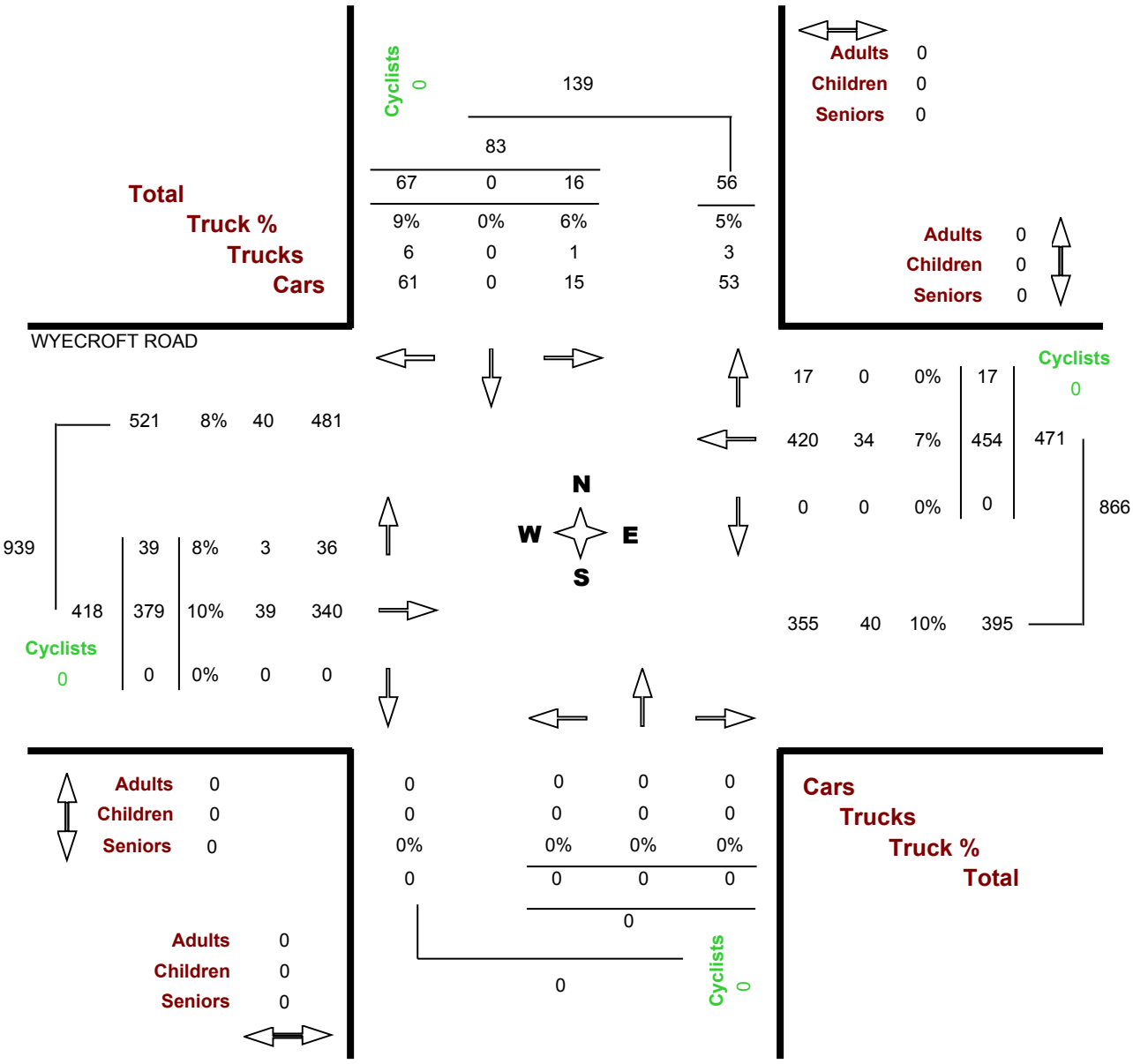
Location..... WYECROFT ROAD @ FOURTH LINE
Municipality..... OAKVILLE
GeoID..... 30148701
Count Date..... Wednesday, 10 May, 2017 **Peak Hour.....** 11:45 AM — 12:45 PM



In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30148801
Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 04:30 PM — 05:30 PM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

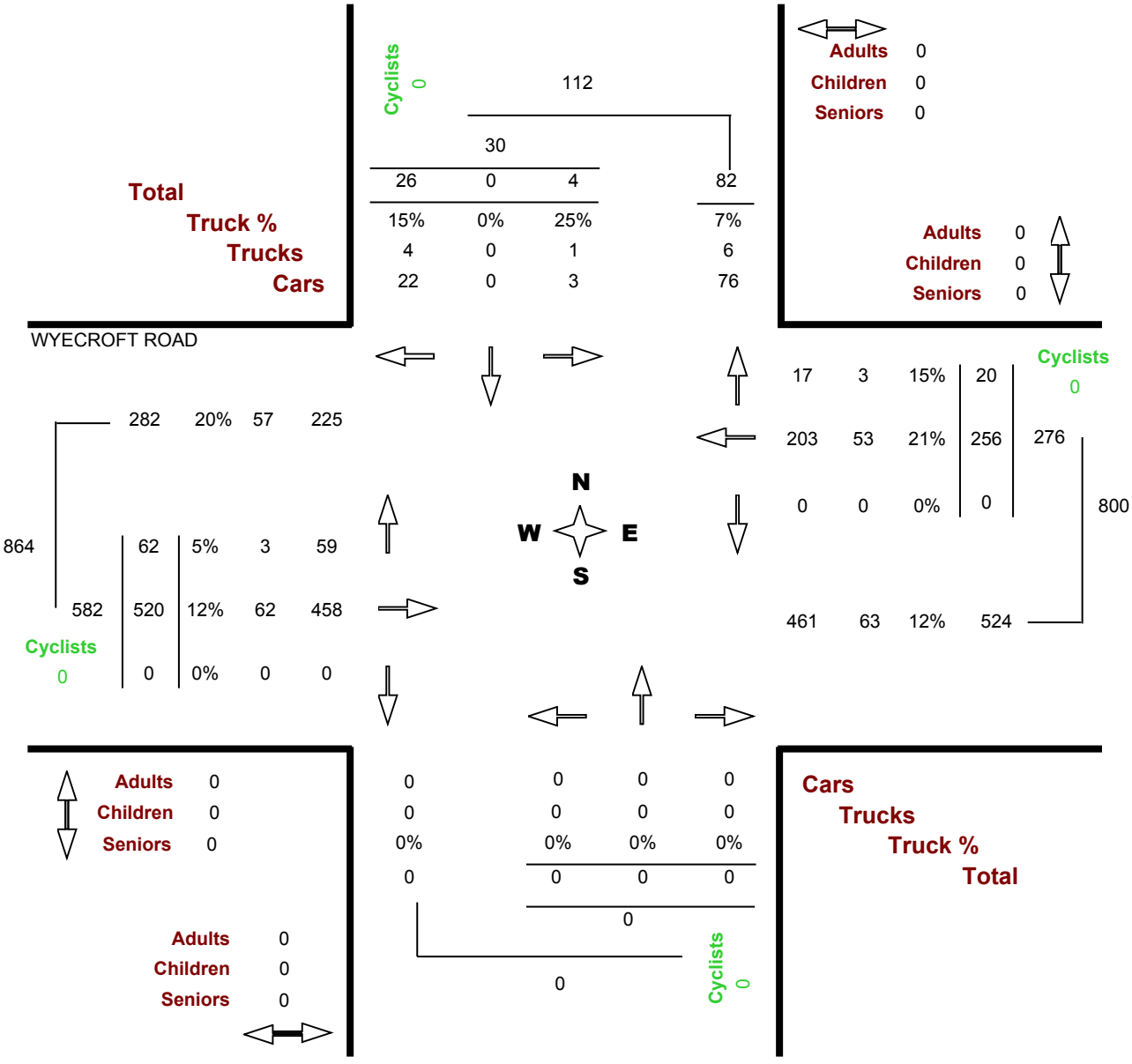
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... 30148801

Count Date..... Wednesday, 25 April, 2018 **Peak Hour.....** 08:00 AM — 09:00 AM

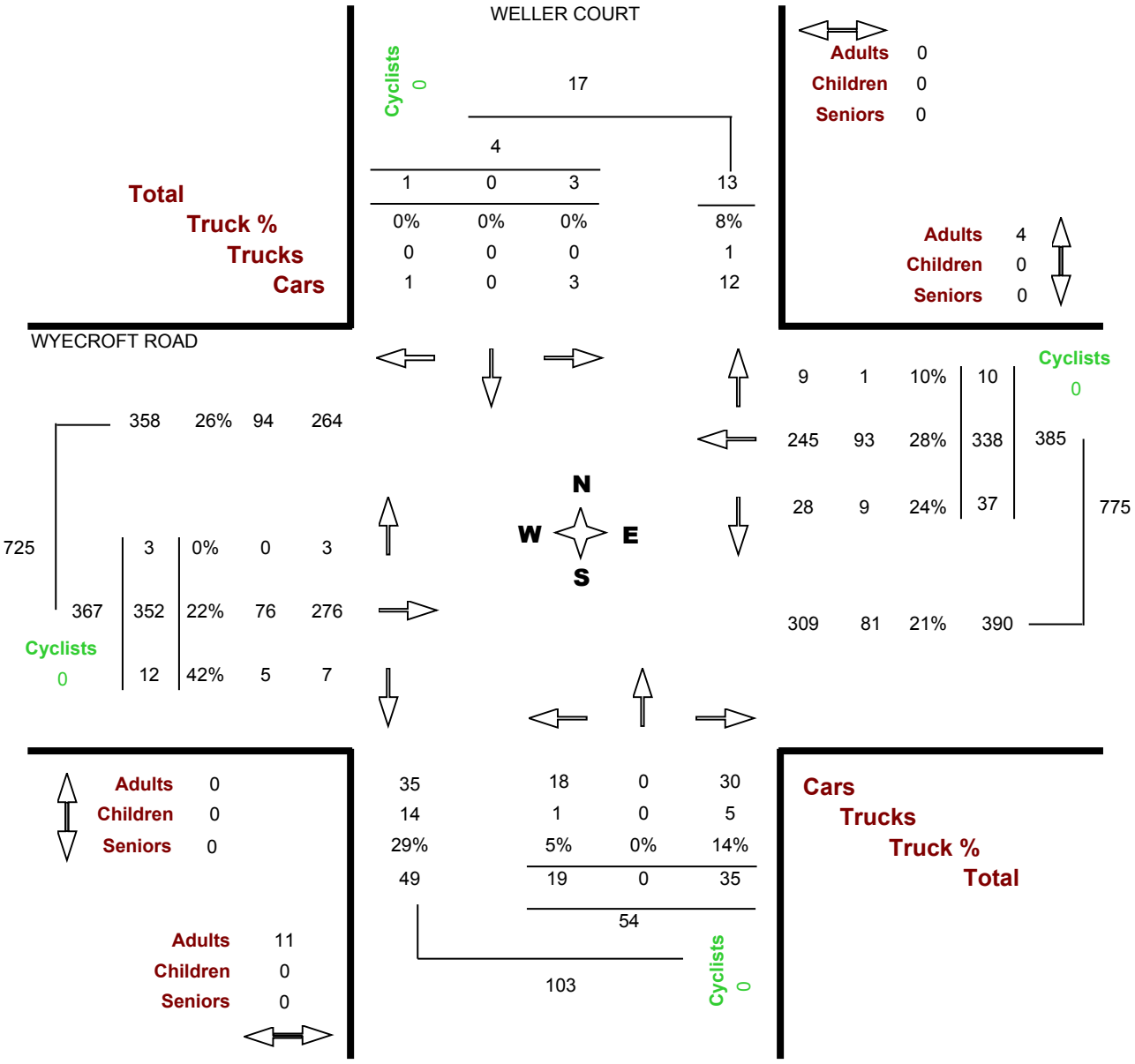


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - MD Period

Location..... WYECROFT ROAD @ WELLER COURT
Municipality..... OAKVILLE
GeoID..... 30149101
Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 12:00 PM — 01:00 PM



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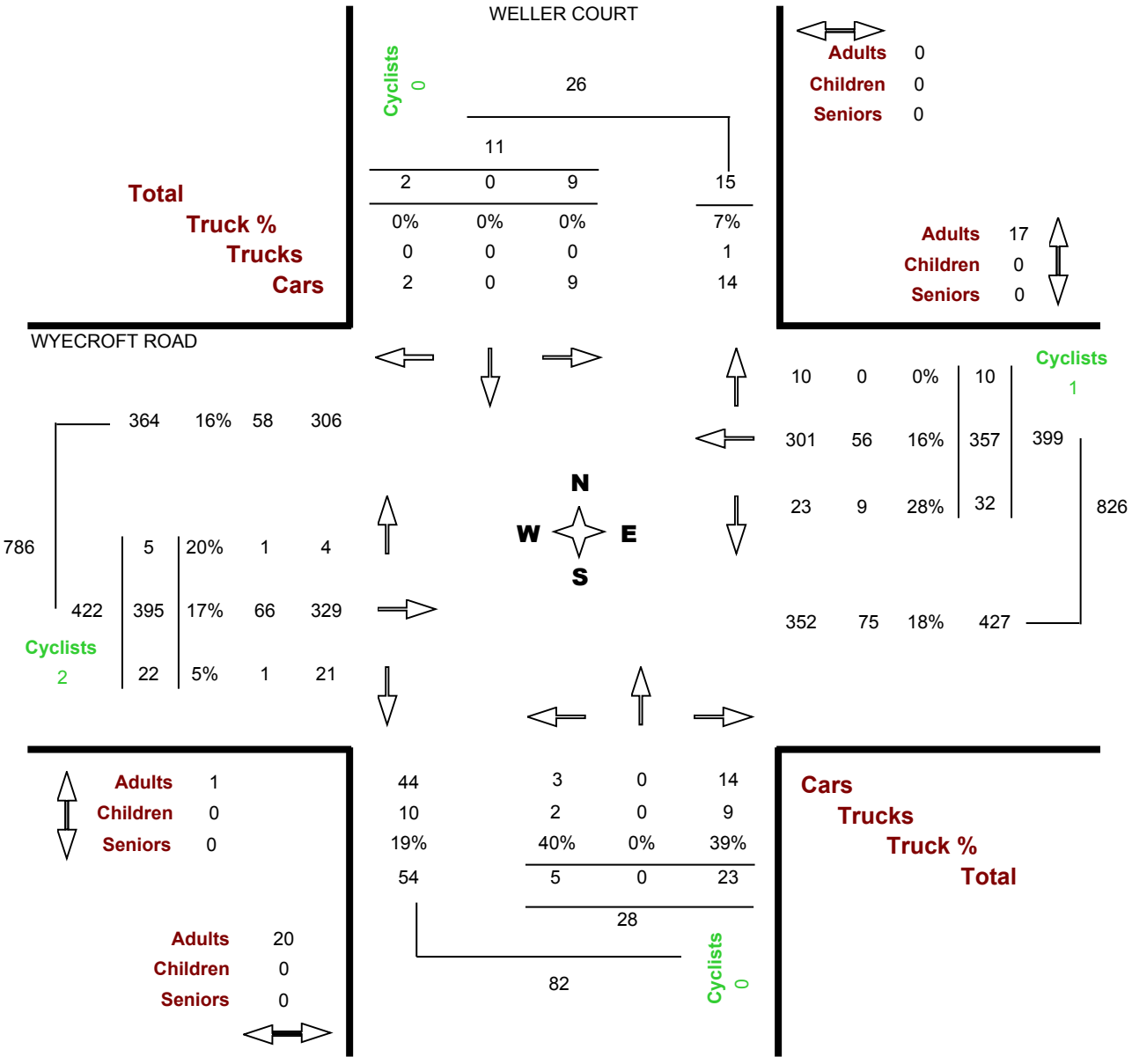
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ WELLER COURT
Municipality..... OAKVILLE
GeoID..... 30149101
Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 08:00 AM — 09:00 AM



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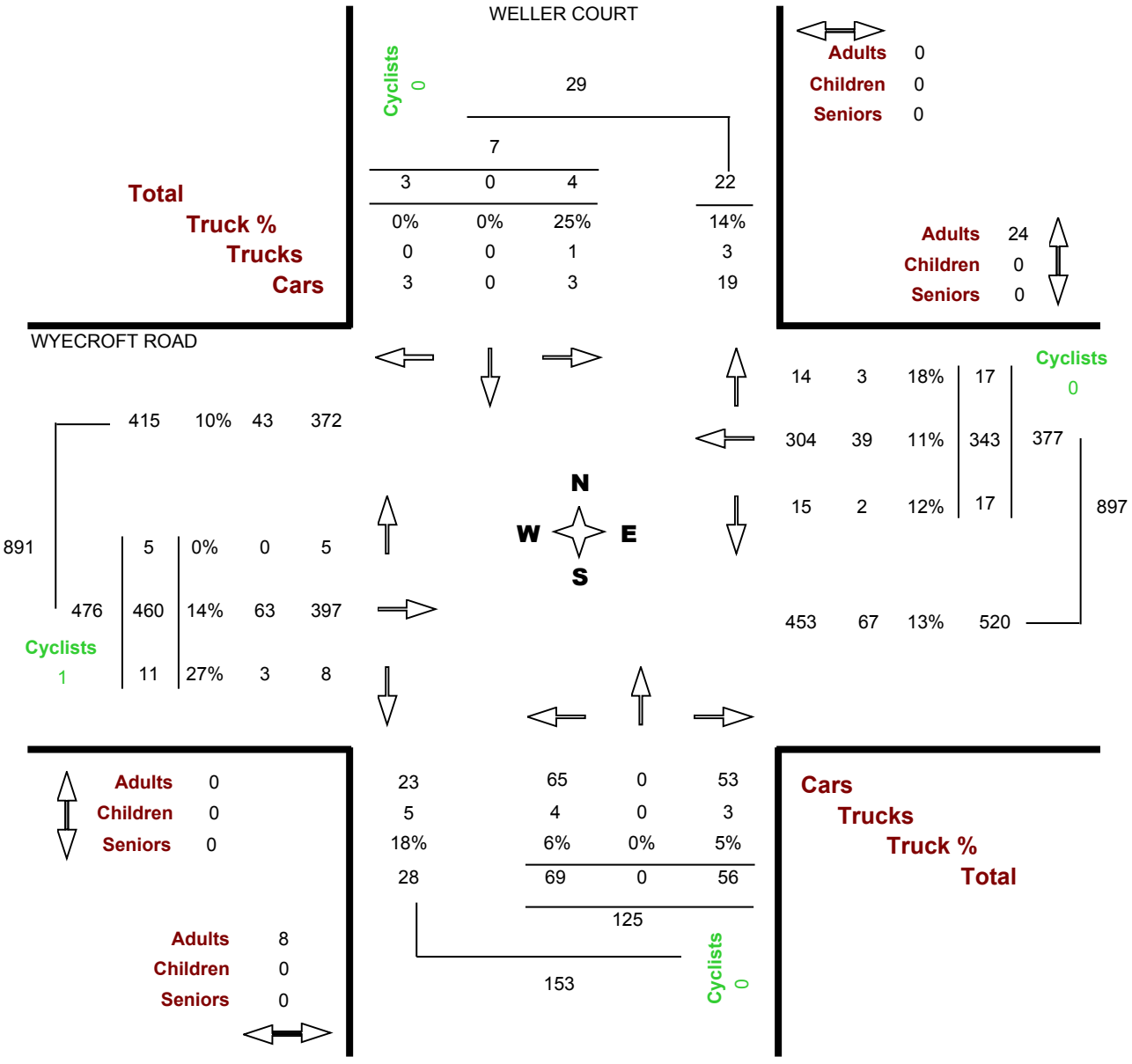
Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ WELLER COURT

Municipality..... OAKVILLE

GeoID..... 30149101

Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 04:15 PM — 05:15 PM



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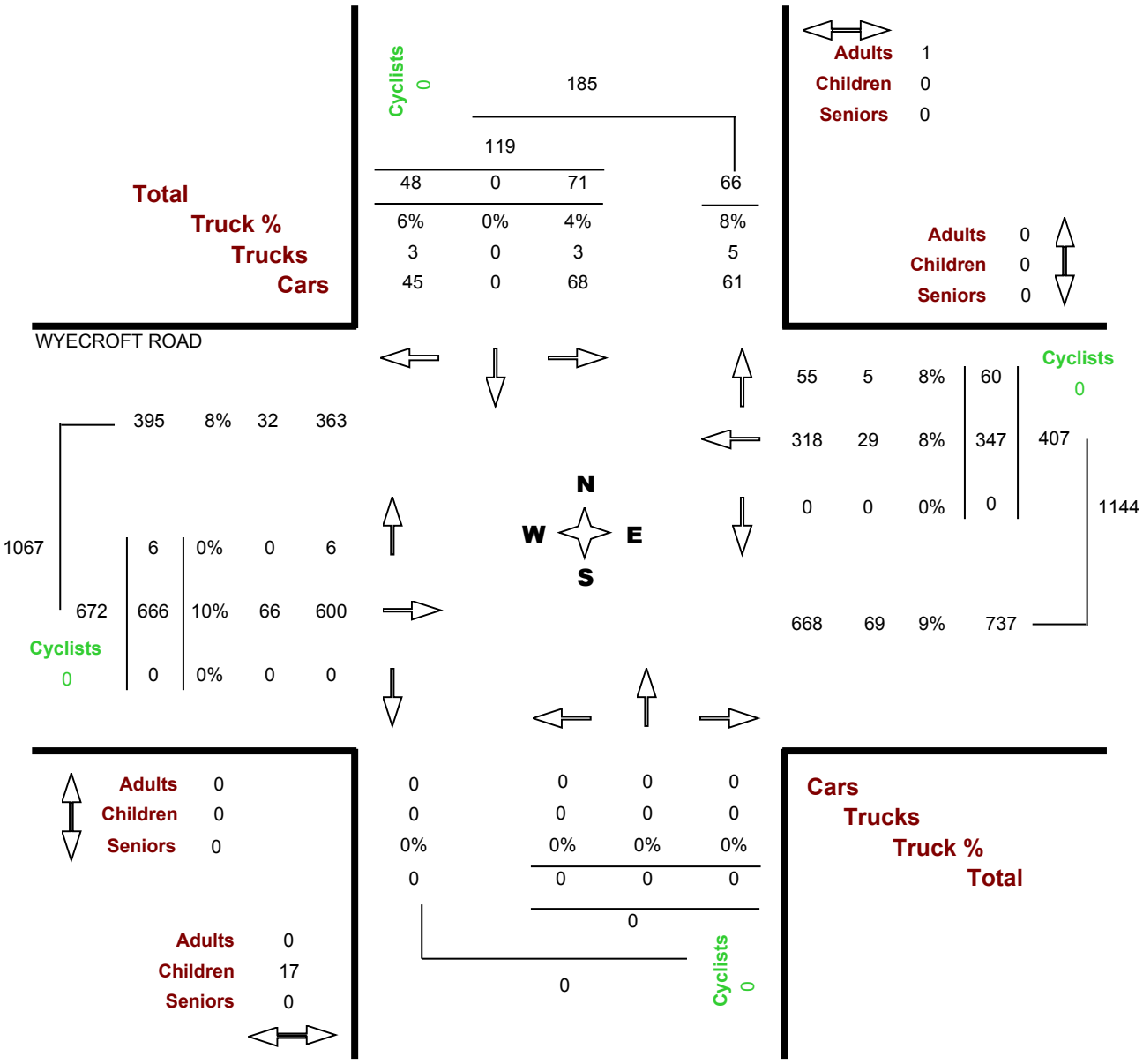
Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30149201
Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 04:30 PM — 05:30 PM



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In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

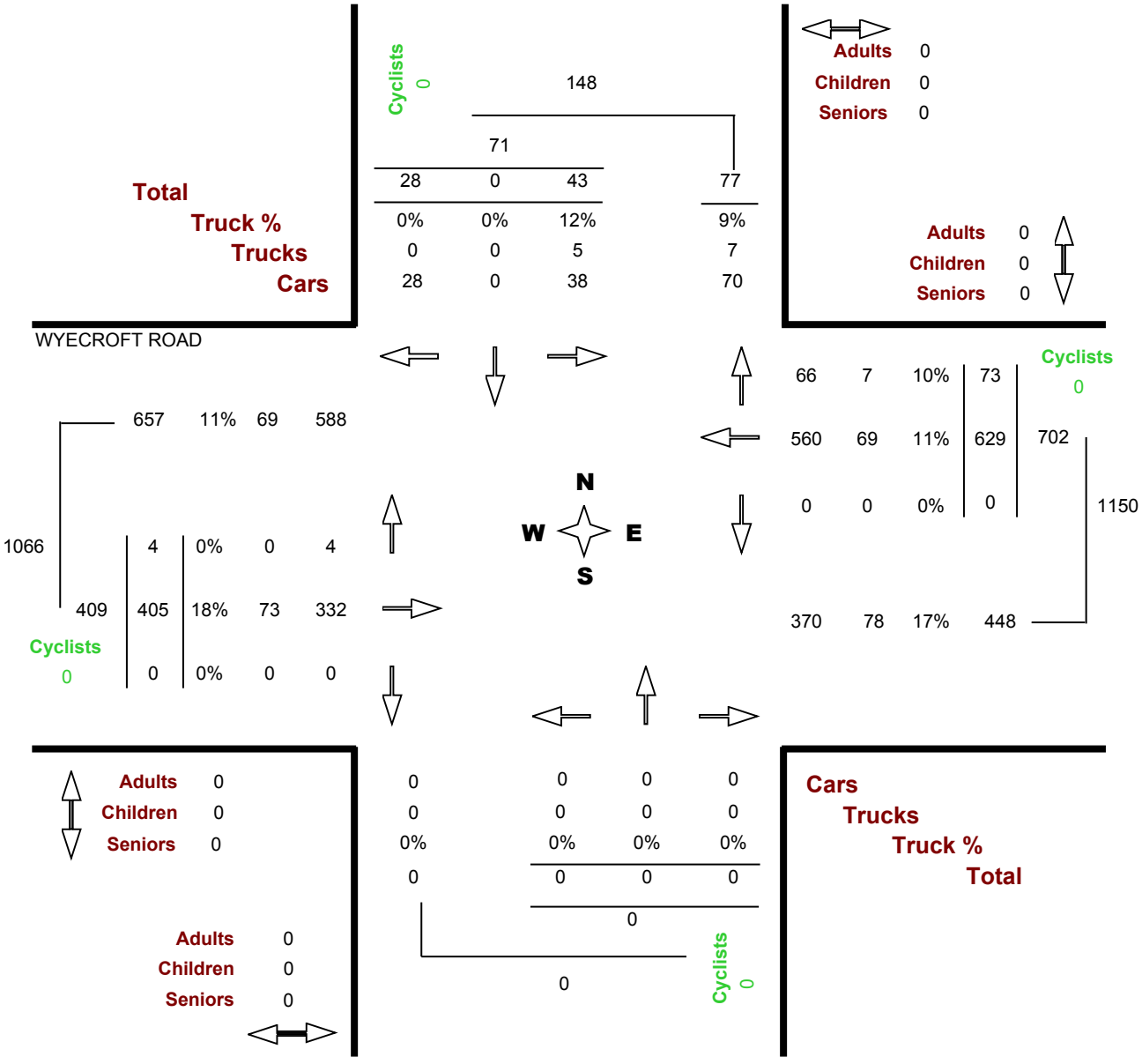
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ SOUTH SERVICE ROAD WEST

Municipality..... OAKVILLE

GeoID..... 30149201

Count Date..... Thursday, 26 April, 2018 **Peak Hour.....** 08:00 AM — 09:00 AM



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Dorval Dr @ Wyecroft Rd

Municipality: Halton Region
Major Road: Dorval Dr
Minor Road: Wyecroft Rd

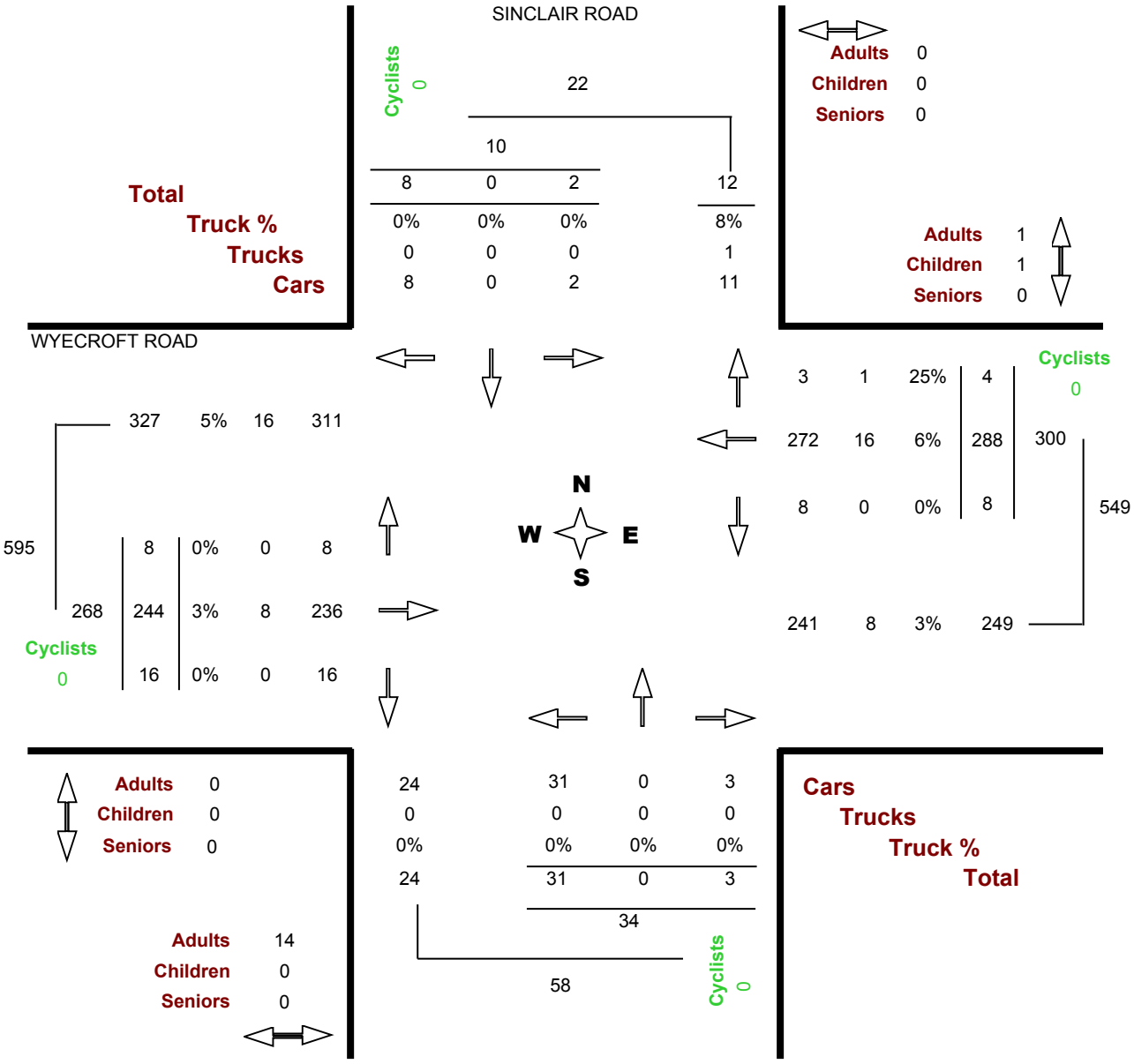
Date: May 18, 2017

Major Road Runs: North/South
Weather Conditions: Sunny/Dry
Person No. 1 Teresa
Person No. 2 Ela M

Period	North Approach							East Approach							South Approach							West Approach							Veh. Summary	
	Cars			Trucks			Ped.	Cars			Trucks			Ped.	Cars			Trucks			Ped.	Cars			Trucks			Ped.		
Ending	Left	Thru	Right	Left	Thru	Right	Cross.	Left	Thru	Right	Left	Thru	Right	Cross.	Left	Thru	Right	Left	Thru	Right	Cross.	Left	Thru	Right	Left	Thru	Right	Cross.	15	60
7:15	26	97	31	0	7	6	0	1	18	7	0	0	0	0	5	125	8	1	3	0	0	6	17	16	10	2	3	0	389	
7:30	40	173	78	1	18	5	0	3	25	40	0	1	4	0	6	162	11	1	22	0	1	11	16	23	10	3	4	0	657	
7:45	43	232	92	1	23	13	1	6	26	37	1	0	3	0	16	206	9	1	10	0	0	23	15	13	9	3	3	0	785	
8:00	67	329	107	2	14	8	0	11	46	48	0	2	4	1	32	297	14	0	13	0	1	32	25	31	8	2	1	3	1093	2924
8:15	34	282	95	0	10	13	0	2	26	41	1	2	3	0	24	320	12	3	16	1	1	26	41	34	8	6	9	0	1009	3544
8:30	61	212	104	0	11	16	1	5	35	62	2	3	3	1	30	294	13	3	22	1	3	40	33	29	12	2	3	0	996	3883
8:45	66	294	95	5	25	11	1	6	45	45	0	0	2	1	36	317	20	2	15	0	3	33	45	18	16	5	3	3	1104	4202
9:00	87	294	124	3	12	13	0	12	45	55	0	3	2	1	25	220	12	3	23	0	6	44	38	27	12	4	6	3	1064	4173
11:15	24	248	55	2	14	14	0	7	18	54	0	2	2	0	22	231	9	3	32	0	0	64	24	22	23	3	1	0	874	
11:30	39	225	47	2	16	14	3	9	37	65	1	4	1	0	15	216	4	2	12	0	8	66	27	24	13	3	4	1	846	
11:45	24	214	52	3	20	17	0	13	19	46	0	4	3	0	30	260	13	3	22	0	4	49	16	24	15	2	4	2	853	
12:00	31	220	46	1	21	13	0	17	30	55	1	5	8	0	26	258	8	4	17	1	2	68	33	25	16	1	2	2	907	3480
12:15	21	188	53	0	14	11	0	17	25	88	0	0	3	1	23	227	7	2	15	0	2	85	40	43	21	0	5	2	888	3494
12:30	27	164	58	2	23	15	0	9	38	58	0	2	1	3	25	232	10	4	21	0	6	84	24	22	10	3	0	4	832	3480
12:45	33	207	49	1	24	11	0	14	19	51	0	2	3	0	30	233	11	4	20	1	5	58	31	31	27	2	1	5	863	3490
13:00	31	228	63	0	18	16	0	12	30	58	1	3	6	0	37	251	12	1	18	0	7	70	24	27	17	4	5	2	932	3515
13:15	36	206	49	3	22	14	0	13	28	52	2	1	4	0	33	209	7	1	17	1	3	80	32	38	16	0	1	1	865	3492
13:30	38	239	56	2	20	13	0	8	28	52	0	1	4	2	39	249	7	8	20	0	3	59	23	23	9	1	1	1	900	3560
13:45	39	234	59	1	18	19	1	10	26	39	0	4	6	2	19	224	15	6	16	0	0	59	22	21	24	1	1	2	863	3560
14:00	56	304	85	3	11	15	0	7	38	62	0	2	2	0	65	299	10	1	23	0	2	79	30	26	11	3	2	5	1134	3762
15:15	31	243	47	0	10	6	0	20	19	62	0	3	2	0	34	329	16	5	16	0	1	118	34	25	11	4	2	2	1037	
15:30	31	240	52	1	20	9	1	7	34	61	2	2	2	2	25	289	10	4	20	1	1	88	33	31	7	2	1	0	972	
15:45	49	305	48	3	19	11	0	8	22	78	0	1	3	0	19	320	8	1	15	0	2	92	33	38	11	2	2	0	1088	
16:00	25	310	79	0	8	7	1	9	33	73	0	5	0	2	25	278	13	4	16	1	4	71	28	34	13	0	1	0	1033	4130
16:15	41	283	40	1	15	10	1	12	22	63	0	1	1	0	20	318	16	2	13	1	0	102	36	30	12	3	2	2	1044	4137
16:30	47	282	54	1	3	7	1	18	28	77	2	2	2	0	18	296	9	4	12	0	0	97	36	34	13	3	4	1	1049	4214
16:45	47	295	41	0	7	10	0	11	20	99	0	4	5	0	34	314	8	4	6	1	0	96	22	29	8	2	1	0	1064	4190
17:00	39	311	42	1	4	4	0	4	46	92	0	5	1	0	50	284	8	2	6	0	0	80	65	33	11	1	2	0	1091	4248
17:15	31	442	29	0	11	8	0	27	45	97	1	2	3	0	58	355	10	2	5	0	0	114	86	22	7	1	1	4	1357	4561
17:30	43	406	61	2	4	3	1	29	32	134	1	1	1	0	50	451	20	4	9	0	0	131	38	40	9	3	3	0	1475	4987
17:45	57	421	49	0	7	5	0	29	30	116	0	0	2	0	39	389	13	4	7	0	0	138	33	40	10	3	0	0	1392	5315
18:00	29	347	24	0	5	2	0	20	6	47	0	1	0	1	32	357	23	0	12	0	1	100	25	26	3	1	0	1	1060	5284

Turning Movements Report - MD Period

Location..... WYECROFT ROAD @ SINCLAIR ROAD
Municipality..... OAKVILLE
GeoID..... 30149501
Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 12:00 PM — 01:00 PM



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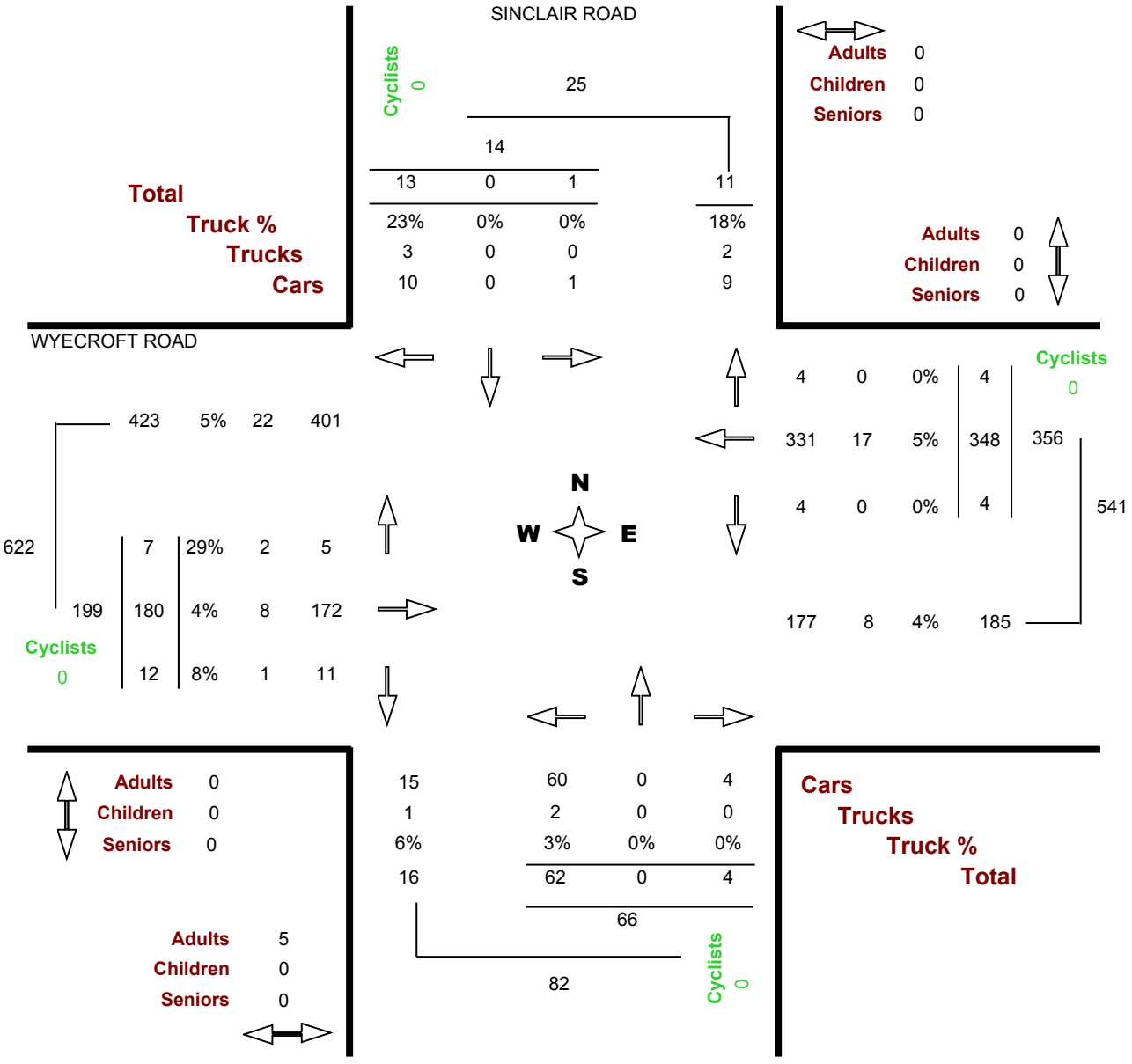
Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ SINCLAIR ROAD

Municipality..... OAKVILLE

GeoID..... 30149501

Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 04:15 PM — 05:15 PM



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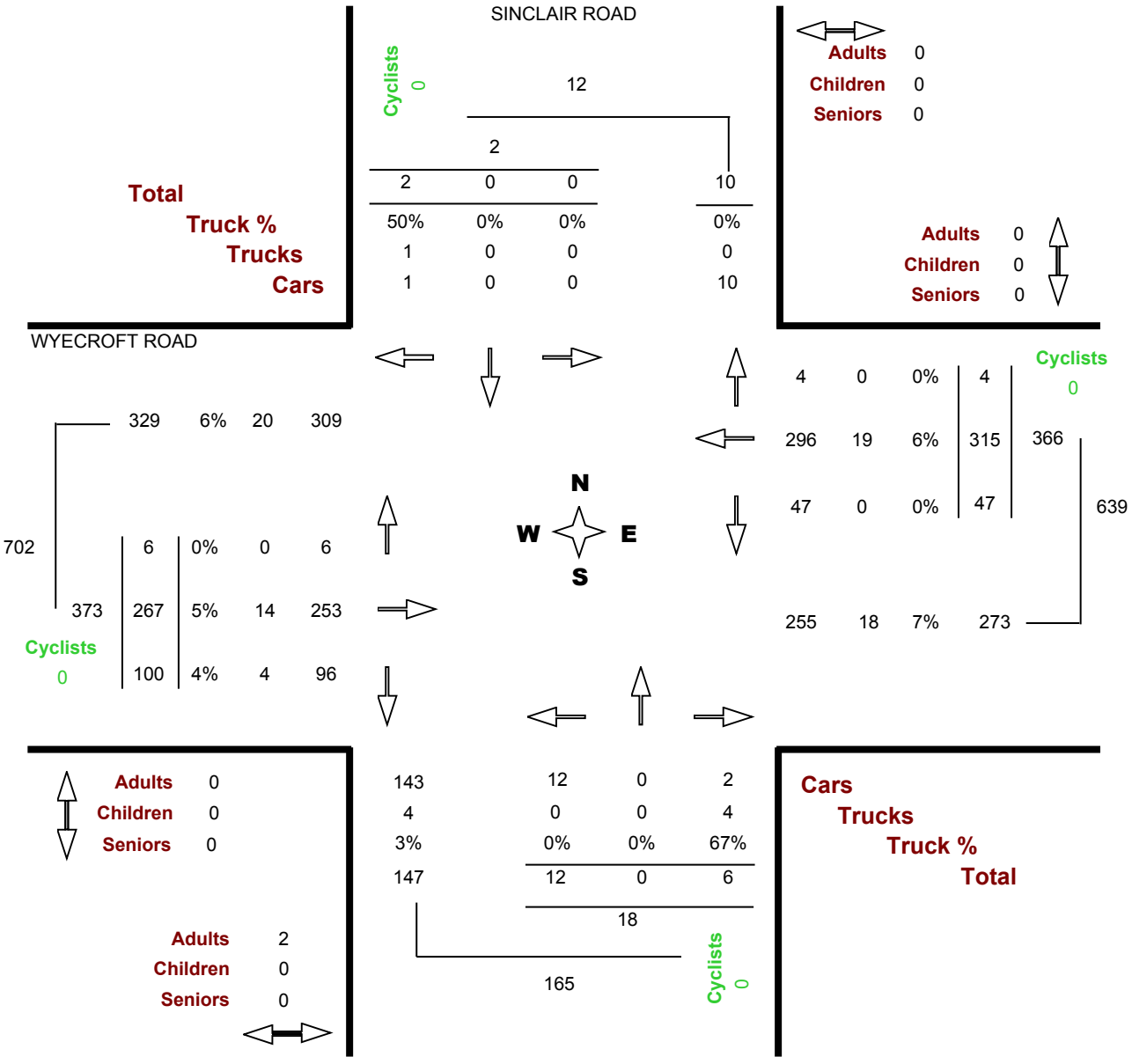
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ SINCLAIR ROAD

Municipality..... OAKVILLE

GeoID..... 30149501

Count Date..... Monday, 27 June, 2016 **Peak Hour.....** 08:00 AM — 09:00 AM



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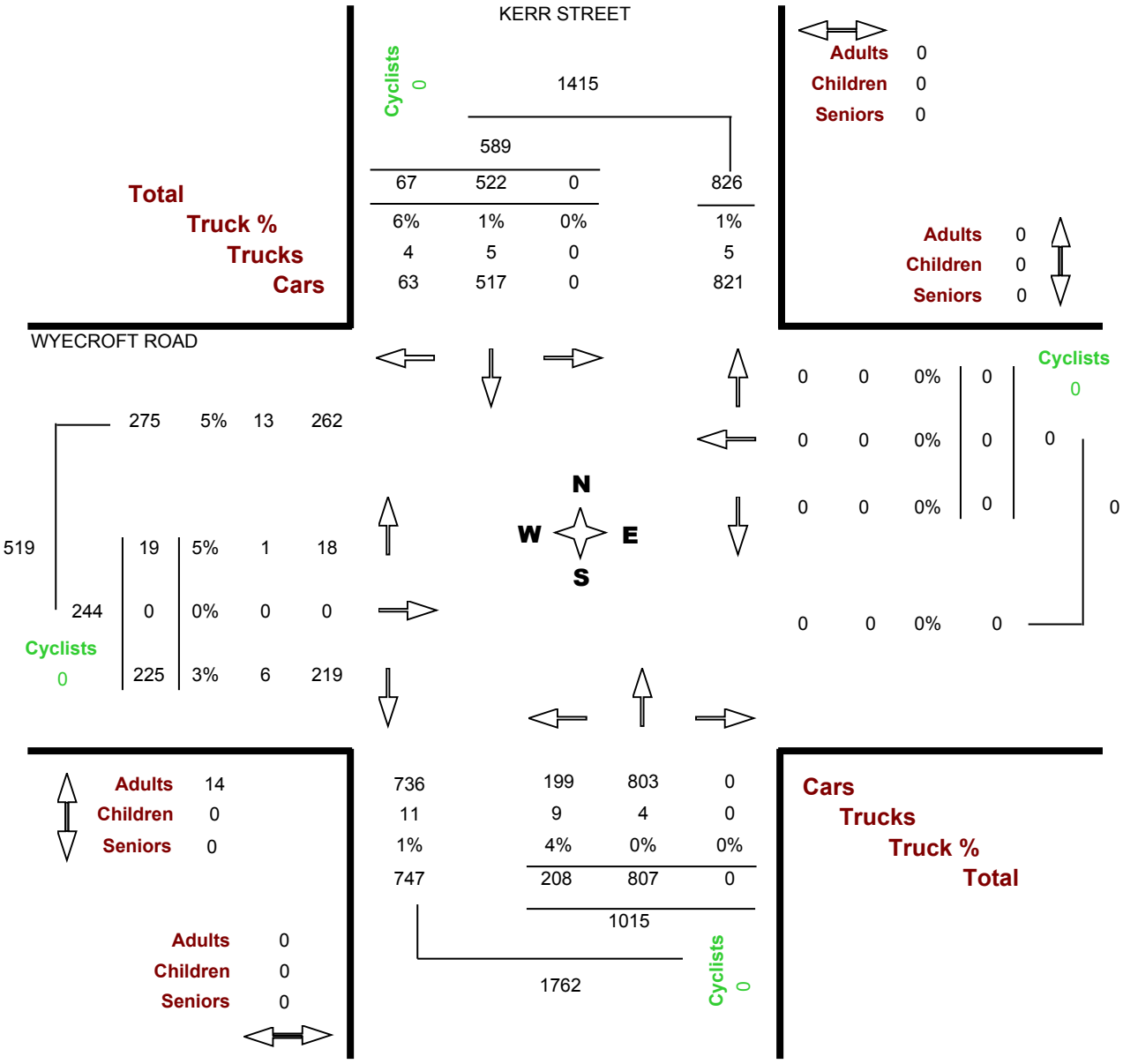
Turning Movements Report - PM Period

Location..... WYECROFT ROAD @ KERR STREET
Municipality..... OAKVILLE
GeoID..... 30149601
Count Date..... Monday, 16 May, 2016 **Peak Hour.....** 04:30 PM — 05:30 PM



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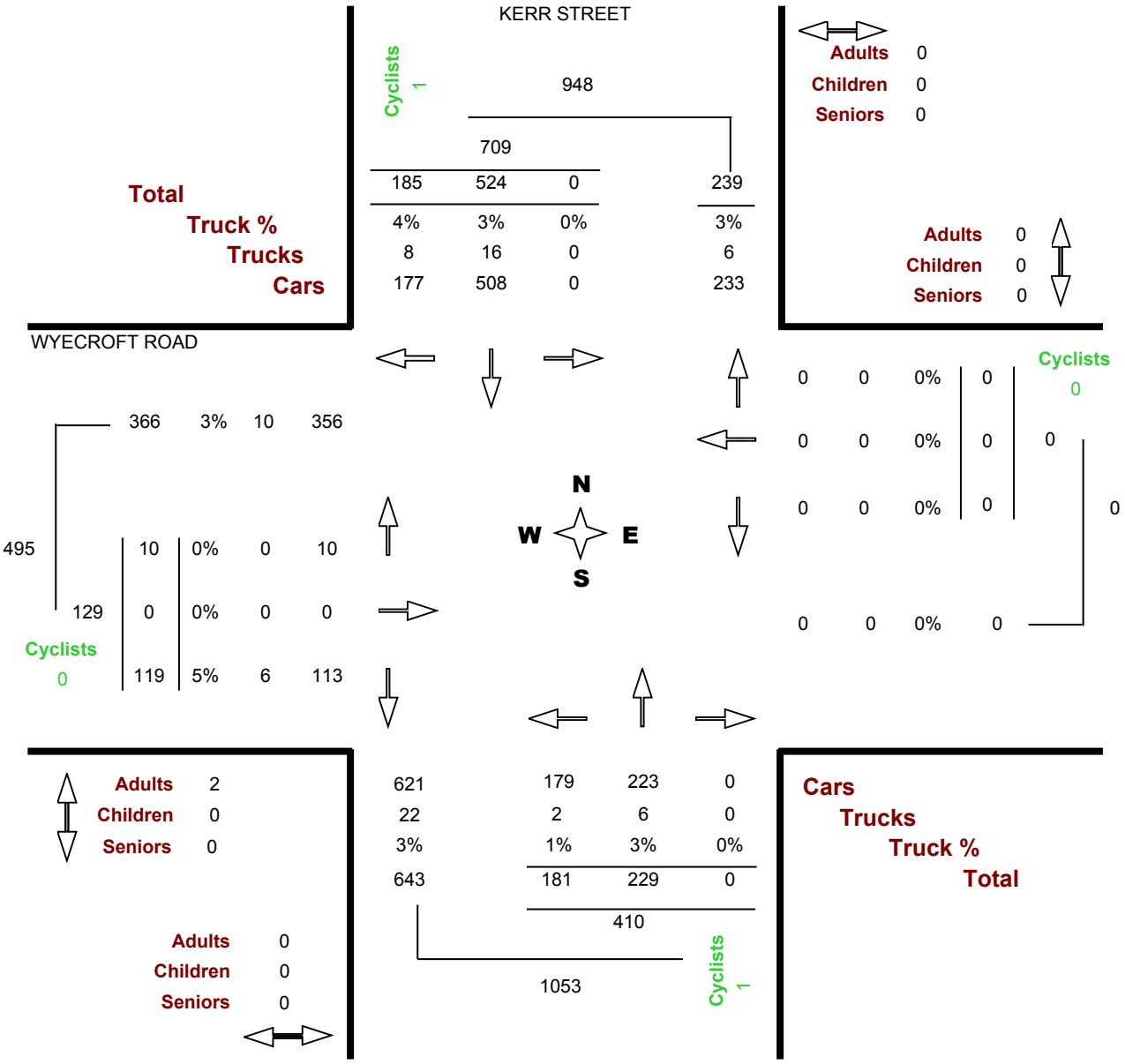
Turning Movements Report - AM Period

Location..... WYECROFT ROAD @ KERR STREET
Municipality..... OAKVILLE
GeoID..... 30149601
Count Date..... Monday, 16 May, 2016 **Peak Hour.....** 08:00 AM — 09:00 AM



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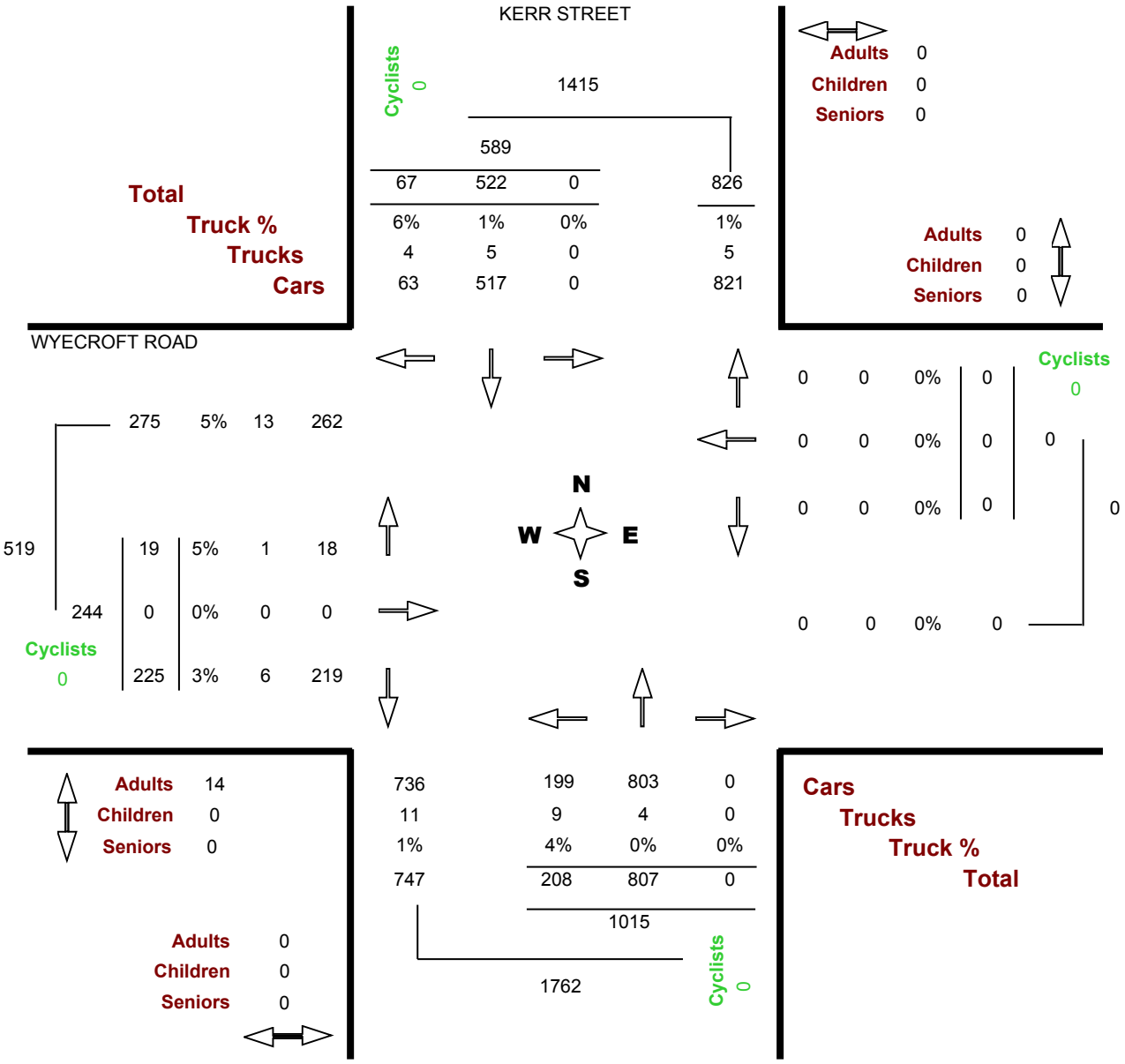
Turning Movements Report - Full Study

Location..... WYECROFT ROAD @ KERR STREET

Municipality..... OAKVILLE

GeoID..... 30149601

Count Date..... Monday, 16 May, 2016 **Peak Hour.....** 04:30 PM — 05:30 PM



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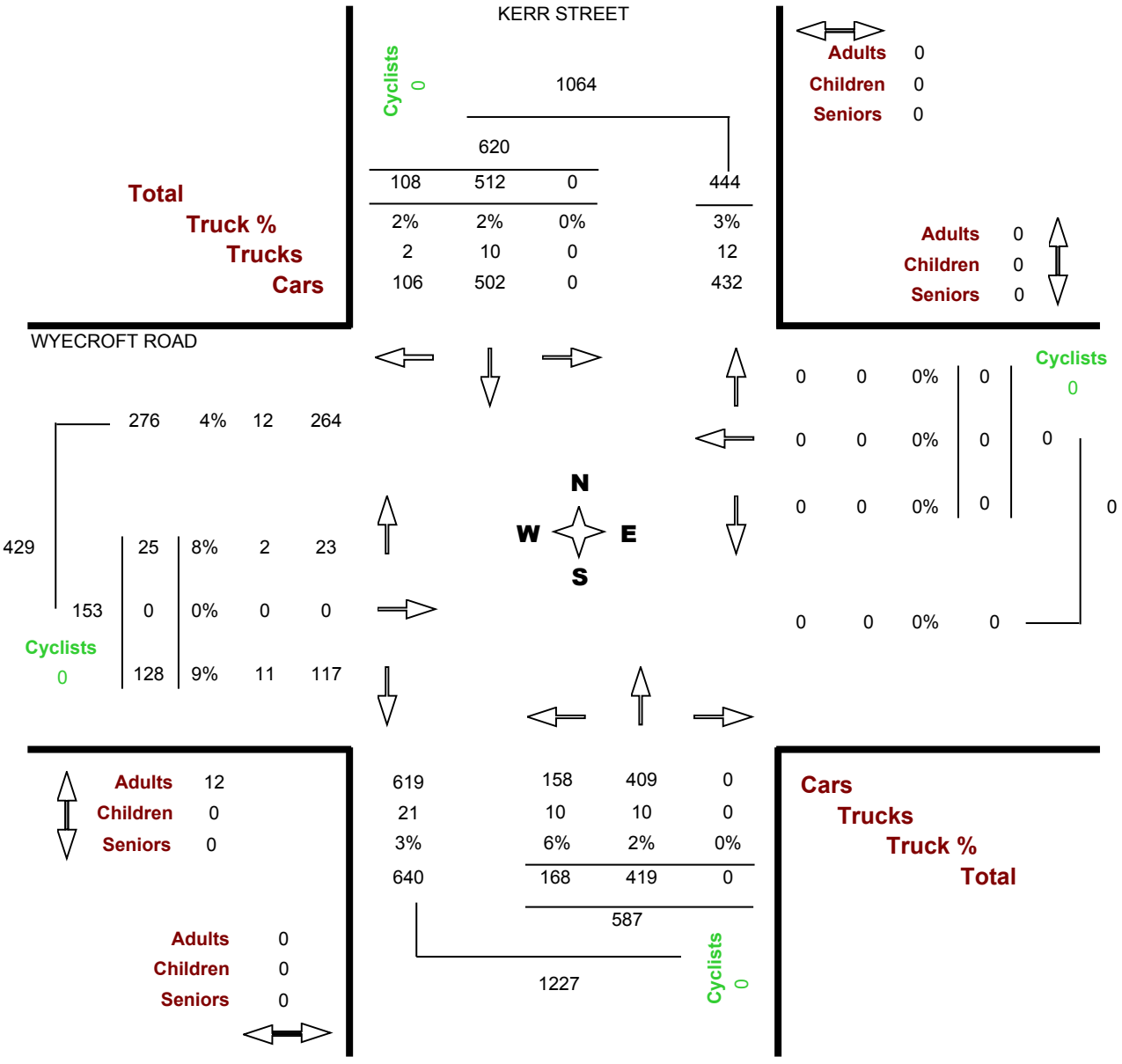
Turning Movements Report - MD Period

Location..... WYECROFT ROAD @ KERR STREET

Municipality..... OAKVILLE

GeoID..... 30149601

Count Date..... Monday, 16 May, 2016 **Peak Hour.....** 12:45 PM — 01:45 PM



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Appendix B

Synchro Analysis Output

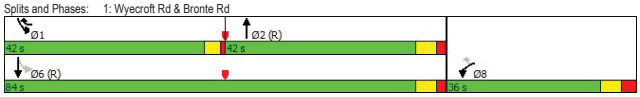
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	193	791	267	899	807
Future Volume (vph)	61	193	791	267	899	807
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	110.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	5.0				5.0	
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	0.95
Ped Bike Factor	1.00		1.00			
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1615	1471	3517	0	1789	3510
Flt Permitted	0.950				0.104	
Satd. Flow (perm)	1613	1471	3517	0	196	3510
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		37	45			
Link Speed (k/h)	50		60			60
Link Distance (m)	128.8		280.9			274.8
Travel Time (s)	9.3		16.9			16.5
Confl. Peds. (#/hr)	1			1	1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	11%	5%	4%	2%	4%
Adj. Flow (vph)	61	193	791	267	899	807
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	193	1058	0	899	807
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7			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)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
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)	6.1	6.1	1.8		6.1	1.8
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)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	6.0	15.0		6.0	15.0
Minimum Split (s)	35.0	10.0	30.0		10.0	30.0
Total Split (s)	36.0	42.0	42.0		42.0	84.0
Total Split (%)	30.0%	35.0%	35.0%		35.0%	70.0%
Maximum Green (s)	29.0	38.0	36.0		38.0	78.0
Yellow Time (s)	4.0	3.0	4.0		3.0	4.0
All-Red Time (s)	3.0	1.0	2.0		1.0	2.0
Lost Time Adjust (s)	0.0	0.0	-2.0		-2.0	0.0
Total Lost Time (s)	7.0	4.0	4.0		2.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.5	5.5	4.0		5.5	4.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	21.0		17.0			17.0
Pedestrian Calls (#/hr)	1		1			0
Act Effct Green (s)	14.1	74.0	38.0		100.3	97.5
Actuated g/C Ratio	0.12	0.62	0.32		0.84	0.81
v/c Ratio	0.32	0.21	0.92		0.96	0.28
Control Delay	50.9	8.7	52.0		47.7	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	50.9	8.7	52.0		47.7	4.5
LOS	D	A	D		D	A
Approach Delay	18.8		52.0			27.3
Approach LOS	B		D			C
Queue Length 50th (m)	13.9	14.7	115.7		176.5	20.3
Queue Length 95th (m)	23.1	25.5	#154.1		#334.6	51.2
Internal Link Dist (m)	104.8		256.9			250.8
Turn Bay Length (m)					110.0	
Base Capacity (vph)	390	921	1144		938	2852
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	0.16	0.21	0.92		0.96	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 114 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 35.2		Intersection LOS: D	

Intersection Capacity Utilization 101.1%		ICU Level of Service G	
Analysis Period (min) 15			
*	User Entered Value		
#	95th percentile volume exceeds capacity, queue may be longer.		
	Queue shown is maximum after two cycles.		

Splits and Phases: 1: Wyecroft Rd & Bronte Rd



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	215	775	181	26	9	54
Future Volume (vph)	215	775	181	26	9	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.983		0.884	
Flt Protected		0.989			0.993	
Satd. Flow (prot)	0	3527	1649	0	1494	0
Flt Permitted		0.989			0.993	
Satd. Flow (perm)	0	3527	1649	0	1494	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		121.7	81.2		226.5	
Travel Time (s)		8.8	5.8		16.3	
Confl. Peds. (#/hr)	3			3		
Confl. Bikes (#/hr)						54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	16%	4%	0%	15%
Adj. Flow (vph)	215	775	181	26	9	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	990	207	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	987	195	4	7	14
Future Volume (vph)	16	987	195	4	7	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997		0.910	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	3542	3173	0	1644	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	3542	3173	0	1644	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		128.8	121.7		152.2	
Travel Time (s)		9.3	8.8		13.7	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	15%	0%	0%	7%
Adj. Flow (vph)	16	987	195	4	7	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1003	199	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	405	629	73	43	28
Future Volume (vph)	4	405	629	73	43	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Frt			0.984		0.947	
Flt Protected					0.971	
Satd. Flow (prot)	0	4451	3239	0	1647	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	4451	3239	0	1647	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		68.2	87.4		142.1	
Travel Time (s)		4.9	6.3		10.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	18%	11%	10%	12%	0%
Adj. Flow (vph)	4	405	629	73	43	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	409	702	0	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.5%		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)	64	624	24	7	205	43	2	0	1	16	0	20
Future Volume (vph)	64	624	24	7	205	43	2	0	1	16	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.995			0.977			0.955			0.925	
Flt Protected		0.996			0.999			0.968			0.978	
Satd. Flow (prot)	0	1824	0	0	1685	0	0	1776	0	0	1738	0
Flt Permitted		0.996			0.999			0.968			0.978	
Satd. Flow (perm)	0	1824	0	0	1685	0	0	1776	0	0	1738	0
Link Speed (k/h)		50			50			40			50	
Link Distance (m)		316.7			441.6			245.2			363.6	
Travel Time (s)		22.8			31.8			22.1			26.2	
Confl. Peds. (#/hr)	4		1	1		4			1	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%	5%	0%	0%	13%	5%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	64	624	24	7	205	43	2	0	1	16	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	712	0	0	255	0	0	3	0	0	36	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	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 65.4%		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)	51	490	8	17	317	36	4	0	8	9	0	14
Future Volume (vph)	51	490	8	17	317	36	4	0	8	9	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.987			0.910			0.918	
Flt Protected		0.995			0.998			0.984			0.981	
Satd. Flow (prot)	0	1813	0	0	1759	0	0	1032	0	0	1593	0
Flt Permitted		0.995			0.998			0.984			0.981	
Satd. Flow (perm)	0	1813	0	0	1759	0	0	1032	0	0	1593	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		441.6			436.5			166.2			348.3	
Travel Time (s)		31.8			31.4			12.0			25.1	
Confl. Peds. (#/hr)	8		6	6		8	1		1	1		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 (%)	4%	5%	25%	35%	7%	0%	50%	0%	75%	22%	0%	0%
Adj. Flow (vph)	51	490	8	17	317	36	4	0	8	9	0	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	549	0	0	370	0	0	12	0	0	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)		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	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			

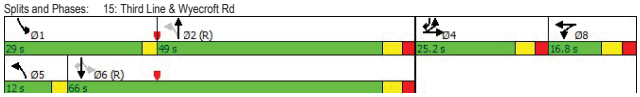
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	488	154	108	44	88	85	224	1555	68	507	1803	1293
Future Volume (vph)	488	154	108	44	88	85	224	1555	68	507	1803	1293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2100	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		50.0	90.0		0.0	110.0		65.0
Storage Lanes	2		0	1		1	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	0.95	1.00	*1.00	*1.00	1.00	*1.00	1.00
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.938			0.926			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3248	1723	0	1547	3265	0	1772	4093	0	1772	3767	1617
Flt Permitted	0.950			0.950			0.089			0.087		
Satd. Flow (perm)	3248	1723	0	1545	3265	0	166	4093	0	162	3767	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			85			4				197
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		136.0			184.2			499.0			390.5	
Travel Time (s)		9.8			13.3			29.9			23.4	
Confl. Peds. (#/hr)			1	1					1	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 (%)	9%	4%	4%	18%	7%	11%	3%	3%	4%	3%	2%	1%
Adj. Flow (vph)	488	154	108	44	88	85	224	1555	68	507	1803	1293
Shared Lane Traffic (%)												
Lane Group Flow (vph)	488	262	0	44	173	0	224	1623	0	507	1803	1293
Enter Blocked Intersection	No	No	No	No	No	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	0.86	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	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	6.1
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	1.8		6.1	1.8		6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	4	4		8	8		5	2		1	6	4
Permitted Phases							2			6		6
Detector Phase	4	4		8	8		5	2		1	6	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	28.0		7.0	28.0	10.0
Minimum Split (s)	31.4	31.4		16.8	16.8		12.0	34.2		10.0	34.2	31.4
Total Split (s)	25.2	25.2		16.8	16.8		12.0	49.0		29.0	66.0	25.2
Total Split (%)	21.0%	21.0%		14.0%	14.0%		10.0%	40.8%		24.2%	55.0%	21.0%
Maximum Green (s)	18.8	18.8		10.0	10.0		9.0	42.8		26.0	59.8	18.8
Yellow Time (s)	3.7	3.7		4.0	4.0		3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	2.7	2.7		2.8	2.8		0.0	2.5		0.0	2.5	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	6.4	6.4		6.8	6.8		1.0	4.2		1.0	4.2	4.4
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	4.5	4.5		3.5	3.5		5.0	5.0		2.5	5.0	4.5
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	None
Walk Time (s)	7.0	7.0						7.0			7.0	7.0
Flash Dont Walk (s)	18.0	18.0						21.0			21.0	18.0
Pedestrian Calls (#/hr)	1	1						1			0	1
Act Effct Green (s)	18.8	18.8		10.0	10.0		59.0	44.8		77.0	61.8	86.8
Actuated g/C Ratio	0.16	0.16		0.08	0.08		0.49	0.37		0.64	0.52	0.72
v/c Ratio	0.96	0.90		0.34	0.49		0.98	1.06		1.06	0.93	1.06
Control Delay	81.8	77.9		59.9	31.9		88.7	77.7		91.9	37.0	58.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	81.8	77.9		59.9	31.9		88.7	77.7		91.9	37.0	58.0
LOS	F	E		E	C		F	E		F	D	E
Approach Delay		80.4			37.6			79.0			52.3	
Approach LOS		F			D			E			D	
Queue Length 50th (m)	59.4	55.8		9.9	9.9		36.5	~210.2		~114.4	190.6	~320.4
Queue Length 95th (m)	#91.8	#103.8		22.0	20.7		#86.2	#251.1		#180.2	#233.5	#401.2
Internal Link Dist (m)		112.0			160.2			475.0			366.5	
Turn Bay Length (m)				50.0			90.0			110.0		65.0
Base Capacity (vph)	508	291		128	350		228	1530		479	1940	1224
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	0.96	0.90		0.34	0.49		0.98	1.06		1.06	0.93	1.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
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: 1.06			
Intersection Signal Delay: 62.8		Intersection LOS: E	

Intersection Capacity Utilization 113.5%		ICU Level of Service H	
Analysis Period (min) 15			
*	User Entered Value		
~	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: 15: Third Line & Wyecroft Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	324	312	59	404	32	29
Future Volume (vph)	324	312	59	404	32	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
Ped Bike Factor						
Frt	0.934					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	1708	0	0	1771	1426	984
Flt Permitted				0.994	0.950	
Satd. Flow (perm)	1708	0	0	1771	1426	984
Link Speed (k/h)	50			50	40	
Link Distance (m)	436.5			161.1	162.8	
Travel Time (s)	31.4			11.6	14.7	
Confl. Peds. (#/hr)		4	4			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	27%	5%	28%	66%
Adj. Flow (vph)	324	312	59	404	32	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	636	0	0	463	32	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

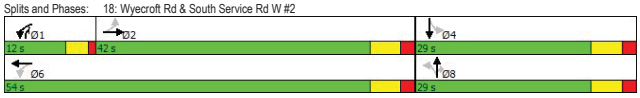
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	266	52	361	451	122	42	4	105	26	4	9
Future Volume (vph)	3	266	52	361	451	122	42	4	105	26	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor	1.00	0.99		0.99	0.99			0.99	0.98		0.99	
Frt		0.975			0.968				0.850		0.969	
Flt Protected	0.950			0.950				0.956			0.968	
Satd. Flow (prot)	1825	1639	0	1825	1701	0	0	1837	1633	0	1700	0
Flt Permitted	0.449			0.502				0.716			0.771	
Satd. Flow (perm)	861	1639	0	959	1701	0	0	1367	1597	0	1352	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			28				105		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.1			197.2			238.6			282.2	
Travel Time (s)		11.6			14.2			17.2			20.3	
Confl. Peds. (#/hr)	2		6	6		2	4		1	1		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 (%)	0%	16%	2%	0%	9%	8%	0%	0%	0%	8%	0%	0%
Adj. Flow (vph)	3	266	52	361	451	122	42	4	105	26	4	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	318	0	361	573	0	0	46	105	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)		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		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	6	6			2		1	1		4	4	
Act Effct Green (s)	36.1	36.1		50.0	50.9			12.2	16.1		12.2	
Actuated g/C Ratio	0.56	0.56		0.77	0.79			0.19	0.25		0.19	
v/c Ratio	0.01	0.34		0.43	0.43			0.18	0.22		0.15	
Control Delay	11.3	11.7		6.2	6.7			25.9	4.6		21.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	11.3	11.7		6.2	6.7			25.9	4.6		21.3	
LOS	B	B		A	A			C	A		C	
Approach Delay		11.7			6.5			11.1			21.3	
Approach LOS		B			A			B			C	
Queue Length 50th (m)	0.2	22.0		13.3	27.3			5.3	0.0		3.4	
Queue Length 95th (m)	1.7	52.6		39.1	76.2			13.1	7.9		10.4	
Internal Link Dist (m)		137.1			173.2			214.6			258.2	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	494	948		853	1309			501	492		502	
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	0.01	0.34		0.42	0.44			0.09	0.21		0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 64.6			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 85.5%		ICU Level of Service E	

Analysis Period (min) 15

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	324	3	112	941	1	25
Future Volume (vph)	324	3	112	941	1	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	1671	0	0	3477	1825	1633
Flt Permitted				0.995	0.950	
Satd. Flow (perm)	1671	0	0	3477	1825	1633
Link Speed (k/h)	50			50	40	
Link Distance (m)	197.2			45.1	235.2	
Travel Time (s)	14.2			3.2	21.2	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	15%	0%	0%	5%	0%	0%
Adj. Flow (vph)	324	3	112	941	1	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	327	0	0	1053	1	25
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	288	150	37	117	21	7
Future Volume (vph)	288	150	37	117	21	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.954				0.966	
Flt Protected				0.988	0.964	
Satd. Flow (prot)	1704	0	0	1402	1318	0
Flt Permitted				0.988	0.964	
Satd. Flow (perm)	1704	0	0	1402	1318	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	597.7			460.8	281.2	
Travel Time (s)	43.0			33.2	20.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	1%	8%	44%	43%	14%
Adj. Flow (vph)	288	150	37	117	21	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	438	0	0	154	28	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	3.7	
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			Free	Stop	

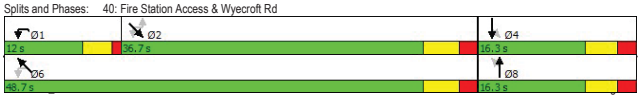
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	8	0	14	1	0	0	4	312	10	16	201	2
Future Volume (vph)	8	0	14	1	0	0	4	312	10	16	201	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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		0.850							0.850		0.999	
Flt Protected	0.950				0.950			0.999		0.950		
Satd. Flow (prot)	1615	1266	0	0	1825	0	0	1630	1166	1393	1436	0
Flt Permitted								0.995		0.439		
Satd. Flow (perm)	1700	1266	0	0	1921	0	0	1623	1166	644	1436	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		598							106		2	
Link Speed (k/h)		50			40			50			50	
Link Distance (m)		120.2			119.2			273.5			145.9	
Travel Time (s)		8.7			10.7			19.7			10.5	
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
Heavy Vehicles (%)	13%	0%	29%	0%	0%	0%	0%	18%	40%	31%	34%	0%
Adj. Flow (vph)	8	0	14	1	0	0	4	312	10	16	201	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	14	0	0	1	0	0	316	10	16	203	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	pm+pt	NA	
Protected Phases		8			4			2		1	6	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	15.8	15.8			15.8			28.0	28.0	23.3	27.9	
Actuated g/C Ratio	0.51	0.51			0.51			0.90	0.90	0.75	0.89	
v/c Ratio	0.01	0.01			0.00			0.22	0.01	0.02	0.16	
Control Delay	16.4	0.0			17.0			4.1	0.0	1.8	1.9	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	16.4	0.0			17.0			4.1	0.0	1.8	1.9	
LOS	B	A			B			A	A	A	A	
Approach Delay		6.0			17.0			4.0			1.9	
Approach LOS		A			B			A			A	
Queue Length 50th (m)	0.3	0.0			0.1			0.0	0.0	0.1	0.0	
Queue Length 95th (m)	3.9	0.0			1.3			38.1	0.0	1.7	14.3	
Internal Link Dist (m)		96.2			95.2			249.5			121.9	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	911	956			1029			1375	1004	806	1348	
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	0.01	0.01			0.00			0.23	0.01	0.02	0.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 31.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.22			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	272	3	1	207	19	1	0	0	4	0	4
Future Volume (vph)	12	272	3	1	207	19	1	0	0	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.999			0.989						0.932	
Flt Protected		0.998						0.950			0.976	
Satd. Flow (prot)	0	1645	0	0	1487	0	0	1825	0	0	1398	0
Flt Permitted		0.998						0.950			0.976	
Satd. Flow (perm)	0	1645	0	0	1487	0	0	1825	0	0	1398	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		145.9			123.5			161.1			189.9	
Travel Time (s)		10.5			8.9			14.5			17.1	
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 (%)	8%	17%	0%	100%	30%	0%	0%	0%	0%	25%	0%	25%
Adj. Flow (vph)	12	272	3	1	207	19	1	0	0	4	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	287	0	0	227	0	0	1	0	0	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			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 33.2%		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)	2	273	23	11	226	6	7	0	2	0	0	0
Future Volume (vph)	2	273	23	11	226	6	7	0	2	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.990			0.997			0.970				
Flt Protected					0.998			0.963				
Satd. Flow (prot)	0	1646	0	0	1673	0	0	1348	0	0	1921	0
Flt Permitted					0.998			0.963				
Satd. Flow (perm)	0	1646	0	0	1673	0	0	1348	0	0	1921	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		8.9			12.4			11.9			19.1	
Confl. Peds. (#/hr)			2	2			1		2	2		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%	17%	0%	27%	14%	0%	14%	0%	100%	0%	0%	0%
Adj. Flow (vph)	2	273	23	11	226	6	7	0	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	0	0	243	0	0	9	0	0	0	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		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)	11	219	19	55	249	16	3	0	19	1	0	4
Future Volume (vph)	11	219	19	55	249	16	3	0	19	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor												
Frt		0.988			0.991			0.883			0.892	
Flt Protected	0.950			0.950				0.993			0.990	
Satd. Flow (prot)	1674	1616	0	1615	1598	0	0	1169	0	0	1212	0
Flt Permitted	0.950			0.950				0.993			0.990	
Satd. Flow (perm)	1674	1616	0	1615	1598	0	0	1169	0	0	1212	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		172.3			135.2			130.8			152.7	
Travel Time (s)		12.4			9.7			9.4			11.0	
Confl. Peds. (#/hr)			6	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 (%)	9%	19%	0%	13%	20%	6%	0%	0%	51%	0%	0%	50%
Adj. Flow (vph)	11	219	19	55	249	16	3	0	19	1	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	238	0	55	265	0	0	22	0	0	5	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
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			

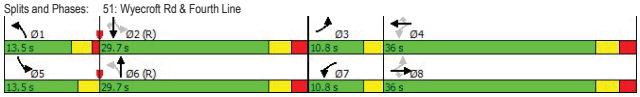
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	183	48	66	173	26	48	214	145	214	362	91
Future Volume (vph)	45	183	48	66	173	26	48	214	145	214	362	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		1.00		0.98
Frt			0.850			0.850		0.939				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	1525	1183	1587	1588	1286	1659	3289	0	1738	1830	1555
Flt Permitted	0.648			0.536			0.524			0.486		
Satd. Flow (perm)	915	1525	1158	894	1588	1269	914	3289	0	887	1830	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			116		145				120
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		135.2			64.2			211.2			311.7	
Travel Time (s)		9.7			4.6			15.8			23.4	
Confl. Peds. (#/hr)	1		1	1		1	1		2	2		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 (%)	36%	26%	38%	15%	21%	27%	10%	2%	5%	5%	5%	5%
Adj. Flow (vph)	45	183	48	66	173	26	48	214	145	214	362	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	183	48	66	173	26	48	359	0	214	362	91
Enter Blocked Intersection	No	No	No	No	No	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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.8	36.0	36.0	10.8	36.0	36.0	13.5	29.7		13.5	29.7	29.7
Total Split (%)	12.0%	40.0%	40.0%	12.0%	40.0%	40.0%	15.0%	33.0%		15.0%	33.0%	33.0%
Maximum Green (s)	7.8	30.1	30.1	7.8	30.1	30.1	9.5	24.1		10.5	24.1	24.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		1	1		1	1		2			1	1
Act Effct Green (s)	28.2	19.3	19.3	29.0	21.4	21.4	45.9	37.1		53.2	43.9	43.9
Actuated g/C Ratio	0.31	0.21	0.21	0.32	0.24	0.24	0.51	0.41		0.59	0.49	0.49
v/c Ratio	0.14	0.56	0.14	0.19	0.46	0.07	0.09	0.25		0.34	0.41	0.11
Control Delay	18.3	37.6	0.9	19.0	33.1	0.3	11.4	12.8		11.9	20.1	2.6
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	18.3	37.6	0.9	19.0	33.1	0.3	11.4	12.8		11.9	20.1	2.6
LOS	B	D	A	B	C	A	B	B		B	C	A
Approach Delay		28.1			26.3			12.6			15.0	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	5.1	28.7	0.0	7.5	26.6	0.0	3.5	12.2		16.6	43.5	0.0
Queue Length 95th (m)	10.7	44.6	0.0	14.1	41.8	0.0	9.8	26.6		33.6	79.0	6.0
Internal Link Dist (m)		111.2			40.2			187.2			287.7	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	326	510	464	348	531	501	567	1440		636	893	804
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	0.14	0.36	0.10	0.19	0.33	0.05	0.08	0.25		0.34	0.41	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 18.5		Intersection LOS: B	

Intersection Capacity Utilization 67.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 51: Wyecroft Rd & Fourth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	62	520	256	20	4	26
Future Volume (vph)	62	520	256	20	4	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Frt			0.989		0.883	
Flt Protected		0.995			0.993	
Satd. Flow (prot)	0	1718	4302	0	1448	0
Flt Permitted		0.995			0.993	
Satd. Flow (perm)	0	1718	4302	0	1448	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.2	77.4		236.2	
Travel Time (s)		4.6	5.6		17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	12%	21%	15%	25%	15%
Adj. Flow (vph)	62	520	256	20	4	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	582	276	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
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)	5	411	23	33	371	10	5	0	24	9	0	2
Future Volume (vph)	5	411	23	33	371	10	5	0	24	9	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.993			0.997			0.888			0.975	
Flt Protected		0.999			0.996			0.991			0.961	
Satd. Flow (prot)	0	1637	0	0	1637	0	0	1215	0	0	1800	0
Flt Permitted		0.999			0.996			0.991			0.961	
Satd. Flow (perm)	0	1637	0	0	1637	0	0	1215	0	0	1800	0
Link Speed (k/h)		50			50			40			48	
Link Distance (m)		746.3			110.8			199.4			294.8	
Travel Time (s)		53.7			8.0			17.9			22.1	
Confl. Peds. (#/hr)			20	20			1		17	17		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 (%)	20%	17%	5%	28%	16%	0%	40%	0%	39%	0%	0%	0%
Adj. Flow (vph)	5	411	23	33	371	10	5	0	24	9	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	439	0	0	414	0	0	29	0	0	11	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	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 55.3% ICU Level of Service B
Analysis Period (min) 15

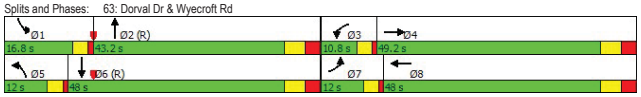
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	159	128	27	159	208	130	1294	61	235	1177	449
Future Volume (vph)	175	159	128	27	159	208	130	1294	61	235	1177	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	1.00	0.99		0.99	0.99		1.00	1.00		1.00	1.00	
Frt		0.933			0.915			0.993			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2832	3047	0	1644	3152	0	1722	4795	0	3437	4692	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2829	3047	0	1636	3152	0	1721	4795	0	3435	4692	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		128			196			6			87	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.9			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	2		8	8		2	6		3	3		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 (%)	25%	9%	13%	11%	4%	6%	6%	5%	3%	3%	5%	11%
Parking (#/hr)								0				
Adj. Flow (vph)	175	159	128	27	159	208	130	1294	61	235	1177	449
Shared Lane Traffic (%)												
Lane Group Flow (vph)	175	287	0	27	367	0	130	1355	0	235	1626	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			7.4			7.4	
Link Offset(m)		0.0			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	1.03	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	12.0	49.2		10.8	48.0		12.0	43.2		16.8	48.0	
Total Split (%)	10.0%	41.0%		9.0%	40.0%		10.0%	36.0%		14.0%	40.0%	
Maximum Green (s)	8.0	42.2		6.8	41.0		8.0	36.2		12.8	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	2.0	7.0		4.0	7.0		4.0	7.0		4.0	7.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		8			2			3			6	
Act Effct Green (s)	10.0	22.3		6.5	16.8		16.8	59.8		13.4	56.4	
Actuated g/C Ratio	0.08	0.19		0.05	0.14		0.14	0.50		0.11	0.47	
v/c Ratio	0.74	0.43		0.30	0.60		0.54	0.57		0.61	0.72	
Control Delay	73.0	24.9		63.4	25.0		57.9	24.4		57.7	27.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	73.0	24.9		63.4	25.0		57.9	24.4		57.7	27.5	
LOS	E	C		E	C		E	C		E	C	
Approach Delay		43.1			27.6			27.3			31.3	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	21.1	18.7		6.2	20.4		28.6	72.3		27.6	97.6	
Queue Length 95th (m)	#37.1	24.9		15.8	27.7		#60.7	#142.0		39.3	#167.3	
Internal Link Dist (m)		63.4			120.9			189.8			270.1	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	236	1154		93	1205		241	2394		404	2250	
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	0.74	0.25		0.29	0.30		0.54	0.57		0.58	0.72	

Intersection Summary
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 21.6 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74

Intersection Signal Delay: 30.9 Intersection LOS: C
Intersection Capacity Utilization 77.5% 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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

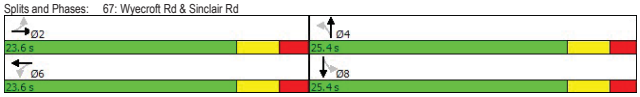


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	267	100	47	315	47	12	0	6	0	0	2
Future Volume (vph)	6	267	100	47	315	47	12	0	6	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.964			0.984			0.955			0.865	
Flt Protected		0.999			0.994			0.968				
Satd. Flow (prot)	0	1757	0	0	1796	0	0	1452	0	0	1108	0
Flt Permitted		0.990			0.917							
Satd. Flow (perm)	0	1741	0	0	1657	0	0	1500	0	0	1108	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			15			58			359	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		96.5			190.5			115.8			194.3	
Travel Time (s)		6.9			13.7			10.4			17.5	
Confl. Peds. (#/hr)			2	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%	5%	4%	0%	6%	0%	0%	0%	67%	0%	0%	50%
Adj. Flow (vph)	6	267	100	47	315	47	12	0	6	0	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	373	0	0	409	0	0	18	0	0	2	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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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			NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	17.0	17.0		17.0	17.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1		2.1	2.1	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.6			5.6			5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.5	3.5		3.5	3.5	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		9.0	9.0		9.0	9.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	2	2		0	0		0	0		0	0	
Act Effct Green (s)		20.9			20.9			12.1			12.1	
Actuated g/C Ratio		0.89			0.89			0.52			0.52	
v/c Ratio		0.24			0.28			0.02			0.00	
Control Delay		2.9			3.4			1.1			0.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		2.9			3.4			1.1			0.0	
LOS		A			A			A			A	
Approach Delay		2.9			3.4			1.1				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		26.6			33.0			0.9			0.0	
Internal Link Dist (m)		72.5			166.5			91.8			170.3	
Turn Bay Length (m)												
Base Capacity (vph)		1350			1279			1260			983	
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		0.28			0.32			0.01			0.00	

Intersection Summary
Area Type: Other
Cycle Length: 49
Actuated Cycle Length: 23.4
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 3.1 Intersection LOS: A
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	124	188	238	545	192
Future Volume (vph)	10	124	188	238	545	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	5.0		5.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.875				0.965	
Flt Protected	0.996		0.950			
Satd. Flow (prot)	1600	0	1807	1865	1795	0
Flt Permitted	0.996		0.950			
Satd. Flow (perm)	1600	0	1807	1865	1795	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	146.2			210.7	216.3	
Travel Time (s)	10.5			15.2	15.6	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	1%	3%	3%	4%
Adj. Flow (vph)	10	124	188	238	545	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	0	188	238	737	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

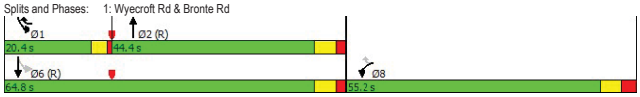
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	260	733	828	98	358	759
Future Volume (vph)	260	733	828	98	358	759
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	110.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	5.0				5.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor		0.98	1.00			
Frt		0.850	0.984			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1772	1585	3508	0	1738	3579
Flt Permitted	0.950				0.124	
Satd. Flow (perm)	1772	1558	3508	0	227	3579
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		32	11			
Link Speed (k/h)	50		60			60
Link Distance (m)	128.7		281.0			274.7
Travel Time (s)	9.3		16.9			16.5
Confl. Peds. (#/hr)		4		3	3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	2%	4%	5%	2%
Adj. Flow (vph)	260	733	828	98	358	759
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	733	926	0	358	759
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7			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)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
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)	6.1	6.1	1.8		6.1	1.8
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)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	6.0	15.0		6.0	15.0
Minimum Split (s)	35.0	10.0	30.0		10.0	30.0
Total Split (s)	55.2	20.4	44.4		20.4	64.8
Total Split (%)	46.0%	17.0%	37.0%		17.0%	54.0%
Maximum Green (s)	48.2	16.4	38.4		16.4	58.8
Yellow Time (s)	4.0	3.0	4.0		3.0	4.0
All-Red Time (s)	3.0	1.0	2.0		1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	4.0	6.0		4.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.5	5.5	4.0		5.5	4.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	21.0		17.0			17.0
Pedestrian Calls (#/hr)	4		3			0
Act Effct Green (s)	23.7	64.6	41.4		85.3	83.3
Actuated g/C Ratio	0.20	0.54	0.34		0.71	0.69
v/c Ratio	0.74	0.85	0.76		0.56	0.31
Control Delay	58.0	31.7	39.8		21.5	8.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	58.0	31.7	39.8		21.5	8.1
LOS	E	C	D		C	A
Approach Delay	38.6		39.8			12.4
Approach LOS	D		D			B
Queue Length 50th (m)	58.1	125.2	99.8		44.1	33.0
Queue Length 95th (m)	80.5	169.6	129.7		81.9	51.3
Internal Link Dist (m)	104.7		257.0			250.7
Turn Bay Length (m)					110.0	
Base Capacity (vph)	711	861	1218		638	2485
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	0.37	0.85	0.76		0.56	0.31

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116.4 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 29.3		Intersection LOS: C	

Intersection Capacity Utilization 80.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Wyecroft Rd & Bronte Rd



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	252	768	28	9	234
Future Volume (vph)	52	252	768	28	9	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.995		0.870	
Flt Protected		0.992			0.998	
Satd. Flow (prot)	0	3385	1840	0	1652	0
Flt Permitted		0.992			0.998	
Satd. Flow (perm)	0	3385	1840	0	1652	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		121.8	81.2		226.6	
Travel Time (s)		8.8	5.8		16.3	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	8%	4%	0%	0%	1%
Adj. Flow (vph)	52	252	768	28	9	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	304	796	0	243	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	29	311	1005	10	1	48
Future Volume (vph)	29	311	1005	10	1	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.868	
Flt Protected		0.996			0.999	
Satd. Flow (prot)	0	3417	3541	0	1603	0
Flt Permitted		0.996			0.999	
Satd. Flow (perm)	0	3417	3541	0	1603	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		128.7	121.8		152.3	
Travel Time (s)		9.3	8.8		13.7	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	7%	3%	0%	0%	4%
Adj. Flow (vph)	29	311	1005	10	1	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	340	1015	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	666	347	60	71	48
Future Volume (vph)	6	666	347	60	71	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.978		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	4772	3305	0	1684	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	4772	3305	0	1684	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		68.2	87.4		142.0	
Travel Time (s)		4.9	6.3		10.2	
Confl. Peds. (#/hr)	1			1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	8%	8%	4%	6%
Adj. Flow (vph)	6	666	347	60	71	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	672	407	0	119	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.6%		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)	39	237	6	3	628	40	5	0	6	51	0	96
Future Volume (vph)	39	237	6	3	628	40	5	0	6	51	0	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.992			0.926			0.912	
Flt Protected		0.993						0.978			0.983	
Satd. Flow (prot)	0	1813	0	0	1834	0	0	1740	0	0	1678	0
Flt Permitted		0.993						0.978			0.983	
Satd. Flow (perm)	0	1813	0	0	1834	0	0	1740	0	0	1678	0
Link Speed (k/h)		50			50			40			50	
Link Distance (m)		316.8			441.5			245.3			363.5	
Travel Time (s)		22.8			31.8			22.1			26.2	
Confl. Peds. (#/hr)	5		1	1		5	1					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 (%)	5%	5%	0%	33%	4%	0%	0%	0%	0%	2%	0%	3%
Adj. Flow (vph)	39	237	6	3	628	40	5	0	6	51	0	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	282	0	0	671	0	0	11	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)		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	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 59.5%		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)	6	346	4	10	615	23	15	0	22	26	0	45
Future Volume (vph)	6	346	4	10	615	23	15	0	22	26	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.995			0.920			0.914	
Flt Protected		0.999			0.999			0.980			0.982	
Satd. Flow (prot)	0	1817	0	0	1816	0	0	1365	0	0	1724	0
Flt Permitted		0.999			0.999			0.980			0.982	
Satd. Flow (perm)	0	1817	0	0	1816	0	0	1365	0	0	1724	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		441.5			436.6			166.3			348.2	
Travel Time (s)		31.8			31.4			12.0			25.1	
Confl. Peds. (#/hr)	5		6	6		5	3					3
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%	5%	50%	80%	4%	4%	40%	0%	18%	0%	0%	0%
Adj. Flow (vph)	6	346	4	10	615	23	15	0	22	26	0	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	356	0	0	648	0	0	37	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	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 52.0%		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)	845	190	144	79	215	424	149	1324	25	109	1182	221
Future Volume (vph)	845	190	144	79	215	424	149	1324	25	109	1182	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		50.0	90.0		0.0	110.0		65.0
Storage Lanes	2		0	1		0	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	*1.00	1.00	*1.00	*1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00		0.99		1.00				
Frt		0.935				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	1698	0	1755	1847	1585	1706	3749	0	1587	3579	1498
Flt Permitted	0.950			0.950			0.089			0.090		
Satd. Flow (perm)	3465	1698	0	1752	1847	1565	160	3749	0	150	3579	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				87		2				186
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		136.0			184.2			498.9			390.6	
Travel Time (s)		9.8			13.3			29.9			23.4	
Confl. Peds. (#/hr)	1		2	2		1			5	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
Heavy Vehicles (%)	2%	6%	4%	4%	4%	3%	7%	2%	8%	15%	2%	9%
Adj. Flow (vph)	845	190	144	79	215	424	149	1324	25	109	1182	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	845	334	0	79	215	424	149	1349	0	109	1182	221
Enter Blocked Intersection	No	No	No	No	No	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	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

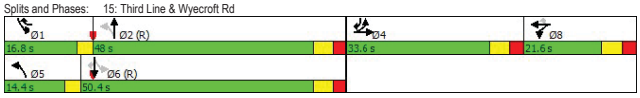
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	4	4		8	8	1	5	2		1	6	4
Permitted Phases						8	2			6		6
Detector Phase	4	4		8	8	1	5	2		1	6	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	7.0	7.0	28.0		7.0	28.0	10.0
Minimum Split (s)	31.4	31.4		21.6	21.6	10.0	10.0	34.2		10.0	34.2	31.4
Total Split (s)	33.6	33.6		21.6	21.6	16.8	14.4	48.0		16.8	50.4	33.6
Total Split (%)	28.0%	28.0%		18.0%	18.0%	14.0%	12.0%	40.0%		14.0%	42.0%	28.0%
Maximum Green (s)	27.2	27.2		14.8	14.8	13.8	11.4	41.8		13.8	44.2	27.2
Yellow Time (s)	3.7	3.7		4.0	4.0	3.0	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	2.7	2.7		2.8	2.8	0.0	0.0	2.5		0.0	2.5	2.7
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0	0.0
Total Lost Time (s)	4.4	4.4		6.8	4.8	1.0	3.0	4.2		3.0	4.2	6.4
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	4.5	4.5		3.5	3.5	2.5	5.0	5.0		2.5	5.0	4.5
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	None
Walk Time (s)	7.0	7.0						7.0			7.0	7.0
Flash Dont Walk (s)	18.0	18.0						21.0			21.0	18.0
Pedestrian Calls (#/hr)	2	2						5			0	2
Act Effct Green (s)	29.2	29.2		14.7	16.7	33.4	59.0	46.8		58.7	46.6	78.0
Actuated g/C Ratio	0.24	0.24		0.12	0.14	0.28	0.49	0.39		0.49	0.39	0.65
v/c Ratio	1.00	0.77		0.37	0.84	0.85	0.67	0.92		0.54	0.85	0.21
Control Delay	76.8	51.3		53.8	77.6	48.1	38.5	46.8		27.5	40.8	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	76.8	51.3		53.8	77.6	48.1	38.5	46.8		27.5	40.8	2.3
LOS	E	D		D	E	D	D	D		C	D	A
Approach Delay		69.6			57.6			45.9			34.2	
Approach LOS		E			E			D			C	
Queue Length 50th (m)	~103.1	67.3		17.3	49.9	74.8	18.0	151.7		12.9	133.0	2.8
Queue Length 95th (m)	#144.8	#107.6		32.6	#89.5	#117.0	#44.6	#203.1		26.8	162.0	11.3
Internal Link Dist (m)		112.0			160.2			474.9			366.6	
Turn Bay Length (m)				50.0		50.0	90.0			110.0		65.0
Base Capacity (vph)	844	435		216	258	536	225	1463		241	1390	1039
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	1.00	0.77		0.37	0.83	0.79	0.66	0.92		0.45	0.85	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14.4 (12%), 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: 49.7		Intersection LOS: D	

Intersection Capacity Utilization 98.4%	ICU Level of Service F
Analysis Period (min) 15	

* User Entered Value
~ 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: 15: Third Line & Wyecroft Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	372	32	38	523	143	102
Future Volume (vph)	372	32	38	523	143	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.989					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	1814	0	0	1792	1690	1396
Flt Permitted				0.997	0.950	
Satd. Flow (perm)	1814	0	0	1792	1690	1396
Link Speed (k/h)	50			50	40	
Link Distance (m)	436.6			161.0	162.7	
Travel Time (s)	31.4			11.6	14.6	
Confl. Peds. (#/hr)		9	9			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	25%	47%	4%	8%	17%
Adj. Flow (vph)	372	32	38	523	143	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	0	0	561	143	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

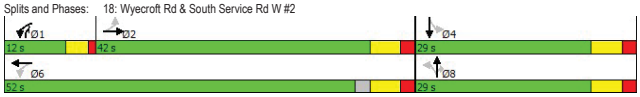
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	521	27	107	403	68	174	7	266	123	5	19
Future Volume (vph)	8	521	27	107	403	68	174	7	266	123	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt		0.993			0.978				0.850		0.983	
Flt Protected	0.950			0.950				0.954			0.960	
Satd. Flow (prot)	1644	1733	0	1825	1696	0	0	1833	1633	0	1628	0
Flt Permitted	0.493			0.283				0.681			0.619	
Satd. Flow (perm)	852	1733	0	543	1696	0	0	1305	1633	0	1050	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			17				222		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.0			197.3			238.5			282.3	
Travel Time (s)		11.6			14.2			17.2			20.3	
Confl. Peds. (#/hr)	2		4	4		2	2					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 (%)	11%	10%	8%	0%	11%	7%	0%	0%	0%	11%	0%	14%
Adj. Flow (vph)	8	521	27	107	403	68	174	7	266	123	5	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	548	0	107	471	0	0	181	266	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	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	52.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	62.7%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	46.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	4	4			2		0	0		2	2	
Act Effct Green (s)	35.6	35.6		48.9	46.9			16.1	29.4		16.1	
Actuated g/C Ratio	0.47	0.47		0.65	0.63			0.21	0.39		0.21	
v/c Ratio	0.02	0.67		0.22	0.44			0.65	0.34		0.64	
Control Delay	12.9	21.1		7.0	9.4			38.2	4.8		38.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	12.9	21.1		7.0	9.4			38.2	4.8		38.0	
LOS	B	C		A	A			D	A		D	
Approach Delay		21.0			9.0			18.4			38.0	
Approach LOS		C			A			B			D	
Queue Length 50th (m)	0.6	55.5		4.8	28.9			23.1	3.7		17.5	
Queue Length 95th (m)	3.2	106.4		12.6	60.1			43.3	16.8		35.9	
Internal Link Dist (m)		137.0			173.3			214.5			258.3	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	411	838		491	1097			402	789		330	
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	0.02	0.65		0.22	0.43			0.45	0.34		0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 75			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	

Analysis Period (min) 15

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	837	0	6	484	2	73
Future Volume (vph)	837	0	6	484	2	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected				0.999	0.950	
Satd. Flow (prot)	1865	0	0	3411	1825	1633
Flt Permitted				0.999	0.950	
Satd. Flow (perm)	1865	0	0	3411	1825	1633
Link Speed (k/h)	50			50	40	
Link Distance (m)	197.3			45.1	235.2	
Travel Time (s)	14.2			3.2	21.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	7%	0%	0%
Adj. Flow (vph)	837	0	6	484	2	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	837	0	0	490	2	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	170	10	11	311	194	59
Future Volume (vph)	170	10	11	311	194	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.969	
Flt Protected				0.998	0.963	
Satd. Flow (prot)	1564	0	0	1780	1731	0
Flt Permitted				0.998	0.963	
Satd. Flow (perm)	1564	0	0	1780	1731	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	597.7			248.1	281.2	
Travel Time (s)	43.0			17.9	20.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	22%	20%	27%	7%	1%	12%
Adj. Flow (vph)	170	10	11	311	194	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	0	322	253	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	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

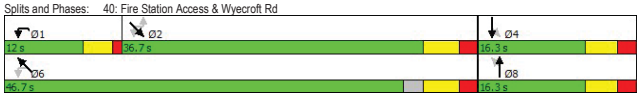
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	1	15	2	0	4	0	298	2	1	286	0
Future Volume (vph)	22	1	15	2	0	4	0	298	2	1	286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor		0.98			1.00							
Frt		0.859			0.910				0.850			
Flt Protected	0.950				0.984					0.950		
Satd. Flow (prot)	1674	1435	0	0	1720	0	0	1601	1633	1825	1671	0
Flt Permitted										0.441		
Satd. Flow (perm)	1762	1435	0	0	1745	0	0	1601	1633	847	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			112				106			
Link Speed (k/h)		50			40			50			50	
Link Distance (m)		120.3			119.2			273.4			145.9	
Travel Time (s)		8.7			10.7			19.7			10.5	
Confl. Peds. (#/hr)			2	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 (%)	9%	0%	13%	0%	0%	0%	0%	20%	0%	0%	15%	0%
Adj. Flow (vph)	22	1	15	2	0	4	0	298	2	1	286	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	16	0	0	6	0	0	298	2	1	286	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	46.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	71.8%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	41.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	17.6	17.6			17.6			27.5	27.5	24.1	28.5	
Actuated g/C Ratio	0.52	0.52			0.52			0.81	0.81	0.71	0.84	
v/c Ratio	0.02	0.02			0.01			0.23	0.00	0.00	0.20	
Control Delay	18.6	11.7			0.0			5.7	0.0	3.0	3.4	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	18.6	11.7			0.0			5.7	0.0	3.0	3.4	
LOS	B	B			A			A	A	A	A	
Approach Delay		15.7						5.6			3.4	
Approach LOS		B						A			A	
Queue Length 50th (m)	0.9	0.1			0.0			0.0	0.0	0.0	0.0	
Queue Length 95th (m)	7.4	4.4			0.0			35.8	0.0	0.4	19.3	
Internal Link Dist (m)		96.3			95.2			249.4			121.9	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	952	782			994			1273	1320	1044	1516	
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	0.02	0.02			0.01			0.23	0.00	0.00	0.19	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 33.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.23
Intersection Signal Delay: 5.1 Intersection LOS: A
Intersection Capacity Utilization 62.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	333	0	2	302	2	1	0	2	10	0	10
Future Volume (vph)	3	333	0	2	302	2	1	0	2	10	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt					0.999			0.910			0.932	
Flt Protected								0.984			0.976	
Satd. Flow (prot)	0	1687	0	0	1716	0	0	1720	0	0	1664	0
Flt Permitted								0.984			0.976	
Satd. Flow (perm)	0	1687	0	0	1716	0	0	1720	0	0	1664	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		145.9			123.5			161.1			189.9	
Travel Time (s)		10.5			8.9			14.5			17.1	
Confl. Peds. (#/hr)			1	1			1					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%	14%	0%	0%	12%	0%	0%	0%	0%	0%	0%	10%
Adj. Flow (vph)	3	333	0	2	302	2	1	0	2	10	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	336	0	0	306	0	0	3	0	0	20	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
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)	0	325	7	16	225	2	16	0	15	8	1	4
Future Volume (vph)	0	325	7	16	225	2	16	0	15	8	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.999			0.935			0.958	
Flt Protected					0.997			0.975			0.970	
Satd. Flow (prot)	0	1776	0	0	1775	0	0	1751	0	0	1785	0
Flt Permitted					0.997			0.975			0.970	
Satd. Flow (perm)	0	1776	0	0	1775	0	0	1751	0	0	1785	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		8.9			12.4			11.9			19.1	
Confl. Peds. (#/hr)			2	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%	8%	0%	6%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	325	7	16	225	2	16	0	15	8	1	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	332	0	0	243	0	0	31	0	0	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			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 35.1% 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)	5	354	7	10	279	8	21	0	48	17	0	6
Future Volume (vph)	5	354	7	10	279	8	21	0	48	17	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor												
Frt		0.997			0.996			0.906			0.965	
Flt Protected	0.950			0.950				0.985			0.964	
Satd. Flow (prot)	1304	1690	0	1825	1758	0	0	1691	0	0	1581	0
Flt Permitted	0.950			0.950				0.985			0.964	
Satd. Flow (perm)	1304	1690	0	1825	1758	0	0	1691	0	0	1581	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		172.3			135.2			130.8			152.7	
Travel Time (s)		12.4			9.7			9.4			11.0	
Confl. Peds. (#/hr)			8	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
Heavy Vehicles (%)	40%	13%	29%	0%	8%	38%	0%	0%	2%	0%	0%	50%
Adj. Flow (vph)	5	354	7	10	279	8	21	0	48	17	0	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	361	0	10	287	0	0	69	0	0	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			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 29.7%		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)	163	269	63	211	271	189	42	480	86	65	479	65
Future Volume (vph)	163	269	63	211	271	189	42	480	86	65	479	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00					0.98
Frt			0.850			0.850		0.977				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1671	1541	1772	1700	1585	1534	3432	0	1690	1865	1458
Flt Permitted	0.446			0.445			0.303			0.366		
Satd. Flow (perm)	822	1671	1504	828	1700	1561	489	3432	0	651	1865	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			189		22				120
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		135.2			64.2			211.2			311.8	
Travel Time (s)		9.7			4.6			15.8			23.4	
Confl. Peds. (#/hr)	3		2	2		3	1					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 (%)	4%	15%	6%	3%	13%	3%	19%	3%	9%	8%	3%	12%
Adj. Flow (vph)	163	269	63	211	271	189	42	480	86	65	479	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	269	63	211	271	189	42	566	0	65	479	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

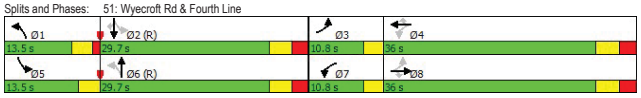
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.8	36.0	36.0	10.8	36.0	36.0	13.5	29.7		13.5	29.7	29.7
Total Split (%)	12.0%	40.0%	40.0%	12.0%	40.0%	40.0%	15.0%	33.0%		15.0%	33.0%	33.0%
Maximum Green (s)	7.8	30.1	30.1	7.8	30.1	30.1	9.5	24.1		10.5	24.1	24.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		2	2		3	3		0			1	1
Act Effct Green (s)	33.9	23.3	23.3	34.2	23.5	23.5	43.3	35.8		44.9	37.5	37.5
Actuated g/C Ratio	0.38	0.26	0.26	0.38	0.26	0.26	0.48	0.40		0.50	0.42	0.42
v/c Ratio	0.42	0.62	0.13	0.53	0.61	0.35	0.13	0.41		0.16	0.62	0.10
Control Delay	19.5	35.1	1.3	22.3	34.6	5.4	14.3	22.0		13.8	28.9	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
Total Delay	19.5	35.1	1.3	22.3	34.6	5.4	14.3	22.0		13.8	28.9	1.0
LOS	B	D	A	C	C	A	B	C		B	C	A
Approach Delay		25.7			22.5			21.5			24.3	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	17.6	40.8	0.0	23.5	41.0	0.0	3.5	36.1		5.4	69.5	0.0
Queue Length 95th (m)	26.7	59.1	1.7	34.0	59.2	13.5	9.9	58.5		13.5	#135.8	1.8
Internal Link Dist (m)		111.2			40.2			187.2			287.8	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	391	558	580	396	568	647	354	1379		456	777	664
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	0.42	0.48	0.11	0.53	0.48	0.29	0.12	0.41		0.14	0.62	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 23.4		Intersection LOS: C	

Intersection Capacity Utilization 73.6%	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.

Splits and Phases: 51: Wyecroft Rd & Fourth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	39	379	454	17	16	67
Future Volume (vph)	39	379	454	17	16	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt			0.995		0.891	
Flt Protected		0.995			0.990	
Satd. Flow (prot)	0	1741	4889	0	1563	0
Flt Permitted		0.995			0.990	
Satd. Flow (perm)	0	1741	4889	0	1563	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.2	77.4		236.2	
Travel Time (s)		4.6	5.6		17.0	
Confl. Peds. (#/hr)	3			3		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	10%	7%	0%	6%	9%
Adj. Flow (vph)	39	379	454	17	16	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	418	471	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.0%		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)	5	479	11	18	357	18	72	0	58	4	0	3
Future Volume (vph)	5	479	11	18	357	18	72	0	58	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.994			0.940			0.942	
Flt Protected		0.999			0.998			0.973			0.972	
Satd. Flow (prot)	0	1676	0	0	1711	0	0	1665	0	0	1539	0
Flt Permitted		0.999			0.998			0.973			0.972	
Satd. Flow (perm)	0	1676	0	0	1711	0	0	1665	0	0	1539	0
Link Speed (k/h)		50			50			40			48	
Link Distance (m)		746.3			110.8			199.4			201.0	
Travel Time (s)		53.7			8.0			17.9			15.1	
Confl. Peds. (#/hr)				8	8					24	17	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%	14%	27%	12%	11%	18%	6%	0%	5%	25%	0%	0%
Adj. Flow (vph)	5	479	11	18	357	18	72	0	58	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	495	0	0	393	0	0	130	0	0	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)		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	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 49.9%		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)	500	230	141	91	161	446	209	1506	51	173	1606	201
Future Volume (vph)	500	230	141	91	161	446	209	1506	51	173	1606	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	*1.00	0.95	0.95	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	*1.00	*1.00
Ped Bike Factor	1.00				0.99		1.00				1.00	
Frt		0.943			0.890			0.995			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3411	3330	0	1789	3295	0	1722	5626	0	3471	5496	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3410	3330	0	1789	3295	0	1721	5626	0	3471	5496	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			164			5			22	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	1					1	4					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%	3%	4%	2%	5%	2%	6%	2%	0%	2%	2%	10%
Adj. Flow (vph)	500	230	141	91	161	446	209	1506	51	173	1606	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	500	371	0	91	607	0	209	1557	0	173	1807	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			7.4			7.4	
Link Offset(m)		0.0			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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

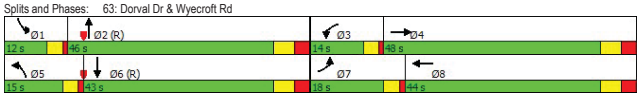
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	18.0	48.0		14.0	44.0		15.0	46.0		12.0	43.0	
Total Split (%)	15.0%	40.0%		11.7%	36.7%		12.5%	38.3%		10.0%	35.8%	
Maximum Green (s)	14.0	41.0		10.0	37.0		11.0	39.0		8.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		-2.0	0.0		-2.0	0.0		0.0	-2.0	
Total Lost Time (s)	2.0	7.0		2.0	7.0		2.0	7.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		0			1			0			4	
Act Effct Green (s)	16.0	29.3		11.3	24.7		23.3	49.1		10.2	40.1	
Actuated g/C Ratio	0.13	0.24		0.09	0.21		0.19	0.41		0.08	0.33	
v/c Ratio	1.10	0.41		0.54	0.98dr		0.63	0.68		0.58	0.98	
Control Delay	120.6	25.7		64.1	37.8		55.1	31.9		61.4	55.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	120.6	25.7		64.1	37.8		55.1	31.9		61.4	55.6	
LOS	F	C		E	D		E	C		E	E	
Approach Delay		80.2			41.2			34.7			56.1	
Approach LOS		F			D			C			E	
Queue Length 50th (m)	~66.8	26.4		20.7	50.7		44.3	97.9		20.3	~141.8	
Queue Length 95th (m)	#98.9	34.4		37.6	59.8		#103.7	130.6		#37.2	#177.9	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	454	1216		178	1129		333	2304		296	1850	
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	1.10	0.31		0.51	0.54		0.63	0.68		0.58	0.98	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 3.6 (3%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 51.0		Intersection LOS: D	

Intersection Capacity Utilization 97.4%	ICU Level of Service F
Analysis Period (min) 15	

* User Entered Value
~ 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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

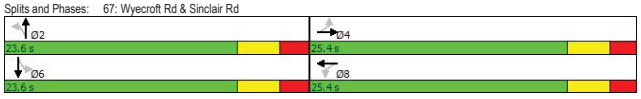


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	180	12	4	348	4	62	0	4	1	0	13
Future Volume (vph)	7	180	12	4	348	4	62	0	4	1	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.992			0.998			0.992			0.875	
Flt Protected		0.998			0.999			0.955			0.996	
Satd. Flow (prot)	0	1806	0	0	1826	0	0	1770	0	0	1380	0
Flt Permitted		0.972			0.994			0.995			0.967	
Satd. Flow (perm)	0	1759	0	0	1817	0	0	1844	0	0	1339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			1			53			53	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		96.4			190.6			115.7			194.3	
Travel Time (s)		6.9			13.7			10.4			17.5	
Confl. Peds. (#/hr)			5	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
Heavy Vehicles (%)	29%	4%	8%	0%	5%	0%	3%	0%	0%	0%	0%	23%
Adj. Flow (vph)	7	180	12	4	348	4	62	0	4	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	199	0	0	356	0	0	66	0	0	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)		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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0	
Minimum Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (%)	51.8%	51.8%		51.8%	51.8%		48.2%	48.2%		48.2%	48.2%	
Maximum Green (s)	20.0	20.0		20.0	20.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.4			5.4			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	9.0	9.0		9.0	9.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	5	5		0	0		0	0		0	0	
Act Effct Green (s)		18.5			18.5			19.6			19.6	
Actuated g/C Ratio		0.70			0.70			0.75			0.75	
v/c Ratio		0.16			0.28			0.05			0.01	
Control Delay		6.6			7.3			4.4			0.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.6			7.3			4.4			0.3	
LOS		A			A			A			A	
Approach Delay		6.6			7.3			4.4			0.3	
Approach LOS		A			A			A			A	
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		20.5			37.8			6.2			0.4	
Internal Link Dist (m)		72.4			166.6			91.7			170.3	
Turn Bay Length (m)												
Base Capacity (vph)		1361			1404			1406			1024	
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		0.15			0.25			0.05			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 26.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	234	216	840	543	70
Future Volume (vph)	20	234	216	840	543	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	5.0		5.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.876				0.985	
Flt Protected	0.996		0.950			
Satd. Flow (prot)	1625	0	1755	1921	1863	0
Flt Permitted	0.996		0.950			
Satd. Flow (perm)	1625	0	1755	1921	1863	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	146.1			210.8	216.3	
Travel Time (s)	10.5			15.2	15.6	
Confl. Peds. (#/hr)			14			14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	3%	4%	0%	1%	6%
Adj. Flow (vph)	20	234	216	840	543	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	254	0	216	840	613	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.5%		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)	435	218	73	81	218	320	73	907	308	990	922	622
Future Volume (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		50.0	40.0		0.0	40.0		60.0	105.0		60.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	*1.00	*1.00	0.97	0.95	1.00
Ped Bike Factor				1.00					0.99	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	3579	1601	1615	3579	1471	1789	3659	1570	3471	3510	1601
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	3579	1601	1612	3579	1471	1789	3659	1550	3470	3510	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			320			253			564
Link Speed (k/h)		48			50			60			60	
Link Distance (m)		265.8			128.7			281.0			274.8	
Travel Time (s)		19.9			9.3			16.9			16.5	
Confl. Peds. (#/hr)				1					1	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%	2%	13%	2%	11%	2%	5%	4%	2%	4%	2%
Adj. Flow (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

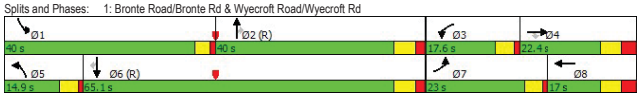
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			Free			2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0		5.0	15.0	15.0	6.0	15.0	15.0
Minimum Split (s)	9.5	12.0	12.0	9.5	17.0		9.5	21.0	21.0	10.0	21.0	21.0
Total Split (s)	23.0	22.4	22.4	17.6	17.0		14.9	40.0	40.0	40.0	65.1	65.1
Total Split (%)	19.2%	18.7%	18.7%	14.7%	14.2%		12.4%	33.3%	33.3%	33.3%	54.3%	54.3%
Maximum Green (s)	18.5	15.4	15.4	13.1	10.0		10.4	34.0	34.0	36.0	59.1	59.1
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		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	-2.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0		4.5	4.0	6.0	2.0	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	3.5		3.0	4.0	4.0	5.5	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.9	19.4	19.4	10.7	10.0	120.0	9.2	36.4	34.4	38.1	63.1	63.1
Actuated g/C Ratio	0.15	0.16	0.16	0.09	0.08	1.00	0.08	0.30	0.29	0.32	0.53	0.53
v/c Ratio	0.84	0.38	0.19	0.56	0.73	0.22	0.53	0.82	0.49	0.90	0.50	0.56
Control Delay	64.8	48.6	1.1	66.8	68.7	0.3	67.5	45.9	10.4	51.0	20.4	4.6
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	64.8	48.6	1.1	66.8	68.7	0.3	67.5	45.9	10.4	51.0	20.4	4.6
LOS	E	D	A	E	E	A	E	D	B	D	C	A
Approach Delay		53.6			33.1			38.6			28.5	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	51.7	24.9	0.0	18.5	26.8	0.0	16.7	99.2	9.6	114.5	76.0	7.0
Queue Length 95th (m)	#74.1	38.0	0.0	34.2	#43.0	0.0	31.9	122.9	34.1	#150.6	94.7	30.2
Internal Link Dist (m)		241.8			104.7			257.0			250.8	
Turn Bay Length (m)	75.0		50.0	40.0			40.0		60.0	105.0		60.0
Base Capacity (vph)	535	579	380	176	298	1471	155	1110	625	1103	1844	1108
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	0.81	0.38	0.19	0.46	0.73	0.22	0.47	0.82	0.49	0.90	0.50	0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
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: 0.90			
Intersection Signal Delay: 35.1		Intersection LOS: D	
Intersection Capacity Utilization 90.3%		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.

Splits and Phases: 1: Bronte Road/Bronte Rd & Wyecroft Road/Wyecroft Rd

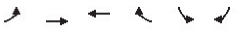


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	215	1187	538	26	9	54
Future Volume (vph)	215	1187	538	26	9	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	20.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.993		0.884	
Flt Protected	0.950				0.993	
Satd. Flow (prot)	1825	3544	3140	0	1494	0
Flt Permitted	0.950				0.993	
Satd. Flow (perm)	1825	3544	3140	0	1494	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		121.7	81.2		226.5	
Travel Time (s)		8.8	5.8		16.3	
Confl. Peds. (#/hr)	3			3		
Confl. Bikes (#/hr)						54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	16%	4%	0%	15%
Adj. Flow (vph)	215	1187	538	26	9	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	215	1187	564	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	1422	553	4	7	14
Future Volume (vph)	16	1422	553	4	7	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.910	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	3541	3174	0	1644	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	3541	3174	0	1644	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		128.7	121.7		152.2	
Travel Time (s)		9.3	8.8		13.7	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	15%	0%	0%	7%
Adj. Flow (vph)	16	1422	553	4	7	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1438	557	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	23	468	717	73	43	47
Future Volume (vph)	23	468	717	73	43	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Frt			0.986		0.929	
Flt Protected		0.998			0.977	
Satd. Flow (prot)	0	4468	3245	0	1649	0
Flt Permitted		0.998			0.977	
Satd. Flow (perm)	0	4468	3245	0	1649	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		68.2	87.4		142.1	
Travel Time (s)		4.9	6.3		10.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	18%	11%	10%	12%	0%
Adj. Flow (vph)	23	468	717	73	43	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	491	790	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		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)	64	1019	24	7	564	43	2	0	1	16	0	20
Future Volume (vph)	64	1019	24	7	564	43	2	0	1	16	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.989			0.955			0.850	
Flt Protected	0.950				0.999			0.968		0.950		
Satd. Flow (prot)	1825	3470	0	0	3212	0	0	1776	0	1825	1633	0
Flt Permitted	0.950				0.999			0.968		0.950		
Satd. Flow (perm)	1825	3470	0	0	3212	0	0	1776	0	1825	1633	0
Link Speed (k/h)		50			50			40			50	
Link Distance (m)		316.8			441.5			245.2			363.5	
Travel Time (s)		22.8			31.8			22.1			26.2	
Confl. Peds. (#/hr)	4		1	1		4			1	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%	5%	0%	0%	13%	5%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	64	1019	24	7	564	43	2	0	1	16	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1043	0	0	614	0	0	3	0	16	20	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 59.8%		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)	51	870	8	17	689	36	4	0	8	9	0	14
Future Volume (vph)	51	870	8	17	689	36	4	0	8	9	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.993			0.910			0.918	
Flt Protected		0.997			0.999			0.984			0.981	
Satd. Flow (prot)	0	3459	0	0	3375	0	0	1032	0	0	1593	0
Flt Permitted		0.997			0.999			0.984			0.981	
Satd. Flow (perm)	0	3459	0	0	3375	0	0	1032	0	0	1593	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		441.5			436.6			166.3			348.3	
Travel Time (s)		31.8			31.4			12.0			25.1	
Confl. Peds. (#/hr)	8		6	6		8	1		1	1		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 (%)	4%	5%	25%	35%	7%	0%	50%	0%	75%	22%	0%	0%
Adj. Flow (vph)	51	870	8	17	689	36	4	0	8	9	0	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	929	0	0	742	0	0	12	0	0	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)		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	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 60.2%		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)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Future Volume (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2100	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	50.0		50.0	115.0		50.0	80.0		100.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	1.00	1.00	*1.00	*1.00	0.97	*1.00	1.00
Ped Bike Factor			0.99	1.00					0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3248	1847	1570	1547	1795	1471	1772	6184	1570	3437	5650	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3248	1847	1549	1543	1795	1471	1772	6184	1550	3437	5650	1617
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			169			87						805
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		113.5			184.2			499.0			390.5	
Travel Time (s)		8.2			13.3			29.9			23.4	
Confl. Peds. (#/hr)			1	1					1	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 (%)	9%	4%	4%	18%	7%	11%	3%	3%	4%	3%	2%	1%
Adj. Flow (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Shared Lane Traffic (%)												
Lane Group Flow (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	0.86	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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	4	4	4	8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	28.0	28.0	7.0	28.0	
Minimum Split (s)	16.4	16.4	16.4	16.8	16.8	10.0	10.0	34.2	34.2	10.0	34.2	
Total Split (s)	32.3	32.3	32.3	18.7	18.7	24.0	18.0	45.0	45.0	24.0	51.0	
Total Split (%)	26.9%	26.9%	26.9%	15.6%	15.6%	20.0%	15.0%	37.5%	37.5%	20.0%	42.5%	
Maximum Green (s)	25.9	25.9	25.9	11.9	11.9	21.0	15.0	38.8	38.8	21.0	44.8	
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0	3.0	3.0	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.7	2.7	2.7	2.8	2.8	0.0	0.0	2.5	2.5	0.0	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-2.0	-3.0	-2.0	-2.0	
Total Lost Time (s)	6.4	6.4	6.4	6.8	6.8	3.0	1.0	4.2	3.2	1.0	4.2	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	4.5	4.5	4.5	3.5	3.5	2.5	5.0	5.0	5.0	2.5	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	25.9	25.9	25.9	11.9	11.9	39.3	17.0	41.2	42.2	22.6	46.8	120.0
Actuated g/C Ratio	0.22	0.22	0.22	0.10	0.10	0.33	0.14	0.34	0.35	0.19	0.39	1.00
v/c Ratio	1.01	0.61	0.36	0.32	0.96	0.17	1.18	0.85	0.14	0.87	0.94	0.98
Control Delay	83.7	50.1	8.1	56.5	112.1	7.7	158.9	41.6	27.7	62.2	45.6	21.5
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	83.7	50.1	8.1	56.5	112.1	7.7	158.9	41.6	27.7	62.2	45.6	21.5
LOS	F	D	A	E	F	A	F	D	C	E	D	C
Approach Delay		65.0			72.2			57.0			38.7	
Approach LOS		E			E			E			D	
Queue Length 50th (m)	~88.2	52.3	0.0	10.9	40.7	1.1	~83.5	132.1	12.0	66.4	155.7	0.0
Queue Length 95th (m)	#127.1	79.4	17.4	23.3	#83.8	12.6	#137.4	149.7	23.1	#93.0	#186.4	#67.6
Internal Link Dist (m)		89.5			160.2			475.0			366.5	
Turn Bay Length (m)			50.0	50.0		50.0	115.0		50.0	80.0		100.0
Base Capacity (vph)	701	398	466	153	178	544	251	2122	544	658	2203	1617
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	0.61	0.36	0.32	0.96	0.17	1.18	0.85	0.14	0.85	0.94	0.98

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
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: 1.18			
Intersection Signal Delay: 48.9		Intersection LOS: D	
Intersection Capacity Utilization 103.7%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

~ 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: 15: Third Line & Wyecroft Rd

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	723	312	59	800	32	29
Future Volume (vph)	723	312	59	800	32	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.955					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3295	0	1437	3476	1426	984
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3295	0	1437	3476	1426	984
Link Speed (k/h)	50			50	40	
Link Distance (m)	436.6			161.0	162.8	
Travel Time (s)	31.4			11.6	14.7	
Confl. Peds. (#/hr)		4	4			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	27%	5%	28%	66%
Adj. Flow (vph)	723	312	59	800	32	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1035	0	59	800	32	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.4%		ICU Level of Service A	
Analysis Period (min) 15			

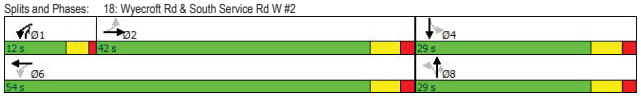
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Future Volume (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor	1.00	0.99		1.00	1.00			1.00	0.99		1.00	
Frt		0.974			0.980				0.850		0.969	
Flt Protected	0.950			0.950				0.954			0.968	
Satd. Flow (prot)	1825	3114	0	1825	3275	0	0	1833	1633	0	1704	0
Flt Permitted	0.316			0.314				0.705			0.730	
Satd. Flow (perm)	606	3114	0	601	3275	0	0	1349	1612	0	1284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			36				105		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.0			197.2			238.6			282.2	
Travel Time (s)		11.6			14.2			17.2			20.3	
Confl. Peds. (#/hr)	2		6	6		2	4		1	1		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 (%)	0%	16%	2%	0%	9%	8%	0%	0%	0%	8%	0%	0%
Adj. Flow (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	711	0	361	901	0	0	119	105	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)		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		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	6	6			2		1	1		4	4	
Act Effct Green (s)	36.0	36.0		50.0	49.6			13.4	20.2		13.4	
Actuated g/C Ratio	0.52	0.52		0.72	0.71			0.19	0.29		0.19	
v/c Ratio	0.01	0.44		0.63	0.38			0.46	0.19		0.15	
Control Delay	12.0	12.7		12.2	6.5			32.2	4.2		21.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	12.0	12.7		12.2	6.5			32.2	4.2		21.3	
LOS	B	B		B	A			C	A		C	
Approach Delay		12.7			8.1			19.1			21.3	
Approach LOS		B			A			B			C	
Queue Length 50th (m)	0.2	28.7		15.1	23.4			14.6	0.0		3.4	
Queue Length 95th (m)	1.8	53.7		#43.9	49.8			29.0	8.1		10.6	
Internal Link Dist (m)		137.0			173.2			214.6			258.2	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	321	1670		577	2327			457	551		441	
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	0.01	0.43		0.63	0.39			0.26	0.19		0.09	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 69.4			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 83.5%		ICU Level of Service E	

Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	3	112	1323	1	25
Future Volume (vph)	650	3	112	1323	1	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999					0.850
Flt Protected				0.996	0.950	
Satd. Flow (prot)	3173	0	0	3475	1825	1633
Flt Permitted				0.996	0.950	
Satd. Flow (perm)	3173	0	0	3475	1825	1633
Link Speed (k/h)	50			50	40	
Link Distance (m)	197.2			45.1	235.3	
Travel Time (s)	14.2			3.2	21.2	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	15%	0%	0%	5%	0%	0%
Adj. Flow (vph)	650	3	112	1323	1	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	653	0	0	1435	1	25
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	150	37	203	21	7
Future Volume (vph)	392	150	37	203	21	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.963				0.966	
Flt Protected			0.950		0.964	
Satd. Flow (prot)	1709	0	1690	1334	1318	0
Flt Permitted			0.950		0.964	
Satd. Flow (perm)	1709	0	1690	1334	1318	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	597.6			460.9	281.1	
Travel Time (s)	43.0			33.2	20.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	1%	8%	44%	43%	14%
Adj. Flow (vph)	392	150	37	203	21	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	542	0	37	203	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

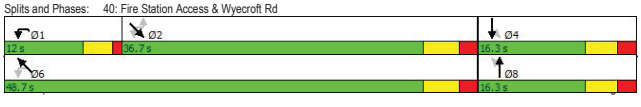
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Future Volume (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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		0.850							0.850		0.999	
Flt Protected	0.950				0.950					0.950		
Satd. Flow (prot)	1615	1266	0	0	1825	0	0	1630	1166	1393	1435	0
Flt Permitted								0.997		0.435		
Satd. Flow (perm)	1700	1266	0	0	1921	0	0	1626	1166	638	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		502							106		1	
Link Speed (k/h)		50			40			50			50	
Link Distance (m)		120.2			119.2			273.4			146.0	
Travel Time (s)		8.7			10.7			19.7			10.5	
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
Heavy Vehicles (%)	13%	0%	29%	0%	0%	0%	0%	18%	40%	31%	34%	0%
Adj. Flow (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	14	0	0	1	0	0	423	10	16	298	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	pm+pt	NA	
Protected Phases		8			4			2		1	6	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	14.3	14.3			14.3			32.1	32.1	29.0	33.4	
Actuated g/C Ratio	0.40	0.40			0.40			0.90	0.90	0.81	0.93	
v/c Ratio	0.01	0.02			0.00			0.29	0.01	0.02	0.02	
Control Delay	16.4	0.1			17.0			4.5	0.0	1.8	2.1	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	16.4	0.1			17.0			4.5	0.0	1.8	2.1	
LOS	B	A			B			A	A	A	A	
Approach Delay		6.0			17.0			4.4			2.1	
Approach LOS		A			B			A			A	
Queue Length 50th (m)	0.3	0.0			0.1			0.0	0.0	0.1	0.0	
Queue Length 95th (m)	3.9	0.0			1.3			54.0	0.0	1.7	21.6	
Internal Link Dist (m)		96.2			95.2			249.4			122.0	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	714	823			807			1334	976	771	1347	
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	0.01	0.02			0.00			0.32	0.01	0.02	0.22	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 35.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 3.5		Intersection LOS: A	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lanes, Volumes, Timings
43: Wyecroft Rd & Cranberry Ct

AM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Future Volume (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.999			0.992						0.932	
Flt Protected		0.998						0.950			0.976	
Satd. Flow (prot)	0	1643	0	0	1484	0	0	1825	0	0	1398	0
Flt Permitted		0.998						0.950			0.976	
Satd. Flow (perm)	0	1643	0	0	1484	0	0	1825	0	0	1398	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			123.5			161.1			189.8	
Travel Time (s)		10.5			8.9			14.5			17.1	
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 (%)	8%	17%	0%	100%	30%	0%	0%	0%	0%	25%	0%	25%
Adj. Flow (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	390	0	0	323	0	0	1	0	0	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			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 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lanes, Volumes, Timings
46: Redwood Square & Wyecroft Rd

AM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	376	23	11	324	6	7	0	2	0	0	0
Future Volume (vph)	2	376	23	11	324	6	7	0	2	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.992			0.998			0.970				
Flt Protected					0.998			0.963				
Satd. Flow (prot)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Flt Permitted					0.998			0.963				
Satd. Flow (perm)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		8.9			12.4			11.9			19.1	
Confl. Peds. (#/hr)				2	2			1		2	2	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%	17%	0%	27%	14%	0%	14%	0%	100%	0%	0%	0%
Adj. Flow (vph)	2	376	23	11	324	6	7	0	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	0	0	341	0	0	9	0	0	0	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lanes, Volumes, Timings
48: Redwood Square/Equestrian Ct & Wyecroft Rd

AM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	316	19	55	349	16	3	0	19	1	0	4
Future Volume (vph)	11	316	19	55	349	16	3	0	19	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor												
Frt		0.991			0.993			0.883			0.892	
Flt Protected	0.950			0.950				0.993			0.990	
Satd. Flow (prot)	1674	1614	0	1615	1598	0	0	1169	0	0	1212	0
Flt Permitted	0.950			0.950				0.993			0.990	
Satd. Flow (perm)	1674	1614	0	1615	1598	0	0	1169	0	0	1212	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		172.3			135.1			130.8			152.7	
Travel Time (s)		12.4			9.7			9.4			11.0	
Confl. Peds. (#/hr)			6	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 (%)	9%	19%	0%	13%	20%	6%	0%	0%	51%	0%	0%	50%
Adj. Flow (vph)	11	316	19	55	349	16	3	0	19	1	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	335	0	55	365	0	0	22	0	0	5	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lanes, Volumes, Timings
51: Wyecroft Rd & Fourth Line

AM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	276	53	73	265	29	53	237	161	237	402	101
Future Volume (vph)	50	276	53	73	265	29	53	237	161	237	402	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		1.00		0.98
Frt			0.850			0.850		0.939				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	1525	1183	1587	1588	1286	1659	3289	0	1738	1830	1555
Flt Permitted	0.495			0.410			0.462			0.447		
Satd. Flow (perm)	699	1525	1158	684	1588	1269	806	3289	0	816	1830	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			153		161				120
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		135.1			64.2			211.2			311.7	
Travel Time (s)		9.7			4.6			15.8			23.4	
Confl. Peds. (#/hr)	1		1	1		1	1		2	2		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 (%)	36%	26%	38%	15%	21%	27%	10%	2%	5%	5%	5%	5%
Adj. Flow (vph)	50	276	53	73	265	29	53	237	161	237	402	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	276	53	73	265	29	53	398	0	237	402	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	33.0		15.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	36.7%		16.7%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	27.4		12.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		1	1		1	1		2			1	1
Act Effct Green (s)	31.3	22.8	22.8	31.9	24.8	24.8	42.8	34.2		50.3	41.1	41.1
Actuated g/C Ratio	0.35	0.25	0.25	0.35	0.28	0.28	0.48	0.38		0.56	0.46	0.46
v/c Ratio	0.17	0.72	0.13	0.23	0.61	0.06	0.12	0.29		0.42	0.48	0.13
Control Delay	17.2	41.2	0.7	18.0	34.6	0.3	12.8	13.7		14.2	23.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.2	41.2	0.7	18.0	34.6	0.3	12.8	13.7		14.2	23.0	3.3
LOS	B	D	A	B	C	A	B	B		B	C	A
Approach Delay		32.4			28.6			13.6			17.5	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	5.1	42.3	0.0	7.5	39.9	0.0	4.5	15.5		21.7	55.6	0.0
Queue Length 95th (m)	11.6	67.3	0.0	15.3	63.5	0.0	10.6	27.6		37.1	87.4	7.6
Internal Link Dist (m)		111.1			40.2			187.2			287.7	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	292	442	444	312	477	488	449	1350		578	835	760
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	0.17	0.62	0.12	0.23	0.56	0.06	0.12	0.29		0.41	0.48	0.13

Intersection Summary
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 21.6 Intersection LOS: C

Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 51: Wyecroft Rd & Fourth Line

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	99	614	310	20	4	63
Future Volume (vph)	99	614	310	20	4	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Frt			0.991		0.873	
Flt Protected		0.993			0.997	
Satd. Flow (prot)	0	1718	4308	0	1446	0
Flt Permitted		0.993			0.997	
Satd. Flow (perm)	0	1718	4308	0	1446	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.2	77.5		236.2	
Travel Time (s)		4.6	5.6		17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	12%	21%	15%	25%	15%
Adj. Flow (vph)	99	614	310	20	4	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	713	330	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 58.3% 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)	5	475	22	32	433	10	5	0	23	9	0	2
Future Volume (vph)	5	475	22	32	433	10	5	0	23	9	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.994			0.997			0.889			0.975	
Flt Protected					0.997			0.991			0.961	
Satd. Flow (prot)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Flt Permitted					0.997			0.991			0.961	
Satd. Flow (perm)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Link Speed (k/h)		50			50			40			48	
Link Distance (m)		746.2			110.9			199.4			294.8	
Travel Time (s)		53.7			8.0			17.9			22.1	
Confl. Peds. (#/hr)			20	20			1		17	17		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 (%)	20%	17%	5%	28%	16%	0%	40%	0%	39%	0%	0%	0%
Adj. Flow (vph)	5	475	22	32	433	10	5	0	23	9	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	502	0	0	475	0	0	28	0	0	11	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	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 58.4% ICU Level of Service B
Analysis Period (min) 15

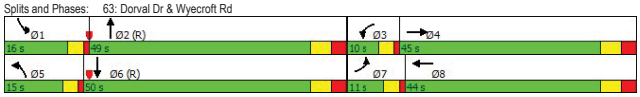
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Future Volume (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Frt		0.930			0.915			0.993			0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2832	3034	0	1644	3152	0	1722	4795	0	3437	4686	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2820	3034	0	1636	3152	0	1721	4795	0	3435	4686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			209			6			91	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	2		8	8		2	6		3	3		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 (%)	25%	9%	13%	11%	4%	6%	6%	5%	3%	3%	5%	11%
Parking (#/hr)								0				
Adj. Flow (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Shared Lane Traffic (%)												
Lane Group Flow (vph)	204	328	0	30	407	0	154	1503	0	261	1813	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			7.4			7.4	
Link Offset(m)		0.0			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	1.03	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		3.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	11.0	45.0		10.0	44.0		15.0	49.0		16.0	50.0	
Total Split (%)	9.2%	37.5%		8.3%	36.7%		12.5%	40.8%		13.3%	41.7%	
Maximum Green (s)	7.0	38.0		6.0	37.0		11.0	42.0		12.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	2.0	7.0		4.0	7.0		4.0	7.0		4.0	7.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		30.0						29.0			29.0	
Pedestrian Calls (#/hr)		8						3			6	
Act Effct Green (s)	9.0	22.3		5.9	17.3		16.6	60.2		13.5	57.2	
Actuated g/C Ratio	0.08	0.19		0.05	0.14		0.14	0.50		0.11	0.48	
v/c Ratio	0.96	0.48		0.37	0.64		0.65	0.62		0.68	0.80	
Control Delay	108.3	24.7		68.5	26.7		62.8	24.9		60.3	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	108.3	24.7		68.5	26.7		62.8	24.9		60.3	29.5	
LOS	F	C		E	C		E	C		E	C	
Approach Delay		56.8			29.6			28.4			33.4	
Approach LOS		E			C			C			C	
Queue Length 50th (m)	25.1	20.6		7.0	23.7		34.1	86.0		30.5	118.7	
Queue Length 95th (m)	#48.9	27.8		16.9	31.7		#74.9	141.7		45.0	#194.2	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)				50.0			65.0			65.0		
Base Capacity (vph)	212	1064		82	1116		237	2410		393	2279	
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	0.96	0.31		0.37	0.36		0.65	0.62		0.66	0.80	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
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: 0.96	

Intersection Signal Delay: 33.9	Intersection LOS: C
Intersection Capacity Utilization 81.9%	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.	

Splits and Phases: 63: Dorval Dr & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	296	100	47	349	4	12	0	6	0	0	2
Future Volume (vph)	6	296	100	47	349	4	12	0	6	0	0	2
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	0		0	0		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor		0.99			1.00							
Frt		0.966			0.999			0.955			0.865	
Flt Protected		0.999			0.994			0.968				
Satd. Flow (prot)	0	1761	0	0	1813	0	0	1452	0	0	1108	0
Flt Permitted		0.991			0.911							
Satd. Flow (perm)	0	1747	0	0	1661	0	0	1500	0	0	1108	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			1			58			318	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		96.5			190.6			115.7			194.4	
Travel Time (s)		6.9			13.7			10.4			17.5	
Confl. Peds. (#/hr)			2	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%	5%	4%	0%	6%	0%	0%	0%	67%	0%	0%	50%
Adj. Flow (vph)	6	296	100	47	349	4	12	0	6	0	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	402	0	0	400	0	0	18	0	0	2	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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

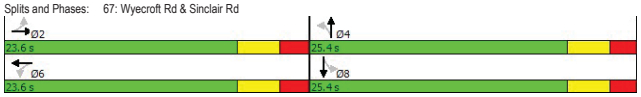
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	17.0	17.0		17.0	17.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1		2.1	2.1	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.6			5.6			5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.5	3.5		3.5	3.5	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		9.0	9.0		9.0	9.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	2	2		0	0		0	0		0	0	
Act Effct Green (s)		20.9			20.9			12.1			12.1	
Actuated g/C Ratio		0.89			0.89			0.52			0.52	
v/c Ratio		0.26			0.27			0.02			0.00	
Control Delay		3.0			3.4			1.1			0.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.0			3.4			1.1			0.0	
LOS		A			A			A			A	
Approach Delay		3.0			3.4			1.1				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		29.7			33.1			0.9			0.0	
Internal Link Dist (m)		72.5			166.6			91.7			170.4	
Turn Bay Length (m)												
Base Capacity (vph)		1354			1279			1260			976	
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		0.30			0.31			0.01			0.00	

Intersection Summary

Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 23.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	

Analysis Period (min) 15

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	132	201	254	581	205
Future Volume (vph)	11	132	201	254	581	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	20.0		20.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.965	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1825	1555	1807	1865	1795	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1825	1555	1807	1865	1795	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	146.2			210.7	216.3	
Travel Time (s)	10.5			15.2	15.6	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	1%	3%	3%	4%
Adj. Flow (vph)	11	132	201	254	581	205
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	132	201	254	786	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.6%		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)	622	311	104	299	311	904	104	944	120	413	867	435
Future Volume (vph)	622	311	104	299	311	904	104	944	120	413	867	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		50.0	40.0		0.0	40.0		60.0	105.0		60.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	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	3579	1601	1789	3579	1601	1789	3579	1601	3471	3579	1601
Flt Permitted	0.950			0.563			0.950			0.950		
Satd. Flow (perm)	3471	3579	1601	1060	3579	1601	1789	3579	1601	3471	3579	1601
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			147						156			396
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		221.1			131.0			223.9			255.1	
Travel Time (s)		16.6			9.8			13.4			15.3	
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)	622	311	104	299	311	904	104	944	120	413	867	435
Shared Lane Traffic (%)												
Lane Group Flow (vph)	622	311	104	299	311	904	104	944	120	413	867	435
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	0	0	0	0	0	0	0	0	0	0	0
Detector Template	Left											
Leading Detector (m)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Type	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
Turn Type	Prot	NA	Perm	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		Free			2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	12.0	12.0	9.5	12.0		9.5	11.0	11.0	9.5	11.0	11.0
Total Split (s)	32.0	24.1	24.1	27.9	20.0		19.1	46.5	46.5	24.0	51.4	51.4

Lanes, Volumes, Timings
1: Bronte Rd & Wyecroft Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	26.1%	19.7%	19.7%	22.8%	16.3%		15.6%	38.0%	38.0%	19.6%	42.0%	42.0%
Maximum Green (s)	27.5	17.1	17.1	23.4	13.0		14.6	40.5	40.5	19.5	45.4	45.4
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		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	7.0	7.0	4.5	7.0		4.5	6.0	6.0	4.5	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-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	25.6	18.9	18.9	35.7	13.3	122.5	11.9	43.4	43.4	18.2	49.8	49.8
Actuated g/C Ratio	0.21	0.15	0.15	0.29	0.11	1.00	0.10	0.35	0.35	0.15	0.41	0.41
v/c Ratio	0.86	0.56	0.28	0.70	0.80	0.56	0.60	0.74	0.18	0.80	0.60	0.49
Control Delay	59.3	52.8	4.4	38.6	69.8	1.4	67.0	39.8	2.5	62.7	31.5	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	59.3	52.8	4.4	38.6	69.8	1.4	67.0	39.8	2.5	62.7	31.5	6.0
LOS	E	D	A	D	E	A	E	D	A	E	C	A
Approach Delay		51.8			22.8			38.4			32.5	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	73.8	36.5	0.0	52.3	38.9	0.0	24.2	108.3	0.0	49.5	87.6	5.8
Queue Length 95th (m)	94.2	52.6	6.2	77.0	#60.8	0.0	42.0	133.4	6.6	66.7	112.3	29.9
Internal Link Dist (m)		197.1			107.0			199.9			231.1	
Turn Bay Length (m)	75.0		50.0	40.0			40.0		60.0	105.0		60.0
Base Capacity (vph)	779	551	370	477	391	1601	213	1269	668	552	1453	885
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	0.80	0.56	0.28	0.63	0.80	0.56	0.49	0.74	0.18	0.75	0.60	0.49

Intersection Summary

Area Type: Other
Cycle Length: 122.5
Actuated Cycle Length: 122.5
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: 0.86
Intersection Signal Delay: 34.8 Intersection LOS: C
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Bronte Rd & Wyecroft Rd

Lanes, Volumes, Timings
2: Wyecroft Rd & South Service Rd W #1

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	692	1266	28	9	234
Future Volume (vph)	52	692	1266	28	9	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	20.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997		0.870	
Flt Protected	0.950				0.998	
Satd. Flow (prot)	1789	3380	3502	0	1652	0
Flt Permitted	0.950				0.998	
Satd. Flow (perm)	1789	3380	3502	0	1652	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		121.8	81.2		226.6	
Travel Time (s)		9.1	6.1		16.3	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	8%	4%	0%	0%	1%
Adj. Flow (vph)	52	692	1266	28	9	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	692	1294	0	243	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 64.2% ICU Level of Service C
Analysis Period (min) 15

Lanes, Volumes, Timings
3: Wyecroft Rd & Conference Centre Access

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	29	656	1529	10	1	48
Future Volume (vph)	29	656	1529	10	1	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.868	
Flt Protected		0.998			0.999	
Satd. Flow (prot)	0	3414	3541	0	1603	0
Flt Permitted		0.998			0.999	
Satd. Flow (perm)	0	3414	3541	0	1603	0
Link Speed (k/h)		48	48		40	
Link Distance (m)		131.0	121.8		152.3	
Travel Time (s)		9.8	9.1		13.7	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	7%	3%	0%	0%	4%
Adj. Flow (vph)	29	656	1529	10	1	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	685	1539	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	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

Lanes, Volumes, Timings
7: Wyecroft Rd & South Service Rd #4

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	765	411	60	71	74
Future Volume (vph)	32	765	411	60	71	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.981		0.931	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	4776	3316	0	1662	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	4776	3316	0	1662	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		68.2	87.4		142.0	
Travel Time (s)		5.1	6.6		10.2	
Confl. Peds. (#/hr)	1			1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	8%	8%	4%	6%
Adj. Flow (vph)	32	765	411	60	71	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	797	471	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 47.2% ICU Level of Service A
Analysis Period (min) 15

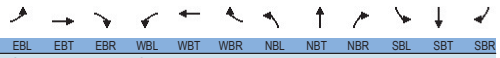
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Future Volume (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.995			0.926			0.850	
Flt Protected	0.950							0.978		0.950		
Satd. Flow (prot)	1738	3474	0	0	3494	0	0	1740	0	1789	1585	0
Flt Permitted	0.950							0.978		0.950		
Satd. Flow (perm)	1738	3474	0	0	3494	0	0	1740	0	1789	1585	0
Link Speed (k/h)		48			48			40			50	
Link Distance (m)		316.8			441.5			245.3			363.5	
Travel Time (s)		23.8			33.1			22.1			26.2	
Confl. Peds. (#/hr)	5		1	1		5	1					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 (%)	5%	5%	0%	33%	4%	0%	0%	0%	0%	2%	0%	3%
Adj. Flow (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	681	0	0	1154	0	0	11	0	51	96	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 47.1%		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)	6	796	4	10	1096	23	15	0	22	26	0	45
Future Volume (vph)	6	796	4	10	1096	23	15	0	22	26	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.997			0.920			0.914	
Flt Protected								0.980			0.982	
Satd. Flow (prot)	0	3467	0	0	3477	0	0	1365	0	0	1724	0
Flt Permitted								0.980			0.982	
Satd. Flow (perm)	0	3467	0	0	3477	0	0	1365	0	0	1724	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		441.5			436.6			166.3			348.2	
Travel Time (s)		33.1			32.7			12.0			25.1	
Confl. Peds. (#/hr)	5		6	6		5	3					3
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%	5%	50%	80%	4%	4%	40%	0%	18%	0%	0%	0%
Adj. Flow (vph)	6	796	4	10	1096	23	15	0	22	26	0	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	806	0	0	1129	0	0	37	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	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 50.9%		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)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Future Volume (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	50.0		50.0	115.0		50.0	90.0		100.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	0.91	1.00
Ped Bike Factor	1.00		0.99	1.00		0.99			0.98	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	1812	1570	1755	1847	1585	1706	5650	1512	3079	5142	1498
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3468	1812	1547	1752	1847	1565	1706	5650	1484	3075	5142	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223			115			120			343
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		117.2			184.2			498.9			390.6	
Travel Time (s)		8.8			13.8			29.9			23.4	
Confl. Peds. (#/hr)	1		2	2		1			5	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
Heavy Vehicles (%)	2%	6%	4%	4%	4%	3%	7%	2%	8%	15%	2%	9%
Adj. Flow (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	



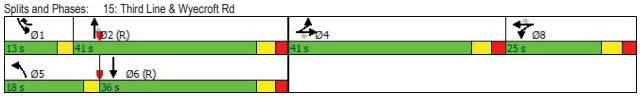
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	4	4	4	8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	28.0	28.0	7.0	28.0	
Minimum Split (s)	31.4	31.4	31.4	16.8	16.8	10.0	10.0	34.2	34.2	10.0	34.2	
Total Split (s)	41.0	41.0	41.0	25.0	25.0	13.0	18.0	41.0	41.0	13.0	36.0	
Total Split (%)	34.2%	34.2%	34.2%	20.8%	20.8%	10.8%	15.0%	34.2%	34.2%	10.8%	30.0%	
Maximum Green (s)	34.6	34.6	34.6	18.2	18.2	10.0	15.0	34.8	34.8	10.0	29.8	
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0	3.0	3.0	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.7	2.7	2.7	2.8	2.8	0.0	0.0	2.5	2.5	0.0	2.5	
Lost Time Adjust (s)	-2.0	-2.0	0.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	4.4	4.4	6.4	6.8	4.8	1.0	3.0	4.2	6.2	3.0	4.2	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	4.5	4.5	4.5	3.5	3.5	2.5	5.0	5.0	5.0	2.5	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	18.0					21.0	21.0		21.0	
Pedestrian Calls (#/hr)	2	2	2					5	5		0	
Act Effct Green (s)	36.6	36.6	34.6	18.2	20.2	35.1	15.0	37.7	35.7	9.1	31.8	120.0
Actuated g/C Ratio	0.30	0.30	0.29	0.15	0.17	0.29	0.12	0.31	0.30	0.08	0.26	1.00
v/c Ratio	1.04	0.57	0.37	0.33	1.10	0.87	1.07	0.87	0.05	0.52	1.02	0.27
Control Delay	80.2	40.0	6.0	49.4	128.0	47.4	131.3	45.4	0.2	61.5	72.4	0.4
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	80.2	40.0	6.0	49.4	128.0	47.4	131.3	45.4	0.2	61.5	72.4	0.4
LOS	F	D	A	D	F	D	F	D	A	E	E	A
Approach Delay		62.4			78.2			55.6			56.4	
Approach LOS		E			E			E			E	
Queue Length 50th (m)	~144.8	62.3	0.0	18.8	~91.4	80.0	~59.5	115.6	0.0	14.2	~123.2	0.0
Queue Length 95th (m)	#185.0	91.6	17.7	34.6	#148.2	#138.5	#108.5	133.0	0.0	23.9	#155.5	0.0
Internal Link Dist (m)		93.2			160.2			474.9			366.6	
Turn Bay Length (m)			50.0	50.0		50.0	115.0		50.0	90.0		100.0
Base Capacity (vph)	1058	552	604	266	310	552	213	1776	526	256	1362	1498
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	0.57	0.37	0.33	1.10	0.85	1.07	0.87	0.05	0.47	1.02	0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14.4 (12%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 60.9		Intersection LOS: E	

Intersection Capacity Utilization 103.4%	ICU Level of Service G
Analysis Period (min) 15	

* User Entered Value
~ 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: 15: Third Line & Wyecroft Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	850	32	38	1014	143	102
Future Volume (vph)	850	32	38	1014	143	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.995					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3499	0	1242	3510	1690	1396
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3499	0	1242	3510	1690	1396
Link Speed (k/h)	48			48	40	
Link Distance (m)	436.6			161.0	162.7	
Travel Time (s)	32.7			12.1	14.6	
Confl. Peds. (#/hr)		9	9			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	25%	47%	4%	8%	17%
Adj. Flow (vph)	850	32	38	1014	143	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	882	0	38	1014	143	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			7.4	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

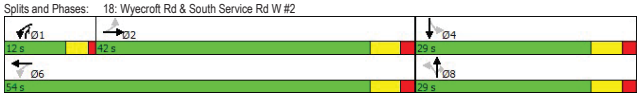
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Future Volume (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt		0.981			0.988				0.850		0.983	
Flt Protected	0.950			0.950				0.953			0.960	
Satd. Flow (prot)	1644	3251	0	1825	3252	0	0	1831	1633	0	1630	0
Flt Permitted	0.334			0.154				0.666			0.441	
Satd. Flow (perm)	577	3251	0	296	3252	0	0	1277	1633	0	749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			19				64		9	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		161.0			197.3			238.5			282.3	
Travel Time (s)		12.1			14.8			17.2			20.3	
Confl. Peds. (#/hr)	2		4	4		2	2					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 (%)	11%	10%	8%	0%	11%	7%	0%	0%	0%	11%	0%	14%
Adj. Flow (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1042	0	107	845	0	0	285	266	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	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	4	4			2		0	0		2	2	
Act Effct Green (s)	35.7	35.7		49.0	47.0			20.9	34.3		20.9	
Actuated g/C Ratio	0.45	0.45		0.61	0.59			0.26	0.43		0.26	
v/c Ratio	0.03	0.71		0.33	0.44			0.85	0.36		0.73	
Control Delay	14.0	21.4		9.8	10.1			53.2	13.0		47.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	14.0	21.4		9.8	10.1			53.2	13.0		47.8	
LOS	B	C		A	B			D	B		D	
Approach Delay		21.3			10.1			33.8			47.8	
Approach LOS		C			B			C			D	
Queue Length 50th (m)	0.7	66.3		6.5	35.8			41.1	19.5		19.1	
Queue Length 95th (m)	3.2	90.8		12.6	48.5			#81.5	36.4		#46.9	
Internal Link Dist (m)		137.0			173.3			214.5			258.3	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	260	1479		334	1963			368	749		222	
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	0.03	0.70		0.32	0.43			0.77	0.36		0.66	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 80			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 90.7%		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.

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1261	0	6	867	2	73
Future Volume (vph)	1261	0	6	867	2	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3544	0	0	3413	1825	1633
Flt Permitted					0.950	
Satd. Flow (perm)	3544	0	0	3413	1825	1633
Link Speed (k/h)	48			48	40	
Link Distance (m)	197.3			45.1	235.2	
Travel Time (s)	14.8			3.4	21.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	7%	0%	0%
Adj. Flow (vph)	1261	0	6	867	2	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1261	0	0	873	2	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	293	10	11	449	194	59
Future Volume (vph)	293	10	11	449	194	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996				0.969	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	1569	0	1437	1795	1731	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	1569	0	1437	1795	1731	0
Link Speed (k/h)	48			48	50	
Link Distance (m)	597.7			248.1	281.2	
Travel Time (s)	44.8			18.6	20.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	22%	20%	27%	7%	1%	12%
Adj. Flow (vph)	293	10	11	449	194	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	11	449	253	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			

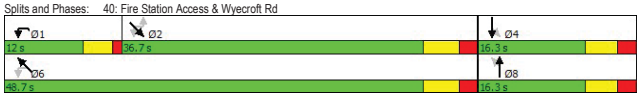
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Future Volume (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor		0.98			1.00							
Frt		0.859			0.910				0.850			
Flt Protected	0.950				0.984					0.950		
Satd. Flow (prot)	1674	1435	0	0	1720	0	0	1601	1633	1825	1671	0
Flt Permitted					0.952					0.424		
Satd. Flow (perm)	1762	1435	0	0	1661	0	0	1601	1633	815	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			112				106			
Link Speed (k/h)		50			40			48			48	
Link Distance (m)		120.3			119.2			273.4			145.9	
Travel Time (s)		8.7			10.7			20.5			10.9	
Confl. Peds. (#/hr)			2	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 (%)	9%	0%	13%	0%	0%	0%	0%	20%	0%	0%	15%	0%
Adj. Flow (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	16	0	0	6	0	0	435	2	1	421	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	14.9	14.9			14.9			31.7	31.7	29.5	33.1	
Actuated g/C Ratio	0.38	0.38			0.38			0.81	0.81	0.76	0.85	
v/c Ratio	0.03	0.03			0.01			0.33	0.00	0.00	0.30	
Control Delay	18.7	11.8			0.0			6.4	0.0	3.0	3.8	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	18.7	11.8			0.0			6.4	0.0	3.0	3.8	
LOS	B	B			A			A	A	A	A	
Approach Delay		15.8						6.4			3.8	
Approach LOS		B						A			A	
Queue Length 50th (m)	0.9	0.1			0.0			0.0	0.0	0.0	0.0	
Queue Length 95th (m)	7.4	4.4			0.0			56.5	0.0	0.4	30.5	
Internal Link Dist (m)		96.3			95.2			249.4			121.9	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	708	585			734			1231	1279	943	1516	
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	0.03	0.03			0.01			0.35	0.00	0.00	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 38.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 5.5 Intersection LOS: A
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Future Volume (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt					0.999			0.910			0.932	
Flt Protected								0.984			0.976	
Satd. Flow (prot)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Flt Permitted								0.984			0.976	
Satd. Flow (perm)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		145.9			123.5			161.1			189.9	
Travel Time (s)		10.9			9.3			14.5			17.1	
Confl. Peds. (#/hr)			1	1			1					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%	14%	0%	0%	12%	0%	0%	0%	0%	0%	0%	10%
Adj. Flow (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	0	0	443	0	0	3	0	0	20	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
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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Future Volume (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.999			0.935			0.958	
Flt Protected					0.998			0.975			0.970	
Satd. Flow (prot)	0	1777	0	0	1776	0	0	1751	0	0	1785	0
Flt Permitted					0.998			0.975			0.970	
Satd. Flow (perm)	0	1777	0	0	1776	0	0	1751	0	0	1785	0
Link Speed (k/h)		48			48			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		9.3			12.9			11.9			19.1	
Confl. Peds. (#/hr)			2	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%	8%	0%	6%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	0	0	372	0	0	31	0	0	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			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 41.8% 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)	5	497	7	10	413	8	21	0	48	17	0	6
Future Volume (vph)	5	497	7	10	413	8	21	0	48	17	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor												
Frt		0.998			0.997			0.906			0.965	
Flt Protected	0.950			0.950				0.985			0.964	
Satd. Flow (prot)	1304	1693	0	1825	1764	0	0	1691	0	0	1581	0
Flt Permitted	0.950			0.950				0.985			0.964	
Satd. Flow (perm)	1304	1693	0	1825	1764	0	0	1691	0	0	1581	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		172.3			135.2			130.8			152.7	
Travel Time (s)		12.9			10.1			9.4			11.0	
Confl. Peds. (#/hr)			8	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
Heavy Vehicles (%)	40%	13%	29%	0%	8%	38%	0%	0%	2%	0%	0%	50%
Adj. Flow (vph)	5	497	7	10	413	8	21	0	48	17	0	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	504	0	10	421	0	0	69	0	0	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			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 37.3%	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)	181	402	70	234	405	210	47	532	95	72	531	72
Future Volume (vph)	181	402	70	234	405	210	47	532	95	72	531	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00					0.98
Frt			0.850			0.850		0.977				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1671	1541	1772	1700	1585	1534	3432	0	1690	1865	1458
Flt Permitted	0.259			0.263			0.236			0.328		
Satd. Flow (perm)	478	1671	1504	490	1700	1561	381	3432	0	583	1865	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			210		25				108
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		135.2			64.2			211.2			311.8	
Travel Time (s)		10.1			4.8			15.8			23.4	
Confl. Peds. (#/hr)	3		2	2		3	1					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 (%)	4%	15%	6%	3%	13%	3%	19%	3%	9%	8%	3%	12%
Adj. Flow (vph)	181	402	70	234	405	210	47	532	95	72	531	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	402	70	234	405	210	47	627	0	72	531	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

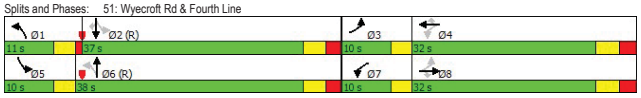
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	38.0		10.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	42.2%		11.1%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	32.4		7.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		2	2		3	3		0			1	1
Act Effct Green (s)	35.3	25.4	25.4	35.3	25.4	25.4	42.3	35.1		43.3	36.5	36.5
Actuated g/C Ratio	0.39	0.28	0.28	0.39	0.28	0.28	0.47	0.39		0.48	0.41	0.41
v/c Ratio	0.63	0.86	0.14	0.80	0.85	0.36	0.17	0.46		0.20	0.70	0.11
Control Delay	28.0	49.4	2.8	41.5	48.1	5.5	13.8	21.8		13.2	30.4	2.2
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	28.0	49.4	2.8	41.5	48.1	5.5	13.8	21.8		13.2	30.4	2.2
LOS	C	D	A	D	D	A	B	C		B	C	A
Approach Delay		38.5			35.8			21.2			25.6	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	19.2	64.7	0.0	25.6	65.0	0.0	4.1	42.0		6.2	82.5	0.0
Queue Length 95th (m)	32.9	#111.8	4.7	#54.3	#111.4	15.2	9.6	57.6		13.0	#133.9	4.1
Internal Link Dist (m)		111.2			40.2			187.2			287.8	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	286	484	510	291	493	601	269	1355		366	757	642
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	0.63	0.83	0.14	0.80	0.82	0.35	0.17	0.46		0.20	0.70	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 30.5	Intersection LOS: C

Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 51: Wyecroft Rd & Fourth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	472	556	17	16	119
Future Volume (vph)	91	472	556	17	16	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.881	
Flt Protected		0.992			0.994	
Satd. Flow (prot)	0	1738	4891	0	1548	0
Flt Permitted		0.992			0.994	
Satd. Flow (perm)	0	1738	4891	0	1548	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		64.2	77.4		236.2	
Travel Time (s)		4.8	5.8		17.0	
Confl. Peds. (#/hr)	3			3		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	10%	7%	0%	6%	9%
Adj. Flow (vph)	91	472	556	17	16	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	563	573	0	135	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.7%		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)	5	562	11	17	432	17	69	0	56	4	0	3
Future Volume (vph)	5	562	11	17	432	17	69	0	56	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.995			0.940			0.942	
Flt Protected					0.998			0.973			0.972	
Satd. Flow (prot)	0	1678	0	0	1714	0	0	1665	0	0	1539	0
Flt Permitted					0.998			0.973			0.972	
Satd. Flow (perm)	0	1678	0	0	1714	0	0	1665	0	0	1539	0
Link Speed (k/h)		48			48			40			48	
Link Distance (m)		746.3			110.8			199.4			201.0	
Travel Time (s)		56.0			8.3			17.9			15.1	
Confl. Peds. (#/hr)			8	8					24	17		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%	14%	27%	12%	11%	18%	6%	0%	5%	25%	0%	0%
Adj. Flow (vph)	5	562	11	17	432	17	69	0	56	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	0	0	466	0	0	125	0	0	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)		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	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 53.2%		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)	568	255	169	101	179	495	245	1670	57	192	1781	236
Future Volume (vph)	568	255	169	101	179	495	245	1670	57	192	1781	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	*1.00	0.95	0.95	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	*1.00	*1.00
Ped Bike Factor	1.00				0.99		1.00				1.00	
Frt		0.940			0.890			0.995			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3411	3318	0	1789	3295	0	1722	5626	0	3471	5488	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3410	3318	0	1789	3295	0	1721	5626	0	3471	5488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		137			135			5			25	
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.6			10.9			12.8			17.6	
Confl. Peds. (#/hr)	1					1	4					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%	3%	4%	2%	5%	2%	6%	2%	0%	2%	2%	10%
Adj. Flow (vph)	568	255	169	101	179	495	245	1670	57	192	1781	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	568	424	0	101	674	0	245	1727	0	192	2017	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			7.4			7.4	
Link Offset(m)		0.0			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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

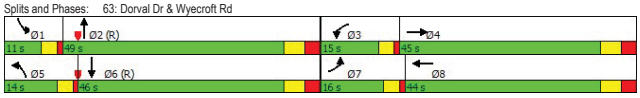
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	16.0	45.0		15.0	44.0		14.0	49.0		11.0	46.0	
Total Split (%)	13.3%	37.5%		12.5%	36.7%		11.7%	40.8%		9.2%	38.3%	
Maximum Green (s)	12.0	38.0		11.0	37.0		10.0	42.0		7.0	39.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		-2.0	0.0		-2.0	0.0		0.0	-2.0	
Total Lost Time (s)	2.0	7.0		2.0	7.0		2.0	7.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		0			1			0			4	
Act Effct Green (s)	14.0	29.6		12.1	27.7		21.3	46.9		11.4	41.0	
Actuated g/C Ratio	0.12	0.25		0.10	0.23		0.18	0.39		0.10	0.34	
v/c Ratio	1.43	0.46		0.56	1.06dr		0.80	0.78		0.58	1.07	
Control Delay	246.4	26.4		63.6	40.5		68.7	36.0		59.9	78.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	246.4	26.4		63.6	40.5		68.7	36.0		59.9	78.9	
LOS	F	C		E	D		E	D		E	E	
Approach Delay		152.4			43.6			40.1			77.2	
Approach LOS		F			D			D			E	
Queue Length 50th (m)	~90.4	30.2		22.8	60.8		55.8	120.3		22.2	~173.9	
Queue Length 95th (m)	#124.0	40.6		40.9	72.5		#127.8	143.9		#46.3	#201.0	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)				50.0			65.0			65.0		
Base Capacity (vph)	397	1144		193	1109		306	2202		330	1891	
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	1.43	0.37		0.52	0.61		0.80	0.78		0.58	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 3.6 (3%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.43			
Intersection Signal Delay: 73.1		Intersection LOS: E	

Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

* User Entered Value
~ 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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

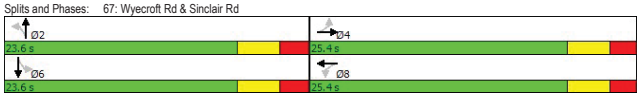


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Future Volume (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.993			0.999			0.992			0.875	
Flt Protected		0.998			0.999			0.955			0.996	
Satd. Flow (prot)	0	1810	0	0	1828	0	0	1770	0	0	1380	0
Flt Permitted		0.980			0.996			0.995			0.967	
Satd. Flow (perm)	0	1778	0	0	1822	0	0	1844	0	0	1339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			1			53			53	
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		96.4			190.6			115.7			194.3	
Travel Time (s)		7.2			14.3			10.4			17.5	
Confl. Peds. (#/hr)			5	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
Heavy Vehicles (%)	29%	4%	8%	0%	5%	0%	3%	0%	0%	0%	0%	23%
Adj. Flow (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	0	0	394	0	0	66	0	0	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)		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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0	
Minimum Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (%)	51.8%	51.8%		51.8%	51.8%		48.2%	48.2%		48.2%	48.2%	
Maximum Green (s)	20.0	20.0		20.0	20.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.4			5.4			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	9.0	9.0		9.0	9.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	5	5		0	0		0	0		0	0	
Act Effct Green (s)		20.0			20.0			20.3			20.3	
Actuated g/C Ratio		0.74			0.74			0.75			0.75	
v/c Ratio		0.17			0.29			0.05			0.01	
Control Delay		6.6			7.4			4.5			0.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.6			7.4			4.5			0.4	
LOS		A			A			A			A	
Approach Delay		6.6			7.4			4.5			0.4	
Approach LOS		A			A			A			A	
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		22.4			42.4			6.2			0.4	
Internal Link Dist (m)		72.4			166.6			91.7			170.3	
Turn Bay Length (m)												
Base Capacity (vph)		1371			1404			1402			1022	
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		0.16			0.28			0.05			0.01	

Intersection Summary	
Area Type:	Other
Cycle Length: 49	
Actuated Cycle Length: 27.2	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	250	231	895	579	71
Future Volume (vph)	21	250	231	895	579	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	20.0		20.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.985	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1738	1585	1755	1921	1863	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1738	1585	1755	1921	1863	0
Link Speed (k/h)	48			50	50	
Link Distance (m)	146.1			210.8	216.3	
Travel Time (s)	11.0			15.2	15.6	
Confl. Peds. (#/hr)			14			14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	3%	4%	0%	1%	6%
Adj. Flow (vph)	21	250	231	895	579	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	250	231	895	650	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.1%		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)	435	218	73	81	218	320	73	907	308	990	922	622
Future Volume (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	100.0		0.0	0.0		0.0	110.0		0.0
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	*1.00	*1.00	1.00	0.95	1.00
Ped Bike Factor				1.00					0.99	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	3579	1601	1615	3579	1471	1789	3659	1570	1789	3510	1601
Flt Permitted	0.950			0.950			0.310			0.126		
Satd. Flow (perm)	3471	3579	1601	1612	3579	1471	584	3659	1549	237	3510	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			109			269			618
Link Speed (k/h)		48			50			60			60	
Link Distance (m)		123.7			128.7			281.0			274.8	
Travel Time (s)		9.3			9.3			16.9			16.5	
Confl. Peds. (#/hr)				1					1	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%	2%	13%	2%	11%	2%	5%	4%	2%	4%	2%
Adj. Flow (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	218	73	81	218	320	73	907	308	990	922	622
Enter Blocked Intersection	No	No	No	No	No	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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

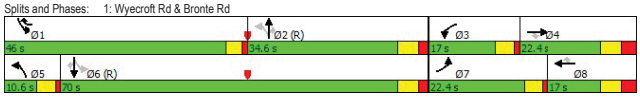
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	6.0	5.0	15.0	15.0	6.0	15.0	15.0
Minimum Split (s)	9.5	12.0	12.0	9.5	17.0	10.0	9.5	21.0	21.0	10.0	21.0	21.0
Total Split (s)	22.4	22.4	22.4	17.0	17.0	46.0	10.6	34.6	34.6	46.0	70.0	70.0
Total Split (%)	18.7%	18.7%	18.7%	14.2%	14.2%	38.3%	8.8%	28.8%	28.8%	38.3%	58.3%	58.3%
Maximum Green (s)	17.9	15.4	15.4	12.5	10.0	42.0	6.1	28.6	28.6	42.0	64.0	64.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	3.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0	1.0	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	-2.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0	4.0	4.5	4.0	6.0	2.0	6.0	6.0
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	3.0	3.0	3.0	3.5	5.5	3.0	4.0	4.0	5.5	4.0	4.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.5	19.2	19.2	10.5	10.0	59.4	36.1	30.6	28.6	79.0	66.5	66.5
Actuated g/C Ratio	0.15	0.16	0.16	0.09	0.08	0.50	0.30	0.26	0.24	0.66	0.55	0.55
v/c Ratio	0.86	0.38	0.19	0.57	0.73	0.41	0.31	0.97	0.54	1.36	0.47	0.53
Control Delay	67.6	48.8	1.1	68.2	68.7	14.1	19.8	68.0	10.8	197.1	17.7	3.0
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	67.6	48.8	1.1	68.2	68.7	14.1	19.8	68.0	10.8	197.1	17.7	3.0
LOS	E	D	A	E	E	B	B	E	B	F	B	A
Approach Delay		55.3			40.4			51.6			84.2	
Approach LOS		E			D			D			F	
Queue Length 50th (m)	52.0	25.1	0.0	18.5	26.8	29.6	6.1	106.1	7.2	~292.5	69.5	0.4
Queue Length 95th (m)	#76.2	38.0	0.0	34.4	#43.0	51.4	11.7	#145.4	32.4	#370.3	86.2	16.7
Internal Link Dist (m)		99.7			104.7			257.0			250.8	
Turn Bay Length (m)				100.0						110.0		
Base Capacity (vph)	517	573	378	168	298	783	237	933	574	730	1946	1163
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	0.38	0.19	0.48	0.73	0.41	0.31	0.97	0.54	1.36	0.47	0.53

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.36			
Intersection Signal Delay: 66.8		Intersection LOS: E	
Intersection Capacity Utilization 116.9%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

~ 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: 1: Wyecroft Rd & Bronte Rd

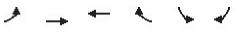


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	215	1187	538	26	9	54
Future Volume (vph)	215	1187	538	26	9	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.994		0.884	
Flt Protected		0.992			0.993	
Satd. Flow (prot)	0	3531	1654	0	1494	0
Flt Permitted		0.992			0.993	
Satd. Flow (perm)	0	3531	1654	0	1494	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		121.7	81.2		226.5	
Travel Time (s)		8.8	5.8		16.3	
Confl. Peds. (#/hr)	3			3		
Confl. Bikes (#/hr)						54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	16%	4%	0%	15%
Adj. Flow (vph)	215	1187	538	26	9	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1402	564	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 82.8%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	1422	553	4	7	14
Future Volume (vph)	16	1422	553	4	7	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.910	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	3541	3174	0	1644	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	3541	3174	0	1644	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		128.7	121.7		152.2	
Travel Time (s)		9.3	8.8		13.7	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	15%	0%	0%	7%
Adj. Flow (vph)	16	1422	553	4	7	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1438	557	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	23	468	717	73	43	47
Future Volume (vph)	23	468	717	73	43	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Frt			0.986		0.929	
Flt Protected		0.998			0.977	
Satd. Flow (prot)	0	4468	3245	0	1649	0
Flt Permitted		0.998			0.977	
Satd. Flow (perm)	0	4468	3245	0	1649	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		68.2	87.4		142.1	
Travel Time (s)		4.9	6.3		10.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	18%	11%	10%	12%	0%
Adj. Flow (vph)	23	468	717	73	43	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	491	790	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		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)	64	1019	24	7	564	43	2	0	1	16	0	20
Future Volume (vph)	64	1019	24	7	564	43	2	0	1	16	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.991			0.955			0.925	
Flt Protected		0.997			0.999			0.968			0.978	
Satd. Flow (prot)	0	1826	0	0	1694	0	0	1776	0	0	1738	0
Flt Permitted		0.997			0.999			0.968			0.978	
Satd. Flow (perm)	0	1826	0	0	1694	0	0	1776	0	0	1738	0
Link Speed (k/h)		50			50			40			50	
Link Distance (m)		316.8			441.5			245.2			363.5	
Travel Time (s)		22.8			31.8			22.1			26.2	
Confl. Peds. (#/hr)	4			1		4			1	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%	5%	0%	0%	13%	5%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	64	1019	24	7	564	43	2	0	1	16	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1107	0	0	614	0	0	3	0	0	36	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	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 105.0%		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)	51	870	8	17	689	36	4	0	8	9	0	14
Future Volume (vph)	51	870	8	17	689	36	4	0	8	9	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.999			0.993			0.910			0.918	
Flt Protected		0.997			0.999			0.984			0.981	
Satd. Flow (prot)	0	1820	0	0	1776	0	0	1032	0	0	1593	0
Flt Permitted		0.997			0.999			0.984			0.981	
Satd. Flow (perm)	0	1820	0	0	1776	0	0	1032	0	0	1593	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		441.5			436.6			166.3			348.3	
Travel Time (s)		31.8			31.4			12.0			25.1	
Confl. Peds. (#/hr)	8		6	6		8	1		1	1		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 (%)	4%	5%	25%	35%	7%	0%	50%	0%	75%	22%	0%	0%
Adj. Flow (vph)	51	870	8	17	689	36	4	0	8	9	0	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	929	0	0	742	0	0	12	0	0	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)		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	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 81.9%	ICU Level of Service D
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Future Volume (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2100	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		50.0	90.0		0.0	110.0		65.0
Storage Lanes	2		0	1		1	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	0.95	1.00	*1.00	*1.00	1.00	*1.00	1.00
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.939			0.947			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3248	1725	0	1547	3356	0	1772	4093	0	1772	3767	1617
Flt Permitted	0.950			0.950			0.095			0.093		
Satd. Flow (perm)	3248	1725	0	1545	3356	0	177	4093	0	173	3767	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			79			4				62
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		136.1			184.2			499.0			390.5	
Travel Time (s)		9.8			13.3			29.9			23.4	
Confl. Peds. (#/hr)			1	1						1	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 (%)	9%	4%	4%	18%	7%	11%	3%	3%	4%	3%	2%	1%
Adj. Flow (vph)	709	244	169	49	171	94	296	1813	75	562	2081	1591
Shared Lane Traffic (%)												
Lane Group Flow (vph)	709	413	0	49	265	0	296	1888	0	562	2081	1591
Enter Blocked Intersection	No	No	No	No	No	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	0.86	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	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	6.1
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	1.8		6.1	1.8		6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	4	4		8	8		5	2		1	6	4
Permitted Phases							2			6		6
Detector Phase	4	4		8	8		5	2		1	6	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	28.0		7.0	28.0	10.0
Minimum Split (s)	31.4	31.4		16.8	16.8		12.0	34.2		10.0	34.2	31.4
Total Split (s)	39.0	39.0		16.8	16.8		12.0	46.2		18.0	52.2	39.0
Total Split (%)	32.5%	32.5%		14.0%	14.0%		10.0%	38.5%		15.0%	43.5%	32.5%
Maximum Green (s)	32.6	32.6		10.0	10.0		9.0	40.0		15.0	46.0	32.6
Yellow Time (s)	3.7	3.7		4.0	4.0		3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	2.7	2.7		2.8	2.8		0.0	2.5		0.0	2.5	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	6.4	6.4		6.8	6.8		1.0	4.2		1.0	4.2	4.4
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	4.5	4.5		3.5	3.5		5.0	5.0		2.5	5.0	4.5
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	None
Walk Time (s)	7.0	7.0						7.0			7.0	7.0
Flash Dont Walk (s)	18.0	18.0						21.0			21.0	18.0
Pedestrian Calls (#/hr)	1	1						1			0	1
Act Effct Green (s)	32.6	32.6		10.0	10.0		56.2	42.0		63.2	48.0	86.8
Actuated g/C Ratio	0.27	0.27		0.08	0.08		0.47	0.35		0.53	0.40	0.72
v/c Ratio	0.80	0.84		0.38	0.75		1.29	1.32		1.77	1.38	1.34
Control Delay	48.9	55.3		61.3	51.8		188.6	180.5		385.6	206.9	179.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	48.9	55.3		61.3	51.8		188.6	180.5		385.6	206.9	179.5
LOS	D	E		E	D		F	F		F	F	F
Approach Delay		51.2			53.3			181.6			220.3	
Approach LOS		D			D			F			F	
Queue Length 50th (m)	80.3	86.2		11.1	21.6		~72.6	~288.3		~182.7	~325.2	~487.8
Queue Length 95th (m)	102.6	#137.7		23.7	#38.7		#127.4	#328.9		#250.5	#364.9	#569.6
Internal Link Dist (m)		112.1			160.2			475.0			366.5	
Turn Bay Length (m)				50.0			90.0			110.0		65.0
Base Capacity (vph)	882	489		128	352		229	1435		317	1506	1186
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.80	0.84		0.38	0.75		1.29	1.32		1.77	1.38	1.34

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
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: 1.77	
Intersection Signal Delay: 178.7	Intersection LOS: F

Intersection Capacity Utilization 135.9%	ICU Level of Service H
Analysis Period (min) 15	

* User Entered Value
~ 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: 15: Third Line & Wyecroft Rd

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	723	312	59	800	32	29
Future Volume (vph)	723	312	59	800	32	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
Ped Bike Factor						
Frt	0.959					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	1741	0	0	1798	1426	984
Flt Permitted				0.997	0.950	
Satd. Flow (perm)	1741	0	0	1798	1426	984
Link Speed (k/h)	50			50	40	
Link Distance (m)	436.6			161.0	162.8	
Travel Time (s)	31.4			11.6	14.7	
Confl. Peds. (#/hr)		4	4			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	27%	5%	28%	66%
Adj. Flow (vph)	723	312	59	800	32	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1035	0	0	859	32	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 101.3%		ICU Level of Service G	
Analysis Period (min) 15			

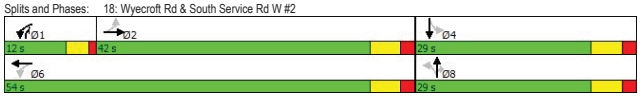
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Future Volume (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor	1.00	0.99			1.00			0.99	0.98		0.99	
Frt		0.974			0.980				0.850		0.969	
Flt Protected	0.950			0.950				0.954			0.968	
Satd. Flow (prot)	1825	1639	0	1825	1724	0	0	1833	1633	0	1700	0
Flt Permitted	0.289			0.192				0.705			0.731	
Satd. Flow (perm)	555	1639	0	369	1724	0	0	1345	1597	0	1282	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			16				105		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.0			197.2			238.6			282.2	
Travel Time (s)		11.6			14.2			17.2			20.3	
Confl. Peds. (#/hr)	2		6	6		2	4		1	1		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 (%)	0%	16%	2%	0%	9%	8%	0%	0%	0%	8%	0%	0%
Adj. Flow (vph)	3	586	125	361	779	122	115	4	105	26	4	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	711	0	361	901	0	0	119	105	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)		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		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	6	6			2		1	1		4	4	
Act Effct Green (s)	36.5	36.5		50.8	50.3			13.4	20.5		13.4	
Actuated g/C Ratio	0.52	0.52		0.72	0.72			0.19	0.29		0.19	
v/c Ratio	0.01	0.83		0.83	0.73			0.46	0.19		0.15	
Control Delay	12.0	27.5		27.4	14.7			32.7	4.2		21.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	12.0	27.5		27.4	14.7			32.7	4.2		21.5	
LOS	B	C		C	B			C	A		C	
Approach Delay		27.4			18.3			19.4			21.5	
Approach LOS		C			B			B			C	
Queue Length 50th (m)	0.2	77.5		15.2	70.2			14.9	0.0		3.5	
Queue Length 95th (m)	1.8	#177.1		#67.2	#196.4			29.0	8.1		10.6	
Internal Link Dist (m)		137.0			173.2			214.6			258.2	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	290	865		436	1208			449	544		434	
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	0.01	0.82		0.83	0.75			0.27	0.19		0.09	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 70.2			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 102.7%		ICU Level of Service G	

Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	3	112	1323	1	25
Future Volume (vph)	650	3	112	1323	1	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999					0.850
Flt Protected				0.996	0.950	
Satd. Flow (prot)	1670	0	0	3475	1825	1633
Flt Permitted				0.996	0.950	
Satd. Flow (perm)	1670	0	0	3475	1825	1633
Link Speed (k/h)	50			50	40	
Link Distance (m)	197.2			45.1	235.3	
Travel Time (s)	14.2			3.2	21.2	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	15%	0%	0%	5%	0%	0%
Adj. Flow (vph)	650	3	112	1323	1	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	653	0	0	1435	1	25
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	150	37	203	21	7
Future Volume (vph)	392	150	37	203	21	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.963				0.966	
Flt Protected				0.992	0.964	
Satd. Flow (prot)	1709	0	0	1376	1318	0
Flt Permitted				0.992	0.964	
Satd. Flow (perm)	1709	0	0	1376	1318	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	597.6			460.9	281.1	
Travel Time (s)	43.0			33.2	20.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	1%	8%	44%	43%	14%
Adj. Flow (vph)	392	150	37	203	21	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	542	0	0	240	28	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	3.7	
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			Free	Stop	

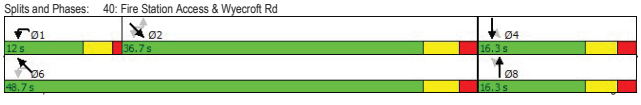
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Future Volume (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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		0.850							0.850		0.999	
Flt Protected	0.950				0.950					0.950		
Satd. Flow (prot)	1615	1266	0	0	1825	0	0	1630	1166	1393	1435	0
Flt Permitted								0.997		0.435		
Satd. Flow (perm)	1700	1266	0	0	1921	0	0	1626	1166	638	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		502							106		1	
Link Speed (k/h)		50			40			50			50	
Link Distance (m)		120.2			119.2			273.4			146.0	
Travel Time (s)		8.7			10.7			19.7			10.5	
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
Heavy Vehicles (%)	13%	0%	29%	0%	0%	0%	0%	18%	40%	31%	34%	0%
Adj. Flow (vph)	8	0	14	1	0	0	4	419	10	16	296	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	14	0	0	1	0	0	423	10	16	298	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	pm+pt	NA	
Protected Phases		8			4			2		1	6	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	14.3	14.3			14.3			32.1	32.1	29.0	33.4	
Actuated g/C Ratio	0.40	0.40			0.40			0.90	0.90	0.81	0.93	
v/c Ratio	0.01	0.02			0.00			0.29	0.01	0.02	0.02	
Control Delay	16.4	0.1			17.0			4.5	0.0	1.8	2.1	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	16.4	0.1			17.0			4.5	0.0	1.8	2.1	
LOS	B	A			B			A	A	A	A	
Approach Delay		6.0			17.0			4.4			2.1	
Approach LOS		A			B			A			A	
Queue Length 50th (m)	0.3	0.0			0.1			0.0	0.0	0.1	0.0	
Queue Length 95th (m)	3.9	0.0			1.3			54.0	0.0	1.7	21.6	
Internal Link Dist (m)		96.2			95.2			249.4			122.0	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	714	823			807			1334	976	771	1347	
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	0.01	0.02			0.00			0.32	0.01	0.02	0.22	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 35.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 3.5		Intersection LOS: A	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Future Volume (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.999			0.992						0.932	
Flt Protected		0.998						0.950			0.976	
Satd. Flow (prot)	0	1643	0	0	1484	0	0	1825	0	0	1398	0
Flt Permitted		0.998						0.950			0.976	
Satd. Flow (perm)	0	1643	0	0	1484	0	0	1825	0	0	1398	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			123.5			161.1			189.8	
Travel Time (s)		10.5			8.9			14.5			17.1	
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 (%)	8%	17%	0%	100%	30%	0%	0%	0%	0%	25%	0%	25%
Adj. Flow (vph)	12	375	3	1	303	19	1	0	0	4	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	390	0	0	323	0	0	1	0	0	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			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 38.8%		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	376	23	11	324	6	7	0	2	0	0	0
Future Volume (vph)	2	376	23	11	324	6	7	0	2	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.992			0.998			0.970				
Flt Protected					0.998			0.963				
Satd. Flow (prot)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Flt Permitted					0.998			0.963				
Satd. Flow (perm)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		8.9			12.4			11.9			19.1	
Confl. Peds. (#/hr)			2	2			1		2	2		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%	17%	0%	27%	14%	0%	14%	0%	100%	0%	0%	0%
Adj. Flow (vph)	2	376	23	11	324	6	7	0	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	0	0	341	0	0	9	0	0	0	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.8%		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)	11	316	19	55	349	16	3	0	19	1	0	4
Future Volume (vph)	11	316	19	55	349	16	3	0	19	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	5.0			5.0			5.0			5.0		
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
Ped Bike Factor												
Frt		0.991			0.993			0.883			0.892	
Flt Protected	0.950			0.950				0.993			0.990	
Satd. Flow (prot)	1674	1614	0	1615	1598	0	0	1169	0	0	1212	0
Flt Permitted	0.950			0.950				0.993			0.990	
Satd. Flow (perm)	1674	1614	0	1615	1598	0	0	1169	0	0	1212	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		172.3			135.1			130.8			152.7	
Travel Time (s)		12.4			9.7			9.4			11.0	
Confl. Peds. (#/hr)			6	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 (%)	9%	19%	0%	13%	20%	6%	0%	0%	51%	0%	0%	50%
Adj. Flow (vph)	11	316	19	55	349	16	3	0	19	1	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	335	0	55	365	0	0	22	0	0	5	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		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)	50	276	53	73	265	29	53	237	161	237	402	101
Future Volume (vph)	50	276	53	73	265	29	53	237	161	237	402	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		1.00		0.98
Frt			0.850			0.850		0.939				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	1525	1183	1587	1588	1286	1659	3289	0	1738	1830	1555
Flt Permitted	0.495			0.410			0.462			0.447		
Satd. Flow (perm)	699	1525	1158	684	1588	1269	806	3289	0	816	1830	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			153		161				120
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		135.1			64.2			211.2			311.7	
Travel Time (s)		9.7			4.6			15.8			23.4	
Confl. Peds. (#/hr)	1		1	1		1	1		2	2		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 (%)	36%	26%	38%	15%	21%	27%	10%	2%	5%	5%	5%	5%
Adj. Flow (vph)	50	276	53	73	265	29	53	237	161	237	402	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	276	53	73	265	29	53	398	0	237	402	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	33.0		15.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	36.7%		16.7%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	27.4		12.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		1	1		1	1		2			1	1
Act Effct Green (s)	31.3	22.8	22.8	31.9	24.8	24.8	42.8	34.2		50.3	41.1	41.1
Actuated g/C Ratio	0.35	0.25	0.25	0.35	0.28	0.28	0.48	0.38		0.56	0.46	0.46
v/c Ratio	0.17	0.72	0.13	0.23	0.61	0.06	0.12	0.29		0.42	0.48	0.13
Control Delay	17.2	41.2	0.7	18.0	34.6	0.3	12.8	13.7		14.2	23.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.2	41.2	0.7	18.0	34.6	0.3	12.8	13.7		14.2	23.0	3.3
LOS	B	D	A	B	C	A	B	B		B	C	A
Approach Delay		32.4			28.6			13.6			17.5	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	5.1	42.3	0.0	7.5	39.9	0.0	4.5	15.5		21.7	55.6	0.0
Queue Length 95th (m)	11.6	67.3	0.0	15.3	63.5	0.0	10.6	27.6		37.1	87.4	7.6
Internal Link Dist (m)		111.1			40.2			187.2			287.7	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	292	442	444	312	477	488	449	1350		578	835	760
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	0.17	0.62	0.12	0.23	0.56	0.06	0.12	0.29		0.41	0.48	0.13

Intersection Summary
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 21.6 Intersection LOS: C

Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 51: Wyecroft Rd & Fourth Line

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	99	614	310	20	4	63
Future Volume (vph)	99	614	310	20	4	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Frt			0.991		0.873	
Flt Protected		0.993			0.997	
Satd. Flow (prot)	0	1718	4308	0	1446	0
Flt Permitted		0.993			0.997	
Satd. Flow (perm)	0	1718	4308	0	1446	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.2	77.5		236.2	
Travel Time (s)		4.6	5.6		17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	12%	21%	15%	25%	15%
Adj. Flow (vph)	99	614	310	20	4	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	713	330	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 58.3% 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)	5	475	22	32	433	10	5	0	23	9	0	2
Future Volume (vph)	5	475	22	32	433	10	5	0	23	9	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.994			0.997			0.889			0.975	
Flt Protected					0.997			0.991			0.961	
Satd. Flow (prot)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Flt Permitted					0.997			0.991			0.961	
Satd. Flow (perm)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Link Speed (k/h)		50			50			40			48	
Link Distance (m)		746.2			110.9			199.4			294.8	
Travel Time (s)		53.7			8.0			17.9			22.1	
Confl. Peds. (#/hr)			20	20			1		17	17		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 (%)	20%	17%	5%	28%	16%	0%	40%	0%	39%	0%	0%	0%
Adj. Flow (vph)	5	475	22	32	433	10	5	0	23	9	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	502	0	0	475	0	0	28	0	0	11	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	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 58.4% ICU Level of Service B
Analysis Period (min) 15

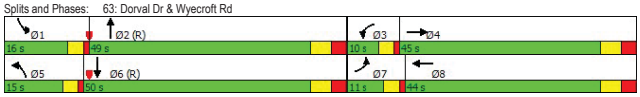
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Future Volume (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	5.0			5.0			5.0			5.0		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Frt		0.930			0.915			0.993			0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2832	3034	0	1644	3152	0	1722	4795	0	3437	4686	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2829	3034	0	1636	3152	0	1721	4795	0	3435	4686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			209			6			91	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	2		8	8		2	6		3	3		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 (%)	25%	9%	13%	11%	4%	6%	6%	5%	3%	3%	5%	11%
Parking (#/hr)								0				
Adj. Flow (vph)	204	176	152	30	176	231	154	1435	68	261	1305	508
Shared Lane Traffic (%)												
Lane Group Flow (vph)	204	328	0	30	407	0	154	1503	0	261	1813	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			7.4			7.4	
Link Offset(m)		0.0			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	1.03	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	11.0	45.0		10.0	44.0		15.0	49.0		16.0	50.0	
Total Split (%)	9.2%	37.5%		8.3%	36.7%		12.5%	40.8%		13.3%	41.7%	
Maximum Green (s)	7.0	38.0		6.0	37.0		11.0	42.0		12.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	2.0	7.0		4.0	7.0		4.0	7.0		4.0	7.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		8			2			3			6	
Act Effct Green (s)	9.0	22.5		6.0	17.5		16.4	60.2		13.3	57.2	
Actuated g/C Ratio	0.08	0.19		0.05	0.15		0.14	0.50		0.11	0.48	
v/c Ratio	0.96	0.47		0.37	0.64		0.66	0.62		0.69	0.80	
Control Delay	108.3	24.5		68.0	26.4		63.6	24.9		61.2	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	108.3	24.5		68.0	26.4		63.6	24.9		61.2	29.5	
LOS	F	C		E	C		E	C		E	C	
Approach Delay		56.7			29.3			28.5			33.5	
Approach LOS		E			C			C			C	
Queue Length 50th (m)	25.1	20.6		7.0	23.7		34.1	86.0		30.5	118.7	
Queue Length 95th (m)	#48.9	27.4		16.9	31.3		#78.4	141.7		#49.0	#194.2	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	212	1064		82	1116		234	2410		387	2279	
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	0.96	0.31		0.37	0.36		0.66	0.62		0.67	0.80	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 21.6 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	

Intersection Signal Delay: 34.0	Intersection LOS: C
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

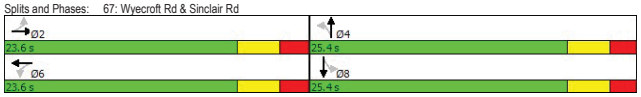


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	296	100	47	349	4	12	0	6	0	0	2
Future Volume (vph)	6	296	100	47	349	4	12	0	6	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.966			0.999			0.955			0.865	
Flt Protected		0.999			0.994			0.968				
Satd. Flow (prot)	0	1761	0	0	1813	0	0	1452	0	0	1108	0
Flt Permitted		0.991			0.911							
Satd. Flow (perm)	0	1747	0	0	1661	0	0	1500	0	0	1108	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			1			58			318	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		96.5			190.6			115.7			194.4	
Travel Time (s)		6.9			13.7			10.4			17.5	
Confl. Peds. (#/hr)			2	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%	5%	4%	0%	6%	0%	0%	0%	67%	0%	0%	50%
Adj. Flow (vph)	6	296	100	47	349	4	12	0	6	0	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	402	0	0	400	0	0	18	0	0	2	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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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			NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	17.0	17.0		17.0	17.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1		2.1	2.1	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.6			5.6			5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.5	3.5		3.5	3.5	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		9.0	9.0		9.0	9.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	2	2		0	0		0	0		0	0	
Act Effct Green (s)		20.9			20.9			12.1			12.1	
Actuated g/C Ratio		0.89			0.89			0.52			0.52	
v/c Ratio		0.26			0.27			0.02			0.00	
Control Delay		3.0			3.4			1.1			0.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.0			3.4			1.1			0.0	
LOS		A			A			A			A	
Approach Delay		3.0			3.4			1.1				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		29.7			33.1			0.9			0.0	
Internal Link Dist (m)		72.5			166.6			91.7			170.4	
Turn Bay Length (m)												
Base Capacity (vph)		1354			1279			1260			976	
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		0.30			0.31			0.01			0.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 23.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	132	201	254	581	205
Future Volume (vph)	11	132	201	254	581	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	5.0		5.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.875				0.965	
Flt Protected	0.996		0.950			
Satd. Flow (prot)	1600	0	1807	1865	1795	0
Flt Permitted	0.996		0.950			
Satd. Flow (perm)	1600	0	1807	1865	1795	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	146.2			210.7	216.3	
Travel Time (s)	10.5			15.2	15.6	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	1%	3%	3%	4%
Adj. Flow (vph)	11	132	201	254	581	205
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	0	201	254	786	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.0%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	622	311	104	299	311	904	104	944	120	413	867	435
Future Volume (vph)	622	311	104	299	311	904	104	944	120	413	867	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	80.0		0.0	110.0		0.0
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	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	3579	1601	1789	3579	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.950			0.950			0.327			0.105		
Satd. Flow (perm)	3471	3579	1601	1789	3579	1601	616	3579	1601	198	3579	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			68			200			435
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		198.0			131.0			142.5			135.3	
Travel Time (s)		14.9			9.8			8.6			8.1	
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)	622	311	104	299	311	904	104	944	120	413	867	435
Shared Lane Traffic (%)												
Lane Group Flow (vph)	622	311	104	299	311	904	104	944	120	413	867	435
Enter Blocked Intersection	No	No	No	No	No	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	0	0	0	0	0	0	0	0	0	0	0
Detector Template	Left											
Leading Detector (m)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Type	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
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (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
Minimum Split (s)	9.5	12.0	12.0	9.5	12.0	9.5	9.5	11.0	11.0	9.5	11.0	11.0
Total Split (s)	27.0	17.3	17.3	35.2	25.5	28.0	9.5	39.5	39.5	28.0	58.0	58.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	22.5%	14.4%	14.4%	29.3%	21.3%	23.3%	7.9%	32.9%	32.9%	23.3%	48.3%	48.3%
Maximum Green (s)	22.5	10.3	10.3	30.7	18.5	23.5	5.0	33.5	33.5	23.5	52.0	52.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0	1.0	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	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0	4.5	4.5	6.0	6.0	4.5	6.0	6.0
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	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	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.5	14.5	14.5	24.7	16.7	49.0	40.7	33.5	33.5	64.8	53.1	53.1
Actuated g/C Ratio	0.19	0.12	0.12	0.21	0.14	0.41	0.34	0.28	0.28	0.54	0.44	0.44
v/c Ratio	0.96	0.72	0.29	0.81	0.62	1.30	0.39	0.94	0.20	0.93	0.55	0.46
Control Delay	74.7	61.6	2.0	62.5	54.2	176.9	22.5	60.6	0.8	63.2	26.5	3.6
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	74.7	61.6	2.0	62.5	54.2	176.9	22.5	60.6	0.8	63.2	26.5	3.6
LOS	E	E	A	E	D	F	C	E	A	E	C	A
Approach Delay		63.5			129.1			51.1			29.5	
Approach LOS		E			F			D			C	
Queue Length 50th (m)	75.4	37.1	0.0	67.3	36.1	~264.5	11.9	114.6	0.0	81.1	78.8	0.0
Queue Length 95th (m)	#110.2	#69.4	0.0	93.5	50.9	#341.3	21.1	#154.5	0.0	#145.3	98.1	17.9
Internal Link Dist (m)		174.0			107.0			118.5			111.3	
Turn Bay Length (m)	100.0			100.0			80.0			110.0		
Base Capacity (vph)	650	432	361	457	551	693	264	999	591	442	1583	951
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	0.96	0.72	0.29	0.65	0.56	1.30	0.39	0.94	0.20	0.93	0.55	0.46

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 68.4 Intersection LOS: E
Intersection Capacity Utilization 112.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Bronte Rd & Wyecroft Rd

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	692	1266	28	9	234
Future Volume (vph)	52	692	1266	28	9	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.997		0.870	
Flt Protected		0.997			0.998	
Satd. Flow (prot)	0	3383	1843	0	1652	0
Flt Permitted		0.997			0.998	
Satd. Flow (perm)	0	3383	1843	0	1652	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		121.8	81.2		226.6	
Travel Time (s)		9.1	6.1		16.3	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	8%	4%	0%	0%	1%
Adj. Flow (vph)	52	692	1266	28	9	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	744	1294	0	243	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 90.0% ICU Level of Service E
Analysis Period (min) 15

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	29	656	1529	10	1	48
Future Volume (vph)	29	656	1529	10	1	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.868	
Flt Protected		0.998			0.999	
Satd. Flow (prot)	0	3414	3541	0	1603	0
Flt Permitted		0.998			0.999	
Satd. Flow (perm)	0	3414	3541	0	1603	0
Link Speed (k/h)		48	48		40	
Link Distance (m)		131.0	121.8		152.3	
Travel Time (s)		9.8	9.1		13.7	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	7%	3%	0%	0%	4%
Adj. Flow (vph)	29	656	1529	10	1	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	685	1539	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	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

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	765	411	60	71	74
Future Volume (vph)	32	765	411	60	71	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.981		0.931	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	4776	3316	0	1662	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	4776	3316	0	1662	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		68.2	87.4		142.0	
Travel Time (s)		5.1	6.6		10.2	
Confl. Peds. (#/hr)	1			1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	8%	8%	4%	6%
Adj. Flow (vph)	32	765	411	60	71	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	797	471	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 47.2% ICU Level of Service A
Analysis Period (min) 15

Lanes, Volumes, Timings
11: Pacific Rd & Wyecroft Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Future Volume (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.999			0.995			0.926			0.912	
Flt Protected		0.997						0.978			0.983	
Satd. Flow (prot)	0	1823	0	0	1839	0	0	1740	0	0	1678	0
Flt Permitted		0.997						0.978			0.983	
Satd. Flow (perm)	0	1823	0	0	1839	0	0	1740	0	0	1678	0
Link Speed (k/h)		48			48			40			50	
Link Distance (m)		316.8			441.5			245.3			363.5	
Travel Time (s)		23.8			33.1			22.1			26.2	
Confl. Peds. (#/hr)	5		1	1		5	1					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 (%)	5%	5%	0%	33%	4%	0%	0%	0%	0%	2%	0%	3%
Adj. Flow (vph)	39	675	6	3	1111	40	5	0	6	51	0	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	720	0	0	1154	0	0	11	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)		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	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 82.6%		ICU Level of Service E	
Analysis Period (min) 15			

Lanes, Volumes, Timings
12: Wyecroft Rd & Westgate Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	796	4	10	1096	23	15	0	22	26	0	45
Future Volume (vph)	6	796	4	10	1096	23	15	0	22	26	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.999			0.997			0.920			0.914	
Flt Protected								0.980			0.982	
Satd. Flow (prot)	0	1825	0	0	1830	0	0	1365	0	0	1724	0
Flt Permitted								0.980			0.982	
Satd. Flow (perm)	0	1825	0	0	1830	0	0	1365	0	0	1724	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		441.5			436.6			166.3			348.2	
Travel Time (s)		33.1			32.7			12.0			25.1	
Confl. Peds. (#/hr)	5		6	6		5	3					3
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%	5%	50%	80%	4%	4%	40%	0%	18%	0%	0%	0%
Adj. Flow (vph)	6	796	4	10	1096	23	15	0	22	26	0	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	806	0	0	1129	0	0	37	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	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 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Lanes, Volumes, Timings
15: Third Line & Wyecroft Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Future Volume (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		50.0	90.0		0.0	110.0		65.0
Storage Lanes	2		0	1		0	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	*1.00	1.00	*1.00	*1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99			1.00				
Frt		0.938			0.913			0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	1703	0	1755	3365	0	1706	3750	0	1587	3579	1498
Flt Permitted	0.950			0.950			0.096			0.098		
Satd. Flow (perm)	3468	1703	0	1752	3365	0	172	3750	0	164	3579	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			100			2				68
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		136.0			184.2			498.9			390.6	
Travel Time (s)		10.2			13.8			29.9			23.4	
Confl. Peds. (#/hr)	1		2	2		1			5	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
Heavy Vehicles (%)	2%	6%	4%	4%	4%	3%	7%	2%	8%	15%	2%	9%
Adj. Flow (vph)	1103	315	223	88	342	470	228	1545	28	121	1385	409
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1103	538	0	88	812	0	228	1573	0	121	1385	409
Enter Blocked Intersection	No	No	No	No	No	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	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	6.1
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	1.8		6.1	1.8		6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lanes, Volumes, Timings
15: Third Line & Wyecroft Rd

PM Peak Period
06-26-2019

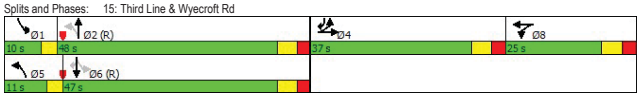
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	4	4		8	8		5	2		1	6	4
Permitted Phases							2			6		6
Detector Phase	4	4		8	8		5	2		1	6	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	28.0		7.0	28.0	10.0
Minimum Split (s)	31.4	31.4		21.6	21.6		10.0	34.2		10.0	34.2	31.4
Total Split (s)	37.0	37.0		25.0	25.0		11.0	48.0		10.0	47.0	37.0
Total Split (%)	30.8%	30.8%		20.8%	20.8%		9.2%	40.0%		8.3%	39.2%	30.8%
Maximum Green (s)	30.6	30.6		18.2	18.2		8.0	41.8		7.0	40.8	30.6
Yellow Time (s)	3.7	3.7		4.0	4.0		3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	2.7	2.7		2.8	2.8		0.0	2.5		0.0	2.5	2.7
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	0.0
Total Lost Time (s)	4.4	4.4		6.8	4.8		3.0	4.2		3.0	4.2	6.4
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	4.5	4.5		3.5	3.5		5.0	5.0		2.5	5.0	4.5
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	None
Walk Time (s)	7.0	7.0						7.0			7.0	7.0
Flash Dont Walk (s)	18.0	18.0						21.0			21.0	18.0
Pedestrian Calls (#/hr)	2	2						5			0	2
Act Effct Green (s)	32.6	32.6		18.2	20.2		53.0	43.8		51.0	42.8	77.6
Actuated g/C Ratio	0.27	0.27		0.15	0.17		0.44	0.36		0.42	0.36	0.65
v/c Ratio	1.17	1.11		0.33	1.35dr		1.28	1.15		0.80	1.09	0.41
Control Delay	127.7	114.6		49.4	162.0		187.6	111.2		56.8	88.9	9.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	127.7	114.6		49.4	162.0		187.6	111.2		56.8	88.9	9.7
LOS	F	F		D	F		F	F		E	F	A
Approach Delay		123.4			151.0			120.9			70.0	
Approach LOS		F			F			F			E	
Queue Length 50th (m)	~159.5	~140.2		18.8	~109.5		~52.1	~218.2		16.3	~192.5	34.9
Queue Length 95th (m)	#199.6	#207.0		34.6	#146.9		#102.0	#259.1		#44.8	#234.6	53.9
Internal Link Dist (m)		112.0			160.2			474.9			366.6	
Turn Bay Length (m)				50.0			90.0			110.0		65.0
Base Capacity (vph)	942	483		266	649		178	1370		152	1276	992
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.17	1.11		0.33	1.25		1.28	1.15		0.80	1.09	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14.4 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay: 110.3		Intersection LOS: F	

Intersection Capacity Utilization 121.5%	ICU Level of Service H
Analysis Period (min) 15	

* User Entered Value
~ 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.

Splits and Phases: 15: Third Line & Wyecroft Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	850	32	38	1014	143	102
Future Volume (vph)	850	32	38	1014	143	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995					0.850
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1842	0	0	1816	1690	1396
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1842	0	0	1816	1690	1396
Link Speed (k/h)	48			48	40	
Link Distance (m)	436.6			161.0	162.7	
Travel Time (s)	32.7			12.1	14.6	
Confl. Peds. (#/hr)		9	9			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	25%	47%	4%	8%	17%
Adj. Flow (vph)	850	32	38	1014	143	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	882	0	0	1052	143	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 98.9%		ICU Level of Service F	
Analysis Period (min) 15			

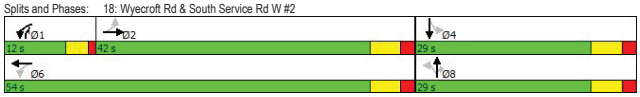
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Future Volume (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor	1.00	1.00			1.00			1.00			1.00	
Frt		0.981			0.988				0.850		0.983	
Flt Protected	0.950			0.950				0.953			0.960	
Satd. Flow (prot)	1644	1711	0	1825	1712	0	0	1831	1633	0	1628	0
Flt Permitted	0.235			0.099				0.666			0.438	
Satd. Flow (perm)	406	1711	0	190	1712	0	0	1276	1633	0	743	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			9				64		9	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		161.0			197.3			238.5			282.3	
Travel Time (s)		12.1			14.8			17.2			20.3	
Confl. Peds. (#/hr)	2		4	4		2	2					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 (%)	11%	10%	8%	0%	11%	7%	0%	0%	0%	11%	0%	14%
Adj. Flow (vph)	8	911	131	107	777	68	278	7	266	123	5	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1042	0	107	845	0	0	285	266	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	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	4	4			2		0	0		2	2	
Act Effct Green (s)	36.3	36.3		49.7	47.7			21.0	34.4		21.0	
Actuated g/C Ratio	0.45	0.45		0.62	0.59			0.26	0.43		0.26	
v/c Ratio	0.04	1.34		0.40	0.83			0.86	0.36		0.73	
Control Delay	14.5	187.4		11.7	23.2			54.0	13.1		49.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	14.5	187.4		11.7	23.2			54.0	13.1		49.1	
LOS	B	F		B	C			D	B		D	
Approach Delay		186.0			21.9			34.3			49.1	
Approach LOS		F			C			C			D	
Queue Length 50th (m)	0.7	~220.7		6.5	101.1			41.8	20.0		19.5	
Queue Length 95th (m)	3.3	#296.5		13.3	#182.4			#81.5	36.4		#47.2	
Internal Link Dist (m)		137.0			173.3			214.5			258.3	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	182	775		279	1023			364	745		218	
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	0.04	1.34		0.38	0.83			0.78	0.36		0.67	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 80.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.34			
Intersection Signal Delay: 89.7		Intersection LOS: F	
Intersection Capacity Utilization 106.5%		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: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1261	0	6	867	2	73
Future Volume (vph)	1261	0	6	867	2	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	1865	0	0	3413	1825	1633
Flt Permitted					0.950	
Satd. Flow (perm)	1865	0	0	3413	1825	1633
Link Speed (k/h)	48			48	40	
Link Distance (m)	197.3			45.1	235.2	
Travel Time (s)	14.8			3.4	21.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	7%	0%	0%
Adj. Flow (vph)	1261	0	6	867	2	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1261	0	0	873	2	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 77.6% ICU Level of Service D
Analysis Period (min) 15

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	293	10	11	449	194	59
Future Volume (vph)	293	10	11	449	194	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996				0.969	
Flt Protected				0.999	0.963	
Satd. Flow (prot)	1569	0	0	1786	1731	0
Flt Permitted				0.999	0.963	
Satd. Flow (perm)	1569	0	0	1786	1731	0
Link Speed (k/h)	48			48	50	
Link Distance (m)	597.7			248.1	281.2	
Travel Time (s)	44.8			18.6	20.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	22%	20%	27%	7%	1%	12%
Adj. Flow (vph)	293	10	11	449	194	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	0	460	253	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	3.7	
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			Free	Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.5% ICU Level of Service A
Analysis Period (min) 15

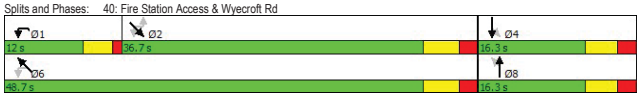
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Future Volume (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor		0.98			1.00							
Frt		0.859			0.910				0.850			
Flt Protected	0.950				0.984					0.950		
Satd. Flow (prot)	1674	1435	0	0	1720	0	0	1601	1633	1825	1671	0
Flt Permitted					0.952					0.424		
Satd. Flow (perm)	1762	1435	0	0	1661	0	0	1601	1633	815	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			112				106			
Link Speed (k/h)		50			40			48			48	
Link Distance (m)		120.3			119.2			273.4			145.9	
Travel Time (s)		8.7			10.7			20.5			10.9	
Confl. Peds. (#/hr)			2	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 (%)	9%	0%	13%	0%	0%	0%	0%	20%	0%	0%	15%	0%
Adj. Flow (vph)	22	1	15	2	0	4	0	435	2	1	421	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	16	0	0	6	0	0	435	2	1	421	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	14.9	14.9			14.9			31.7	31.7	29.5	33.1	
Actuated g/C Ratio	0.38	0.38			0.38			0.81	0.81	0.76	0.85	
v/c Ratio	0.03	0.03			0.01			0.33	0.00	0.00	0.30	
Control Delay	18.7	11.8			0.0			6.4	0.0	3.0	3.8	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	18.7	11.8			0.0			6.4	0.0	3.0	3.8	
LOS	B	B			A			A	A	A	A	
Approach Delay		15.8						6.4			3.8	
Approach LOS		B						A			A	
Queue Length 50th (m)	0.9	0.1			0.0			0.0	0.0	0.0	0.0	
Queue Length 95th (m)	7.4	4.4			0.0			56.5	0.0	0.4	30.5	
Internal Link Dist (m)		96.3			95.2			249.4			121.9	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	708	585			734			1231	1279	943	1516	
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	0.03	0.03			0.01			0.35	0.00	0.00	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 38.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 5.5 Intersection LOS: A
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Future Volume (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt					0.999			0.910			0.932	
Flt Protected								0.984			0.976	
Satd. Flow (prot)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Flt Permitted								0.984			0.976	
Satd. Flow (perm)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		145.9			123.5			161.1			189.9	
Travel Time (s)		10.9			9.3			14.5			17.1	
Confl. Peds. (#/hr)			1	1			1					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%	14%	0%	0%	12%	0%	0%	0%	0%	0%	0%	10%
Adj. Flow (vph)	3	473	0	2	439	2	1	0	2	10	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	0	0	443	0	0	3	0	0	20	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
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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Future Volume (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.999			0.935			0.958	
Flt Protected					0.998			0.975			0.970	
Satd. Flow (prot)	0	1777	0	0	1776	0	0	1751	0	0	1785	0
Flt Permitted					0.998			0.975			0.970	
Satd. Flow (perm)	0	1777	0	0	1776	0	0	1751	0	0	1785	0
Link Speed (k/h)		48			48			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		9.3			12.9			11.9			19.1	
Confl. Peds. (#/hr)			2	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%	8%	0%	6%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	464	7	16	354	2	16	0	15	8	1	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	0	0	372	0	0	31	0	0	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			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 41.8% 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)	5	497	7	10	413	8	21	0	48	17	0	6
Future Volume (vph)	5	497	7	10	413	8	21	0	48	17	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor												
Frt		0.998			0.997			0.906			0.965	
Flt Protected	0.950			0.950				0.985			0.964	
Satd. Flow (prot)	1304	1693	0	1825	1764	0	0	1691	0	0	1581	0
Flt Permitted	0.950			0.950				0.985			0.964	
Satd. Flow (perm)	1304	1693	0	1825	1764	0	0	1691	0	0	1581	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		172.3			135.2			130.8			152.7	
Travel Time (s)		12.9			10.1			9.4			11.0	
Confl. Peds. (#/hr)			8	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
Heavy Vehicles (%)	40%	13%	29%	0%	8%	38%	0%	0%	2%	0%	0%	50%
Adj. Flow (vph)	5	497	7	10	413	8	21	0	48	17	0	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	504	0	10	421	0	0	69	0	0	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			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 37.3%		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)	181	402	70	234	405	210	47	532	95	72	531	72
Future Volume (vph)	181	402	70	234	405	210	47	532	95	72	531	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00					0.98
Frt			0.850			0.850		0.977				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1671	1541	1772	1700	1585	1534	3432	0	1690	1865	1458
Flt Permitted	0.259			0.263			0.236			0.328		
Satd. Flow (perm)	478	1671	1504	490	1700	1561	381	3432	0	583	1865	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			210		25				108
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		135.2			64.2			211.2			311.8	
Travel Time (s)		10.1			4.8			15.8			23.4	
Confl. Peds. (#/hr)	3		2	2		3	1					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 (%)	4%	15%	6%	3%	13%	3%	19%	3%	9%	8%	3%	12%
Adj. Flow (vph)	181	402	70	234	405	210	47	532	95	72	531	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	402	70	234	405	210	47	627	0	72	531	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

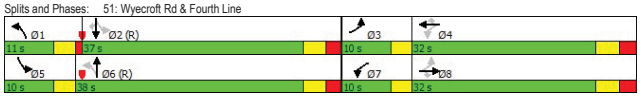
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	38.0		10.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	42.2%		11.1%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	32.4		7.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		2	2		3	3		0			1	1
Act Effct Green (s)	35.3	25.4	25.4	35.3	25.4	25.4	42.3	35.1		43.3	36.5	36.5
Actuated g/C Ratio	0.39	0.28	0.28	0.39	0.28	0.28	0.47	0.39		0.48	0.41	0.41
v/c Ratio	0.63	0.86	0.14	0.80	0.85	0.36	0.17	0.46		0.20	0.70	0.11
Control Delay	28.0	49.4	2.8	41.5	48.1	5.5	13.8	21.8		13.2	30.4	2.2
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	28.0	49.4	2.8	41.5	48.1	5.5	13.8	21.8		13.2	30.4	2.2
LOS	C	D	A	D	D	A	B	C		B	C	A
Approach Delay		38.5			35.8			21.2			25.6	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	19.2	64.7	0.0	25.6	65.0	0.0	4.1	42.0		6.2	82.5	0.0
Queue Length 95th (m)	32.9	#111.8	4.7	#54.3	#111.4	15.2	9.6	57.6		13.0	#133.9	4.1
Internal Link Dist (m)		111.2			40.2			187.2			287.8	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	286	484	510	291	493	601	269	1355		366	757	642
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	0.63	0.83	0.14	0.80	0.82	0.35	0.17	0.46		0.20	0.70	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 30.5		Intersection LOS: C	

Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

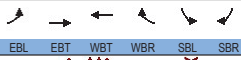
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 51: Wyecroft Rd & Fourth Line



Lanes, Volumes, Timings
54: Wyecroft Rd & South Service Rd W #3

PM Peak Period
06-26-2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	472	556	17	16	119
Future Volume (vph)	91	472	556	17	16	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.881	
Flt Protected		0.992			0.994	
Satd. Flow (prot)	0	1738	4891	0	1548	0
Flt Permitted		0.992			0.994	
Satd. Flow (perm)	0	1738	4891	0	1548	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		64.2	77.4		236.2	
Travel Time (s)		4.8	5.8		17.0	
Confl. Peds. (#/hr)	3			3		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	10%	7%	0%	6%	9%
Adj. Flow (vph)	91	472	556	17	16	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	563	573	0	135	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

Lanes, Volumes, Timings
56: Weller Ct & Wyecroft Rd

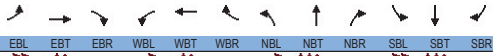
PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	562	11	17	432	17	69	0	56	4	0	3
Future Volume (vph)	5	562	11	17	432	17	69	0	56	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.997			0.995			0.940			0.942	
Flt Protected					0.998			0.973			0.972	
Satd. Flow (prot)	0	1678	0	0	1714	0	0	1665	0	0	1539	0
Flt Permitted					0.998			0.973			0.972	
Satd. Flow (perm)	0	1678	0	0	1714	0	0	1665	0	0	1539	0
Link Speed (k/h)		48			48			40			48	
Link Distance (m)		746.3			110.8			199.4			201.0	
Travel Time (s)		56.0			8.3			17.9			15.1	
Confl. Peds. (#/hr)			8	8					24	17		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%	14%	27%	12%	11%	18%	6%	0%	5%	25%	0%	0%
Adj. Flow (vph)	5	562	11	17	432	17	69	0	56	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	0	0	466	0	0	125	0	0	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)		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	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 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lanes, Volumes, Timings
63: Dorval Dr & Wyecroft Rd

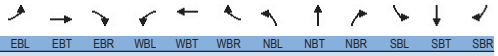
PM Peak Period
06-26-2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	568	255	169	101	179	495	245	1670	57	192	1781	236
Future Volume (vph)	568	255	169	101	179	495	245	1670	57	192	1781	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	*1.00	0.95	0.95	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	*1.00	*1.00
Ped Bike Factor	1.00				0.99		1.00				1.00	
Frt		0.940			0.890			0.995			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3411	3318	0	1789	3295	0	1722	5626	0	3471	5488	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3410	3318	0	1789	3295	0	1721	5626	0	3471	5488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		137			135			5			25	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	1					1	4					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%	3%	4%	2%	5%	2%	6%	2%	0%	2%	2%	10%
Adj. Flow (vph)	568	255	169	101	179	495	245	1670	57	192	1781	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	568	424	0	101	674	0	245	1727	0	192	2017	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			7.4			7.4	
Link Offset(m)		0.0			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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lanes, Volumes, Timings
63: Dorval Dr & Wyecroft Rd

PM Peak Period
06-26-2019



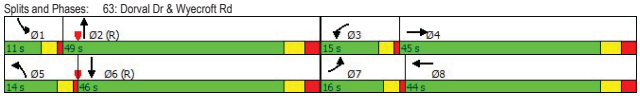
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	16.0	45.0		15.0	44.0		14.0	49.0		11.0	46.0	
Total Split (%)	13.3%	37.5%		12.5%	36.7%		11.7%	40.8%		9.2%	38.3%	
Maximum Green (s)	12.0	38.0		11.0	37.0		10.0	42.0		7.0	39.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		-2.0	0.0		-2.0	0.0		0.0	-2.0	
Total Lost Time (s)	2.0	7.0		2.0	7.0		2.0	7.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		0			1			0			4	
Act Effct Green (s)	14.0	29.6		12.1	27.7		21.3	46.9		11.4	41.0	
Actuated g/C Ratio	0.12	0.25		0.10	0.23		0.18	0.39		0.10	0.34	
v/c Ratio	1.43	0.46		0.56	1.06dr		0.80	0.78		0.58	1.07	
Control Delay	246.4	26.4		63.6	40.5		68.7	36.0		59.9	78.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	246.4	26.4		63.6	40.5		68.7	36.0		59.9	78.9	
LOS	F	C		E	D		E	D		E	E	
Approach Delay		152.4			43.6			40.1			77.2	
Approach LOS		F			D			D			E	
Queue Length 50th (m)	~90.4	30.2		22.8	60.8		55.8	120.3		22.2	~173.9	
Queue Length 95th (m)	#124.0	40.6		40.9	72.5		#127.8	143.9		#46.3	#201.0	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	397	1144		193	1109		306	2202		330	1891	
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	1.43	0.37		0.52	0.61		0.80	0.78		0.58	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 3.6 (3%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.43			
Intersection Signal Delay: 73.1		Intersection LOS: E	

Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

* User Entered Value
~ 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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

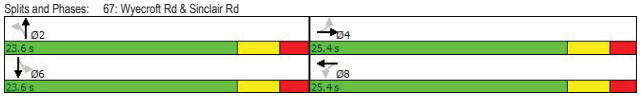


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Future Volume (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.993			0.999			0.992			0.875	
Flt Protected		0.998			0.999			0.955			0.996	
Satd. Flow (prot)	0	1810	0	0	1828	0	0	1770	0	0	1380	0
Flt Permitted		0.980			0.996			0.995			0.967	
Satd. Flow (perm)	0	1778	0	0	1822	0	0	1844	0	0	1339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			1			53			53	
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		96.4			190.6			115.7			194.3	
Travel Time (s)		7.2			14.3			10.4			17.5	
Confl. Peds. (#/hr)			5	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
Heavy Vehicles (%)	29%	4%	8%	0%	5%	0%	3%	0%	0%	0%	0%	23%
Adj. Flow (vph)	7	200	12	4	386	4	62	0	4	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	0	0	394	0	0	66	0	0	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)		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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0	
Minimum Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (%)	51.8%	51.8%		51.8%	51.8%		48.2%	48.2%		48.2%	48.2%	
Maximum Green (s)	20.0	20.0		20.0	20.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.4			5.4			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	9.0	9.0		9.0	9.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	5	5		0	0		0	0		0	0	
Act Effct Green (s)		20.0			20.0			20.3			20.3	
Actuated g/C Ratio		0.74			0.74			0.75			0.75	
v/c Ratio		0.17			0.29			0.05			0.01	
Control Delay		6.6			7.4			4.5			0.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.6			7.4			4.5			0.4	
LOS		A			A			A			A	
Approach Delay		6.6			7.4			4.5			0.4	
Approach LOS		A			A			A			A	
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		22.4			42.4			6.2			0.4	
Internal Link Dist (m)		72.4			166.6			91.7			170.3	
Turn Bay Length (m)												
Base Capacity (vph)		1371			1404			1402			1022	
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		0.16			0.28			0.05			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 27.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	250	231	895	579	71
Future Volume (vph)	21	250	231	895	579	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	20.0		20.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.875				0.985	
Flt Protected	0.996		0.950			
Satd. Flow (prot)	1623	0	1755	1921	1863	0
Flt Permitted	0.996		0.950			
Satd. Flow (perm)	1623	0	1755	1921	1863	0
Link Speed (k/h)	48			50	50	
Link Distance (m)	146.1			210.8	216.3	
Travel Time (s)	11.0			15.2	15.6	
Confl. Peds. (#/hr)			14			14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	3%	4%	0%	1%	6%
Adj. Flow (vph)	21	250	231	895	579	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	271	0	231	895	650	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.4%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	459	229	76	99	229	444	76	1009	345	1165	1023	655
Future Volume (vph)	459	229	76	99	229	444	76	1009	345	1165	1023	655
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		50.0	40.0		0.0	40.0		60.0	105.0		60.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	*1.00	*1.00	0.97	0.95	1.00
Ped Bike Factor				1.00					0.99	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	3579	1601	1615	3579	1471	1789	3659	1570	3471	3510	1601
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	3579	1601	1612	3579	1471	1789	3659	1550	3470	3510	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			444			250			540
Link Speed (k/h)		48			50			60			60	
Link Distance (m)		265.8			128.7			281.0			274.8	
Travel Time (s)		19.9			9.3			16.9			16.5	
Confl. Peds. (#/hr)				1					1	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%	2%	13%	2%	11%	2%	5%	4%	2%	4%	2%
Adj. Flow (vph)	459	229	76	99	229	444	76	1009	345	1165	1023	655
Shared Lane Traffic (%)												
Lane Group Flow (vph)	459	229	76	99	229	444	76	1009	345	1165	1023	655
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

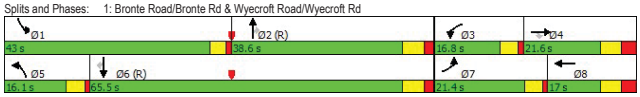
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			Free			2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0		5.0	15.0	15.0	6.0	15.0	15.0
Minimum Split (s)	9.5	12.0	12.0	9.5	17.0		9.5	21.0	21.0	10.0	21.0	21.0
Total Split (s)	21.4	21.6	21.6	16.8	17.0		16.1	38.6	38.6	43.0	65.5	65.5
Total Split (%)	17.8%	18.0%	18.0%	14.0%	14.2%		13.4%	32.2%	32.2%	35.8%	54.6%	54.6%
Maximum Green (s)	16.9	14.6	14.6	12.3	10.0		11.6	32.6	32.6	39.0	59.5	59.5
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		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	-2.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0		4.5	4.0	6.0	2.0	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	3.5		3.0	4.0	4.0	5.5	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.9	15.9	15.9	11.0	10.0	120.0	9.8	34.6	32.6	41.0	63.5	63.5
Actuated g/C Ratio	0.14	0.13	0.13	0.09	0.08	1.00	0.08	0.29	0.27	0.34	0.53	0.53
v/c Ratio	0.94	0.48	0.23	0.67	0.77	0.30	0.52	0.96	0.57	0.98	0.55	0.59
Control Delay	79.7	52.6	1.5	74.4	71.4	0.5	65.5	61.3	14.7	61.9	21.0	6.1
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	79.7	52.6	1.5	74.4	71.4	0.5	65.5	61.3	14.7	61.9	21.0	6.1
LOS	E	D	A	E	E	A	E	E	B	E	C	A
Approach Delay		63.8			31.0			50.3			34.3	
Approach LOS		E			C			D			C	
Queue Length 50th (m)	55.9	27.0	0.0	22.7	28.2	0.0	17.4	116.8	17.4	139.3	85.5	14.0
Queue Length 95th (m)	#86.5	40.0	0.0	#42.8	#46.3	0.0	32.9	#156.4	47.2	#185.1	107.6	45.4
Internal Link Dist (m)		241.8			104.7			257.0			250.8	
Turn Bay Length (m)	75.0		50.0	40.0			40.0		60.0	105.0		60.0
Base Capacity (vph)	488	473	337	165	298	1471	172	1055	603	1185	1858	1101
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	0.48	0.23	0.60	0.77	0.30	0.44	0.96	0.57	0.98	0.55	0.59

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 41.7		Intersection LOS: D	
Intersection Capacity Utilization 98.8%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Bronte Road/Bronte Rd & Wyecroft Road/Wyecroft Rd

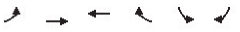


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	215	1379	684	26	9	54
Future Volume (vph)	215	1379	684	26	9	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	20.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.995		0.884	
Flt Protected	0.950				0.993	
Satd. Flow (prot)	1825	3544	3143	0	1494	0
Flt Permitted	0.950				0.993	
Satd. Flow (perm)	1825	3544	3143	0	1494	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		121.7	81.2		226.5	
Travel Time (s)		8.8	5.8		16.3	
Confl. Peds. (#/hr)	3			3		
Confl. Bikes (#/hr)						54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	16%	4%	0%	15%
Adj. Flow (vph)	215	1379	684	26	9	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	215	1379	710	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	1634	701	4	7	14
Future Volume (vph)	16	1634	701	4	7	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.910	
Flt Protected					0.984	
Satd. Flow (prot)	0	3545	3173	0	1644	0
Flt Permitted					0.984	
Satd. Flow (perm)	0	3545	3173	0	1644	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		128.7	121.7		152.2	
Travel Time (s)		9.3	8.8		13.7	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	15%	0%	0%	7%
Adj. Flow (vph)	16	1634	701	4	7	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1650	705	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	506	776	73	43	48
Future Volume (vph)	24	506	776	73	43	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Frt			0.987		0.929	
Flt Protected		0.998			0.977	
Satd. Flow (prot)	0	4467	3248	0	1650	0
Flt Permitted		0.998			0.977	
Satd. Flow (perm)	0	4467	3248	0	1650	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		68.2	87.4		142.1	
Travel Time (s)		4.9	6.3		10.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	18%	11%	10%	12%	0%
Adj. Flow (vph)	24	506	776	73	43	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	530	849	0	91	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		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)	64	1198	24	7	713	43	2	0	1	16	0	20
Future Volume (vph)	64	1198	24	7	713	43	2	0	1	16	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.992			0.955			0.850	
Flt Protected	0.950							0.968		0.950		
Satd. Flow (prot)	1825	3469	0	0	3221	0	0	1776	0	1825	1633	0
Flt Permitted	0.950							0.968		0.950		
Satd. Flow (perm)	1825	3469	0	0	3221	0	0	1776	0	1825	1633	0
Link Speed (k/h)		50			50			40			50	
Link Distance (m)		316.8			441.5			245.2			363.5	
Travel Time (s)		22.8			31.8			22.1			26.2	
Confl. Peds. (#/hr)	4		1	1		4			1	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%	5%	0%	0%	13%	5%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	64	1198	24	7	713	43	2	0	1	16	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1222	0	0	763	0	0	3	0	16	20	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 63.5%		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)	51	1037	8	17	848	36	4	0	8	9	0	14
Future Volume (vph)	51	1037	8	17	848	36	4	0	8	9	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.994			0.910			0.918	
Flt Protected		0.998			0.999			0.984			0.981	
Satd. Flow (prot)	0	3463	0	0	3380	0	0	1032	0	0	1593	0
Flt Permitted		0.998			0.999			0.984			0.981	
Satd. Flow (perm)	0	3463	0	0	3380	0	0	1032	0	0	1593	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		441.5			436.6			166.3			348.3	
Travel Time (s)		31.8			31.4			12.0			25.1	
Confl. Peds. (#/hr)	8		6	6		8	1		1	1		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 (%)	4%	5%	25%	35%	7%	0%	50%	0%	75%	22%	0%	0%
Adj. Flow (vph)	51	1037	8	17	848	36	4	0	8	9	0	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1096	0	0	901	0	0	12	0	0	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)		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	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 69.2%		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)	889	262	194	53	183	102	331	2044	82	609	2327	1834
Future Volume (vph)	889	262	194	53	183	102	331	2044	82	609	2327	1834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2100	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	50.0		50.0	115.0		50.0	80.0		100.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	1.00	1.00	*1.00	*1.00	0.97	*1.00	1.00
Ped Bike Factor			0.99	1.00					0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3248	1847	1570	1547	1795	1471	1772	6184	1570	3437	5650	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3248	1847	1549	1543	1795	1471	1772	6184	1550	3437	5650	1617
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			194			87						790
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		113.5			184.2			499.0			390.5	
Travel Time (s)		8.2			13.3			29.9			23.4	
Confl. Peds. (#/hr)			1	1						1	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 (%)	9%	4%	4%	18%	7%	11%	3%	3%	4%	3%	2%	1%
Adj. Flow (vph)	889	262	194	53	183	102	331	2044	82	609	2327	1834
Shared Lane Traffic (%)												
Lane Group Flow (vph)	889	262	194	53	183	102	331	2044	82	609	2327	1834
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	0.86	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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	4	4	4	8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	28.0	28.0	7.0	28.0	
Minimum Split (s)	16.4	16.4	16.4	16.8	16.8	10.0	10.0	34.2	34.2	10.0	34.2	
Total Split (s)	33.0	33.0	33.0	18.0	18.0	22.0	20.0	47.0	47.0	22.0	49.0	
Total Split (%)	27.5%	27.5%	27.5%	15.0%	15.0%	18.3%	16.7%	39.2%	39.2%	18.3%	40.8%	
Maximum Green (s)	26.6	26.6	26.6	11.2	11.2	19.0	17.0	40.8	40.8	19.0	42.8	
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0	3.0	3.0	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.7	2.7	2.7	2.8	2.8	0.0	0.0	2.5	2.5	0.0	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-2.0	-3.0	-2.0	-2.0	
Total Lost Time (s)	6.4	6.4	6.4	6.8	6.8	3.0	1.0	4.2	3.2	1.0	4.2	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	4.5	4.5	4.5	3.5	3.5	2.5	5.0	5.0	5.0	2.5	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	26.6	26.6	26.6	11.2	11.2	37.0	19.0	42.8	43.8	21.0	44.8	120.0
Actuated g/C Ratio	0.22	0.22	0.22	0.09	0.09	0.31	0.16	0.36	0.36	0.18	0.37	1.00
v/c Ratio	1.24	0.64	0.39	0.37	1.10	0.20	1.18	0.93	0.15	1.01	1.10	1.13
Control Delay	158.0	50.6	7.8	59.0	147.9	9.4	156.4	45.6	26.5	89.2	90.3	75.4
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	158.0	50.6	7.8	59.0	147.9	9.4	156.4	45.6	26.5	89.2	90.3	75.4
LOS	F	D	A	E	F	A	F	D	C	F	F	E
Approach Delay		115.4			92.2			59.9			84.4	
Approach LOS		F			F			E			F	
Queue Length 50th (m)	~133.6	56.3	0.0	11.9	~48.6	2.5	~93.5	153.1	12.8	~76.0	~207.8	~106.3
Queue Length 95th (m)	#172.2	84.5	18.3	25.0	#93.7	15.0	#149.8	#171.9	24.3	#112.9	#233.8	#186.7
Internal Link Dist (m)		89.5			160.2			475.0			366.5	
Turn Bay Length (m)			50.0	50.0		50.0	115.0		50.0	80.0		100.0
Base Capacity (vph)	719	409	494	144	167	513	280	2205	565	601	2109	1617
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	1.24	0.64	0.39	0.37	1.10	0.20	1.18	0.93	0.15	1.01	1.10	1.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay: 82.6		Intersection LOS: F	
Intersection Capacity Utilization 116.1%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

~ 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: 15: Third Line & Wyecroft Rd

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	909	312	59	981	32	29
Future Volume (vph)	909	312	59	981	32	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3313	0	1437	3476	1426	984
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3313	0	1437	3476	1426	984
Link Speed (k/h)	50			50	40	
Link Distance (m)	436.6			161.0	162.8	
Travel Time (s)	31.4			11.6	14.7	
Confl. Peds. (#/hr)		4	4			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	27%	5%	28%	66%
Adj. Flow (vph)	909	312	59	981	32	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1221	0	59	981	32	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.5%		ICU Level of Service A	
Analysis Period (min) 15			

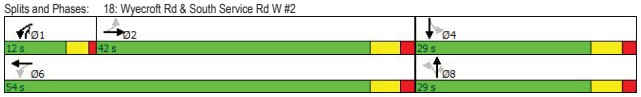
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	764	128	361	962	122	118	4	105	26	4	9
Future Volume (vph)	3	764	128	361	962	122	118	4	105	26	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00	0.99		1.00	
Frt		0.978			0.983				0.850		0.969	
Flt Protected	0.950			0.950				0.954			0.968	
Satd. Flow (prot)	1825	3118	0	1825	3286	0	0	1833	1633	0	1704	0
Flt Permitted	0.264			0.237				0.704			0.731	
Satd. Flow (perm)	507	3118	0	454	3286	0	0	1347	1612	0	1286	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			28				102		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.0			197.2			238.6			282.2	
Travel Time (s)		11.6			14.2			17.2			20.3	
Confl. Peds. (#/hr)	2		6	6		2	4		1	1		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 (%)	0%	16%	2%	0%	9%	8%	0%	0%	0%	8%	0%	0%
Adj. Flow (vph)	3	764	128	361	962	122	118	4	105	26	4	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	892	0	361	1084	0	0	122	105	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)		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		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	6	6			2		1	1		4	4	
Act Effct Green (s)	36.1	36.1		50.4	49.9			13.5	20.5		13.5	
Actuated g/C Ratio	0.52	0.52		0.72	0.71			0.19	0.29		0.19	
v/c Ratio	0.01	0.55		0.74	0.46			0.47	0.19		0.15	
Control Delay	12.0	14.5		18.4	7.3			32.7	4.5		21.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	12.0	14.5		18.4	7.3			32.7	4.5		21.4	
LOS	B	B		B	A			C	A		C	
Approach Delay		14.5			10.1			19.6			21.4	
Approach LOS		B			B			B			C	
Queue Length 50th (m)	0.2	40.1		15.4	31.4			15.0	0.3		3.4	
Queue Length 95th (m)	1.8	72.8		#58.8	65.1			29.7	8.3		10.6	
Internal Link Dist (m)		137.0			173.2			214.6			258.2	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	266	1654		487	2313			452	548		438	
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	0.01	0.54		0.74	0.47			0.27	0.19		0.09	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 69.9			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 12.6		Intersection LOS: B	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	

Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	833	3	112	1550	1	25
Future Volume (vph)	833	3	112	1550	1	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3172	0	0	3477	1825	1633
Flt Permitted				0.997	0.950	
Satd. Flow (perm)	3172	0	0	3477	1825	1633
Link Speed (k/h)	50			50	40	
Link Distance (m)	197.2			45.1	235.3	
Travel Time (s)	14.2			3.2	21.2	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	15%	0%	0%	5%	0%	0%
Adj. Flow (vph)	833	3	112	1550	1	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	836	0	0	1662	1	25
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 82.6%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	423	150	37	218	21	7
Future Volume (vph)	423	150	37	218	21	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.966	
Flt Protected			0.950		0.964	
Satd. Flow (prot)	1710	0	1690	1334	1318	0
Flt Permitted			0.950		0.964	
Satd. Flow (perm)	1710	0	1690	1334	1318	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	597.6			460.9	281.1	
Travel Time (s)	43.0			33.2	20.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	11%	1%	8%	44%	43%	14%
Adj. Flow (vph)	423	150	37	218	21	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	573	0	37	218	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

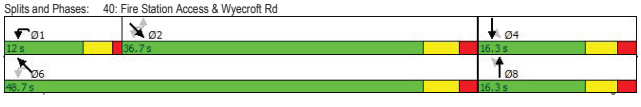
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	8	0	14	1	0	0	4	452	10	16	318	2
Future Volume (vph)	8	0	14	1	0	0	4	452	10	16	318	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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		0.850							0.850		0.999	
Flt Protected	0.950				0.950					0.950		
Satd. Flow (prot)	1615	1266	0	0	1825	0	0	1630	1166	1393	1435	0
Flt Permitted								0.997		0.422		
Satd. Flow (perm)	1700	1266	0	0	1921	0	0	1625	1166	619	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		477							106		1	
Link Speed (k/h)		50			40			50			50	
Link Distance (m)		120.2			119.2			273.4			146.0	
Travel Time (s)		8.7			10.7			19.7			10.5	
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
Heavy Vehicles (%)	13%	0%	29%	0%	0%	0%	0%	18%	40%	31%	34%	0%
Adj. Flow (vph)	8	0	14	1	0	0	4	452	10	16	318	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	14	0	0	1	0	0	456	10	16	320	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	pm+pt	NA	
Protected Phases		8			4			2		1	6	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	14.4	14.4			14.4			32.3	32.3	29.2	33.6	
Actuated g/C Ratio	0.40	0.40			0.40			0.90	0.90	0.81	0.93	
v/c Ratio	0.01	0.02			0.00			0.31	0.01	0.02	0.24	
Control Delay	16.6	0.1			17.0			4.6	0.0	1.8	2.1	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	16.6	0.1			17.0			4.6	0.0	1.8	2.1	
LOS	B	A			B			A	A	A	A	
Approach Delay		6.1			17.0			4.5			2.1	
Approach LOS		A			B			A			A	
Queue Length 50th (m)	0.3	0.0			0.1			0.0	0.0	0.1	0.0	
Queue Length 95th (m)	4.0	0.0			1.2			59.5	0.0	1.7	23.4	
Internal Link Dist (m)		96.2			95.2			249.4			122.0	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	713	808			806			1331	974	762	1344	
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	0.01	0.02			0.00			0.34	0.01	0.02	0.24	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 36			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 3.6		Intersection LOS: A	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	404	3	1	326	19	1	0	0	4	0	4
Future Volume (vph)	12	404	3	1	326	19	1	0	0	4	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.999			0.993						0.932	
Flt Protected		0.999						0.950			0.976	
Satd. Flow (prot)	0	1644	0	0	1484	0	0	1825	0	0	1398	0
Flt Permitted		0.999						0.950			0.976	
Satd. Flow (perm)	0	1644	0	0	1484	0	0	1825	0	0	1398	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			123.5			161.1			189.8	
Travel Time (s)		10.5			8.9			14.5			17.1	
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 (%)	8%	17%	0%	100%	30%	0%	0%	0%	0%	25%	0%	25%
Adj. Flow (vph)	12	404	3	1	326	19	1	0	0	4	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	419	0	0	346	0	0	1	0	0	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			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 40.4%		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)	2	405	23	11	348	6	7	0	2	0	0	0
Future Volume (vph)	2	405	23	11	348	6	7	0	2	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.993			0.998			0.970				
Flt Protected					0.998			0.963				
Satd. Flow (prot)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Flt Permitted					0.998			0.963				
Satd. Flow (perm)	0	1644	0	0	1676	0	0	1348	0	0	1921	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		8.9			12.4			11.9			19.1	
Confl. Peds. (#/hr)			2	2			1		2	2		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%	17%	0%	27%	14%	0%	14%	0%	100%	0%	0%	0%
Adj. Flow (vph)	2	405	23	11	348	6	7	0	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	430	0	0	365	0	0	9	0	0	0	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		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)	11	340	19	55	376	16	3	0	19	1	0	4
Future Volume (vph)	11	340	19	55	376	16	3	0	19	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor												
Frt		0.992			0.994			0.883			0.892	
Flt Protected	0.950			0.950				0.993			0.990	
Satd. Flow (prot)	1674	1615	0	1615	1599	0	0	1169	0	0	1212	0
Flt Permitted	0.950			0.950				0.993			0.990	
Satd. Flow (perm)	1674	1615	0	1615	1599	0	0	1169	0	0	1212	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		172.3			135.1			130.8			152.7	
Travel Time (s)		12.4			9.7			9.4			11.0	
Confl. Peds. (#/hr)			6	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 (%)	9%	19%	0%	13%	20%	6%	0%	0%	51%	0%	0%	50%
Adj. Flow (vph)	11	340	19	55	376	16	3	0	19	1	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	359	0	55	392	0	0	22	0	0	5	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.4%		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)	54	297	58	79	285	31	58	257	174	257	435	109
Future Volume (vph)	54	297	58	79	285	31	58	257	174	257	435	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		1.00		0.98
Frt			0.850			0.850		0.939				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	1525	1183	1587	1588	1286	1659	3289	0	1738	1830	1555
Flt Permitted	0.419			0.399			0.399			0.422		
Satd. Flow (perm)	591	1525	1158	666	1588	1269	696	3289	0	771	1830	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			153		174				120
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		135.1			64.2			211.2			311.7	
Travel Time (s)		9.7			4.6			15.8			23.4	
Confl. Peds. (#/hr)	1		1	1		1	1		2	2		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 (%)	36%	26%	38%	15%	21%	27%	10%	2%	5%	5%	5%	5%
Adj. Flow (vph)	54	297	58	79	285	31	58	257	174	257	435	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	297	58	79	285	31	58	431	0	257	435	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			3.7			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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	33.0		15.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	36.7%		16.7%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	27.4		12.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		1	1		1	1		2			1	1
Act Effct Green (s)	31.9	23.4	23.4	31.9	23.4	23.4	42.0	33.4		49.6	38.3	38.3
Actuated g/C Ratio	0.35	0.26	0.26	0.35	0.26	0.26	0.47	0.37		0.55	0.43	0.43
v/c Ratio	0.20	0.75	0.14	0.26	0.69	0.07	0.15	0.32		0.48	0.56	0.15
Control Delay	17.5	42.8	0.7	18.2	39.1	0.3	13.3	14.1		15.3	25.9	4.0
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	17.5	42.8	0.7	18.2	39.1	0.3	13.3	14.1		15.3	25.9	4.0
LOS	B	D	A	B	D	A	B	B		B	C	A
Approach Delay		33.5			31.8			14.0			19.5	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	5.4	45.4	0.0	8.0	42.8	0.0	5.0	17.5		24.6	62.9	0.0
Queue Length 95th (m)	12.2	72.8	0.0	16.2	68.7	0.0	11.2	29.7		40.4	96.0	8.9
Internal Link Dist (m)		111.1			40.2			187.2			287.7	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	267	442	444	307	460	476	399	1328		555	779	716
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	0.20	0.67	0.13	0.26	0.62	0.07	0.15	0.32		0.46	0.56	0.15

Intersection Summary
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 40.5 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 23.3 Intersection LOS: C

Intersection Capacity Utilization 73.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 51: Wyecroft Rd & Fourth Line

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	101	664	346	20	4	65
Future Volume (vph)	101	664	346	20	4	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Frt			0.992		0.873	
Flt Protected		0.993			0.997	
Satd. Flow (prot)	0	1717	4311	0	1447	0
Flt Permitted		0.993			0.997	
Satd. Flow (perm)	0	1717	4311	0	1447	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.2	77.5		236.2	
Travel Time (s)		4.6	5.6		17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	12%	21%	15%	25%	15%
Adj. Flow (vph)	101	664	346	20	4	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	765	366	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 61.9% 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)	5	513	22	32	468	10	5	0	23	9	0	2
Future Volume (vph)	5	513	22	32	468	10	5	0	23	9	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.994			0.997			0.889			0.975	
Flt Protected					0.997			0.991			0.961	
Satd. Flow (prot)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Flt Permitted					0.997			0.991			0.961	
Satd. Flow (perm)	0	1639	0	0	1640	0	0	1216	0	0	1800	0
Link Speed (k/h)		50			50			40			48	
Link Distance (m)		746.2			110.9			199.4			294.8	
Travel Time (s)		53.7			8.0			17.9			22.1	
Confl. Peds. (#/hr)			20	20			1		17	17		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 (%)	20%	17%	5%	28%	16%	0%	40%	0%	39%	0%	0%	0%
Adj. Flow (vph)	5	513	22	32	468	10	5	0	23	9	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	540	0	0	510	0	0	28	0	0	11	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	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 60.5% 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)	220	191	164	32	191	250	166	1554	73	282	1414	549
Future Volume (vph)	220	191	164	32	191	250	166	1554	73	282	1414	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Frt		0.931			0.915			0.993			0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2832	3038	0	1644	3152	0	1722	4795	0	3437	4686	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2820	3038	0	1636	3152	0	1721	4795	0	3436	4686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		164			189			7			91	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.3			10.4			12.8			17.6	
Confl. Peds. (#/hr)	2		8	8		2	6		3	3		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 (%)	25%	9%	13%	11%	4%	6%	6%	5%	3%	3%	5%	11%
Parking (#/hr)								0				
Adj. Flow (vph)	220	191	164	32	191	250	166	1554	73	282	1414	549
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	355	0	32	441	0	166	1627	0	282	1963	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			7.4			7.4	
Link Offset(m)		0.0			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	1.03	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		3.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	11.0	45.0		10.0	44.0		15.0	51.0		14.0	50.0	
Total Split (%)	9.2%	37.5%		8.3%	36.7%		12.5%	42.5%		11.7%	41.7%	
Maximum Green (s)	7.0	38.0		6.0	37.0		11.0	44.0		10.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	2.0	7.0		4.0	7.0		4.0	7.0		4.0	7.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		30.0						29.0			29.0	
Pedestrian Calls (#/hr)		8						3			6	
Act Effct Green (s)	9.0	23.7		5.9	18.7		18.3	57.1		15.2	53.9	
Actuated g/C Ratio	0.08	0.20		0.05	0.16		0.15	0.48		0.13	0.45	
v/c Ratio	1.04	0.48		0.40	0.68		0.63	0.71		0.65	0.91	
Control Delay	125.8	24.1		69.9	31.1		60.0	28.4		57.6	37.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	125.8	24.1		69.9	31.1		60.0	28.4		57.6	37.6	
LOS	F	C		E	C		E	C		E	D	
Approach Delay		63.0			33.7			31.4			40.1	
Approach LOS		E			C			C			D	
Queue Length 50th (m)	~28.7	22.1		7.4	30.5		36.5	105.0		32.5	145.3	
Queue Length 95th (m)	#53.7	30.0		17.9	38.4		#82.3	#158.3		#58.7	#221.4	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)				50.0			65.0			65.0		
Base Capacity (vph)	212	1074		82	1102		263	2283		436	2156	
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	1.04	0.33		0.39	0.40		0.63	0.71		0.65	0.91	

Intersection Summary
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
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: 1.04

Intersection Signal Delay: 39.0	Intersection LOS: D
Intersection Capacity Utilization 87.0%	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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

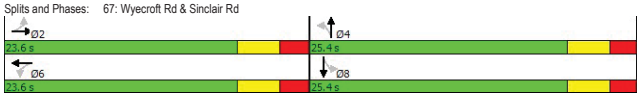
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	321	100	47	378	4	12	0	6	0	0	2
Future Volume (vph)	6	321	100	47	378	4	12	0	6	0	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor		0.99			1.00							
Frt		0.968			0.999			0.955			0.865	
Flt Protected		0.999			0.995			0.968				
Satd. Flow (prot)	0	1765	0	0	1814	0	0	1452	0	0	1108	0
Flt Permitted		0.991			0.913							
Satd. Flow (perm)	0	1751	0	0	1664	0	0	1500	0	0	1108	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			1			58			286	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		96.5			190.6			115.7			194.4	
Travel Time (s)		6.9			13.7			10.4			17.5	
Confl. Peds. (#/hr)			2	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%	5%	4%	0%	6%	0%	0%	0%	67%	0%	0%	50%
Adj. Flow (vph)	6	321	100	47	378	4	12	0	6	0	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	427	0	0	429	0	0	18	0	0	2	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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	17.0	17.0		17.0	17.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (s)	23.6	23.6		23.6	23.6		25.4	25.4		25.4	25.4	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1		2.1	2.1	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.6			5.6			5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.5	3.5		3.5	3.5	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		9.0	9.0		9.0	9.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	2	2		0	0		0	0		0	0	
Act Effct Green (s)		20.9			20.9			12.1			12.1	
Actuated g/C Ratio		0.89			0.89			0.52			0.52	
v/c Ratio		0.27			0.29			0.02			0.00	
Control Delay		3.1			3.5			1.1			0.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.1			3.5			1.1			0.0	
LOS		A			A			A			A	
Approach Delay		3.1			3.5			1.1				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		32.2			36.1			0.9			0.0	
Internal Link Dist (m)		72.5			166.6			91.7			170.4	
Turn Bay Length (m)												
Base Capacity (vph)		1356			1281			1260			971	
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			0.33			0.01			0.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 23.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	

Analysis Period (min) 15

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	143	217	275	629	222
Future Volume (vph)	12	143	217	275	629	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	20.0		20.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.965	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1825	1555	1807	1865	1795	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1825	1555	1807	1865	1795	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	146.2			210.7	216.3	
Travel Time (s)	10.5			15.2	15.6	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	1%	3%	3%	4%
Adj. Flow (vph)	12	143	217	275	629	222
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	143	217	275	851	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.0%		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)	655	328	109	335	328	1063	109	1046	140	533	961	459
Future Volume (vph)	655	328	109	335	328	1063	109	1046	140	533	961	459
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		50.0	40.0		0.0	40.0		60.0	105.0		60.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	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	3579	1601	1789	3579	1601	1789	3579	1601	3471	3579	1601
Flt Permitted	0.950			0.554			0.950			0.950		
Satd. Flow (perm)	3471	3579	1601	1043	3579	1601	1789	3579	1601	3471	3579	1601
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						200			399
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		221.1			131.0			223.9			255.1	
Travel Time (s)		16.6			9.8			13.4			15.3	
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)	655	328	109	335	328	1063	109	1046	140	533	961	459
Shared Lane Traffic (%)												
Lane Group Flow (vph)	655	328	109	335	328	1063	109	1046	140	533	961	459
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	0	0	0	0	0	0	0	0	0	0	0
Detector Template	Left											
Leading Detector (m)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Type	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
Turn Type	Prot	NA	Perm	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		Free			2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	12.0	12.0	9.5	12.0		9.5	11.0	11.0	9.5	11.0	11.0
Total Split (s)	30.0	24.4	24.4	24.6	19.0		17.8	46.0	46.0	25.0	53.2	53.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	25.0%	20.3%	20.3%	20.5%	15.8%		14.8%	38.3%	38.3%	20.8%	44.3%	44.3%
Maximum Green (s)	25.5	17.4	17.4	20.1	12.0		13.3	40.0	40.0	20.5	47.2	47.2
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		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	7.0	7.0	4.5	7.0		4.5	6.0	6.0	4.5	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-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	24.9	17.9	17.9	34.1	12.3	120.0	11.5	40.5	40.5	20.2	49.2	49.2
Actuated g/C Ratio	0.21	0.15	0.15	0.28	0.10	1.00	0.10	0.34	0.34	0.17	0.41	0.41
v/c Ratio	0.91	0.61	0.30	0.81	0.89	0.66	0.64	0.87	0.21	0.91	0.65	0.52
Control Delay	64.2	53.6	4.7	46.7	80.3	2.2	68.7	46.2	1.6	70.1	31.6	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	64.2	53.6	4.7	46.7	80.3	2.2	68.7	46.2	1.6	70.1	31.6	6.5
LOS	E	D	A	D	F	A	E	D	A	E	C	A
Approach Delay		55.1			25.7			43.3			36.2	
Approach LOS		E			C			D			D	
Queue Length 50th (m)	77.7	38.7	0.0	60.4	40.8	0.0	24.8	121.5	0.0	64.0	96.4	8.7
Queue Length 95th (m)	#108.1	54.1	6.9	#95.9	#67.8	0.0	43.3	#151.0	3.5	#93.6	120.3	33.9
Internal Link Dist (m)		197.1			107.0			199.9			231.1	
Turn Bay Length (m)	75.0		50.0	40.0			40.0		60.0	105.0		60.0
Base Capacity (vph)	737	534	366	428	367	1601	198	1208	673	592	1468	891
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	0.89	0.61	0.30	0.78	0.89	0.66	0.55	0.87	0.21	0.90	0.65	0.52

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
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: 0.91
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 90.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Bronte Rd & Wyecroft Rd

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	832	1456	28	9	234
Future Volume (vph)	52	832	1456	28	9	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	20.0				20.0	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997		0.870	
Flt Protected	0.950				0.998	
Satd. Flow (prot)	1789	3380	3502	0	1652	0
Flt Permitted	0.950				0.998	
Satd. Flow (perm)	1789	3380	3502	0	1652	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		121.8	81.2		226.6	
Travel Time (s)		9.1	6.1		16.3	
Confl. Peds. (#/hr)	5			5		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	8%	4%	0%	0%	1%
Adj. Flow (vph)	52	832	1456	28	9	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	832	1484	0	243	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	29	903	1741	10	1	48
Future Volume (vph)	29	903	1741	10	1	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.868	
Flt Protected		0.998			0.999	
Satd. Flow (prot)	0	3411	3541	0	1603	0
Flt Permitted		0.998			0.999	
Satd. Flow (perm)	0	3411	3541	0	1603	0
Link Speed (k/h)		48	48		40	
Link Distance (m)		131.0	121.8		152.3	
Travel Time (s)		9.8	9.1		13.7	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	7%	3%	0%	0%	4%
Adj. Flow (vph)	29	903	1741	10	1	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	932	1751	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 58.4% ICU Level of Service B
Analysis Period (min) 15

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	34	828	445	60	71	76
Future Volume (vph)	34	828	445	60	71	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.982		0.930	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	4775	3319	0	1660	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	4775	3319	0	1660	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		68.2	87.4		142.0	
Travel Time (s)		5.1	6.6		10.2	
Confl. Peds. (#/hr)	1			1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	8%	8%	4%	6%
Adj. Flow (vph)	34	828	445	60	71	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	862	505	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15

Lanes, Volumes, Timings
11: Pacific Rd & Wyecroft Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	814	6	3	1288	40	5	0	6	51	0	96
Future Volume (vph)	39	814	6	3	1288	40	5	0	6	51	0	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.995			0.926			0.850	
Flt Protected	0.950							0.978		0.950		
Satd. Flow (prot)	1738	3474	0	0	3494	0	0	1740	0	1789	1585	0
Flt Permitted	0.950							0.978		0.950		
Satd. Flow (perm)	1738	3474	0	0	3494	0	0	1740	0	1789	1585	0
Link Speed (k/h)		48			48			40			50	
Link Distance (m)		316.8			441.5			245.3			363.5	
Travel Time (s)		23.8			33.1			22.1			26.2	
Confl. Peds. (#/hr)	5		1	1		5	1					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 (%)	5%	5%	0%	33%	4%	0%	0%	0%	0%	2%	0%	3%
Adj. Flow (vph)	39	814	6	3	1288	40	5	0	6	51	0	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	820	0	0	1331	0	0	11	0	51	96	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 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lanes, Volumes, Timings
12: Wyecroft Rd & Westgate Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	945	4	10	1273	23	15	0	22	26	0	45
Future Volume (vph)	6	945	4	10	1273	23	15	0	22	26	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.997			0.920			0.914	
Flt Protected								0.980			0.982	
Satd. Flow (prot)	0	3468	0	0	3480	0	0	1365	0	0	1724	0
Flt Permitted								0.980			0.982	
Satd. Flow (perm)	0	3468	0	0	3480	0	0	1365	0	0	1724	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		441.5			436.6			166.3			348.2	
Travel Time (s)		33.1			32.7			12.0			25.1	
Confl. Peds. (#/hr)	5		6	6		5	3					3
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%	5%	50%	80%	4%	4%	40%	0%	18%	0%	0%	0%
Adj. Flow (vph)	6	945	4	10	1273	23	15	0	22	26	0	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	955	0	0	1306	0	0	37	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	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 55.8%		ICU Level of Service B	
Analysis Period (min) 15			

Lanes, Volumes, Timings
15: Third Line & Wyecroft Rd

PM Peak Period
06-26-2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1298	338	251	95	368	509	256	1742	30	131	1568	543
Future Volume (vph)	1298	338	251	95	368	509	256	1742	30	131	1568	543
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		50.0	50.0		50.0	115.0		50.0	90.0		100.0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	0.97	1.00	1.00	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	0.91	1.00
Ped Bike Factor	1.00		0.99	1.00		0.99			0.98	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	1812	1570	1755	1847	1585	1706	5650	1512	3079	5142	1498
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3468	1812	1547	1752	1847	1564	1706	5650	1484	3076	5142	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			237			115			120			402
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		117.2			184.2			498.9			390.6	
Travel Time (s)		8.8			13.8			29.9			23.4	
Confl. Peds. (#/hr)	1		2	2		1			5	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
Heavy Vehicles (%)	2%	6%	4%	4%	4%	3%	7%	2%	8%	15%	2%	9%
Adj. Flow (vph)	1298	338	251	95	368	509	256	1742	30	131	1568	543
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1298	338	251	95	368	509	256	1742	30	131	1568	543
Enter Blocked Intersection	No	No	No	No	No	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			7.4			7.4	
Link Offset(m)		0.0			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	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lanes, Volumes, Timings
15: Third Line & Wyecroft Rd

PM Peak Period
06-26-2019

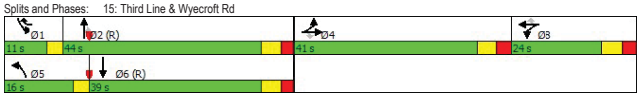
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	4	4	4	8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	28.0	28.0	7.0	28.0	
Minimum Split (s)	31.4	31.4	31.4	16.8	16.8	10.0	10.0	34.2	34.2	10.0	34.2	
Total Split (s)	41.0	41.0	41.0	24.0	24.0	11.0	16.0	44.0	44.0	11.0	39.0	
Total Split (%)	34.2%	34.2%	34.2%	20.0%	20.0%	9.2%	13.3%	36.7%	36.7%	9.2%	32.5%	
Maximum Green (s)	34.6	34.6	34.6	17.2	17.2	8.0	13.0	37.8	37.8	8.0	32.8	
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0	3.0	3.0	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.7	2.7	2.7	2.8	2.8	0.0	0.0	2.5	2.5	0.0	2.5	
Lost Time Adjust (s)	-2.0	-2.0	0.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	4.4	4.4	6.4	6.8	4.8	1.0	3.0	4.2	6.2	3.0	4.2	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	4.5	4.5	4.5	3.5	3.5	2.5	5.0	5.0	5.0	2.5	5.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	18.0					21.0	21.0		21.0	
Pedestrian Calls (#/hr)	2	2	2					5	5		0	
Act Effct Green (s)	36.6	36.6	34.6	17.2	19.2	33.0	13.0	39.8	37.8	8.0	34.8	120.0
Actuated g/C Ratio	0.30	0.30	0.29	0.14	0.16	0.28	0.11	0.33	0.32	0.07	0.29	1.00
v/c Ratio	1.23	0.61	0.41	0.38	1.25	0.99	1.39	0.93	0.05	0.64	1.05	0.36
Control Delay	147.3	41.3	7.2	51.5	178.4	70.5	245.6	48.8	0.2	69.3	79.6	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	147.3	41.3	7.2	51.5	178.4	70.5	245.6	48.8	0.2	69.3	79.6	0.7
LOS	F	D	A	D	F	E	F	D	A	E	E	A
Approach Delay		109.7			109.5			72.9			59.9	
Approach LOS		F			F			E			E	
Queue Length 50th (m)	~194.1	67.9	2.4	20.5	~107.9	95.9	~80.2	131.4	0.0	15.7	~147.6	0.0
Queue Length 95th (m)	#235.3	99.0	21.8	37.2	#166.2	#134.3	#131.1	#154.2	0.0	#27.3	#177.2	0.0
Internal Link Dist (m)		93.2			160.2			474.9			366.6	
Turn Bay Length (m)			50.0	50.0		50.0	115.0		50.0	90.0		100.0
Base Capacity (vph)	1058	552	614	251	295	515	184	1873	549	205	1491	1498
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	1.23	0.61	0.41	0.38	1.25	0.99	1.39	0.93	0.05	0.64	1.05	0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14.4 (12%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay: 83.5		Intersection LOS: F	

Intersection Capacity Utilization 115.4%	ICU Level of Service H
Analysis Period (min) 15	

* User Entered Value
~ 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: 15: Third Line & Wyecroft Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1026	32	38	1202	143	102
Future Volume (vph)	1026	32	38	1202	143	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.995					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3503	0	1242	3510	1690	1396
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3503	0	1242	3510	1690	1396
Link Speed (k/h)	48			48	40	
Link Distance (m)	436.6			161.0	162.7	
Travel Time (s)	32.7			12.1	14.6	
Confl. Peds. (#/hr)		9	9			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	25%	47%	4%	8%	17%
Adj. Flow (vph)	1026	32	38	1202	143	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1058	0	38	1202	143	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.4			7.4	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

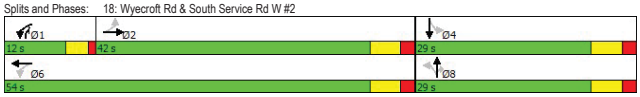
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1096	136	107	949	68	283	7	266	123	5	19
Future Volume (vph)	8	1096	136	107	949	68	283	7	266	123	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor	1.00	1.00			1.00			1.00			1.00	
Frt		0.983			0.990				0.850		0.983	
Flt Protected	0.950			0.950				0.953			0.960	
Satd. Flow (prot)	1644	3259	0	1825	3258	0	0	1831	1633	0	1630	0
Flt Permitted	0.282			0.101				0.665			0.434	
Satd. Flow (perm)	488	3259	0	194	3258	0	0	1275	1633	0	737	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			15				39		9	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		161.0			197.3			238.5			282.3	
Travel Time (s)		12.1			14.8			17.2			20.3	
Confl. Peds. (#/hr)	2		4	4		2	2					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 (%)	11%	10%	8%	0%	11%	7%	0%	0%	0%	11%	0%	14%
Adj. Flow (vph)	8	1096	136	107	949	68	283	7	266	123	5	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1232	0	107	1017	0	0	290	266	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	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	35.0	35.0		7.0	35.0		10.0	10.0	7.0	10.0	10.0	
Minimum Split (s)	42.0	42.0		12.0	42.0		29.0	29.0	12.0	29.0	29.0	
Total Split (s)	42.0	42.0		12.0	54.0		29.0	29.0	12.0	29.0	29.0	
Total Split (%)	50.6%	50.6%		14.5%	65.1%		34.9%	34.9%	14.5%	34.9%	34.9%	
Maximum Green (s)	36.0	36.0		8.0	48.0		23.0	23.0	8.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		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	
Total Lost Time (s)	6.0	6.0		4.0	6.0			6.0	4.0		6.0	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Vehicle Extension (s)	5.0	5.0		2.5	5.0		3.5	3.5	2.5	3.5	3.5	
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	
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	4	4			2		0	0		2	2	
Act Effct Green (s)	35.9	35.9		49.2	47.2			21.2	34.6		21.2	
Actuated g/C Ratio	0.45	0.45		0.61	0.59			0.26	0.43		0.26	
v/c Ratio	0.04	0.84		0.40	0.53			0.86	0.37		0.73	
Control Delay	14.2	26.8		11.4	11.4			54.3	14.7		48.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	14.2	26.8		11.4	11.4			54.3	14.7		48.7	
LOS	B	C		B	B			D	B		D	
Approach Delay		26.7			11.4			35.4			48.7	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	0.7	86.5		6.5	46.8			42.0	22.3		19.2	
Queue Length 95th (m)	3.3	#121.7		12.9	62.4			#83.6	39.6		#47.5	
Internal Link Dist (m)		137.0			173.3			214.5			258.3	
Turn Bay Length (m)	20.0											
Base Capacity (vph)	218	1471		281	1952			365	737		217	
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	0.04	0.84		0.38	0.52			0.79	0.36		0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 80.5			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	

Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Wyecroft Rd & South Service Rd W #2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1475	0	6	1046	2	73
Future Volume (vph)	1475	0	6	1046	2	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3544	0	0	3413	1825	1633
Flt Permitted					0.950	
Satd. Flow (perm)	3544	0	0	3413	1825	1633
Link Speed (k/h)	48			48	40	
Link Distance (m)	197.3			45.1	235.2	
Travel Time (s)	14.8			3.4	21.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	7%	0%	0%
Adj. Flow (vph)	1475	0	6	1046	2	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1475	0	0	1052	2	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	314	10	11	484	194	59
Future Volume (vph)	314	10	11	484	194	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996				0.969	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	1569	0	1437	1795	1731	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	1569	0	1437	1795	1731	0
Link Speed (k/h)	48			48	50	
Link Distance (m)	597.7			248.1	281.2	
Travel Time (s)	44.8			18.6	20.2	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	22%	20%	27%	7%	1%	12%
Adj. Flow (vph)	314	10	11	484	194	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	0	11	484	253	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

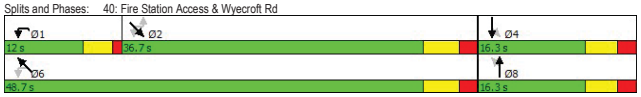
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	22	1	15	2	0	4	0	468	2	1	454	0
Future Volume (vph)	22	1	15	2	0	4	0	468	2	1	454	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	0.0		35.0	50.0		0.0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor		0.98			1.00							
Frt		0.859			0.910				0.850			
Flt Protected	0.950				0.984					0.950		
Satd. Flow (prot)	1674	1435	0	0	1720	0	0	1601	1633	1825	1671	0
Flt Permitted					0.952					0.400		
Satd. Flow (perm)	1762	1435	0	0	1661	0	0	1601	1633	768	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			112				106			
Link Speed (k/h)		50			40			48			48	
Link Distance (m)		120.3			119.2			273.4			145.9	
Travel Time (s)		8.7			10.7			20.5			10.9	
Confl. Peds. (#/hr)			2	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 (%)	9%	0%	13%	0%	0%	0%	0%	20%	0%	0%	15%	0%
Adj. Flow (vph)	22	1	15	2	0	4	0	468	2	1	454	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	16	0	0	6	0	0	468	2	1	454	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	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
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	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		30.0	30.0	30.0	7.0	10.0	
Minimum Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	16.7	
Total Split (s)	16.3	16.3		16.3	16.3		36.7	36.7	36.7	12.0	48.7	
Total Split (%)	25.1%	25.1%		25.1%	25.1%		56.5%	56.5%	56.5%	18.5%	74.9%	
Maximum Green (s)	11.0	11.0		11.0	11.0		31.0	31.0	31.0	8.0	43.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.0	3.7	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	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	
Total Lost Time (s)	5.3	5.3			5.3			5.7	5.7	4.0	5.7	
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	
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	15.0	15.0			15.0			31.9	31.9	29.6	33.3	
Actuated g/C Ratio	0.38	0.38			0.38			0.82	0.82	0.76	0.85	
v/c Ratio	0.03	0.03			0.01			0.36	0.00	0.00	0.32	
Control Delay	18.9	11.9			0.0			6.6	0.0	3.0	3.9	
Queue Delay	0.0	0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay	18.9	11.9			0.0			6.6	0.0	3.0	3.9	
LOS	B	B			A			A	A	A	A	
Approach Delay		16.0						6.6			3.9	
Approach LOS		B						A			A	
Queue Length 50th (m)	0.9	0.1			0.0			0.0	0.0	0.0	0.0	
Queue Length 95th (m)	7.5	4.5			0.0			62.2	0.0	0.3	33.5	
Internal Link Dist (m)		96.3			95.2			249.4			121.9	
Turn Bay Length (m)	35.0								35.0	50.0		
Base Capacity (vph)	707	584			733			1228	1277	921	1512	
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	0.03	0.03			0.01			0.38	0.00	0.00	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 39.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 40: Fire Station Access & Wyecroft Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	510	0	2	473	2	1	0	2	10	0	10
Future Volume (vph)	3	510	0	2	473	2	1	0	2	10	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt					0.999			0.910			0.932	
Flt Protected								0.984			0.976	
Satd. Flow (prot)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Flt Permitted								0.984			0.976	
Satd. Flow (perm)	0	1686	0	0	1715	0	0	1720	0	0	1664	0
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		145.9			123.5			161.1			189.9	
Travel Time (s)		10.9			9.3			14.5			17.1	
Confl. Peds. (#/hr)			1	1			1					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%	14%	0%	0%	12%	0%	0%	0%	0%	0%	0%	10%
Adj. Flow (vph)	3	510	0	2	473	2	1	0	2	10	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	513	0	0	477	0	0	3	0	0	20	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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 39.3% 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	500	7	16	380	2	16	0	15	8	1	4
Future Volume (vph)	0	500	7	16	380	2	16	0	15	8	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.999			0.935			0.958	
Flt Protected					0.998			0.975			0.970	
Satd. Flow (prot)	0	1777	0	0	1775	0	0	1751	0	0	1785	0
Flt Permitted					0.998			0.975			0.970	
Satd. Flow (perm)	0	1777	0	0	1775	0	0	1751	0	0	1785	0
Link Speed (k/h)		48			48			50			40	
Link Distance (m)		123.5			172.3			165.1			212.1	
Travel Time (s)		9.3			12.9			11.9			19.1	
Confl. Peds. (#/hr)			2	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%	8%	0%	6%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	500	7	16	380	2	16	0	15	8	1	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	0	0	398	0	0	31	0	0	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			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 43.1% 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)	5	535	7	10	445	8	21	0	48	17	0	6
Future Volume (vph)	5	535	7	10	445	8	21	0	48	17	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	20.0			20.0			20.0			20.0		
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
Ped Bike Factor												
Frt		0.998			0.997			0.906			0.965	
Flt Protected	0.950			0.950				0.985			0.964	
Satd. Flow (prot)	1304	1694	0	1825	1765	0	0	1691	0	0	1581	0
Flt Permitted	0.950			0.950				0.985			0.964	
Satd. Flow (perm)	1304	1694	0	1825	1765	0	0	1691	0	0	1581	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		172.3			135.2			130.8			152.7	
Travel Time (s)		12.9			10.1			9.4			11.0	
Confl. Peds. (#/hr)			8	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
Heavy Vehicles (%)	40%	13%	29%	0%	8%	38%	0%	0%	2%	0%	0%	50%
Adj. Flow (vph)	5	535	7	10	445	8	21	0	48	17	0	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	542	0	10	453	0	0	69	0	0	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			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 39.3%	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)	196	433	76	253	436	227	50	577	103	78	575	78
Future Volume (vph)	196	433	76	253	436	227	50	577	103	78	575	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	0.0		0.0	65.0		0.0	90.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00					0.98
Frt			0.850			0.850		0.977				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1671	1541	1772	1700	1585	1534	3432	0	1690	1865	1458
Flt Permitted	0.221			0.225			0.185			0.294		
Satd. Flow (perm)	408	1671	1504	419	1700	1561	299	3432	0	523	1865	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			227		25				108
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		135.2			64.2			211.2			311.8	
Travel Time (s)		10.1			4.8			15.8			23.4	
Confl. Peds. (#/hr)	3		2	2		3	1					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 (%)	4%	15%	6%	3%	13%	3%	19%	3%	9%	8%	3%	12%
Adj. Flow (vph)	196	433	76	253	436	227	50	577	103	78	575	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	196	433	76	253	436	227	50	680	0	78	575	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)		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)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
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)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

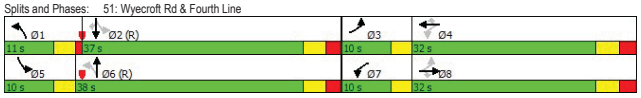
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Detector Phase	3	8	8	7	4	4	1	6		5	2	2
Switch Phase												
Minimum Initial (s)	7.0	15.0	15.0	7.0	10.0	10.0	7.0	25.0		7.0	25.0	25.0
Minimum Split (s)	10.0	30.9	30.9	10.0	30.9	30.9	11.0	30.6		10.0	30.6	30.6
Total Split (s)	10.0	32.0	32.0	10.0	32.0	32.0	11.0	38.0		10.0	37.0	37.0
Total Split (%)	11.1%	35.6%	35.6%	11.1%	35.6%	35.6%	12.2%	42.2%		11.1%	41.1%	41.1%
Maximum Green (s)	7.0	26.1	26.1	7.0	26.1	26.1	7.0	32.4		7.0	31.4	31.4
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6	2.6	0.0	2.6	2.6	1.0	2.3		0.0	2.3	2.3
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)	3.0	5.9	5.9	3.0	5.9	5.9	4.0	5.6		3.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.5	6.0	6.0	2.5	6.0	6.0	2.5	5.0		2.5	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		10.0	10.0		10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		15.0			15.0	15.0
Pedestrian Calls (#/hr)		2	2		3	3		0			1	1
Act Effct Green (s)	35.7	25.8	25.8	35.7	25.8	25.8	41.9	34.7		42.9	36.1	36.1
Actuated g/C Ratio	0.40	0.29	0.29	0.40	0.29	0.29	0.47	0.39		0.48	0.40	0.40
v/c Ratio	0.74	0.90	0.15	0.93	0.89	0.37	0.21	0.51		0.23	0.77	0.12
Control Delay	36.1	55.6	3.3	63.3	53.8	5.5	14.5	22.7		13.7	33.8	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.1	55.6	3.3	63.3	53.8	5.5	14.5	22.7		13.7	33.8	2.5
LOS	D	E	A	E	D	A	B	C		B	C	A
Approach Delay		44.5			44.4			22.1			28.3	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	21.0	71.4	0.0	28.1	71.7	0.0	4.4	46.6		6.7	92.3	0.0
Queue Length 95th (m)	#38.4	#124.2	5.8	#61.0	#124.1	15.7	10.2	63.2		13.8	#151.4	5.2
Internal Link Dist (m)		111.2			40.2			187.2			287.8	
Turn Bay Length (m)	50.0						65.0			90.0		
Base Capacity (vph)	266	484	510	271	493	613	235	1337		340	747	636
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	0.74	0.89	0.15	0.93	0.88	0.37	0.21	0.51		0.23	0.77	0.12

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.3	Intersection LOS: D

Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 51: Wyecroft Rd & Fourth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	94	510	600	17	16	122
Future Volume (vph)	94	510	600	17	16	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.881	
Flt Protected		0.992			0.994	
Satd. Flow (prot)	0	1737	4891	0	1548	0
Flt Permitted		0.992			0.994	
Satd. Flow (perm)	0	1737	4891	0	1548	0
Link Speed (k/h)		48	48		50	
Link Distance (m)		64.2	77.4		236.2	
Travel Time (s)		4.8	5.8		17.0	
Confl. Peds. (#/hr)	3			3		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	10%	7%	0%	6%	9%
Adj. Flow (vph)	94	510	600	17	16	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	604	617	0	138	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.8%		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)	5	608	11	17	467	17	69	0	56	4	0	3
Future Volume (vph)	5	608	11	17	467	17	69	0	56	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt		0.998			0.995			0.940			0.942	
Flt Protected					0.998			0.973			0.972	
Satd. Flow (prot)	0	1680	0	0	1714	0	0	1665	0	0	1539	0
Flt Permitted					0.998			0.973			0.972	
Satd. Flow (perm)	0	1680	0	0	1714	0	0	1665	0	0	1539	0
Link Speed (k/h)		48			48			40			48	
Link Distance (m)		746.3			110.8			199.4			201.0	
Travel Time (s)		56.0			8.3			17.9			15.1	
Confl. Peds. (#/hr)			8	8					24	17		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%	14%	27%	12%	11%	18%	6%	0%	5%	25%	0%	0%
Adj. Flow (vph)	5	608	11	17	467	17	69	0	56	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	624	0	0	501	0	0	125	0	0	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)		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	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 55.2%		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)	615	276	183	109	193	536	265	1809	61	208	1929	255
Future Volume (vph)	615	276	183	109	193	536	265	1809	61	208	1929	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	2		0	1		0	1		0	2		0
Taper Length (m)	20.0			20.0			20.0			20.0		
Lane Util. Factor	*1.00	0.95	0.95	1.00	*1.00	*1.00	1.00	*1.00	*1.00	0.97	*1.00	*1.00
Ped Bike Factor	1.00				0.99		1.00				1.00	
Frt		0.940			0.890			0.995			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3411	3318	0	1789	3295	0	1722	5626	0	3471	5488	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3410	3318	0	1789	3295	0	1721	5626	0	3471	5488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		136			135			5			25	
Link Speed (k/h)		48			48			60			60	
Link Distance (m)		87.4			144.8			213.8			294.1	
Travel Time (s)		6.6			10.9			12.8			17.6	
Confl. Peds. (#/hr)	1					1	4					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%	3%	4%	2%	5%	2%	6%	2%	0%	2%	2%	10%
Adj. Flow (vph)	615	276	183	109	193	536	265	1809	61	208	1929	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	615	459	0	109	729	0	265	1870	0	208	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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

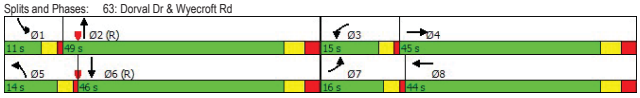
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	20.0		7.0	20.0	
Minimum Split (s)	11.0	44.0		10.0	44.0		10.0	43.0		11.0	43.0	
Total Split (s)	16.0	45.0		15.0	44.0		14.0	49.0		11.0	46.0	
Total Split (%)	13.3%	37.5%		12.5%	36.7%		11.7%	40.8%		9.2%	38.3%	
Maximum Green (s)	12.0	38.0		11.0	37.0		10.0	42.0		7.0	39.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	-2.0	0.0		-2.0	0.0		-2.0	0.0		0.0	-2.0	
Total Lost Time (s)	2.0	7.0		2.0	7.0		2.0	7.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		30.0			30.0			29.0			29.0	
Pedestrian Calls (#/hr)		0			1			0			4	
Act Effct Green (s)	14.0	31.3		12.3	29.6		19.4	44.6		11.9	41.0	
Actuated g/C Ratio	0.12	0.26		0.10	0.25		0.16	0.37		0.10	0.34	
v/c Ratio	1.55	0.48		0.60	1.09dr		0.95	0.89		0.61	1.15	
Control Delay	295.1	26.9		65.4	40.9		93.7	42.6		60.5	112.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	295.1	26.9		65.4	40.9		93.7	42.6		60.5	112.4	
LOS	F	C		E	D		F	D		E	F	
Approach Delay		180.5			44.1			48.9			107.9	
Approach LOS		F			D			D			F	
Queue Length 50th (m)	~101.9	33.7		24.8	66.9		62.5	141.0		24.0	~201.6	
Queue Length 95th (m)	#136.0	45.1		43.5	80.7		#139.6	#171.0		#51.2	#228.4	
Internal Link Dist (m)		63.4			120.8			189.8			270.1	
Turn Bay Length (m)				50.0			65.0			65.0		
Base Capacity (vph)	397	1143		193	1109		279	2092		343	1891	
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	1.55	0.40		0.56	0.66		0.95	0.89		0.61	1.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 3.6 (3%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.55			
Intersection Signal Delay: 92.1		Intersection LOS: F	

Intersection Capacity Utilization 114.9%	ICU Level of Service H
Analysis Period (min) 15	

* User Entered Value
~ 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.

Splits and Phases: 63: Dorval Dr & Wyecroft Rd

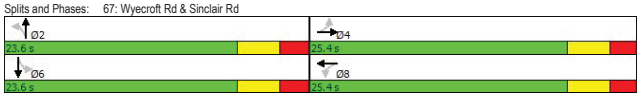


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	216	12	4	418	4	62	0	4	1	0	13
Future Volume (vph)	7	216	12	4	418	4	62	0	4	1	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.993			0.999			0.992			0.875	
Flt Protected		0.999						0.955			0.996	
Satd. Flow (prot)	0	1813	0	0	1829	0	0	1770	0	0	1380	0
Flt Permitted		0.981			0.996			0.995			0.967	
Satd. Flow (perm)	0	1781	0	0	1822	0	0	1844	0	0	1339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			1			53			53	
Link Speed (k/h)		48			48			40			40	
Link Distance (m)		96.4			190.6			115.7			194.3	
Travel Time (s)		7.2			14.3			10.4			17.5	
Confl. Peds. (#/hr)			5	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
Heavy Vehicles (%)	29%	4%	8%	0%	5%	0%	3%	0%	0%	0%	0%	23%
Adj. Flow (vph)	7	216	12	4	418	4	62	0	4	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	426	0	0	66	0	0	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)		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	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)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0	
Minimum Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (s)	25.4	25.4		25.4	25.4		23.6	23.6		23.6	23.6	
Total Split (%)	51.8%	51.8%		51.8%	51.8%		48.2%	48.2%		48.2%	48.2%	
Maximum Green (s)	20.0	20.0		20.0	20.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.4			5.4			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	9.0	9.0		9.0	9.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	5	5		0	0		0	0		0	0	
Act Effct Green (s)		20.8			20.8			20.2			20.2	
Actuated g/C Ratio		0.76			0.76			0.74			0.74	
v/c Ratio		0.17			0.31			0.05			0.01	
Control Delay		6.5			7.4			4.6			0.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.5			7.4			4.6			0.4	
LOS		A			A			A			A	
Approach Delay		6.5			7.4			4.6			0.4	
Approach LOS		A			A			A			A	
Queue Length 50th (m)		0.0			0.0			0.0			0.0	
Queue Length 95th (m)		24.0			46.7			6.2			0.4	
Internal Link Dist (m)		72.4			166.6			91.7			170.3	
Turn Bay Length (m)												
Base Capacity (vph)		1370			1400			1399			1019	
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		0.17			0.30			0.05			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 27.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 67: Wyecroft Rd & Sinclair Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	270	250	969	627	80
Future Volume (vph)	23	270	250	969	627	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	65.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	20.0		20.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.985	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1738	1585	1755	1921	1863	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1738	1585	1755	1921	1863	0
Link Speed (k/h)	48			50	50	
Link Distance (m)	146.1			210.8	216.3	
Travel Time (s)	11.0			15.2	15.6	
Confl. Peds. (#/hr)			14			14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	3%	4%	0%	1%	6%
Adj. Flow (vph)	23	270	250	969	627	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	270	250	969	707	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	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)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Appendix C

Left-turn Lane Warrants

1-South Service Road 1_ITE (50 MPH 2-Lane)_EB_AM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway | Advancing Volume - vph | Operating Speed = 50 mph
Opposing Volume (vph) | Left-turn - percent | Speed Limit = 55 mph
Design Speed = 60 mph

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446										291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400										262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371										242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338										221	186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	312										204	171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	286										187	157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	261										171	143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	242										158	133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	229										150	126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	212										138	116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	200										131	110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	183	173	165	157	151	146	141	136	132	125	120	100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	167	158	150	143	138	133	128	124	120	114	109	92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	156	148	140	134	129	124	120	116	113	107	102	86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	146	138	131	125	120	116	112	109	105	100	95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway | Undivided
Opposing Volume (vph) | Advancing Volume - vph
Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

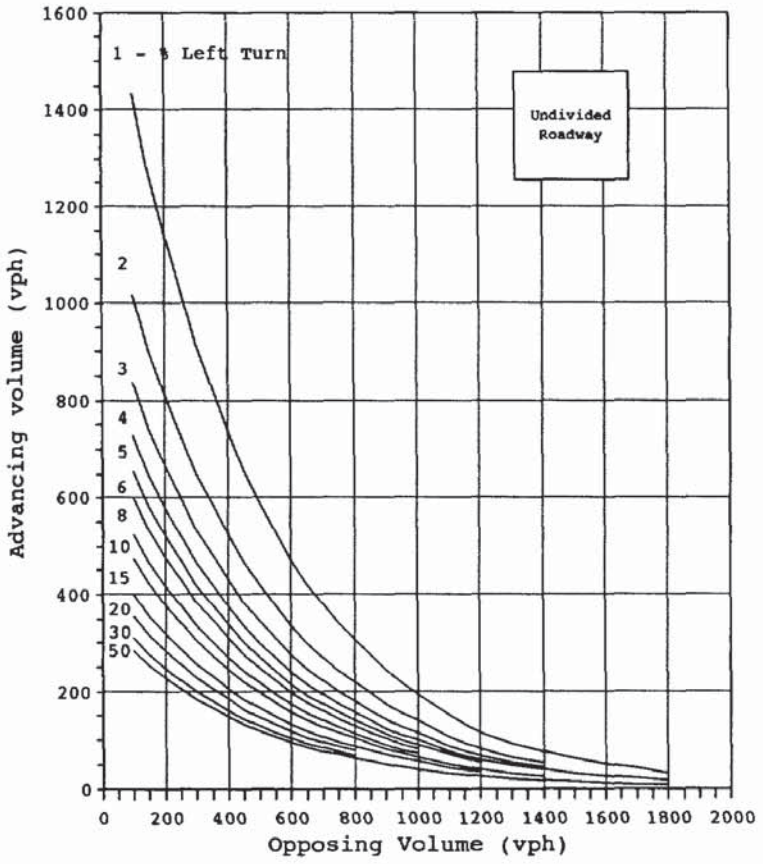


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

1-South Service Road 1_ITE (50 MPH 2-Lane)_EB_PM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway — Operating Speed = 50 mph; Speed Limit = 55 mph; Design Speed = 60 mph

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446	421	401	383	368	354	342	331	322	305	291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400	378	360	344	330	318	307	298	289	274	262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371	351	334	319	306	295	285	276	268	254	242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338	320	304	291	279	269	260	252	244	232	221	186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	3										204	171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	2										187	157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	2										171	143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	2										158	133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	2										150	126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	2										138	116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	2										131	110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	1										120	100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	1										109	92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	1										102	86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	146	138	131	125	120	116	112	109	105	100	95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway — Undivided

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

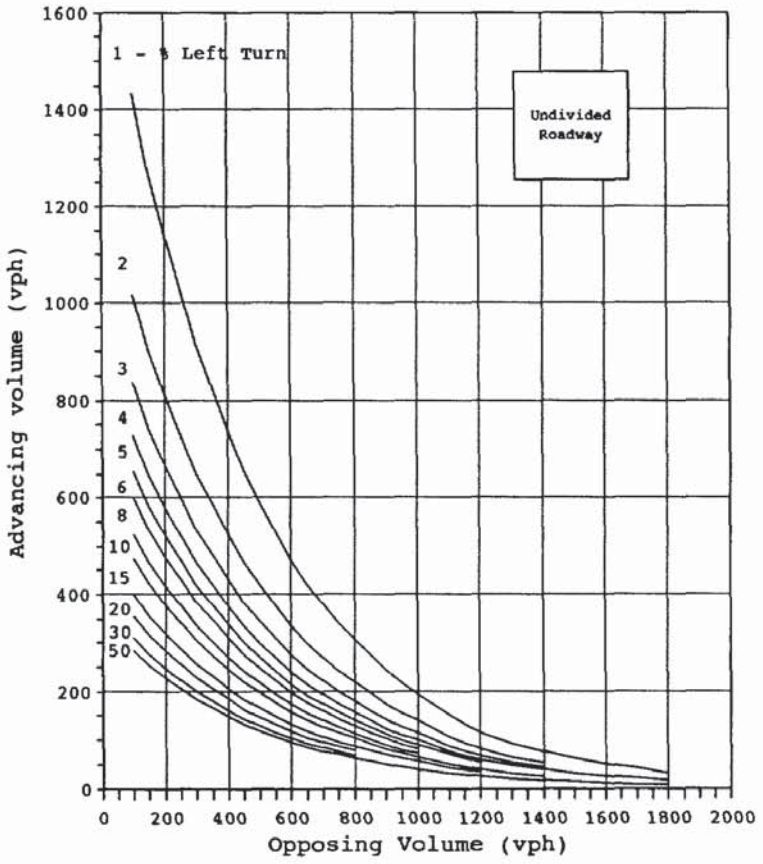


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

2-Pacific Road_ITE (50 MPH 2-Lane)_EB_AM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway — Operating Speed = 50 mph
Opposing Volume (vph) — Advancing Volume - vph — Speed Limit = 55 mph
Left-turn - percent — Design Speed = 60 mph

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446	421	401	383	368	354	342	331	322	305	291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400	378	360	344	330	318	307	298	289	274	262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371	351	334	319	306	295	285	276	268	254	242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338										221	186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	312										204	171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	286										187	157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	261										171	143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	242										158	133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	229										150	126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	212										138	116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	200										131	110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	183										120	100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	167										109	92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	156										102	86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	146	138	131	125	120	116	112	109	105	100	95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway — Undivided
Opposing Volume (vph) — Advancing Volume - vph
Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

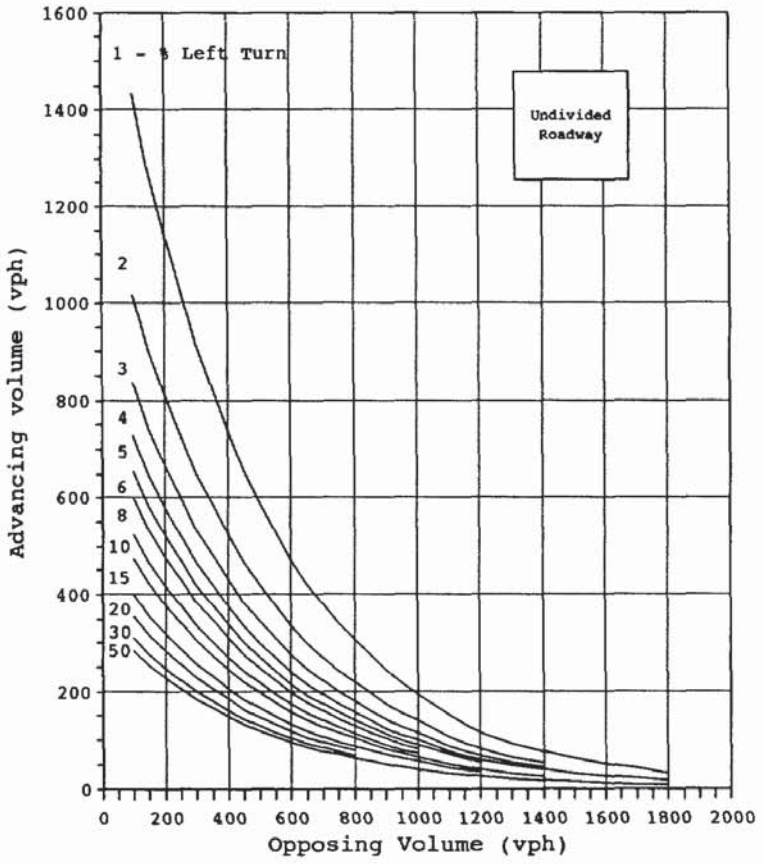


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

2-Pacific Road_ITE (50 MPH 2-Lane)_EB_PM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway — Operating Speed = 50 mph
Opposing Volume (vph) — Advancing Volume - vph — Speed Limit = 55 mph
Left-turn - percent — Design Speed = 60 mph

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446	421	401	383	368	354	342	331	322	305	291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400	378	360	344	330	318	307	298	289	274	262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371	351	334	319	306	295	285	276	268	254	242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338	320	304	291	279	269	260	252	244	232	221	186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	312										204	171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	286										187	157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	261										171	143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	242										158	133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	229										150	126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	212										138	116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	200										131	110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	183										120	100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	167										109	92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	156										102	86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	146										95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway — Undivided
Opposing Volume (vph) — Advancing Volume - vph
Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

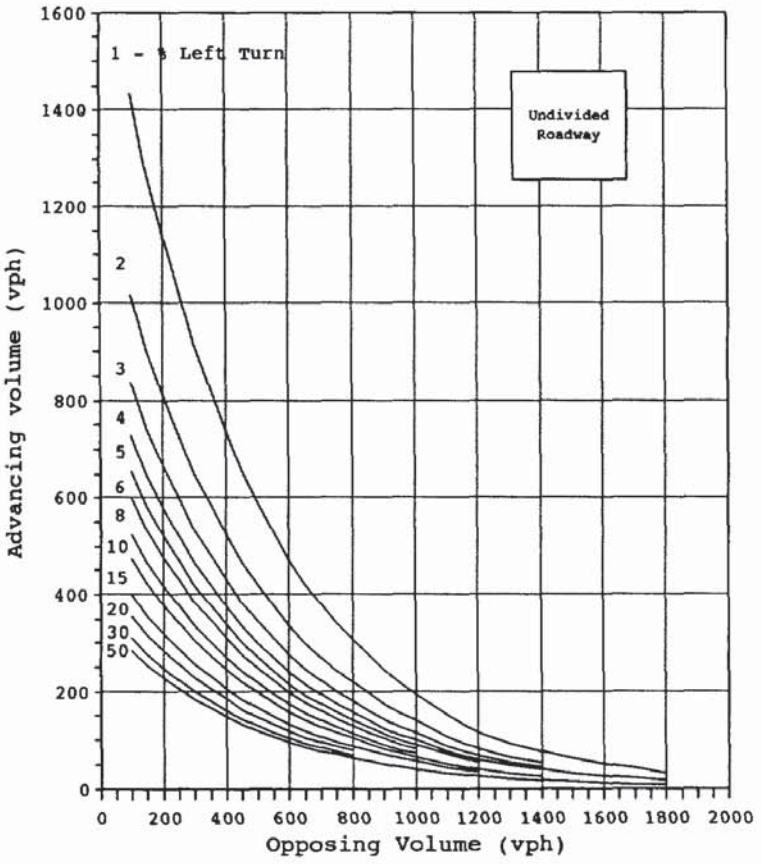


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

3-Bronte GO Bus_ITE (50 MPH 2-Lane)_WB_AM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway — Operating Speed = 50 mph; Speed Limit = 55 mph; Design Speed = 60 mph

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446	421	401	383	368	354	342	331	322	305	291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400	378	360	344	330	318	307	298	289	274	262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371	351	334	319	306	295	285	276	268	254	242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338	320										186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	312	295										171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	286	271										157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	261	247										143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	242	229										133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	229	217										126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	212	200										116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	200	189										110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	183	173										100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	167	158										92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	156	148										86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	146	138	131	125	120	116	112	109	105	100	95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway — Undivided

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

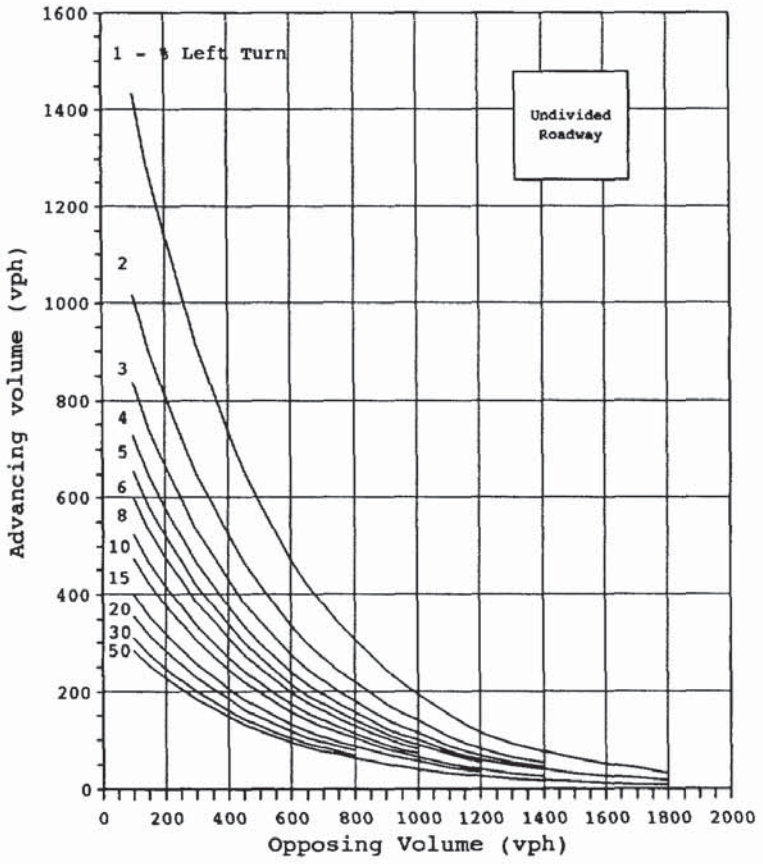


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

3-Bronte GO Bus_ITE (50 MPH 2-Lane)_WB_PM

Table 2

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Two-lane Roadway — Operating Speed = 50 mph; Speed Limit = 55 mph; Design Speed = 60 mph

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	1723	1221	1000	868	778	712	661	620	586	557	533	512	493	476	461	448	425	405	340	304	281	265	255	248	243
100	1517	1075	880	764	685	627	582	546	516	491	469	451	434	419	406	394	374	357	300	268	247	233	224	218	214
150	1355	961	786	683	612	560	520	488	461	439	419	402	388	375	363	352	334	319	268	239	221	209	200	195	191
200	1238	878	718	624	559	512	475	446	421	401	383	368	354	342	331	322	305	291	245	218	202	191	183	178	175
250	1112	788	645	560	502	460	427	400	378	360	344	330	318	307	298	289	274	262	220	196	181	171	164	160	157
300	1031	731	598	520	466	426	396	371	351	334	319	306	295	285	276	268	254	242	204	182	168	159	152	148	145
350	940	667	546	474	425	389	361	338	320	304	291	279	269	260	252	244	232	221	186	166	153	145	139	135	133
400	866	614	503	436	391	358	333	31										204	171	153	141	133	128	125	122
450	795	564	461	401	359	329	305	28										187	157	140	130	122	118	114	112
500	726	515	421	366	328	300	279	26										171	143	128	118	112	107	105	102
550	673	477	391	339	304	278	258	24										158	133	119	110	104	100	97	95
600	637	452	370	321	288	263	245	22										150	126	112	104	98	94	92	90
650	588	417	341	296	266	243	226	21										138	116	104	96	91	87	85	83
700	555	394	322	280	251	230	213	20										131	110	98	90	85	82	80	78
750	509	361	295	256	230	210	195	18										120	100	90	83	78	75	73	72
800	463	328	269	233	209	192	178	16										109	92	82	75	71	69	67	65
850	434	308	252	219	196	179	167	15										102	86	77	71	67	64	62	61
900	406	288	235	204	183	168	156	14										95	80	72	66	62	60	58	57
950	378	268	219	190	171	156	145	136	129	122	117	112	108	105	101	98	93	89	75	67	62	58	56	54	53
1000	351	249	204	177	159	145	135	126	120	114	109	104	101	97	94	91	87	83	69	62	57	54	52	51	50
1050	325	231	189	164	147	134	125	117	111	105	101	97	93	90	87	85	80	76	64	57	53	50	48	47	46
1100	282	200	164	142	128	117	108	102	96	91	87	84	81	78	76	73	70	66	56	50	46	43	42	41	40
1150	257	182	149	129	116	106	98	92	87	83	79	76	73	71	69	67	63	60	51	45	42	39	38	37	36
1200	211	149	122	106	95	87	81	76	72	68	65	63	60	58	56	55	52	50	42	37	34	32	31	30	30
1250	183	130	106	92	83	76	70	66	62	59	57	54	52	51	49	48	45	43	36	32	30	28	27	26	26
1300	154	109	89	78	70	64	59	55	52	50	48	46	44	43	41	40	38	36	30	27	25	24	23	22	22

Please note that ITE (1990) does not have left-turn lane warrants at unsignalized intersections - four-lane, undivided roadways for 30 mph (48 km/h). Due to current speeding concerns along Wyecroft Road, left-turn lanes for 50 mph (80 km/h) was used for South Service Road #1, Pacific road and Bronte GO Bus Loop.

Table 3

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Four-lane Roadway — Undivided

Opposing Volume (vph) — Advancing Volume - vph — Left-turn - percent

	1.0	2.5	5.0	10	15	20	30	40	50
50	1615	1030	737	536	450	402	351	328	321
100	1431	912	653	475	399	356	311	291	285
150	1271	810	580	421	354	316	276	258	253
200	1140	727	521	378	318	284	248	232	227
250	1028	655	469	341	287	256	223	209	205
300	914	582	417	303	255	227	198	186	182
350	824	525	376	273	230	205	179	167	164
400	739	471	338	245	206	184	161	150	147
450	658	419	300	218	183	164	143	134	131
500	590	376	269	196	164	147	128	120	117
550	529	337	242	176	147	132	115	107	105
600	470	300	215	156	131	117	102	96	94
650	419	267	191	139	117	104	91	85	83
700	379	242	173	126	106	94	82	77	76
750	342	218	156	113	95	85	74	69	68
800	308	196	140	102	86	77	67	62	61
850	276	176	126	91	77	69	60	56	55
900	245	156	112	81	68	61	53	50	49
950	216	137	98	71	60	54	47	44	43
1000	195	124	89	65	54	49	42	40	39
1100	150	96	68	50	42	37	33	30	30
1200	114	73	52	38	32	28	25	23	23
1300	91	58	42	30	25	23	20	19	18
1400	74	47	34	24	21	18	16	15	15
1500	60	38	27	20	17	15	13	12	12
1600	49	31	22	16	14	12	11	10	10
1700	41	26	19	13	11	10	9	8	8
1800	31	20	14	10	9	8	7	6	6

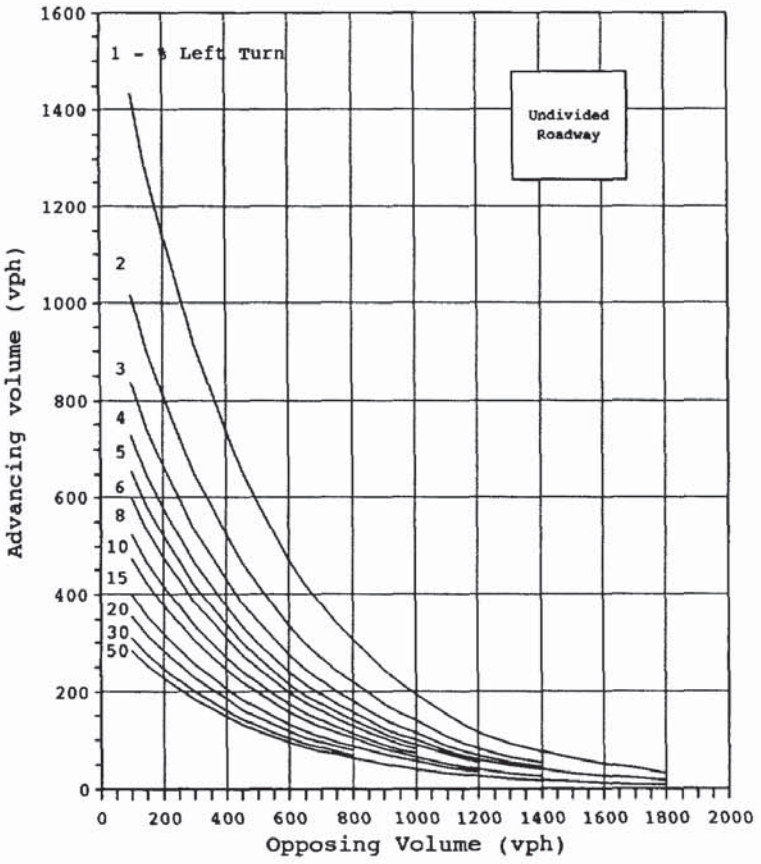


Figure 3 Guidelines for Left-turn Lane at Unsignalized Intersection - Four-lane, Undivided Roadway

4-Progress Court_ITE (30 MPH 2-Lane)_AM

Table 1

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Operating Speed = 30 mph
Speed Limit = 35 mph
Design Speed = 40 mph

Two-lane Roadway Opposing Volume (vph)	Advancing Volume - vph Left-turn - percent																							
	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	2224	1576	1290	1120	1005	920	854	800	757	720	688	660	636	615	596	578	548	523	439	392	362	342	329	320	314
100	1958	1388	1136	987	885	810	752	705	666	634	606	582	560	541	524	509	483	460	387	345	319	301	290	282	276
150	1749	1240	1015	881	790	723	671	630	595	566	541	520	501	484	468	455	431	411	346	308	285	269	259	252	247
200	1598	1133	927	805	722	661	613	575	544	517	494	475	457	442	428	415	394	376	316	282	260	246	236	230	225
250	1436	1018	833	723	649	594	551	517	489	465	444	426	411	397	385	373	354	338	284	253	234	221	212	207	203
300	1331	944	773	671	601	550	511	479	453	431	412	395	381	368	357	346	328	313	263	235	217	205	197	192	188
350	1214	861	704	612	548	502	466	437	413	393	376	361	347	336	325	316	299	285	240	214	198	187	180	175	171
400	1118	793	649	564	505	462	429	403	381	362	346	332	320	309	300	291	276	263	221	197	182	172	165	161	158
450	1026	728	596	517	464	424	394	369	349	332	318	305	294	284	275	267	253	241	203	181	167	158	152	148	145
500	937	664	544	472	423	388	360	337	319	303	290	278	268	259	251	244	231	220	185	165	153	144	139	135	132
550	869	616	504	438	393	359	334	313	296	281	269	258	249	240	233	226	214	204	172	153	142	134	129	125	123
600	823	583	477	414	372	340	316	296	280	266	254	244	235	227	220	214	203	193	162	145	134	127	122	118	116
650	759	538	441	382	343	314	291	273	258	246	235	225	217	210	203	197	187	178	150	134	124	117	112	109	107
700	717	508	416	361	324	296	275	258	244	232	222	213	205	198	192	186	177	168	142	126	117	110	106	103	101
750	657	466	381	331	297	272	252	236	223	213	203	195	188	182	176	171	162	154	130	116	107	101	97	95	93
800	598	424	347	301	270	247	230	215	203	194	185	178	171	165	160	155	147	141	118	105	97	92	88	86	84
850	560	397	325	282	253	232	215	202	191	181	173	166	160	155	150	146	138	132	111	99	91	86	83	81	79
900	524	371	304	264	237	217	201	188	178	169	162	156	150	145	140	136	129	123	103	92	85	81	77	75	74
950	488	346	283	246	221	202	187	176	166	158	151	145	140	135	131	127	120	115	96	86	80	75	72	70	69
1000	454	322	263	229	205	188	174	163	154	147	140	135	130	125	121	118	112	107	90	80	74	70	67	65	64
1050	420	298	244	212	190	174	161	151	143	136	130	125	120	116	112	109	103	99	83	74	68	65	62	60	59
1100	365	258	212	184	165	151	140	131	124	118	113	108	104	101	98	95	90	86	72	64	59	56	54	52	51
1150	331	235	192	167	150	137	127	119	113	107	102	98	95	92	89	86	82	78	65	58	54	51	49	48	47
1200	272	193	158	137	123	112	104	98	93	88	84	81	78	75	73	71	67	64	54	48	44	42	40	39	38
1250	236	168	137	119	107	98	91	85	80	76	73	70	68	65	63	61	58	56	47	42	38	36	35	34	33
1300	199	141	115	100	90	82	76	72	68	64	62	59	57	55	53	52	49	47	39	35	32	31	29	29	28

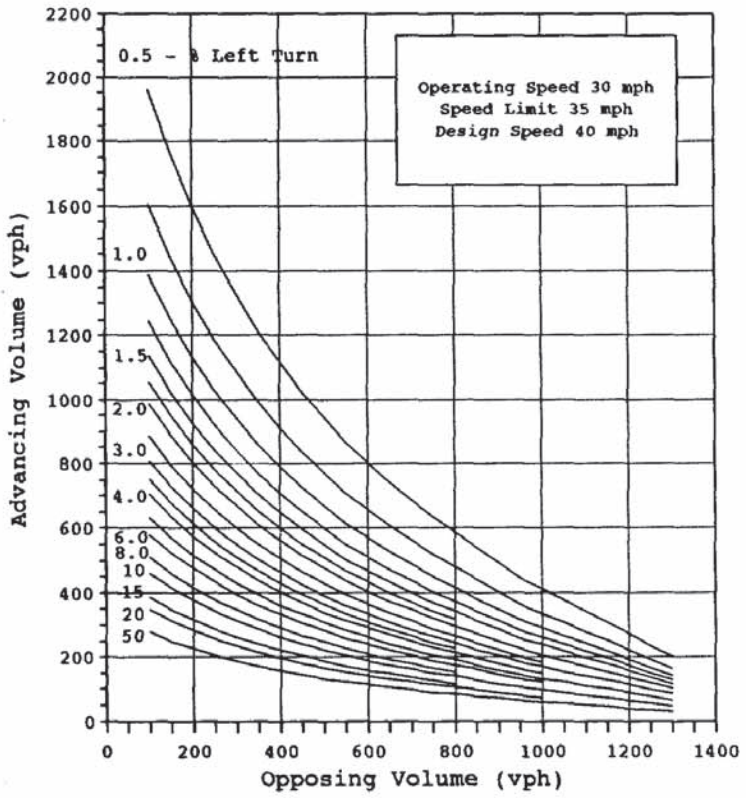


Figure 1 Guidelines for Left-turn Lane at Unsignalized Intersection - Two-lane Roadway

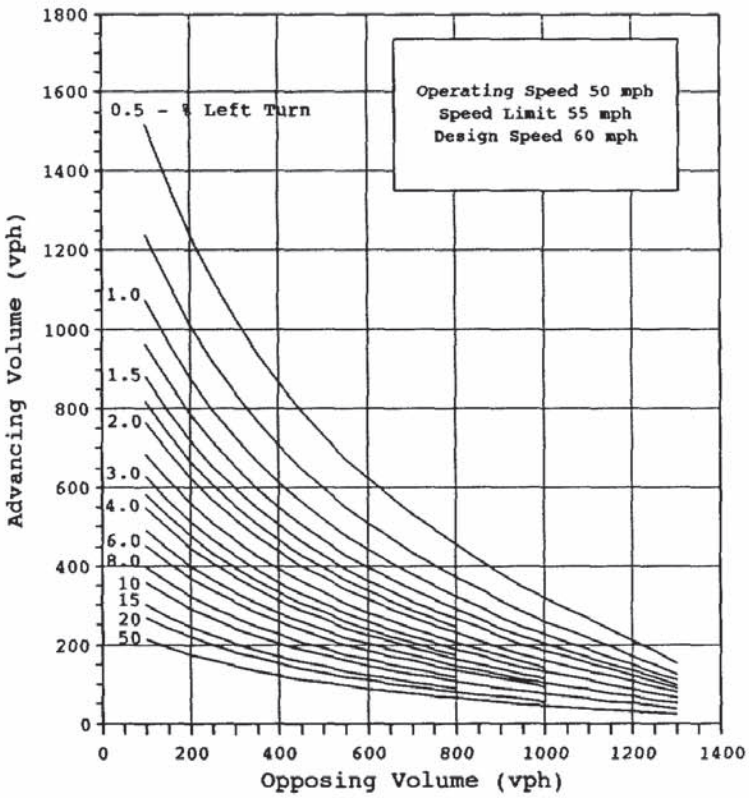


Figure 2 Guidelines for Left-turn Lane at Unsignalized Intersection - Two-lane Roadway

4-Progress Court_ITE (30 MPH 2-Lane)_PM

Table 1

GUIDELINES FOR LEFT-TURN LANE AT UNSIGNALIZED INTERSECTION

Operating Speed = 30 mph
Speed Limit = 35 mph
Design Speed = 40 mph

Two-lane Roadway Opposing Volume (vph)	Advancing Volume - vph																							
	Left-turn - percent																							
	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	15	20	25	30	35	40	50
50	2224	1576	1290	1120	1005	920	854	800	757	720	688	660	636	615	596	578	548	523	439	392	362	342	329	320	314
100	1958	1388	1136	987	885	810	752	705	666	634	606	582	560	541	524	509	483	460	387	345	319	301	290	282	276
150	1749	1240	1015	881	790	723	671	630	595	566	541	520	501	484	468	455	431	411	346	308	285	269	259	252	247
200	1598	1133	927	805	722	661	613	575	544	517	494	475	457	442	428	415	394	376	316	282	260	246	236	230	225
250	1436	1018	833	723	649	594	551	517	489	465	444	426	411	397	385	373	354	338	284	253	234	221	212	207	203
300	1331	944	773	671	601	550	511	479	453	431	412	395	381	368	357	346	328	313	263	235	217	205	197	192	188
350	1214	861	704	612	548	502	466	437	413	393	376	361	347	336	325	316	299	285	240	214	198	187	180	175	171
400	1118	793	649	564	505	462	429	403	381	362	346	332	320	309	300	291	276	263	221	197	182	172	165	161	158
450	1026	728	596	517	464	424	394	369	349	332	318	305	294	284	275	267	253	241	203	181	167	158	152	148	145
500	937	664	544	472	423	388	360	337	319	303	290	278	268	259	251	244	231	220	185	165	153	144	139	135	132
550	869	616	504	438	393	359	334	313	296	281	269	258	249	240	233	226	214	204	172	153	142	134	129	125	123
600	823	583	477	414	372	340	316	296	280	266	254	244	235	227	220	214	203	193	162	145	134	127	122	118	116
650	759	538	441	382	343	314	291	273	258	246	235	225	217	210	203	197	187	178	150	134	124	117	112	109	107
700	717	508	416	361	324	296	275	258	244	232	222	213	205	198	192	186	177	168	142	126	117	110	106	103	101
750	657	466	381	331	297	272	252	236	223	213	203	195	188	182	176	171	162	154	130	116	107	101	97	95	93
800	598	424	347	301	270	247	230	215	203	194	185	178	171	165	160	155	147	141	118	105	97	92	88	86	84
850	560	397	325	282	253	232	215	202	191	181	173	166	160	155	150	146	138	132	111	99	91	86	83	81	79
900	524	371	304	264	237	217	201	188	178	169	162	156	150	145	140	136	129	123	103	92	85	81	77	75	74
950	488	346	283	246	221	202	187	176	166	158	151	145	140	135	131	127	120	115	96	86	80	75	72	70	69
1000	454	322	263	229	205	188	174	163	154	147	140	135	130	125	121	118	112	107	90	80	74	70	67	65	64
1050	420	298	244	212	190	174	161	151	143	136	130	125	120	116	112	109	103	99	83	74	68	65	62	60	59
1100	365	258	212	184	165	151	140	131	124	118	113	108	104	101	98	95	90	86	72	64	59	56	54	52	51
1150	331	235	192	167	150	137	127	119	113	107	102	98	95	92	89	86	82	78	65	58	54	51	49	48	47
1200	272	193	158	137	123	112	104	98	93	88	84	81	78	75	73	71	67	64	54	48	44	42	40	39	38
1250	236	168	137	119	107	98	91	85	80	76	73	70	68	65	63	61	58	56	47	42	38	36	35	34	33
1300	199	141	115	100	90	82	76	72	68	64	62	59	57	55	53	52	49	47	39	35	32	31	29	29	28

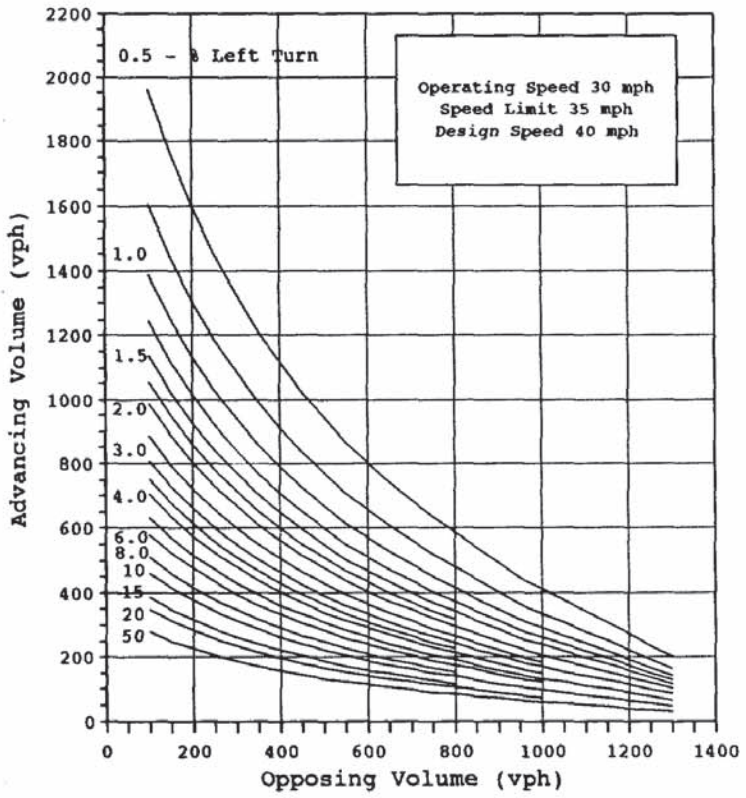


Figure 1 Guidelines for Left-turn Lane at Unsignalized Intersection - Two-lane Roadway

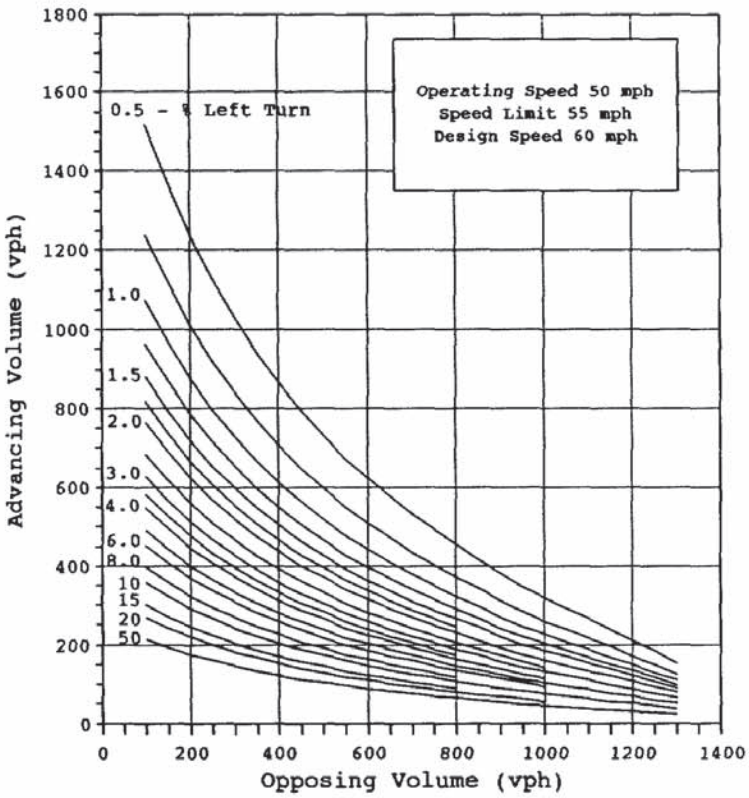


Figure 2 Guidelines for Left-turn Lane at Unsignalized Intersection - Two-lane Roadway

Appendix D

Signal Warrants

2031 Signal Warrants

South Service Road #1

Traffic Signal Justification for Future Development - South Service Road #1
OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1: 120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2: 120% met? (Existing Intersection)	[Y/N]	N	
Justification 3: Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed
Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1078	120%	**30%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	77	30%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1001	120%	**7%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	5	7%	

Pacific Road

Traffic Signal Justification for Future Development - Pacific Road
OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1: 120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2: 120% met? (Existing Intersection)	[Y/N]	N	
Justification 3: Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed
Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	948	120%	**29%**
	B. Vehicle volume, along minor streets (avg hour)	120	170	120	170	49	29%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	899	120%	**25%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	19	25%	

Westgate Road

Traffic Signal Justification for Future Development - Westgate Road

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	937	120%	**21%**
	B. Vehicle volume, along minor streets (avg hour)	120	170	120	170	36	21%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	902	120%	**19%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	14	19%	

Bronte GO Station Bus Loop

Traffic Signal Justification for Future Development - Bronte GO Station Bus Loop

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1034	120%	**30%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	77	30%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	957	120%	**59%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	44	59%	

Bronte GO Station Parking Access

Traffic Signal Justification for Future Development - Bronte GO Station Parking Access

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1081	120%	**10%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	25	10%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1056	120%	**1%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	1	1%	

Progress Court

Traffic Signal Justification for Future Development - Progress Court

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	457	63%	**27%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	70	27%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	386	54%	**54%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	54	72%	

Weller Court

Traffic Signal Justification for Future Development - Weller Court

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	548	76%	**17%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	43	17%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	505	70%	**29%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	22	29%	

Kerr Street

Traffic Signal Justification for Future Development - Kerr Street

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	859	119%	**41%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	104	41%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	755	105%	**11%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	8	11%	

2041 Signal Warrants

South Service Road #1

Traffic Signal Justification for Future Development - South Service Road #1
OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1: 120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2: 120% met? (Existing Intersection)	[Y/N]	N	
Justification 3: Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed
Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1245	120%	**30%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	77	30%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1168	120%	**7%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	5	7%	

Pacific Road

Traffic Signal Justification for Future Development - Pacific Road
OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1: 120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2: 120% met? (Existing Intersection)	[Y/N]	N	
Justification 3: Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed
Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1109	120%	**29%**
	B. Vehicle volume, along minor streets (avg hour)	120	170	120	170	49	29%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1060	120%	**25%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	19	25%	

Westgate Road

Traffic Signal Justification for Future Development - Westgate Road

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1100	120%	**21%**
	B. Vehicle volume, along minor streets (avg hour)	120	170	120	170	36	21%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1065	120%	**19%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	14	19%	

Bronte GO Station Bus Loop

Traffic Signal Justification for Future Development - Bronte GO Station Bus Loop

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1216	120%	**30%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	77	30%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1140	120%	**59%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	44	59%	

Bronte GO Station Parking Access

Traffic Signal Justification for Future Development - Bronte GO Station Parking Access

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	1282	120%	**10%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	25	10%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	1256	120%	**1%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	1	1%	

Progress Court

Traffic Signal Justification for Future Development - Progress Court

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N	Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N	
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N	

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Compliance Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	482	67%	**27%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	70	27%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	412	57%	**57%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	54	72%	

Weller Court

Traffic Signal Justification for Future Development - Weller Court

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	587	82%	**17%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	43	17%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	544	76%	**29%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	22	29%	

Kerr Street

Traffic Signal Justification for Future Development - Kerr Street

OTM Book 12 (November, 2007) Section 4.10 - Table 19 - Justification 7 - Projected Volumes

Justification 1:	120% met? (Existing Intersection)	[Y/N]	N
Justification 2:	120% met? (Existing Intersection)	[Y/N]	N
Justification 3:	Justifications 1 and 2 meets 100%	[Y/N]	N

Warranted only if Justification 1 & 2 are fullfilled to minimum % criteria.

Restr flow = urban conditions, < 70km/hr posted speed

Free Flow = rural case, 70km/hr or greater posted speed

Justification	Description	Minimum Requirement 1 Lane Highways		Minimum Requirement 2 or more lanes		Compliance Sectional		Entire %
		Free Flow	Restr. Flow	Free Flow	Restr. Flow	Numerical	%	
1. Minimum Vehicular Volume	A. Vehichle volume, all approaches (avg hour)	480	720	600	900	929	120%	**44%**
	B. Vehicle volume, along minor streets (avg hour)	120	255	120	170	112	44%	
2. Delay to cross traffic	A. Vehicle volume, major street (avg hour)	480	720	600	900	817	113%	**12%**
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (avg hour)	50	75	120	170	9	12%	

Appendix E

QEW Ramp Terminal Analysis

Wyecroft Road EA Improvements from Bronte Road to Kerr Street

QEW Ramp Terminal Analysis

Prepared for Town of Oakville
by IBI Group

October 15, 2019

Table of Contents

1 Introduction

The Town of Oakville (the "Town") has retained IBI Group to undertake a Schedule 'C' Municipal Class Environmental Assessment (EA) for Wyecroft Road and portions of South Service Road West between Bronte Road and Kerr Street.

The Ministry of Transportation, Ontario (MTO) has requested that the Queen Elizabeth Way (QEW) ramp terminals at Bronte Road, Third Line and Dorval Drive be included in the traffic analysis. The purpose of this report is to analyze the future traffic conditions of the QEW ramp signalized intersections.

Bronte Road and Dorval Drive are regional roads and outside the scope if the Wyecroft Road improvements EA Study.

2 Existing Conditions

2.1 Study Area Intersections

Turning movement counts (TMCs) for the following study area intersections were provided by MTO. Signal timing plans were provided by the Town of Oakville and Region of Halton.

- Bronte Road & Highway 403 / QEW North Ramp Terminal;
- Bronte Road & Highway 403 / QEW South Ramp Terminal;
- Third Line & Highway 403 / QEW North Ramp Terminal;
- Third Line & Highway 403 / QEW South Ramp Terminal;
- Dorval Drive & Highway 403 / QEW North Ramp Terminal; and,
- Dorval Drive & Highway 403 / QEW South Ramp Terminal.

Volume Balancing

The counts provided by MTO were compared to adjacent counts on Wyecroft Road intersections and appear to differ between the intersections. This difference may be a result of seasonal factors, or other variables that were not consistent over the various count periods. In an effort to limit the degree of outliers (such as counts collected on non-representative days) and to represent the worst-case scenario, volumes were added from upstream / downstream intersection, with considerations to volumes leaving on the QEW on-ramps. A summary of the balancing volumes is provided below.

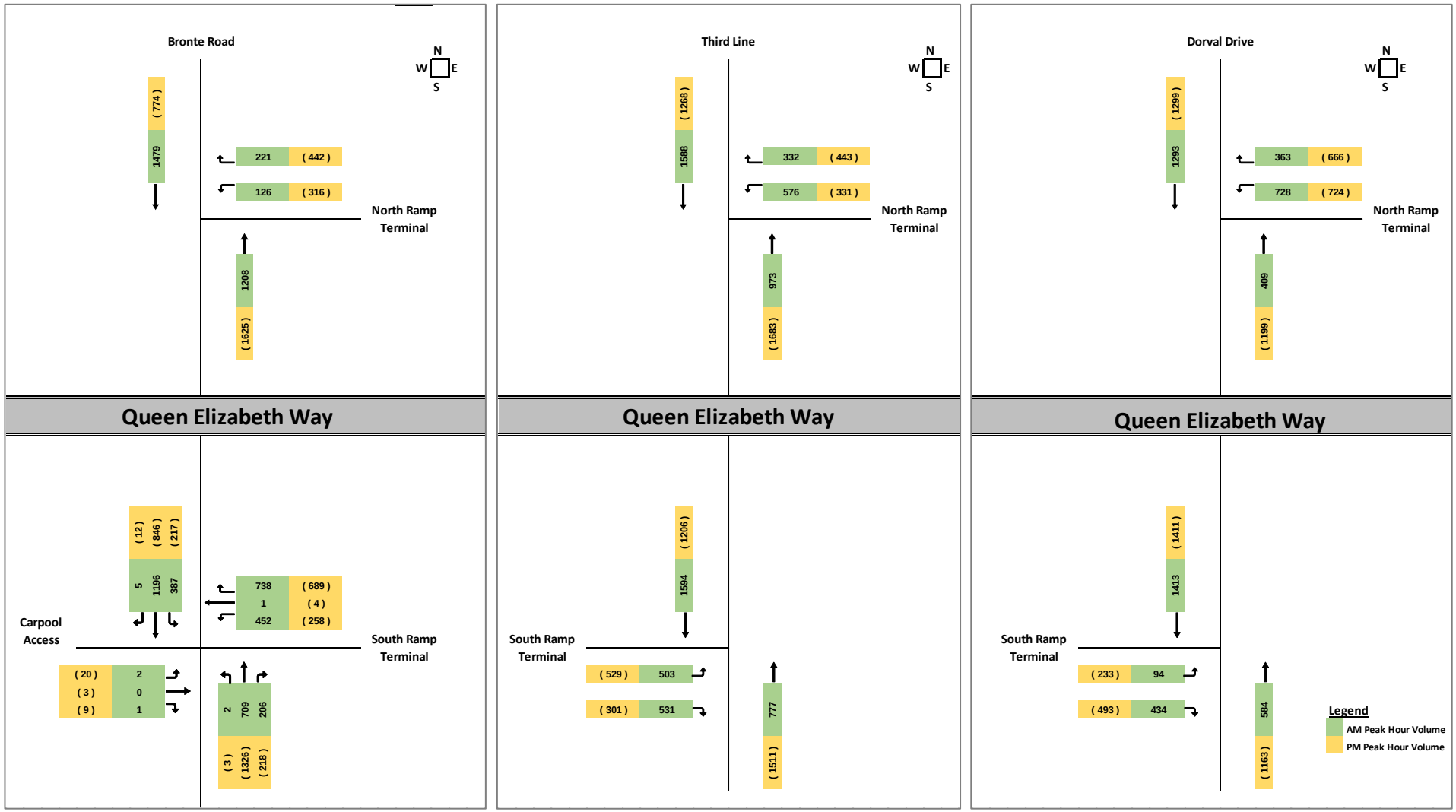
Exhibit 2-1: Balancing Traffic Volumes (Weekday)

LOCATION	MOVEMENT	BALANCING VOLUMES - WEEKDAY	
		AM	PM
Bronte Road & North Ramp Terminal	NBT SBT	 +200	+150
Bronte Road & South Ramp Terminal	NBT SBT	 +200	+150
Third Line & North Ramp Terminal	NBT SBT	 	 +200
Third Line & South Ramp Terminal	NBT SBT	 	 +200
Dorval Drive & North Ramp Terminal	NBT SBT	 +150	+200 +300
Dorval Drive & South Ramp Terminal	NBT SBT EBR	+150	+200 +300 +150

During volume balancing process, it was observed that the counts at Wyecroft Road & Third Line was noticeably higher in the a.m. peak hour. This higher volume is likely due to congestion and traffic build up on the QEW, with vehicles turning onto Wyecroft Road as an alternative route. This is likely the case as the volumes in the p.m. peak hour is comparable to volumes on the ramp terminals. Therefore, balancing for this location in the morning peak was excluded.

Balanced volumes carried forward for the future analysis are shown in Exhibit 2-2.

Exhibit 2-2: Existing Balanced Traffic Volumes AM (PM) Peak Hours



2.2 Traffic Operations

Traffic analysis was conducted using Synchro (version 9) and following Highway Capacity Manual (HCM) methodologies of intersection operation analysis. Analysis periods were limited to the weekday a.m. and p.m. peak hours, when background traffic will be highest.

From the Halton Region Traffic Impact Study guidelines (January 2015), the criteria for identifying critical signalized intersections or movements are:

- Volume to capacity (v/c) ratio of 0.85 for overall intersections operations, through movements or shared through / turning movements;
- V/c ratio exceeds 0.95 for exclusive movements; and
- 95th percentile queues which exceed available storage.

Based on MTO's Traffic Impact Study Guidelines (December 2009), ramp terminal approaches with v/c ratio exceeding 0.75 are considered critical.

Level-of-service (LOS) is a measure of performance based on control delay, as defined in Exhibit 2-3.

Exhibit 2-3: Intersection LOS Reference (Highway Capacity Manual)

HCM LOS	CONTROL DELAY PER VEHICLE (S)
	Signalized
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Peak hour factors (PHF) were calculated from count data. Lane width was assumed as 3.6 metres for the ramps / arterial roads. A default saturation flow of 1900 vehicles per hour (vph) was assumed.

Operational concerns or deficiencies noted in the studied horizon years are identified and addressed through recommendations on potential mitigation measures and/or operational improvements.

A summary of the critical movements identified during the existing conditions analysis is provided in Exhibit 2-4. Existing traffic volumes and detail Synchro outputs are provided in the Appendix.

Exhibit 2-4: Synchro Analysis: Existing Conditions for AM and PM Peak Hours

INTERSECTION	AM PEAK					PM PEAK				
	LOS	Critical Movements				LOS	Critical Movements			
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Bronte Road & QEW North Ramp Terminal ***(signalized)***	B	No Critical Movements				C	WBR	E	0.91	153
Bronte Road & QEW South Ramp Terminal ***(signalized)***	D	EBL EBT WBL WBT WBR NBL NBT NBR	E E F D D D D E	0.07 0.00 1.06 0.54 0.28 0.01 0.64 0.14	3 - 181 69 28 1 64 14	C	EBL EBT WBL WBT WBR NBT SBL	E D D D D D D	0.23 0.04 0.71 0.58 0.55 0.96 0.66	13 7 77 61 56 219 101
Third Line & QEW North Ramp Terminal ***(signalized)***	C	WBL WBR	D D	0.81 0.73	91 88	B	WBR	E	0.91	153
Third Line & QEW South Ramp Terminal ***(signalized)***	C	EBL EBR	E F	0.93 0.99	121 150	C	EBL EBR	D D	0.78 0.69	84 78
Dorval Drive & QEW North Ramp Terminal ***(signalized)***	C	WBL	D	0.80	109	C	WBL WBR	D D	0.80 0.85	128 162
Dorval Drive & QEW South Ramp Terminal ***(signalized)***	B	EBL EBR	D D	0.48 0.71	41 69	B	EBL EBR	D D	0.64 0.71	62 78

The study intersections are currently operating as follows:

- Bronte Road & QEW North Ramp Terminal is operating well at LOS B/C. During the p.m. peak hour, the WBR movement is experiencing moderate congestion (v/c = 0.91) at LOS E.
- Bronte Road & QEW South Ramp Terminal is considered the busiest intersection within the study area, due to its configuration and the split phasing required for the carpool access at the west leg. In the a.m. peak period, the WBL movement is operating past capacity at LOS F. Other movements are considered critical, however have sufficient reserve capacity to accommodate demands (v/c < 0.75). During the p.m. peak hour, only the NBT movement is near capacity (v/c = 0.96).
- The north QEW ramp terminal at Third Line is operating well at LOS C. Due to green time prioritized for both the northbound and southbound approaches, the off-ramp volumes experiences moderate delay. During the p.m. peak hour the WBR is operating close to capacity (v/c = 0.91).
- At the South Ramp Terminal & Third Line, both the EBL and EBR movements are nearing capacity (v/c = 0.93 & 0.99).

- The north QEW ramp terminal at Dorval Drive is operating well at LOS C during the two peaks. Green time is prioritized to northbound and southbound movements, causing modest congestion and queuing for the off-ramp volumes.
- The south QEW ramp terminal at Dorval Drive is operating well at LOS B during the two peaks; no movements at this intersections are considered critical.

Overall, the study area intersections are currently operating well with the exception of the WBL movement at Bronte Road & South Ramp Terminal.

3 Traffic Forecasts

As instructed by MTO staff, a 2% growth rate is required for all MTO ramp terminal volumes. The Wyecroft Road EA study applied a 0.8% growth rate to the traffic along the corridor. The 0.8% rate was developed from the Region of Halton's employment growth and results from the Town of Oakville's EMME model. To incorporate both rates into the traffic analysis, traffic volumes exiting the QEW ramps were grown 2% annually, while the remaining through traffic was grown by 0.8% annually. In addition, there are also two major projects planned in the study area, the Wyecroft Road Extension and Bronte GO Major Transit Station Area (MTSA). Traffic generated from the two projects were added to the traffic volumes and are illustrated in the Appendix. It should be noted that the Wyecroft Road EA is not the source of these two projects. The EA Study recommends active transportation, transit and intersection improvements to accommodate these projects.

4 Future 2031 Conditions

This section documents the future traffic conditions considering the background traffic growth rates and the two major infrastructure projects planned for the study area.

4.1 Future Do Nothing Conditions

To analyze future conditions, the existing volumes were grown using the growth rates discussed in Section 3 and the trips generated by the two major projects. Future volumes are illustrated in Exhibit 4-1.

A summary of critical movements identified during the future condition analysis is provided in Exhibit 4-2. For the purpose of the 2031 analysis, the scenarios use optimized signal timings for all signalized ramp terminals.

Exhibit 4-1: Future 2031 Volumes AM (PM) Peak Hours

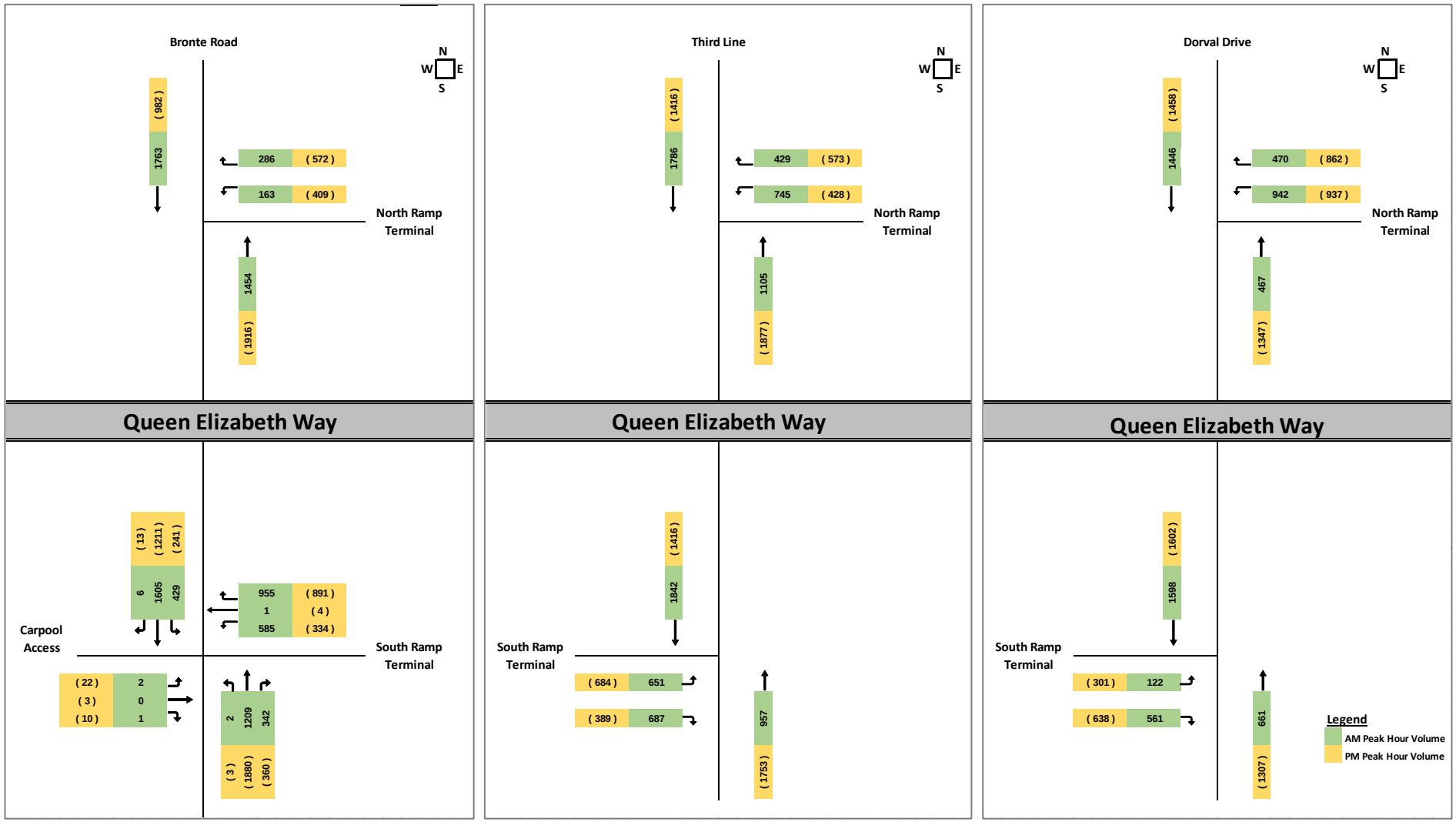


Exhibit 4-2: Synchro Analysis: Future 2031 Conditions for AM and PM Peak Hours

INTERSECTION	AM PEAK					PM PEAK				
	LOS	Critical Movements				LOS	Critical Movements			
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Bronte Road & QEW North Ramp Terminal ***(signalized)***	C	SBT	C	0.93	153	D	WBR NBT	F B	1.06 0.98	220 74
Bronte Road & QEW South Ramp Terminal ***(signalized)***	F	EBL EBT WBL WBT WBR NBL NBT NBR SBL SBT	E E F D D D F E E C	0.07 0.00 1.21 0.77 0.55 0.03 1.24 0.28 0.97 0.88	3 - 237 130 69 0 188 24 162 250	F	EBL EBT WBL WBT WBR NBT SBL	E D E F E F F	0.26 0.04 0.83 0.95 0.92 1.35 0.94	13 7 119 148 139 272 120
Third Line & QEW North Ramp Terminal ***(signalized)***	C	WBL WBR SBT	D E C	0.85 0.93 0.88	116 153 233	D	WBR NBT	F D	1.15 1.02	241 293
Third Line & QEW South Ramp Terminal ***(signalized)***	D	EBL EBR SBT	D F C	0.93 1.04 0.96	153 194 283	C	EBL EBR NBT	E E B	0.92 0.94 0.90	125 142 96
Dorval Drive & QEW North Ramp Terminal ***(signalized)***	C	No Critical Movements				C	SBT	D	0.78	138
Dorval Drive & QEW South Ramp Terminal ***(signalized)***	B	EBL EBR	D D	0.50 0.76	50 89	B	EBL EBR	D D	0.65 0.75	74 97

In 2031 with background growth, the Bronte GO MTSA growth and Wyecroft Road extension growth added, the study intersections are expected to operate as follows:

- Bronte Road & QEW North Ramp Terminal is expected to deteriorate for both peak periods, operating at LOS C and D. With the increase in traffic in the a.m. peak hour, the SBT demand is approaching capacity (v/c = 0.93). During the p.m. peak hour, the heavy NBT demand causes both the NBT and WBR movement to operate at capacity.
- Bronte Road & QEW South Ramp Terminal is expected to operate with severe congestion at LOS F during both peak periods. Due to the configuration the split timing of this intersection, the north, south and east approaches are competing for available green time. During the morning peak, the WBL, NBT and SBL is operating at/past capacity. In the p.m. peak period, the NBT movement is not expected to sufficiently accommodate demands with v/c = 1.35, where vehicles may have to wait multiple cycles to clear the intersection. The WBT and SBL movements are also nearing capacity, with high delays and queues anticipated.
- Third Line & QEW North Ramp Terminal is expected to remain at LOS C in the a.m. peak hour and deteriorate to LOS D in the p.m. peak hour. In the morning peak

period, there are high SBT volumes which causes the ramp movements (WBL and WBR) to experience long delays. During the p.m. peak hour, there are high NBT demands (1877 vph) which causes the WBR to operate past capacity.

- Third Line & QEW South Ramp Terminal is expected to deteriorate to LOS D in the a.m. peak hour but remain at LOS C in the p.m. peak hour. Similar to the other ramp terminals, green time is prioritized for the N-S through volumes, which causes delay to the ramp volumes. In particular, the EBR movement in the a.m. peak hour is operating above capacity with v/c = 1.04.
- The north QEW ramp terminal at Dorval Drive is operating well and remains at the same LOS. With the optimized splits, the North Ramp terminal is no longer operating with any critical movements in the a.m. peak hour.
- The south QEW ramp terminal at Dorval Drive is expected to perform well at LOS B. Moderate congestion are still expected for vehicles leaving the ramp.

Overall, the majority of the critical movements are worsened by the added background traffic growth. In total, ten movements are operating past capacity during the two periods. Capacity constraints are expected at the two Bronte Road and Third Line ramp terminals. It should be noted that the poor traffic operations is not caused by the Wyecroft Road EA, but is related to the two major infrastructure projects planned for the area.

5 2031 Mitigation Measures

Based on the future 2031 conditions analysis, improvement measures were considered for the four ramp terminals on Bronte Road and Third Line with findings summarized below.

5.1 Bronte Road Ramp Terminals

The Region of Halton's *Budget and Business Plan 2019*, identified Bronte Road (RR25) for widening from four to six lanes from Speers Road to Highway 407, with construction happening in 2025. Bronte Road was also identified as a transit priority corridor in Halton Region's *Defining Major Transit Requirements* in Halton Report. Therefore, Bronte Road will likely be subjected to a future EA.

Given the recent reconstruction of the QEW bridge (within past 10 years), it is uncertain if road widening under the bridge will be justified or funded before 2031. Therefore, to be conservative, improvement measures were considered considering the existing right-of-way under the bridge and are as follows:

North Ramp Terminal

- Lengthen the intersection cycle length from the existing 60 seconds to 120 seconds during the a.m. peak hour (to match cycle length for south ramp terminal);
- Converting the middle WBL lane to a shared WBLR lane; and
- Optimize signal splits.

The Synchro results summarizing the above improvements are provided below, with detailed outputs attached in the Appendix.

Exhibit 5-1: Analysis of Improvements to Bronte Road & North Ramp Terminal

INTERSECTION	AM PEAK					PM PEAK				
	Int LOS (Avg. v/c)	All Movements				Int LOS (Avg. v/c)	All Movements			
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Bronte Road & North Ramp Terminal (***existing configuration***)	C (0.86)	WBL	B	0.20	13	C (1.01)	WBL	C	0.36	51
		WBR	C	0.72	48		WBR	F	1.06	220
		NBT	C	0.78	137		NBT	B	0.98	74
		SBT	C	0.93	153		SBT	B	0.52	93
Bronte Road & North Ramp Terminal (***with improvements***)	B (0.66)	WBL	D	0.65	42	C (0.84)	WBL	D	0.81	95
		WBR	D	0.50	41		WBR	E	0.85	120
		NBT	B	0.55	59		NBT	B	0.84	63
		SBT	A	0.66	126		SBT	B	0.44	78

The following was observed:

- In the a.m. peak hour, lengthening the cycle length will give additional green time to the critical SBT movement.
- Converting the middle WBL lane to shared WBLR lane will better facilitate WBR demand and free up green time for N-S volumes.
- Average intersection v/c significantly reduced in the a.m. and p.m. peak hours.

Additionally, a northbound through lane can be added by converting the south-west off ramp to a direct taper. This was not analyzed in this report and is subject to further design review.

South Ramp Terminal

From the future 2031 conditions analysis, the WBL movement is operating past capacity. One improvement considered was to add an additional WBL lane on top of the current configuration (single WBL and a shared WBLTR lane). This may be appropriate, however this configuration is not typical for an off-ramp terminal and is not seen in Ontario. Given the high growth rates used for the ramp volume, it is expected that the WBL movement will be well served. The additional WBL lane will also be subject to the widening of Bronte Road which will require three receiving lanes going south of the intersection. Therefore, due to the above and considering the other critical movements, the following improvements were modelled for analysis:

- Three northbound through lanes (match the three northbound receiving lanes);
- A dedicated northbound right-turn lane;
- Optimizing signal splits.

The Synchro results summarizing these improvements are provided below, with detailed outputs attached in the Appendix.

Exhibit 5-2: Analysis of Improvements to Bronte Road & South Ramp Terminal

INTERSECTION	AM PEAK						PM PEAK				
	Int LOS (Avg. v/c)	All Movements				Int LOS (Avg. v/c)	All Movements				
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Bronte Road & South Ramp Terminal (***existing configuration***)	E (1.13)	EBL	E	0.07	3	F (1.11)	EBL	E	0.26	13
		EBT	E	0.00	-		EBT	D	0.04	7
		WBL	F	1.21	237		WBL	E	0.83	119
		WBT	D	0.77	130		WBT	F	0.95	148
		WBR	D	0.55	69		WBR	E	0.92	139
		NBL	D	0.03	0		NBL	C	0.02	0
		NBT	F	1.24	188		NBT	F	1.35	272
		NBR	E	0.28	24		NBR	C	0.34	11
		SBL	E	0.97	162		SBL	F	0.94	120
		SBT	C	0.88	250		SBT	B	0.65	95
Bronte Road & South Ramp Terminal (***with improvements***)	E (1.01)	EBL	E	0.07	3	C (0.86)	EBL	E	0.26	13
		EBT	E	0.00	-		EBT	D	0.04	7
		WBL	F	1.14	230		WBL	E	0.86	119
		WBT	D	0.73	123		WBT	E	0.79	115
		WBR	C	0.43	45		WBR	D	0.76	107
		NBL	D	0.03	1		NBL	C	0.02	0
		NBT	E	0.97	81		NBT	C	0.91	121
		NBR	F	0.23	27		NBR	C	0.25	5
		SBL	D	0.89	150		SBL	E	0.88	101
		SBT	C	0.91	257		SBT	B	0.64	96

The following was observed:

- Added capacity to the NBT movement with some green time redistributed to the off-ramp approach and improving operation for the WBL movement;
- Average intersection v/c significantly reduced during both peak periods.

These improvements will drastically improve operations at this intersection, particularly to the movements that are overcapacity (i.e. WBL and NBT). Implementing the NBT lane is align with the widening of Bronte Road from four to six lanes currently identified for the Region of Halton. Therefore, it is recommended that the Town of Oakville coordinate efforts with the Region during the design phase of Bronte Road widening to ensure safe and efficient operation.

5.2 Third Line Ramp Terminals

North Ramp Terminal

To address the poor traffic operation of the WBR and NBT movements in the p.m. peak hour, converting the middle WBL lane to a shared WBLR (with optimized splits) was analyzed with Synchro results summarized in Exhibit 5-3.

From the EA study, it was recommended that future transportation network studies be undertaken to support the MTSA at Bronte GO station. The station area will be the main source of additional traffic along Third Line.

Exhibit 5-3: Analysis of Improvements to Third Line & North Ramp Terminal

INTERSECTION	AM PEAK					PM PEAK				
	Int LOS (Avg. v/c)	All Movements				Int LOS (Avg. v/c)	All Movements			
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Third Line & North Ramp Terminal (***existing configuration***)	C (0.9)	WBL	D	0.85	116	D (1.06)	WBL	C	0.40	57
		WBR	E	0.93	153		WBR	F	1.15	241
		NBT	B	0.56	82		NBT	D	1.02	293
		SBT	C	0.88	233		SBT	C	0.78	173
Third Line & North Ramp Terminal (***with improvements***)	C (0.9)	WBL	E	0.92	137	C (0.89)	WBL	D	0.84	105
		WBR	E	0.84	138		WBR	E	0.90	139
		NBT	B	0.57	82		NBT	B	0.89	217
		SBT	C	0.89	233		SBT	B	0.69	144

The following was observed:

- Added capacity to the WBR movement with marginal deterioration of WBL movement given the shared use of the second lane. Overall, the off-ramp approach will have sufficient capacity. Some green time is distributed to the N-S approaches during the p.m. peak, improving operation for the NBT movement.
- Average intersection v/c slightly increase in the a.m. peak hour but significantly reduced in the p.m. peak hour.

Converting the middle WBL lane to a shared WBLR lane is recommended in accommodating the heavy WBR and NBT demands.

South Ramp Terminal

- Optimize signal splits

The Synchro results summarizing these improvements are provided below, with detailed outputs attached in the Appendix.

Exhibit 5-4: Analysis of Improvements to Third Line & South Ramp Terminal

INTERSECTION	AM PEAK					PM PEAK				
	Int LOS (Avg. v/c)	All Movements				Int LOS (Avg. v/c)	All Movements			
		Mvmnt	LOS	V/C	95% Queue		Mvmnt	LOS	V/C	95% Queue
Third Line & South Ramp Terminal (***existing configuration***)	D (0.99)	EBL	D	0.93	153	C (0.91)	EBL	E	0.92	125
		EBR	F	1.04	194		EBR	E	0.94	142
		NBT	A	0.55	24		NBT	B	0.90	96
		SBT	C	0.96	283		SBT	A	0.67	63
Third Line & South Ramp Terminal (***with improvements***)	C (0.99)	EBL	D	0.89	146	C (0.91)	EBL	E	0.92	125
		EBR	E	0.99	189		EBR	E	0.94	142
		NBT	A	0.56	26		NBT	B	0.90	96
		SBT	C	0.99	291		SBT	A	0.67	76

By optimizing signal splits, north-south green time is reallocated to the EB ramp approach during the a.m. peak hour. However, both approaches are at / near capacity with minimal improvement to overall intersection v/c.

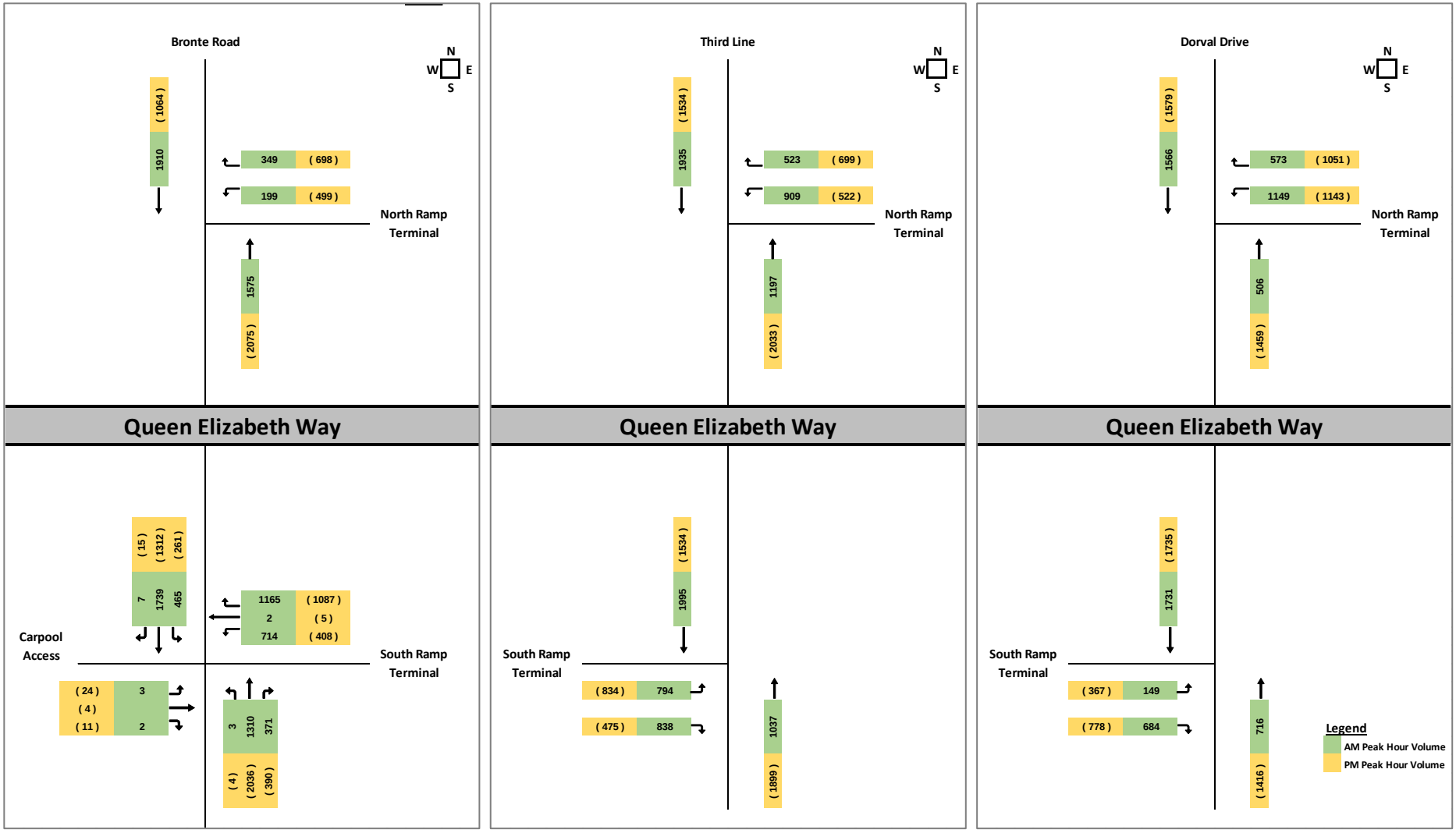
6 2041 Sensitivity Analysis

A sensitivity analysis assessed the 2031 improvements (from Section 5) for the ramp terminals using 2041 forecasts which include the full potential development scenario for the Bronte GO MTSA. These volumes are summarized in Exhibit 6-2. The purpose of this analysis was to determine how the proposed 2031 improvements described in Section 5 will operate with the traffic generated from the full potential development of the Bronte GO MTSA along with other forecast assumptions to 2041 discussed in Section 3. Synchro results summarizing the analysis are provided in Exhibit 6-1, with detailed outputs attached in the Appendix.

Exhibit 6-1: Synchro Analysis: Future 2041 Conditions with Improvements for AM and PM Peak Hours

Intersection	AM PEAK					PM PEAK				
	Int LOS (Avg. v/c)	All Movements				Int LOS (Avg. v/c)	All Movements			
		Mvmt	LOS	V/C	95% Queue		Mvmt	LOS	V/C	95% Queue
Bronte Road & QEW North Ramp Terminal ***(signalized)***	B (0.73)	WBL	D	0.71	53	C (0.95)	WBL	D	0.90	131
		WBR	D	0.65	56		WBR	E	0.96	167
		NBT	A	0.62	47		NBT	B	0.95	67
		SBT	B	0.74	173		SBT	B	0.50	87
Bronte Road & QEW South Ramp Terminal ***(signalized)***	F (1.16)	EBL	E	0.10	4	E (0.99)	EBL	E	0.28	14
		EBT	E	0.00	-		EBT	D	0.05	8
		WBL	F	1.29	287		WBL	F	0.97	159
		WBT	E	0.93	182		WBT	F	1.07	179
		WBR	D	0.72	114		WBR	F	1.03	168
		NBL	D	0.05	1		NBL	C	0.04	1
		NBT	F	1.05	90		NBT	E	1.08	145
		NBR	F	0.24	29		NBR	C	0.31	7
		SBL	E	1.05	154		SBL	E	0.86	100
		SBT	D	1.03	258		SBT	B	0.72	112
Third Line & QEW North Ramp Terminal ***(signalized)***	D (1.01)	WBL	F	1.07	185	D (1.01)	WBL	E	0.98	151
		WBR	F	1.05	194		WBR	F	1.06	188
		NBT	B	0.63	88		NBT	C	0.98	209
		SBT	D	0.98	308		SBT	B	0.76	166
Third Line & QEW South Ramp Terminal ***(signalized)***	E (1.12)	EBL	F	1.06	199	D (1.04)	EBL	F	1.03	164
		EBR	F	1.18	245		EBR	F	1.10	190
		NBT	A	0.62	30		NBT	C	1.01	109
		SBT	E	1.09	290		SBT	B	0.75	88
Dorval Drive & QEW North Ramp Terminal ***(signalized)***	C (0.79)	WBL	C	0.83	155	D (0.93)	WBL	C	0.91	205
		WBR	C	0.65	112		WBR	D	0.94	264
		NBT	C	0.26	39		NBT	C	0.88	86
		SBT	C	0.76	139		SBT	D	0.91	157
Dorval Drive & QEW South Ramp Terminal ***(signalized)***	B (0.67)	EBL	D	0.51	58	C (0.71)	EBL	D	0.69	92
		EBR	D	0.79	107		EBR	D	0.80	123
		NBT	A	0.25	32		NBT	B	0.53	50
		SBT	B	0.62	82		SBT	B	0.66	80

Exhibit 6-2: Future 2041 Volumes AM (PM) Peak Hours



In 2041 with background growth, the full Bronte GO MTSA growth and Wyecroft Road extension growth added, the study intersections are expected to operate as follows:

- Bronte Road & QEW North Ramp Terminal is expected to remain at LOS B in the a.m. peak period with all movements below the critical threshold (v/c < 0.75). During the p.m. peak period, the intersection LOS remains at C but the WBL, WBR and NBT movements are nearing capacity, indicating long delays and queues.
- Bronte Road & QEW South Ramp Terminal is expected to operate with severe congestion at LOS F and E during the a.m. and p.m. peak hours, respectively. In the a.m. peak hour, the WBL deteriorates further with v/c = 1.29. The critical NBT, SBL and SBT movements are all expected to operate at / overcapacity. During the p.m. peak hour, the NBT movement along with the ramp volumes are expected to be congested, all of which are operating at / overcapacity. Due to the high NBT demands, the conflicting SBL is also critical.
- Third Line & QEW North Ramp Terminal is expected to operate at LOS D during both peak periods. With the increased volumes, particularly the SBT volume in the a.m. peak hour and the NBT volume in the p.m. peak hour, the ramp movements are expected to incur significant delays and operate at / past capacity.
- Third Line & QEW South Ramp Terminal is expected to deteriorate with average intersection volumes exceeding capacity in both peak periods. This indicates unstable operation where the intersection is unlikely to accommodate demand and requires vehicles to wait more than one cycle to complete their movements. This operation suggest the need for road widening from four through lanes to six on Third Line to address the heavy N-S volumes resulting from the full growth scenario for Bronte GO MTSA.
- Dorval Drive & QEW North Ramp Terminal is expected to operate at LOS C in the a.m. peak hour and deteriorate to LOS D in the p.m. peak hour. With the added growth, the WBR in the morning peak and all four movements in the p.m. peak are expected to be critical / nearing capacity.
- Dorval Drive & QEW South Ramp Terminal is expected to perform well at LOS B and C during the two peak periods. Each movements are expected to deteriorate, but are not drastically worsened due to added demands.

Overall, the sensitivity analysis illustrates that the full potential development of the Bronte GO MTSA along with the other forecasting assumptions will require strategic improvements to increase the non-auto mode share and the capacity of all six ramp terminals.

7 Summary and Conclusions

This report provides traffic operations analysis for six QEW ramp terminals at Bronte Road, Third Line and Dorval Drive, located in the Town of Oakville. The purpose of this report is to satisfy MTO requirements to analyze future traffic operations at the QEW ramp terminals.

Future conditions forecasts were developed for the study area. A 2% growth rate was used for all traffic volumes exiting QEW ramps, while the remaining corridor through traffic was grown by 0.8% annually. The study also accounts for expected traffic from two major infrastructure projects planned for the area, the Wyecroft Road extension and the potential Bronte GO Major Transit Station Area land use changes.

In 2031, the ramp terminals at Bronte Road and at Third Line are expected to operate poorly, with ten movements operating at/past capacity. It should be noted that the poor traffic operations are not caused by the Wyecroft Road EA, but are related to the two major infrastructure projects planned for the area.

Conceptual improvements were identified at the following locations:

- Bronte Road & North Ramp Terminal which include lengthening cycle lengths in the a.m. peak hour and converting the middle WBL lane to a shared WBLR lane;
- Bronte Road & South Ramp Terminal which include adding a NBT lane (to match existing three northbound receiving lanes) and a separate dedicated NBR turn lane; and
- Third Line & North Ramp Terminal which include converting the middle WBL lane to a shared WBLR lane to accommodate high WBR demands.

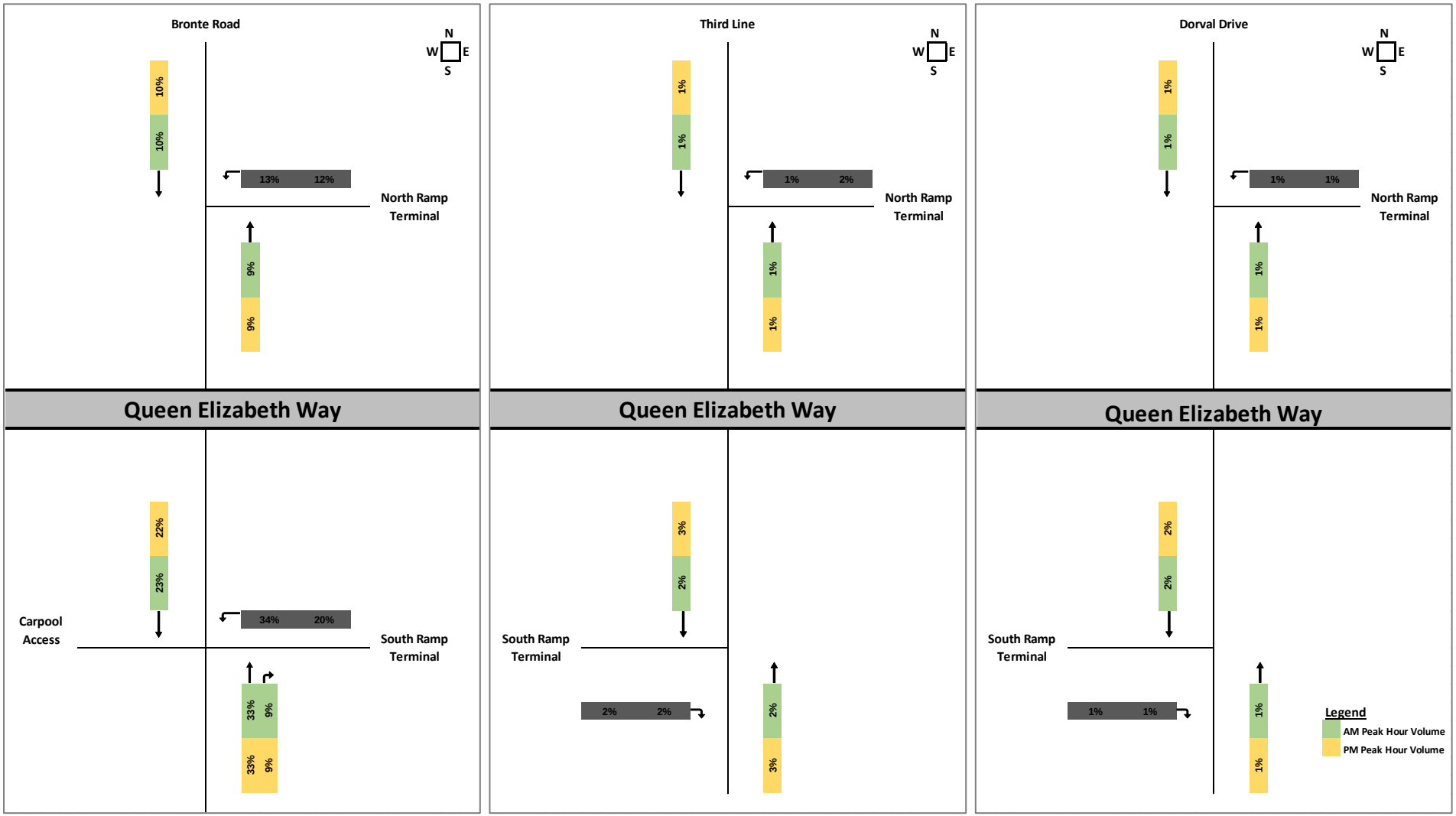
With the above improvements, all of the study intersections are expected to accommodate 2031 demands with limited potential for background queues to interfere. Bronte Road is planned to be widened and was identified as a transit priority corridor in Halton Region's *Defining Major Transit Requirements* report. Future improvements on Bronte Road are likely subject to a future EA study. It is recommended that the Town of Oakville coordinate efforts with the Region during the design phase of Bronte Road widening to ensure safe and efficient operation.

A sensitivity analysis was also completed to analyze the above improvements for the ramp terminals to year 2041. The findings conclude that the full development of Bronte GO MTSA along with the other forecast assumptions will require strategic improvements to increase the non-auto mode share and the capacity of the study ramp terminals.

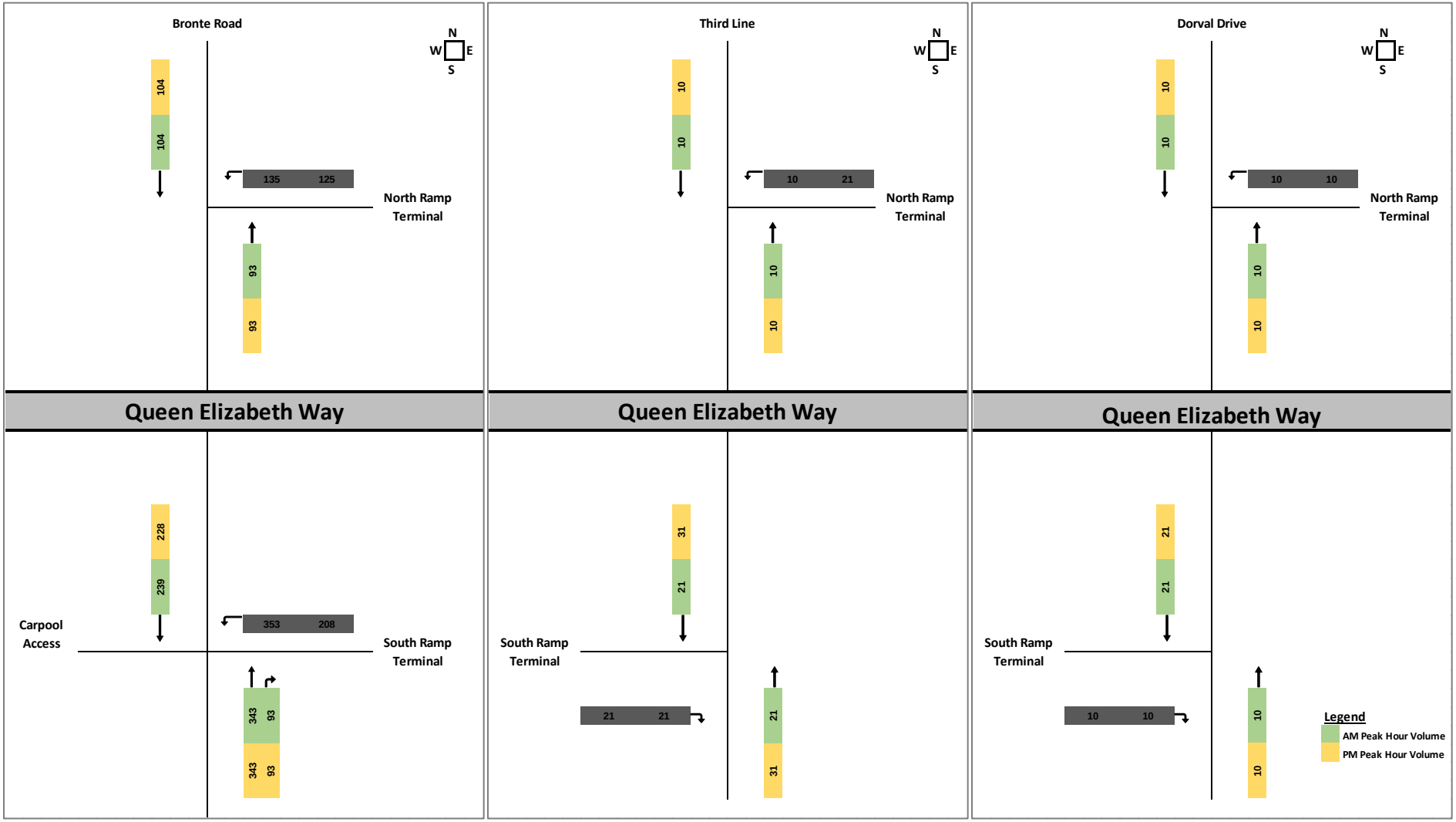
As noted in the Wyecroft Road Improvements Traffic Study, the transportation network surrounding the Bronte GO MTSA requires further study. In particular, widening Third Line to six lanes may be considered, with consideration for impacts to the QEW interchange to the north and the Metrolinx/CN rail bridge to the south. Based on the Bronte GO MTSA land use and mode split assumptions used for this study, it appears the current road network cannot accommodate the traffic growth associated with the potential future land use changes. It is recommended that the Town consider the broader transportation network needs to support growth in the Bronte GO MTSA.

Appendices

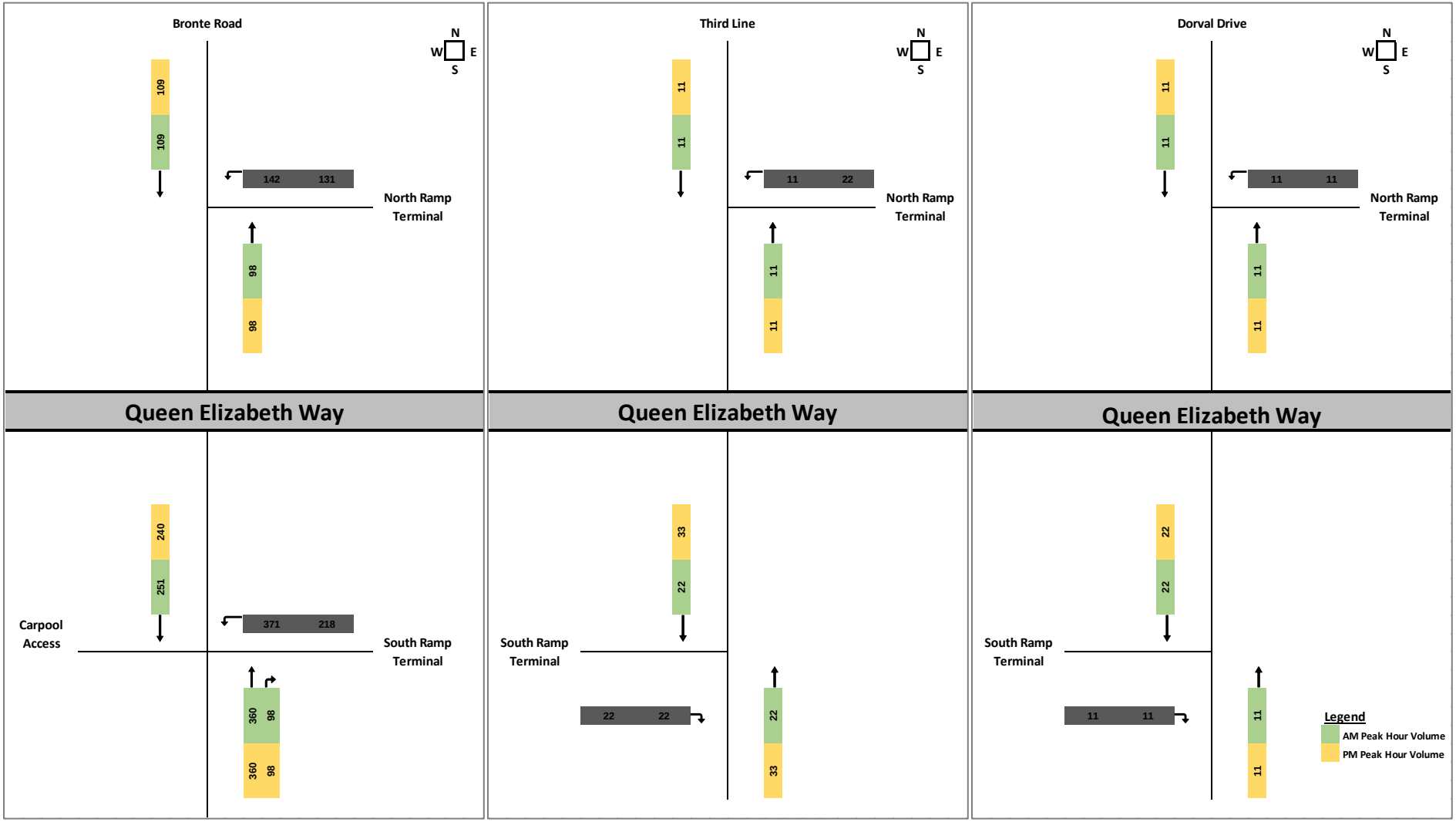
Trip Distribution for Wyecroft Road Extension



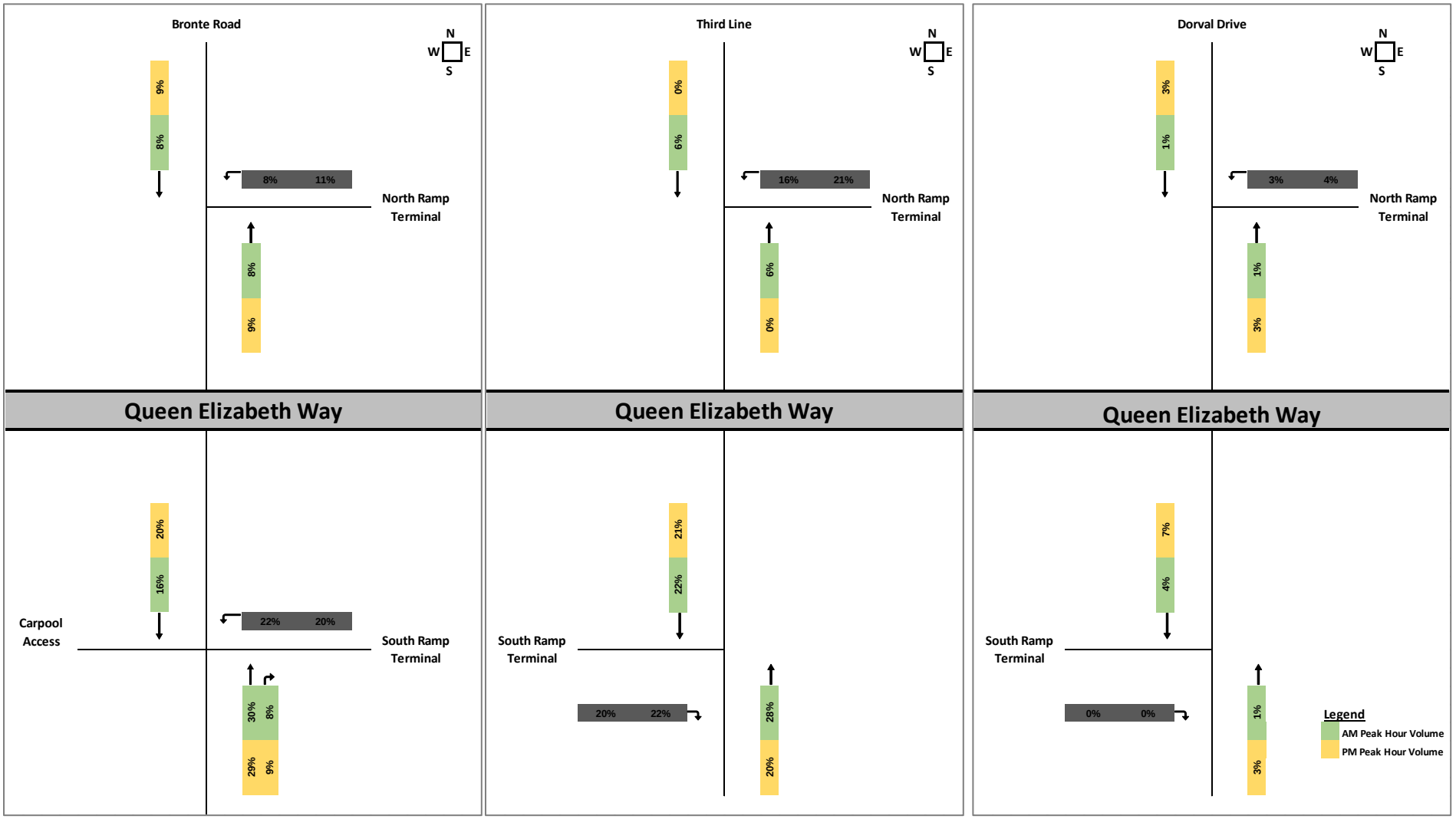
Added Site Traffic Generated for Wyecroft Road Extension (2031)



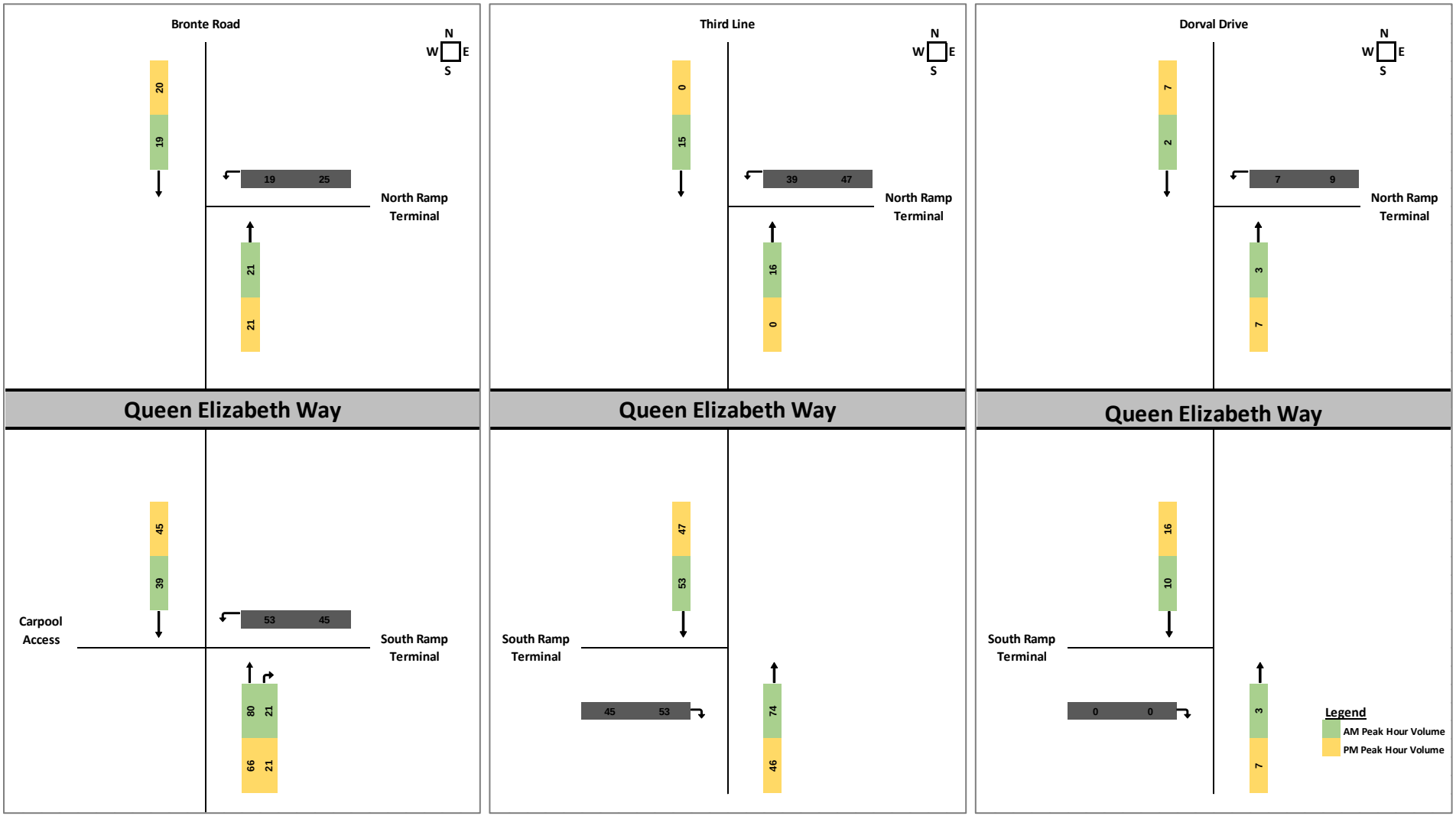
Added Site Traffic Generated for Wyecroft Road Extension (2041)



Trip Distribution for Bronte GO MTSA



Added Site Traffic Generated for Bronte GO MTSA (2031)



Added Site Traffic Generated for Bronte GO MTSA (2041)