Dymon Group of Companies

June 2017

1375 Clyde Avenue
Transportation Impact Study

PARSONS

1375 Clyde Avenue

Transportation Impact Study

prepared for:
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June 30, 2017

476370-01000

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1375 Clyde Avenue Transportation Impact Study

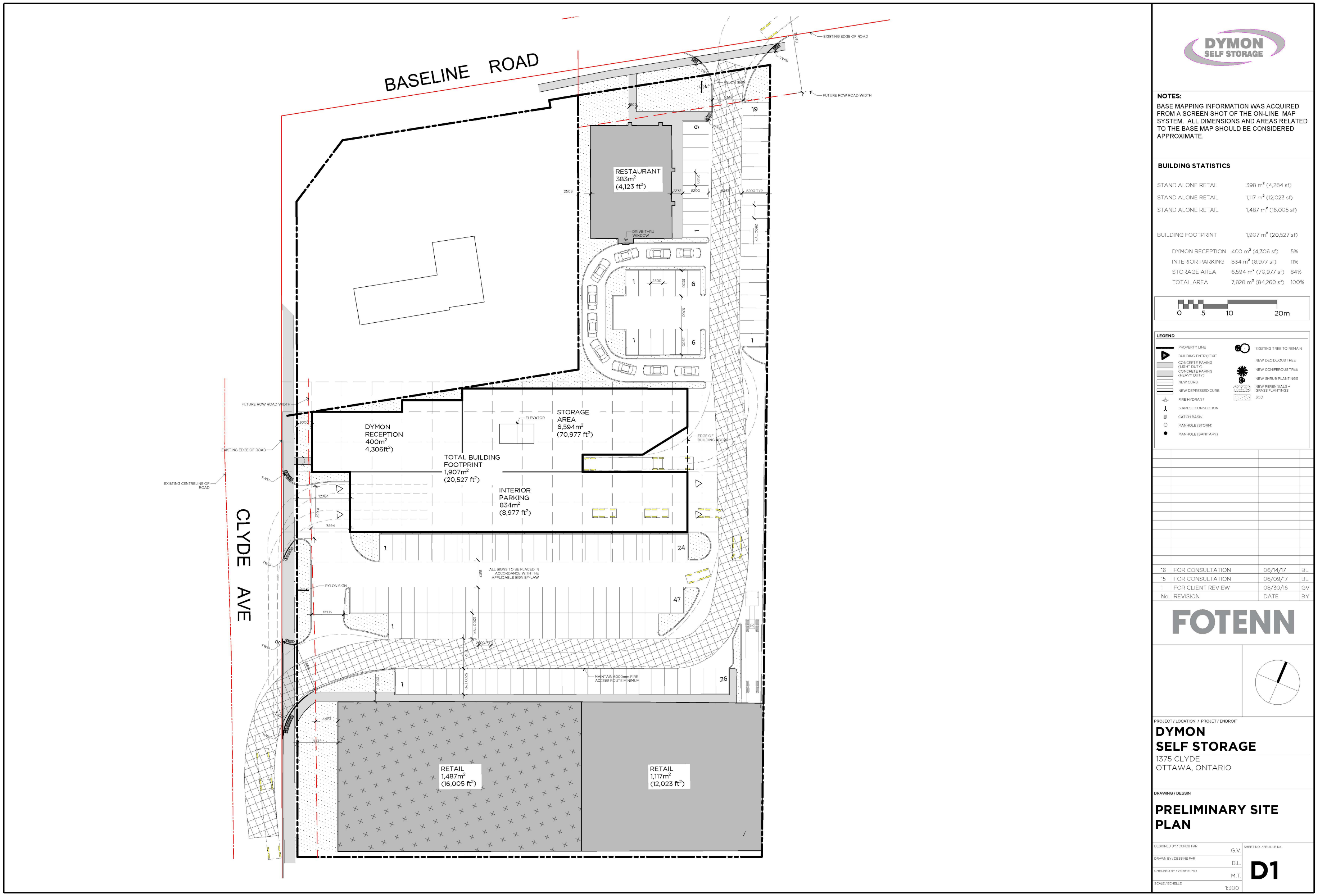
1. INTRODUCTION

This study has been prepared to support Dymon's Site Plan Application for their proposed development at 1375 Clyde Avenue. The proposed development will include a self-storage facility, a restaurant, along with renovations to, and expansion of, the existing retail building. The site is bound by Clyde Avenue to the west, a Petro-Canada gas station to the northwest, Baseline Road to the north, a vacant lot to the east, and an auto maintenance shop to the south. Figure 1 shows the site location and the nearby road network. Figure 2 shows the proposed site plan.

Figure 1: Local Site Context

Consistent with the City of Ottawa's 2006 Transportation Impact Assessment Guidelines (TIA Guidelines), a Transportation Impact Study (TIS) is required to support the subject development application. The following horizons will be considered in the demand forecasting and operational analysis, 2017 (Existing Conditions), 2020 (Full Build-out, assumed), and 2020 (Full build-out plus 5 years). AM, PM, and Saturday peak hours have been analyzed in this study.

Prior to commencement of this study a pre-consultation / scoping e-mail was sent to City Staff for discussion / approval. E-mail correspondence with City Staff has been included as Appendix A.



NOTES:

BASE MAPPING INFORMATION WAS ACQUIRED FROM A SCREEN SHOT OF THE ON-LINE MAP SYSTEM. ALL DIMENSIONS AND AREAS RELATED TO THE BASE MAP SHOULD BE CONSIDERED APPROXIMATE.

BUILDING STATISTICS

STAND ALONE RETAIL	398 m² (4,284 sf)	
STAND ALONE RETAIL	1,117 m² (12,023 sf)	
STAND ALONE RETAIL	1,487 m² (16,005 sf)	
BUILDING FOOTPRINT	1,907 m² (20,527 sf)	
DYMON RECEPTION	400 m² (4,306 sf)	5%
INTERIOR PARKING	834 m² (8,977 sf)	11%
STORAGE AREA	6,594 m² (70,977 sf)	84%
TOTAL AREA	7,828 m² (84,260 sf)	100%

No.	REVISION	DATE	BY
16	FOR CONSULTATION	06/14/17	BL
15	FOR CONSULTATION	06/09/17	BL
1	FOR CLIENT REVIEW	08/30/16	GV

PROJECT / LOCATION / PROJET / ENDROIT

DYMON SELF STORAGE

1375 CLYDE
OTTAWA, ONTARIO

DRAWING / DESSIN

PRELIMINARY SITE PLAN

DESIGNED BY / CONCU PAR: G.V.
DRAWN BY / DESSINE PAR: B.L.
CHECKED BY / VERIFIE PAR: M.T.
SCALE / ECHELLE: 1:300
SHEET NO. / FEUILLE No.: **D1**

Figure 2: **Proposed Site** Plan

2. EXISTING CONDITIONS

2.1. STUDY AREA ROAD NETWORK

The Study Area road network is summarized below:

Baseline Road is a major east-west arterial, which extends from Robertson Road at the west, passes over Highway 416 and continues through to Walkley Road in the east. Within the Study Area, Baseline Road has a four-lane divided cross-section with auxiliary left-turn lanes and channelized right-turn lanes. The posted speed limit, within the Study Area, is 60 km/h.

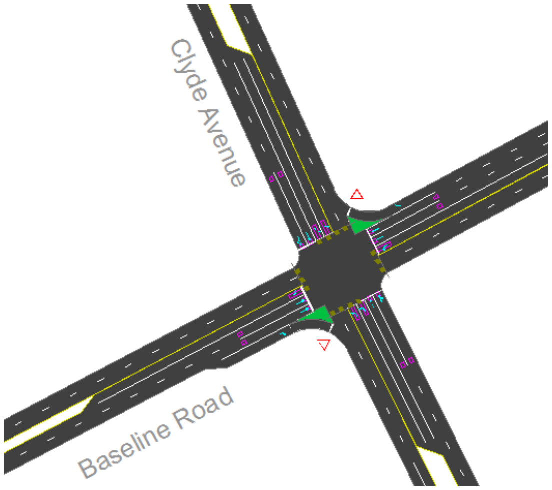
Clyde Avenue is a north-south arterial, which extends from Castle Hill Crescent in the north to Merivale Road/Lotta Avenue in the south (where it continues as Merivale Road). Within the Study Area, Clyde Avenue has a four-lane undivided cross-section with two auxiliary left turn lanes in both the northbound and southbound approach. The posted speed limit, within the Study Area, is 50 km/h.

Merivale Road is a north-south arterial, which extends from Island Park Drive in the north to Prince of Wales Drive to the south. Merivale Road has a four-lane cross-section with auxiliary left turn lanes and select channelized right turn lanes at the Study Area intersections. The posted speed limit, within the Study Area, is 60 km/h.

2.2. EXISTING STUDY AREA INTERSECTIONS

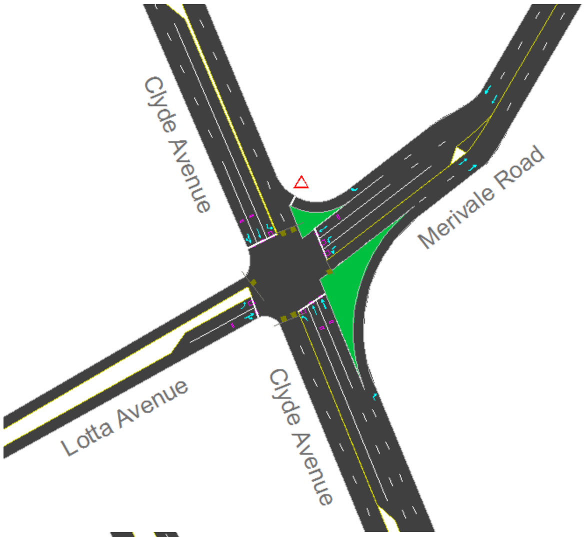
Baseline Road/Clyde Avenue

The Baseline Road/Clyde Avenue intersection is a signalized four-legged intersection. The northbound and southbound approaches consist of two left-turn lanes, one through lane, and a through/right turn lane. The eastbound approach and westbound approaches consist of one left-turn lane, two through lanes and a single channelized right-turn lane. Left-turns for all approaches at this intersection are fully protected.



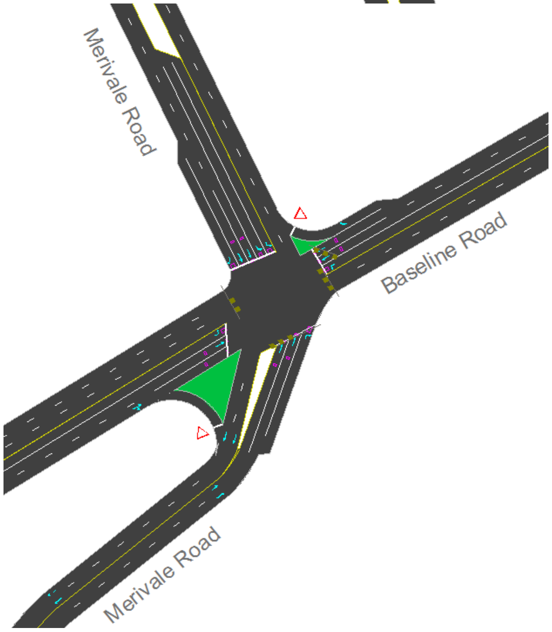
Merivale Road/Lotta Avenue/Clyde Avenue

The Merivale Road/Lotta Avenue/Clyde Avenue intersection is a signalized four-legged intersection. The northbound approach includes a channelized right-turn with a receiving lane, allowing for free-flow operation. The northbound approach also includes a left turn and two through lanes. The southbound approach consists of a left turn lane, a dedicated through lane, and a shared through-right turn lane. The eastbound approach consists of a left turn lane and a shared through-right turn lane. The westbound approach includes a right turn channel with a yield. The westbound approach also includes double left turn lanes and a single through lane.



Merivale Road/Baseline Road

The Merivale Road/Baseline Road intersection is a signalized four-legged intersection. The northbound approach includes two through lanes and a right turn lane, northbound left turns are not permitted at this location. The southbound approach consists of a right-turn lane, two through lanes and double left turn lanes. The eastbound approach includes a channelized right-turn with a yield. The eastbound approach also includes two through lanes and a left turn lane. The eastbound approach includes a channelized right turn with a yield. The eastbound approach also includes two through lanes and a left turn lane.



2.3. TRANSIT NETWORK

Transit service within the vicinity of the site is provided by OC Transpo Routes #50, 80, 81, and 88. Bus stops are located adjacent to the site at the Baseline Road and Clyde Avenue intersection. Local Routes #50 and 81 provide frequent service throughout the day. Frequent Routes #80 and 88 provide service every 15 minutes or less on weekdays between 6 AM and 6PM.

Figure 3: Area Transit Network

Accessed on May 23, 2017

2.4. PEDESTRIAN & CYCLING NETWORK

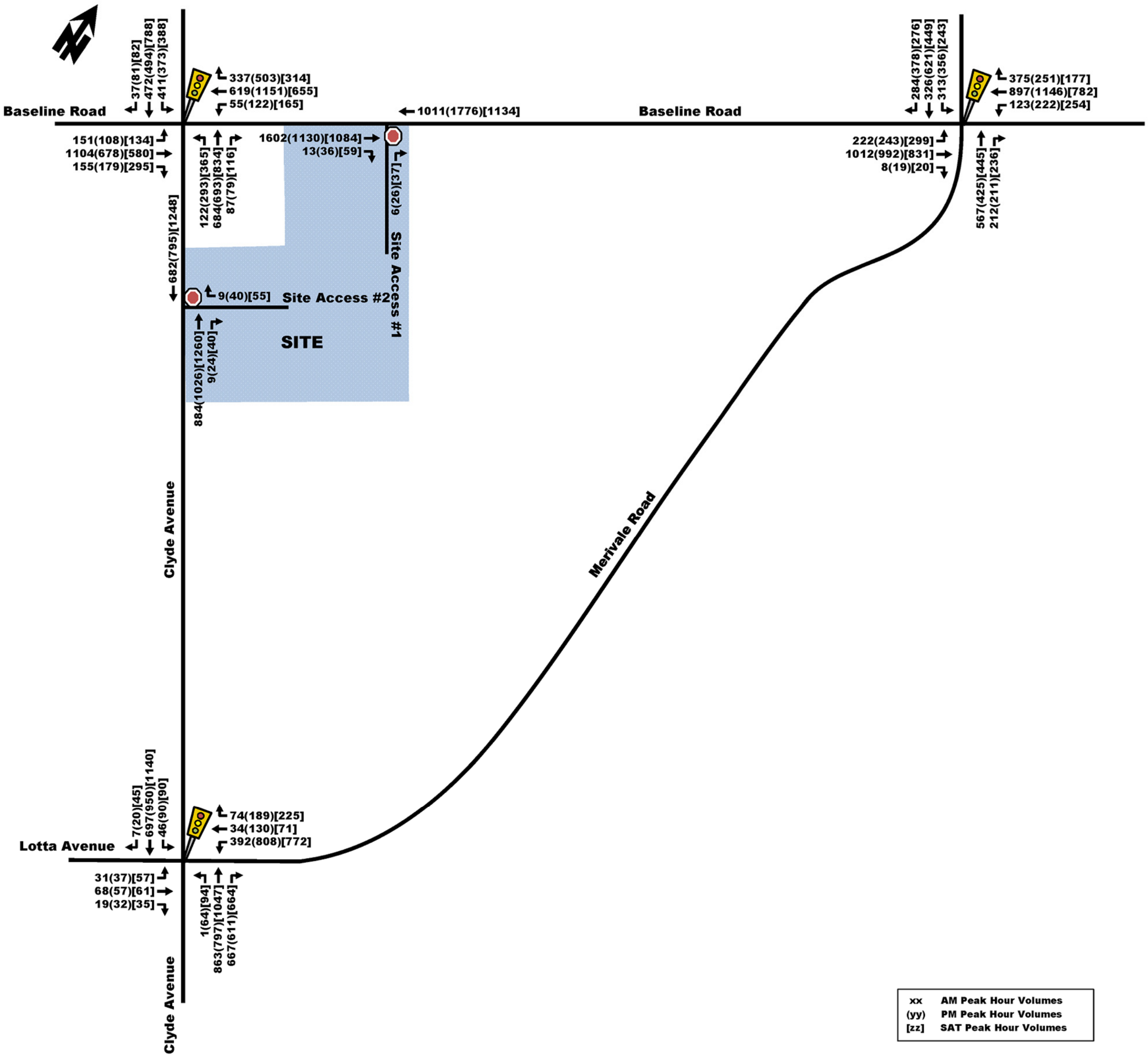
Sidewalk facilities near the site are provided along both sides of Baseline Road and Clyde Avenue. There are few cycling facilities are within the study area. Currently the intersection at Baseline Road and Clyde Avenue provides approximately 90m of cycling lane on Baseline Road for both eastbound and westbound approaches. Baseline Road and Clyde Avenue are planned as Spine Routes for the Ultimate Network. Baseline Road is planned to be included as part of the “Cross-Town Bikeways”. Figure 4 below presents the planned city cycling network.

Figure 4: Ottawa Cycling Plan

2.5. EXISTING TRAFFIC OPERATIONS

To establish the baseline intersection operations an operational analysis of the existing traffic conditions has been undertaken for the Study Area intersection. Recent counts were available from the City of Ottawa for most of the intersections for AM, PM and Saturday peak hours. Saturday counts were not available at the intersection of Merivale Road at Baseline Avenue. New turning movement counts were undertaken on Saturday June 24, 2017. Turning movement counts were not available at the existing site accesses. To estimate the operation of the existing accesses a trip generation was undertaken for the existing building. Details of the trip generation for the existing building are detailed in Section 3.2 – Site Trip Generation. Existing traffic volumes, based on the foregoing, are summarized on Figure 5. Appendix B contains the detailed traffic data sheets.

Figure 5: Existing Peak Hour Traffic Volumes



To assess the peak hour traffic conditions at the signalized and unsignalized intersections a level of service analysis has been completed using Trafficware Synchro 9.1, which implements the methods of the 2000 Highway Capacity Manual. The key parameters used in the analysis include:

- A saturation flow rate of 1800 (as per the City of Ottawa TIA Guidelines)
- Existing Heavy Vehicle % (calculated using the Turning Movement Counts)
- Peak Hour Factor (calculated using the Turning Movement Counts)
- Default values for all other inputs (as defined by Synchro 9.1)

The results of the operational analysis are summarized in Table 1. The Synchro analysis outputs are provided in Appendix C.

Table 1: Intersection Operational Analysis
2017 Existing Conditions

Intersection	Weekday AM Peak (PM Peak) [Saturday]					
	Critical Movement			Intersection		
	LoS	max. v/c or delay (s)	Movement	Delay (s)	LoS	v/c
Clyde Avenue/Baseline Road[1]	F(F)[F]	1.10(1.05)[1.18]	EBT(SBL)[WBL]	64.5(57.1)[72.6]	F(E)[E]	1.01(0.98)[0.97]
Merivale Road/Baseline Road[1]	E(F)[F]	0.93(1.20)[1.36]	EBT(SBL)[EBL]	38.9(53.5)[61.8]	D(E)[D]	0.84(0.92)[0.88]
Clyde Avenue/Lotta Avenue/Merivale Road[1]	C(F)[F]	0.72(1.12)[1.38]	WBL(WBL)[WBL]	20.3(50.5)[73.0]	B(D)[F]	0.64(0.89)[1.07]
Baseline Road/Site Access #1[2]	A(A)[B]	9.9(9.2)[10.1]	NB(NB)[NB]	9.9(9.2)[10.1]	-	-
Clyde Avenue/Site Access #2[2]	A(A)[B]	9.2(9.3)[10.1]	WB(WB)[WB]	9.2(9.3)[10.1]	-	-
Note: *1- Signalized Intersection* *2- Unsignalized Intersection*						

The existing Study Area signalized intersections are characterized by long delays, high v/c ratios (greater than 1.0 in comes cases), and poor LOS. These delays are caused by high traffic volumes on all approaches. While the Study Area signalized intersections were shown to operate poorly, no mitigation measures have been proposed as these intersections are already built out with multiple turning lanes and due to the configuration / location there are no geometric improvements that could be added to improve operations.

The un-signalized, existing, intersections are right-in / right-out only configurations. On Clyde Avenue there is a right out only north of the right-in / right-out access. The right out only has not been included in the operational analysis as it has been assumed that all traffic may use the right-in / right-out. This will create a conservative estimate of the amount of traffic going through the Clyde Avenue access. As shown in the foregoing table, the site accesses operate with LOS B or better.

2.6. EXISTING ROAD SAFETY CONDITIONS

Collision history for the study area roads (2013 to 2015, inclusive) was obtained from the City of Ottawa and revealed that most collisions (89%) only involved property damage, 10% involved personal injuries, 1% resulted in fatal injuries, and 1% was non-reportable.

The primary causes of collisions cited by police include; rear end (61%), angle (10%), turning movement (10%), single vehicle (other) (3%), and (1%) other type collisions.

A standard unit of measure for assessing collisions at an intersection is based on the number collisions per million entering vehicles (MEV). At intersections within the study area, reported collisions have historically taken place at a rate of:

- 1.04/MEV at the Baseline Road and Clyde Avenue intersection;
- 1.17/MEV at the Clyde Avenue and Merivale Road/Lotta Avenue intersection; and
- 0.59/MEV at the Baseline Road and Merivale intersection.

Over a three-year period (Jan. 2013 - Dec. 2015) the Baseline Road at Clyde Avenue had 67 reported collisions, the Clyde Avenue at Merivale Road/Lotta Avenue intersection had 53 reported collisions, and the Baseline Road at Merivale intersection had 37 reported collisions. The intersections of the Baseline Road at Clyde Avenue and Clyde Avenue and Merivale Road/Lotta Avenue have shown a high number of collisions in the last three years and this is considered a safety issue. This should be forwarded to the Susan Woo at the City of Ottawa for further monitoring/analysis. The related analysis is provided as Appendix D.

3. DEMAND FORECASTING

3.1. BACKGROUND TRAFFIC GROWTH

To account for background growth along Clyde Avenue, Merivale Road, and Baseline, a 2% background growth rate per annum (compounded) has been applied. The existing traffic volumes and the percent background growth to estimate the future background traffic for 2020 and 2020. Figure 6 shows the future background traffic volumes for the 2020 horizon. Figure 7 shows the future background traffic volumes for the 2020 horizon.

Figure 6: Future Background Traffic (2020)

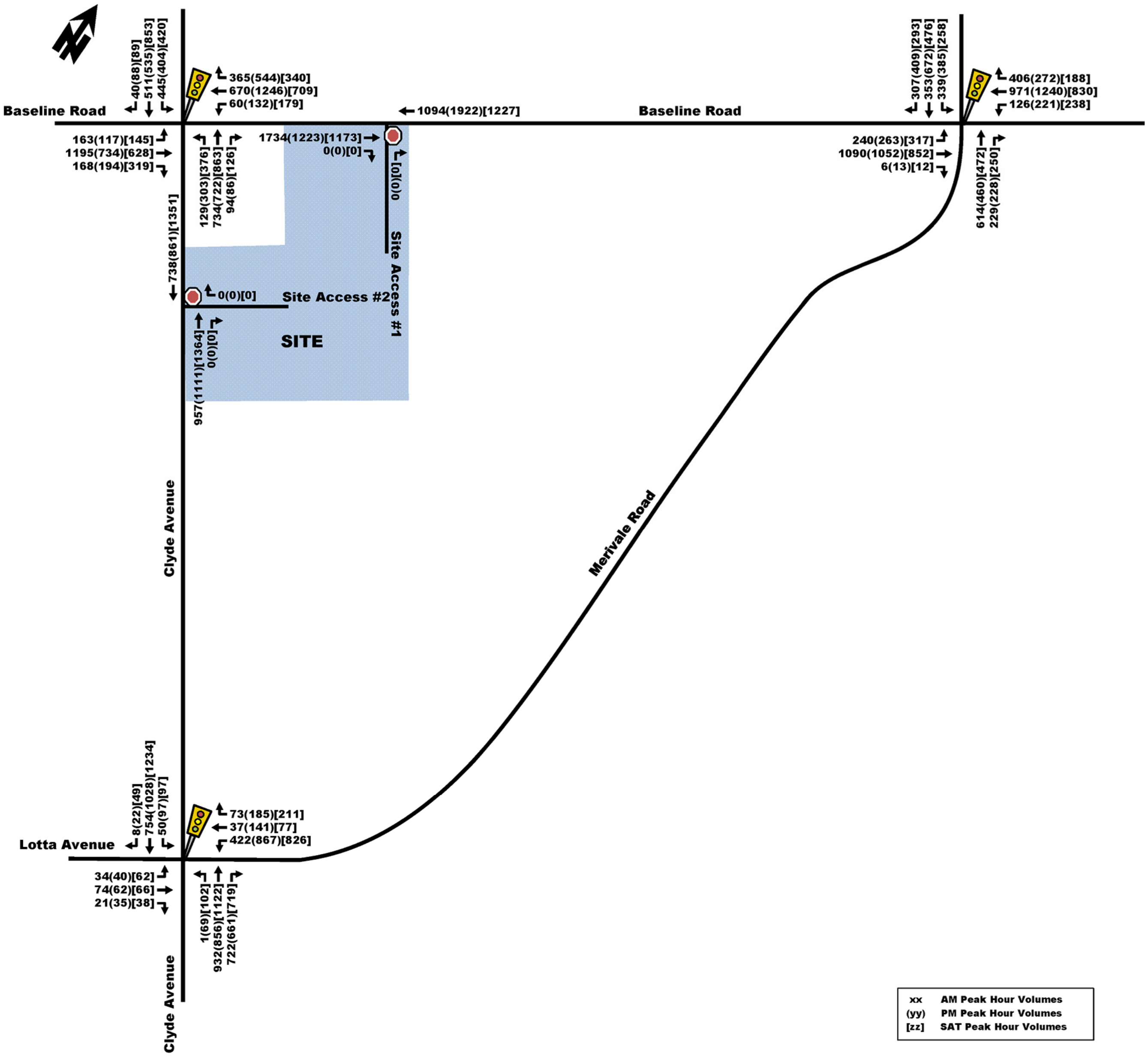
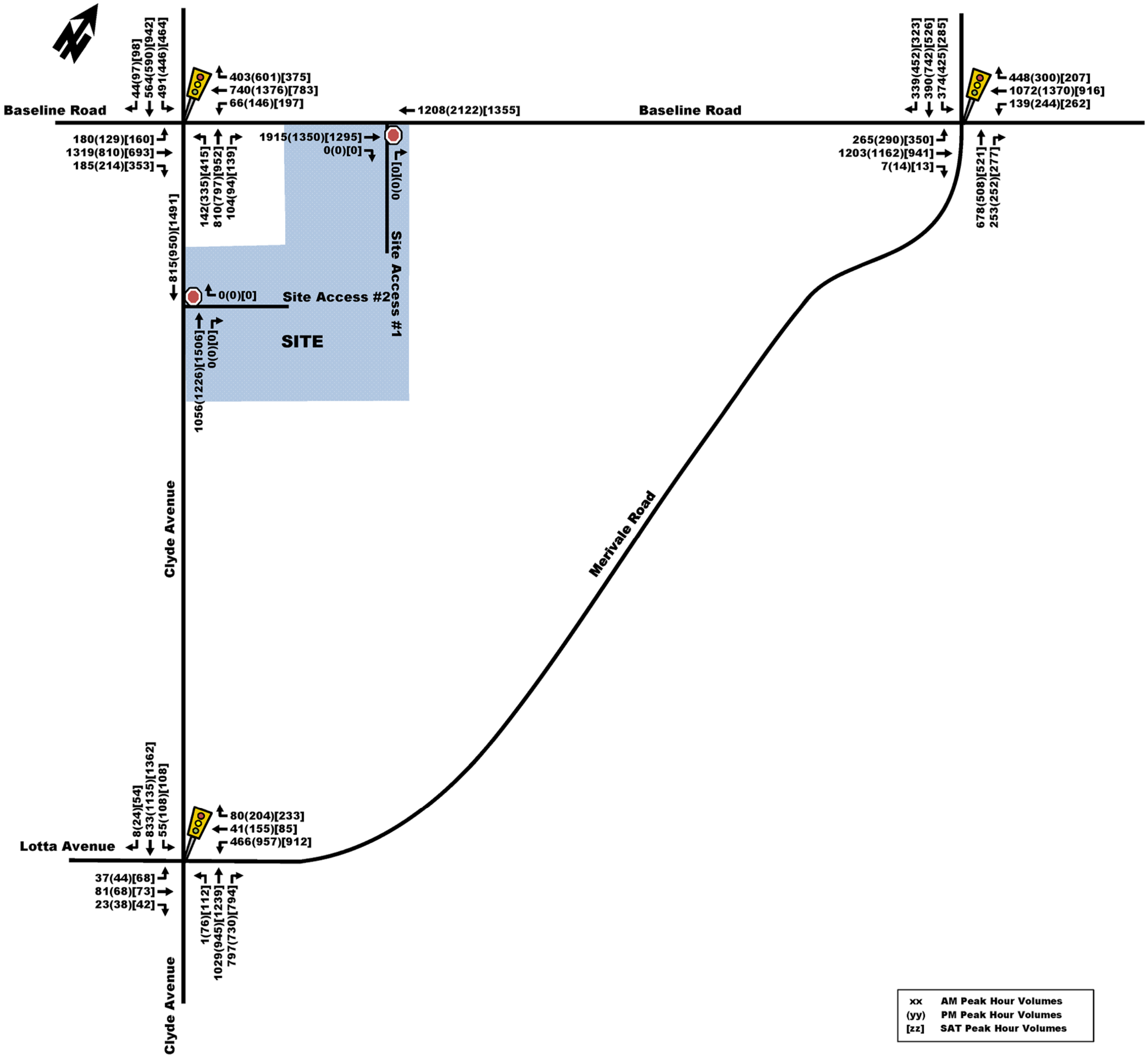


Figure 7: Future Background Traffic (2025)



3.2. SITE TRIP GENERATION

The number of vehicle trips has been estimated, based on the proposed land uses, to project the impact of the proposed development on the surrounding road network. Table 2 documents the proposed land uses, the ITE Land Use Codes, and the independent variables that are being proposed. It should be noted that while the proposed site does have a drive-through, the proposed tenant would be a restaurant similar to a Swiss-Chalet, so the ITE LUC 934 – Fast Food Restaurant with Drive-Through land use would not be reasonable in this case. Therefore, ITE LUC 932 – High Turnover (Sit-Down) Restaurant has been used.

Table 2: Proposed Land Uses

Land Use	Data Source	Independent Variable
High-Turnover (Sit-Down) Restaurant	ITE 932	4,500 ft^2
Shopping Center (Existing)	ITE 820	16,000 ft^2
Shopping Centre (New)	ITE 820	12,000 ft^2

The ITE Land Use Codes and independent variables described above were used to develop the baseline automobile trip generation. The baseline automobile trip generation is multiplied by 1.30 to estimate the number of peak hour person trips that could be generated by the proposed development. The 2011 NCR Household Origin – Destination Survey was reviewed to determine the mode share characteristics of the subject area, specifically, the Merivale Area. Table 3 documents the mode share based on the O-D survey.

Table 3: Merivale Existing Mode Share

Travel Mode	Mode Share
Auto Driver	55%
Auto Passenger	15%
Transit	20%
Non-motorized	10%
Total Person Trips	100%

Table 4 summarizes the vehicle trip generation for the full build-out of the proposed development based on the foregoing assumptions. A full trip generation table is included in Appendix E.

Table 4: Site Trip Generation (Full Build-Out)

	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
Net new Vehicle Trips	28	19	47	47	46	93	72	64	136

3.3. VEHICLE TRAFFIC DISTRIBUTION AND ASSIGNMENT

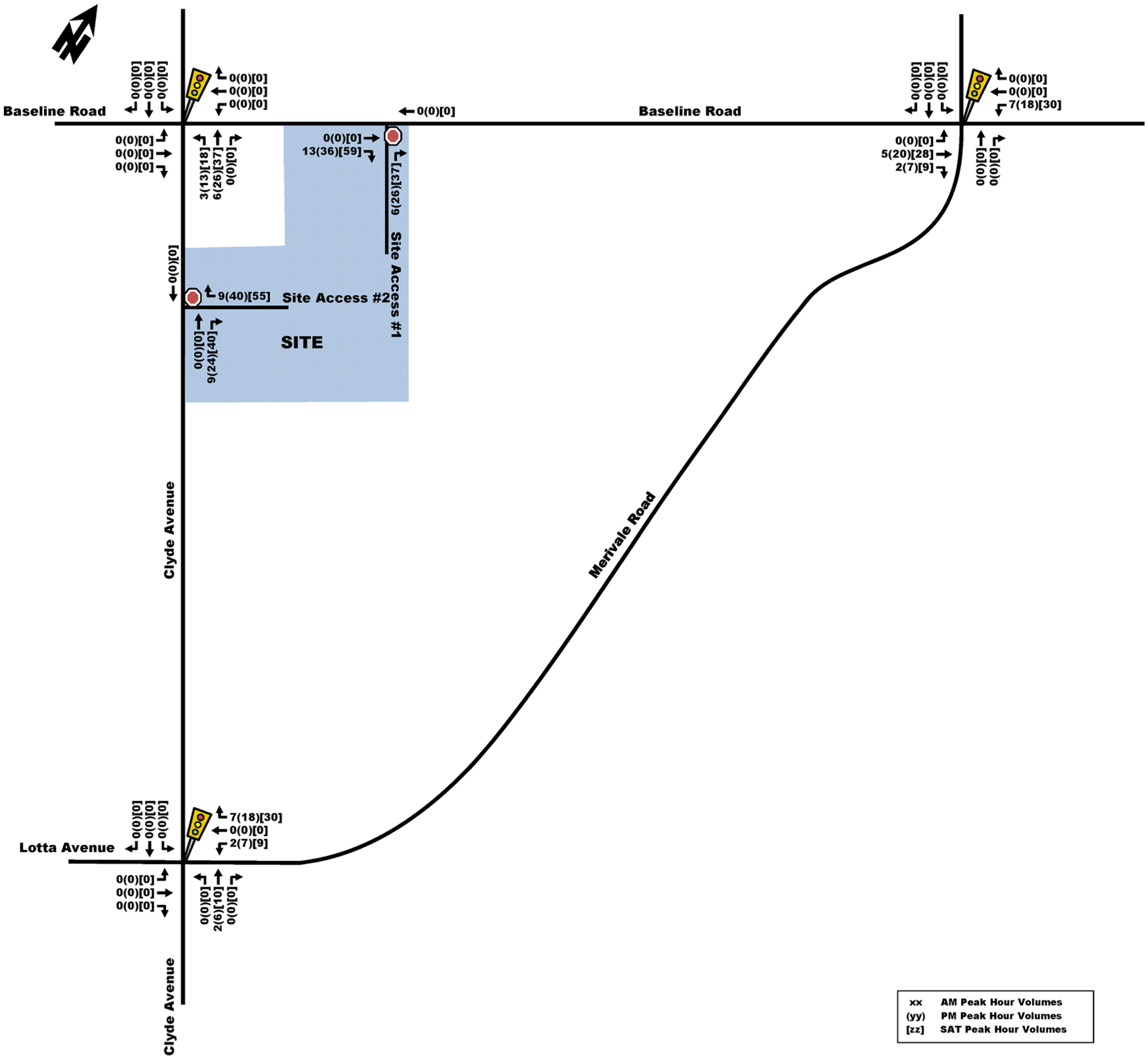
The vehicle traffic distribution and assignment was developed using the 2011 NCR Household Origin – Destination Survey. The resultant distribution is outlined in Table 5.

Table 5: Traffic Distribution

To/From	Distribution
North	40%
South	10%
East	30%
West	20%
Total	100%

Using these distributions and the access configuration, new site-generated trips were assigned to the Study Area intersections. Figure 8 shows the full build-out site generated traffic volumes.

Figure 8: Site Generated Traffic Volumes (Full Build-Out)



3.4. PROJECTED TRAFFIC VOLUMES

The background traffic volumes were combined with the site traffic to determine the weekday AM, PM, and Saturday peak hour total traffic forecasts. The future total traffic volumes for the 2020, and 2025 horizon years are shown in Figure 9, and Figure 10 respectively.

Figure 9: Future Total Traffic (2020)

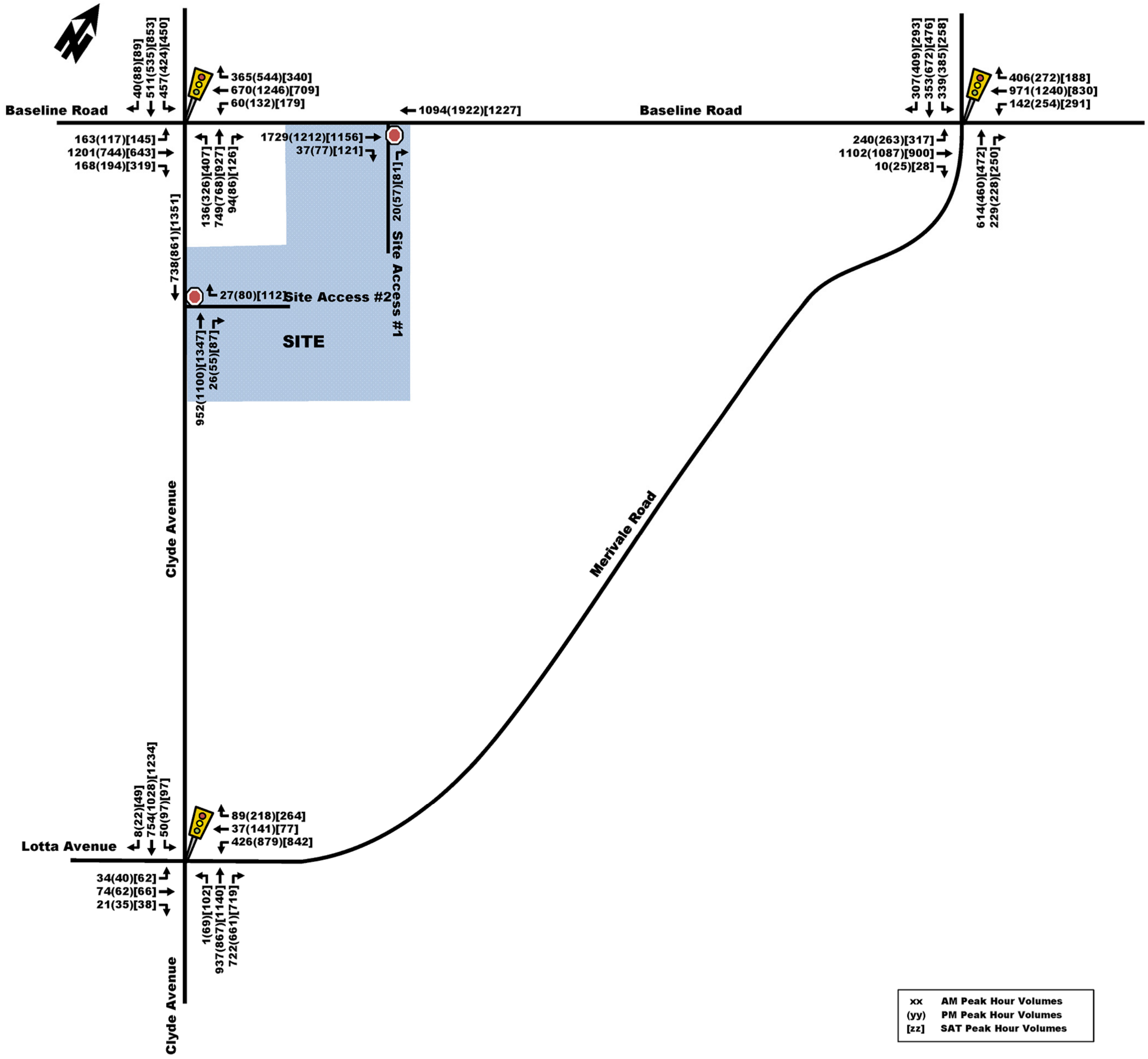
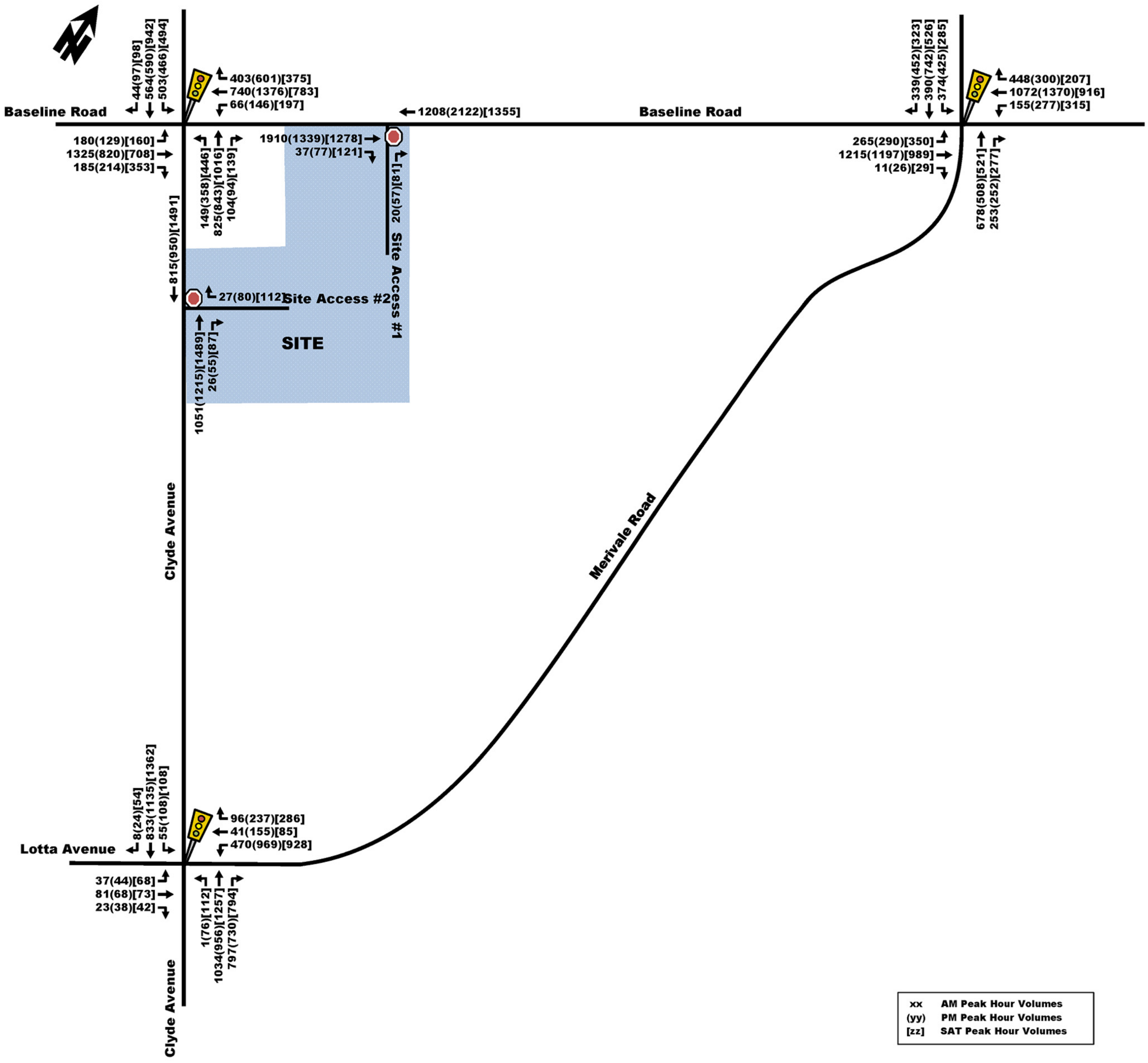


Figure 10: Future Total Traffic (2025)



4. FUTURE TRAFFIC OPERATIONS

4.1. 2020 FUTURE BACKGROUND CONDITIONS

A level of service analysis of the future background AM, PM, and Saturday peak hour operating conditions, including background growth, was undertaken using the same parameters as in the analysis of existing conditions. Table 6 summarizes the operational analysis for the projected 2020 future background conditions. Synchro analysis outputs are included in Appendix F.

Table 6: Intersection Operational Analysis
2020 Future Background Conditions

Intersection	Weekday AM Peak (PM Peak) [Saturday]					
	Critical Movement			Intersection		
	LoS	max. v/c or delay (s)	Movement	Delay (s)	LoS	v/c
Clyde Avenue /Baseline Road¹	F(F)[F]	1.21(1.13)[1.27]	EBT(SBL)[WBL]	82.4(69.7)[89.1]	F(F)[F]	1.10(1.06)[1.05]
Merivale Road /Baseline Road¹	F(F)[F]	1.01(1.30)[1.45]	EBT(SBL)[EBL]	45.6(64.1)[68.2]	E(E)[E]	0.91(1.00)[0.93]
Clyde Avenue/Lotta Avenue/Merivale Road¹	C(F)[F]	0.75(1.22)[1.49]	WBL(WBL)[WBL]	21.3(59.6)[91.8]	B(E)[F]	0.67(0.92)[1.17]
Baseline Road/Site Access #1²	A(A)[B]	9.9(9.2)[10.2]	NB(NB)[NB]	9.9(9.2)[10.2]	-	-
Clyde Avenue/Site Access #2²	A(A)[B]	9.1(9.4)[10.5]	WB(WB)[WB]	9.1(9.4)[10.5]	-	-
Note: *1- Signalized Intersection* *2- Unsignalized Intersection*						

The operational analysis of the 2020 future background conditions is similar to the results of the analysis of existing conditions. The signalized intersections are projected to operate with long delays and poor LOS. As the accesses are the same configuration they are anticipated to continue to operate with good LOS and minimal delays. No mitigation measures are recommended to address deficiencies as a result of the addition of background growth to the Study Area intersections.

4.2. 2020 TOTAL FUTURE CONDITIONS

A level of service analysis of the future AM, PM, and Saturday peak hour operating conditions, including the subject development, was undertaken using the same parameters as in the analysis of existing conditions. When the site is reconstructed the right-out only onto Clyde Avenue will be re-configured to a right-in only to serve the drive-through loading area. For the purposes of the operational analysis it has been assumed that all vehicles will use a single access point. This will give a more conservative estimation of the operational results at the Clyde Avenue access. Table 7 summarizes the operational analysis for the projected 2020 total future conditions. Synchro analysis outputs are included in Appendix G.

Table 7: Intersection Operational Analysis
2020 Future Traffic Conditions

Intersection	Weekday AM Peak (PM Peak) [Saturday]					
	Critical Movement			Intersection		
	LoS	max. v/c or delay (s)	Movement	Delay (s)	LoS	v/c
Clyde Avenue/Baseline Road¹	F(F)[F]	1.22(1.19)[1.27]	EBT(SBL)[WBL]	84.6(72.5)[94.6]	F(F)[F]	1.11(1.08)[1.08]
Merivale Road/Baseline Road¹	F(F)[F]	1.03(1.30)[1.45]	EBT(SBL)[EBL]	47.0(65.0)[72.8]	E(E)[E]	0.92(1.00)[0.93]
Clyde Avenue/Lotta Avenue/Merivale Road¹	C(F)[F]	0.75(1.22)[1.50]	WBL(WBL)[WBL]	21.3(60.1)[92.7]	B(E)[F]	0.67(0.92)[1.17]
Baseline Road/Site Access #1²	B(B)[B]	10.1(10.2)[10.7]	NB(NB)[NB]	10.1(10.2)[10.7]	-	-
Clyde Avenue/Site Access #2²	A(A)[B]	9.2(9.7)[11.0]	WB(WB)[WB]	9.2(9.7)[11.0]	-	-
Note: *1- Signalized Intersection* *2- Unsignalized Intersection*						

The intersection operational analysis of 2020 total future conditions, with the addition of the site-generated traffic, is similar to the results of the analysis of existing conditions. The signalized intersections are projected to operate with long delays and poor LOS. The site accesses were analyzed with a similar configuration to the future background analysis (i.e. a right in right out only access onto each of Clyde Avenue and Baseline Road). This results in a similar outcome for the operational analysis. As the volumes at these intersections are projected to increase as a result of the proposed site modifications, the delay was shown to increase. However, the accesses were shown to operate with LOS B or better during all peak hours.

4.3. 2025 FUTURE BACKGROUND CONDITIONS

A level of service analysis of the 2025 future background AM, PM, and Saturday peak hour operating conditions was undertaken using the same parameters as in the analysis of 2020 future background conditions. Table 8 summarizes the operational analysis for the projected 2025 future background conditions. Synchro analysis outputs are included in Appendix H.

Table 8: Intersection Operational Analysis
2025 Future Background Conditions

Intersection	Weekday AM Peak (PM Peak) [Saturday]					
	Critical Movement			Intersection		
	LoS	max. v/c or delay (s)	Movement	Delay (s)	LoS	v/c
Clyde Avenue/Baseline Road[1]	F(F)[F]	1.35(1.25)[1.40]	EBT(SBL)[WBL]	107.6(93.8)[114.8]	F(F)[F]	1.22(1.18)[1.15]
Merivale Road/Baseline Road[1]	F(F)[F]	1.13(1.43)[1.59]	EBT(SBL)[EBL]	65.8(84.6)[85.7]	F(F)[F]	1.02(1.10)[1.03]
Clyde Avenue/Lotta Avenue/Merivale Road[1]	C(F)[F]	0.78(1.34)[1.65]	WBL(WBL)[WBL]	22.8(73.1)[126.9]	C(F)[F]	0.72(1.02)[1.31]
Baseline Road/Site Access #1[2]	B(B)[B]	11.0(10.0)[10.3]	NB(NB)[NB]	11.0(10.0)[10.3]	-	-
Clyde Avenue/Site Access #2[2]	A(A)[B]	9.2(9.7)[10.5]	WB(WB)[WB]	9.2(9.7)[10.5]	-	-

Note:
1- Signalized Intersection
2- Unsignalized Intersection

The operational analysis of the 2025 future background conditions is similar to the results of the analysis of 2020 future background conditions. The signalized intersections are projected to operate with long delays and poor LOS. As the accesses are the same configuration they are anticipated to continue to operate with good LOS and minimal delays. No mitigation measures are recommended to address deficiencies as a result of the addition of background growth to the Study Area intersections.

4.4. 2025 TOTAL FUTURE CONDITIONS

A level of service analysis of the 2025 total future AM, PM, and Saturday peak hour operating conditions was undertaken using the same parameters as in the analysis of 2020 total future conditions. Table 9 summarizes the operational analysis for the projected 2025 total future conditions. Synchro analysis outputs are included in Appendix I.

Table 9: Intersection Operational Analysis
2025 Future Traffic Conditions

Intersection	Weekday AM Peak (PM Peak) [Saturday]					
	Critical Movement			Intersection		
	LoS	max. v/c or delay (s)	Movement	Delay (s)	LoS	v/c
Clyde Avenue/Baseline Road¹	F(F)[F]	1.35(1.31)[1.40]	EBT(SBL)[WBL]	110.2(97.3)[121.0]	F(F)[F]	1.23(1.19)[1.18]
Merivale Road/Baseline Road¹	F(F)[F]	1.15(1.43)[1.59]	EBT(SBL)[EBL]	67.7(86.4)[91.9]	F(F)[F]	1.03(1.10)[1.03]
Clyde Avenue/Lotta Avenue/Merivale Road¹	C(F)[F]	0.79(1.35)[1.66]	WBL(WBL)[WBL]	22.9(73.6)[128.3]	C(F)[F]	0.72(1.03)[1.31]
Baseline Road/Site Access #1²	B(B)[B]	11.3(10.3)[10.8]	NB(NB)[NB]	11.3(10.3)[10.8]	-	-
Clyde Avenue/Site Access #2²	A(B)[B]	9.3(10)[11.1]	WB(WB)[WB]	9.3(10)[11.1]	-	-
Note: *1- Signalized Intersection* *2- Unsignalized Intersection*						

The intersection operational analysis of 2020 total future conditions, with the addition of the site-generated traffic, is similar to the results of the analysis of existing conditions. The signalized intersections are projected to operate with long delays and poor LOS. The site accesses were analyzed with a similar configuration to the future background analysis (i.e. a right in right out only access onto each of Clyde Avenue and Baseline Road). This results in a similar outcome for the operational analysis. As the volumes at these intersections are projected to increase as a result of the proposed site modifications, the delay was shown to increase. However, the accesses were shown to operate with LOS B or better during all peak hours.

5. SITE PLAN REVIEW

5.1. PARKING

A total of 137 parking spaces are identified on the attached Site Plan. The zoning by-law requirements for this site would necessitate 386 parking stalls. However, as the Dymon Storage facility makes up a significant portion of this site, and requires very little parking to support it, this parking ratio is appropriate. Similar to trip generation rates, it is unlikely that the applicable parking By-law requirement in the City of Ottawa for self-storage facilities is suitable, and to supply the site with the amount of parking consistent with the designated zoning would be wasteful. With regards to parking demand, users of the self-storage facility will typically drive directly into the interior loading bay and therefore do not require traditional on-site parking.

5.2. SITE CIRCULATION

With regard to on-site circulation, the proposed parking lot is laid out effectively such that two-way traffic can be accommodated. The proposed drive aisle width is 6.1m at the narrowest point, which does not meet the City's By-Law requirements. However, access to the truck loading bays and site accesses have been tested using a WB-20 turning template. Both loading bays accommodate access and egress by the WB-20 simulation vehicle. The southernmost Clyde Avenue access will allow inbound truck movements and the Baseline Road access will allow outbound truck movements. Turning template drawings are included as Appendix J.

5.3. ACCESS REQUIREMENTS

The proposed site plan generally uses the existing site access points. On Baseline Road, there are currently two drive-ways approximately 25m apart. These are not signed to restrict access and would allow right-in and right-out movements at both. The proposed site plan would consolidate these into a single right-in / right-out only access, located approximately in the same location as the easternmost existing driveway. On Clyde Avenue, the site is currently accessed by a right-in / right out only, located just north of the existing retail building, along with a right out only located just south of the adjacent Petro-Canada gas station. The proposed site plan will generally utilize the same locations for access, however the right out only driveway will be converted to a right-in only to allow access to the interior loading spaces. As discussed previously the accesses have been designed to accommodate a one-way truck path through the site, entering from Clyde Avenue and exiting onto Baseline Road.

5.4. BICYCLES

The location of bicycle parking is not identified on the attached Site Plan, however, 17 bicycle parking spaces should be located in well-lit areas, close to the main building entrances to satisfy the City’s By-Law requirements.

5.5. DRIVE-THROUGH

The restaurant proposed as part of this development will include a drive-through. Due to space and parking constraints the drive-through cannot meet the vehicle queueing requirement of 11 vehicles. However, the site plan has been laid out to accommodate eight vehicles queued in the drive-through. Additionally, the entrance to the drive-through is located well within the site, towards the middle of the parcel. This placement would allow any occasional queueing that exceeds the drive-through to stack within the site and would not block the access or require vehicles to queue onto the adjacent roadway. As the proposed restaurant is not anticipated to draw a high-volume of drive-through traffic this configuration is appropriate.

6. CONCLUSIONS

The conclusions of the Transportation Impact Study are as follows:

a) The existing Study Area intersections have been shown to operate with poor overall LOS (LOS F) and long delays. No mitigation measures were proposed to address existing deficiencies.

b) It is projected that the site will generate 47, 93, and 136 net new auto trips in the AM, PM, and Saturday peak hours, respectively (per Table 4: Site Trip Generation).

c) The analysis of 2020 and 2025 future background conditions (without site generated traffic) indicated that the signalized intersections would operate with poor LOS (LOS E or worse) and long delays. No mitigation measures were proposed to address deficiencies as a result of the addition of background growth.

d) The analysis of 2020 and 2025 total future traffic forecasts (including site-generated traffic) showed that the signalized intersections would operate with poor LOS (LOS E or worse) and long delays. The operational analysis results were very similar to the future background results, indicating that the site traffic would have a negligible impact on the operations at these intersections. Therefore, no mitigation measures were proposed to address deficiencies at the Study Area intersections.

e) It has been noted that high number of collisions have occurred at all three of the signalized Study Area intersections. The collision data should be forwarded to Suzanne Woo at the City of Ottawa for further review and analysis.

f) The site accesses have been shown to operate with minimal delays and good LOS for all horizons and peak periods (LOS B or better). Additionally, these driveways have been shown to allow access and egress for the site's proposed design vehicle (TAC WB-20).

g) Given the location of the drive-through within the site, and the anticipated low volume of usage, it is appropriate to provide 8 queueing spaces within the drive-through stacking area.

Based on the foregoing analysis, it is anticipated that the proposed site accesses will operate with good LOS, and the site-generated traffic will have a negligible impact on the operations of the Study Area Signalized intersections. It is therefore recommended that, from a transportation perspective, the subject development be approved.

Prepared By

Matthew Mantle

Matthew Mantle, EIT
Transportation Analyst

Reviewed By

LICENSED PROFESSIONAL ENGINEER
M. B. CROCKFORD
100152912
30-Jun-17
PROVINCE OF ONTARIO

Mark B. Crockford, P. Eng.
Transportation Engineer

Appendix A

Terms of Reference

From: Dubyk, Wally [mailto:Wally.Dubyk@ottawa.ca]
Sent: Thursday, June 15, 2017 7:44 AM
To: Crockford, Mark <Mark.Crockford@parsons.com>
Subject: RE: 1375 Clyde Avenue TIS Scope

Mark,

We accept your initial concept plan, please add the following;

1) Any TIA's within this area that are available to the public can be viewed on the City's website.
2) Merivale Road and Baseline Road intersection should be added to the study area.
3) Provide your analysis based on the AM, PM & Saturday traffic periods,

Further comments will be provided through the Site Plan circulation process.

Wally Dubyk
Project Manager - Transportation Approvals
Development Review, Inner & Outer Urban
613-580-2424 x13783

From: Crockford, Mark [mailto:Mark.Crockford@parsons.com]
Sent: Wednesday, June 14, 2017 1:57 PM
To: Dubyk, Wally
Cc: Gordon, Christopher
Subject: 1375 Clyde Avenue TIS Scope

Hi Wally,

We have been asked by Dymon Storage to assist with their zoning by-law amendment for 1375 Clyde Avenue. I have attached a concept plan for your information and to facilitate our discussion. The proposed plan includes a new Dymon Storage Facility, renovation and expansion of the existing retail buildings, and a restaurant with a drive-through. I would like to get your feedback and input on the scope of the TIA, see below:

Transportation Impact Study (as a result of the Drive-through)

Background Growth
- Please provide any TIA's for nearby developments that should be included in our analysis
- 2% background growth rate to be applied along Clyde Avenue and Baseline Road

Study Area Intersections
- Baseline Road and Clyde Avenue
- Merivale Road and Clyde Avenue

Horizons
- No Phasing of the development is anticipated. And therefore, the following horizons will be examined
  - 2017 existing conditions
  - 2020 full build-out
  - 2025 full build-out +5 years
- PM and Saturday peak hours

Trip Generation
- Dymon Storage Facility
  - Proxy Site Trip Generation (We have previously undertaken proxy trip generation counts for Dymon sites)
  - Renovated / Expanded Retail Building (ITE LUC 820 – Shopping Centre)

  - Restaurant (ITE LUC 932 – High-Turnover (Sit-Down) Restaurant)
    - While the proposed site does have a drive-through the proposed tenant would be a restaurant similar to a Swiss-Chalet, so the ITE LUC 934 – Fast Food Restaurant with Drive-Through land use would not be reasonable in this case.

Dymon has asked us to provide them with a quote for this work as soon as possible so I will follow up with a quick phone call shortly to discuss.

Thanks,
Mark

Mark Crockford, P. Eng.
Transportation Engineer
625 Cochrane Drive, Suite 500, Markham, ON L3R 9R9
Mark.Crockford@parsons.com +1 905.943.0406

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Appendix B

Traffic Data

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Operations Unit

Intersection: **Main:** Baseline **Side:** Clyde

Controller: **MS 3200** **TSD:** 5055

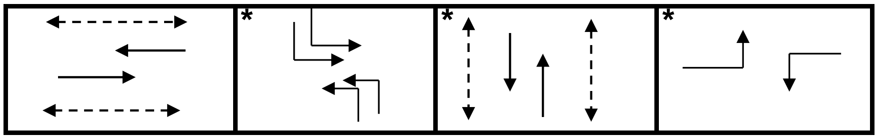
Author: Matthew Anderson **Date:** 16-Jun-2017

Existing Timing Plans†

	Plan					Ped Minimum Time		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	120	120	130	100	120			
Offset	19	82	53	X	82			
EB Thru	41	42	51	34	35	7	21	3.7+2.7
WB Thru	41	42	51	34	35	7	21	3.7+2.7
NB Left (fp)	22	20	21	13	24	-	-	3.3+3.3
SB Left (fp)	22	20	21	13	24	-	-	3.3+3.3
NB Thru	40	40	40	40	43	7	26	3.3+3.6
SB Thru	40	40	40	40	43	7	26	3.3+3.6
EB Left (fp)	17	18	18	13	18	-	-	3.7+2.8
WB Left (fp)	17	18	18	13	18	-	-	3.7+2.8

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:30	2
23:30	4

Saturday

Time	Plan
0:15	4
8:30	5
19:00	2
23:30	4

Sunday

Time	Plan
0:15	4
8:30	2
11:30	5
17:30	2
23:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◀··········▶ Pedestrian signal

Cost is $56.50 ($50 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Operations Unit

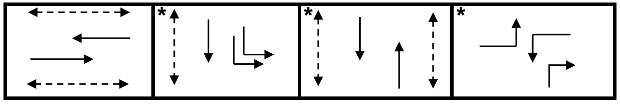
Intersection: *Main:* Baseline Rd *Side:* Merivale Rd
Controller: **MS-3200** **TSD:** 5190
Author: Jon Pach **Date:** 27-Jun-2017

Existing Timing Plans†

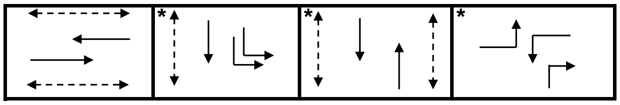
	Plan						Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	PM Rush 13	*Walk*	*DW*	*A+R*
Cycle	120	120	130	110	120	130			
Offset	45	88	19	11	88	19			
EB Thru	43	42	48	48	42	50	7	27	3.7+3.4
WB Thru	43	42	51	48	42	50	7	27	3.7+3.4
SBLT (fp)	18	18	20	14	16	17	-	-	3.7+2.8
NB Thru	35	35	35	35	35	35	7	21	3.7+2.9
SB Thru	53	53	55	49	51	52	7	21	3.7+2.9
EBLT (fp)	24	25	24	13	27	28	-	-	3.7+3.4
WBLT (fp)	24	25	27	13	27	28	-	-	3.7+3.4
NBRT	24	25	27	13	27	28	-	-	3.7+3.4

Phasing Sequence‡

Plan: **1,2,4,5,13**



Plan: **3**



Notes:

1) For all plans, the NB and SB Thru movements have a max recall.
2) For Plan 1, if there are no pedestrian actuations for the N-S ped movement, the N-S phase will be forced off after 20 seconds of green time. The extra green time will be provided to the EB and WB Thru phases.
3) For Plans 2, 5, and 13, if there are no pedestrian actuations for the N-S ped movement, the N-S phase will be forced off after 17 seconds of green time. Any unused time in the cycle will be provided to the EB and WB left turn phases.
4) For Plan 3, if there are no pedestrian actuations for the N-S ped movement, the north-south phase will be forced off after 17 seconds and any unused time in the cycle will be provided to the EB and WB Thru phases.

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
17:30	13
18:30	2
23:30	4

Saturday

Time	Plan
0:15	4
8:30	5
19:00	2
23:30	4

Sunday

Time	Plan
0:15	4
8:30	2
11:30	5
17:30	2
23:30	4

Notes

†: Time for each direction includes amber and all red intervals
‡: Start of first phase should be used as reference point for offset
Asterisk (*) Indicates actuated phase
(fp): Fully Protected Left Turn

←- - - -→ *Pedestrian signal*

Cost is $56.50 ($50 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Operations Unit

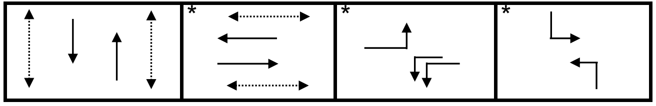
Intersection: ***Main:*** Merivale/Lotta ***Side:*** Clyde
Controller: **MS 3200** **TSD:** 5507
Author: Matthew Anderson **Date:** 16-Jun-17

Existing Timing Plans†

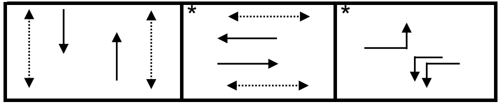
	Plan						**Ped Minimum Time**		
	AM Peak	**Off Peak**	**PM Peak**	**Night**	**Weekend**	**AM Rush**	***Walk***	***DW***	***A+R***
	1	2	3	4	5	21			
Cycle	110	110	130	85	130	130			
Offset	70	76	98	69	60	9			
NB Thru	48	41	40	35	54	63	7	17	3.7+2.3
SB Thru	48	41	40	35	54	63	7	17	3.7+2.3
EB Thru	34	34	34	34	34	34	7	20	3.0+3.8
WB Thru	34	34	34	34	34	34	7	20	3.7+2.5
EB Left (fp)	28	23	44	16	30	33	-	-	3.0+3.8
WB Left (fp)	28	23	44	16	30	33	-	-	3.7+2.5
NB Left	-	12	12	-	12	-	-	-	3.7+2.3
SB Left	-	12	12	-	12	-	-	-	3.7+2.3

Phasing Sequence‡

Plans: 2, 3, 5



Plans: 1, 4, 21



NOTES:
1) In plans 1, 4, and 21, the EB Thru movement is forced off after 10s of green if the ped is not actuated.
2) In plans 2, 3, and 5, the EB Thru movement is forced off after 15s of green if the ped is not actuated.

Schedule

Weekday

Time	Plan
0:15	4
6:00	1
7:00	21
9:30	2
15:00	3
18:30	2
22:00	4

Saturday

Time	Plan
0:15	4
8:00	2
9:30	5
18:00	2
22:30	4

Sunday

Time	Plan
0:15	4
9:30	2
10:00	5
17:30	2
22:30	4

Notes

†: Time for each direction includes amber and all red intervals
‡: Start of first phase should be used as reference point for offset
Asterisk (*) Indicates actuated phase
(fp): Fully Protected Left Turn

◄··········► *Pedestrian signal*

Cost is $56.50 ($50 + HST)

Turning Movement Count
Summary, OFF and EVENING Peak Hour Flow Diagrams

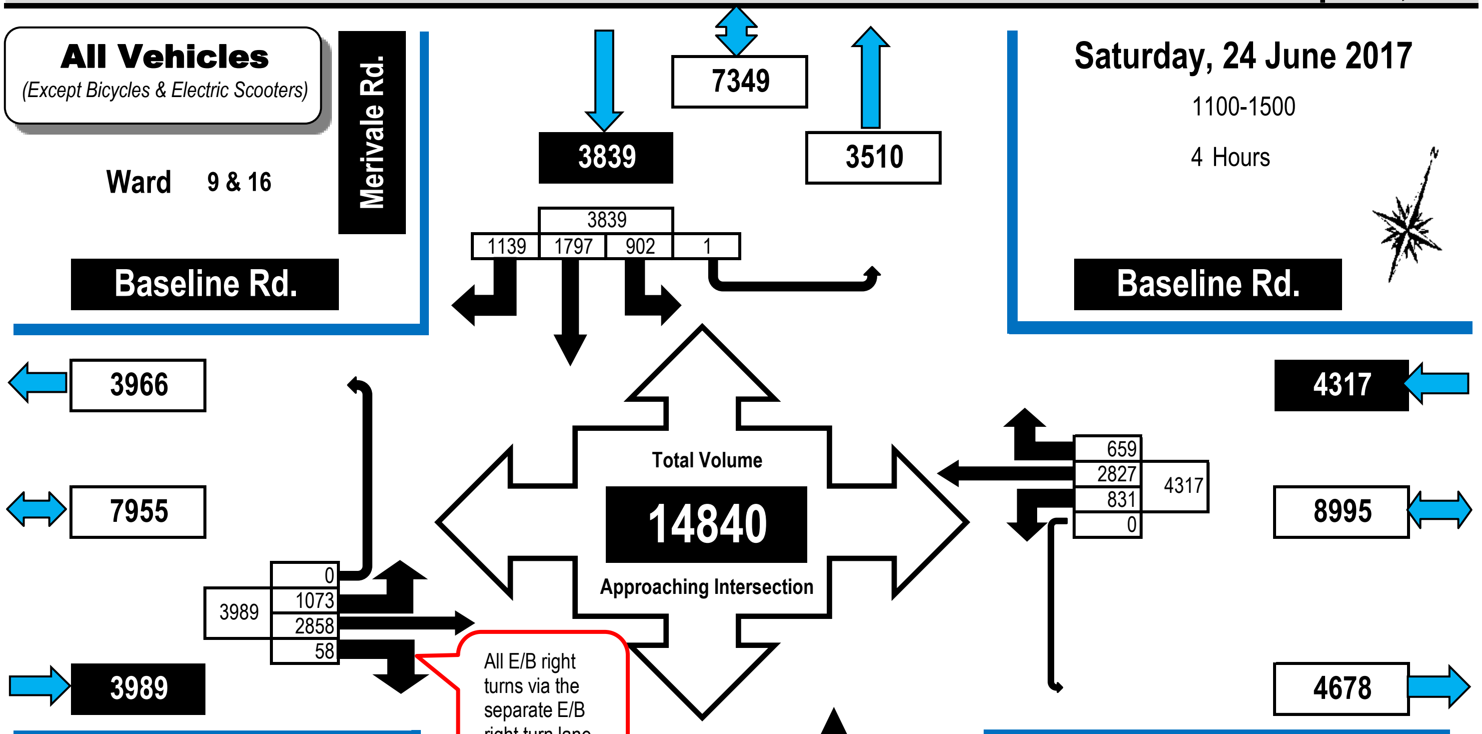
Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

Baseline Road & Merivale Road
Nepean, ON

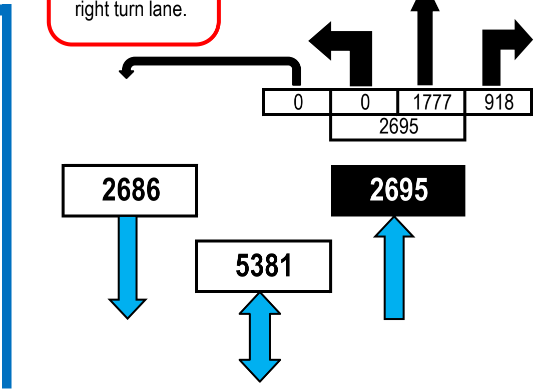
All Vehicles
(Except Bicycles & Electric Scooters)

Ward 9 & 16

Saturday, 24 June 2017
1100-1500
4 Hours



All E/B right turns via the separate E/B right turn lane.

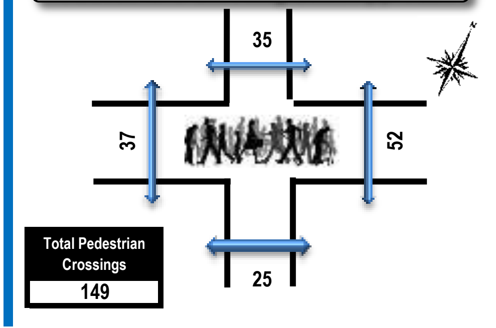


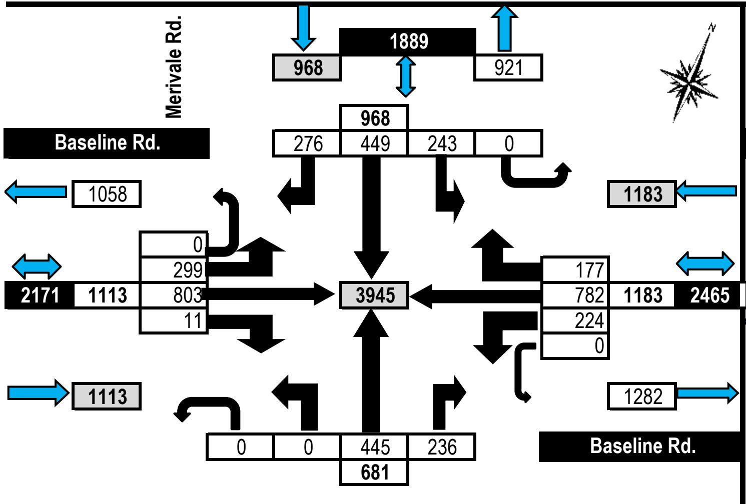
Survey Summary

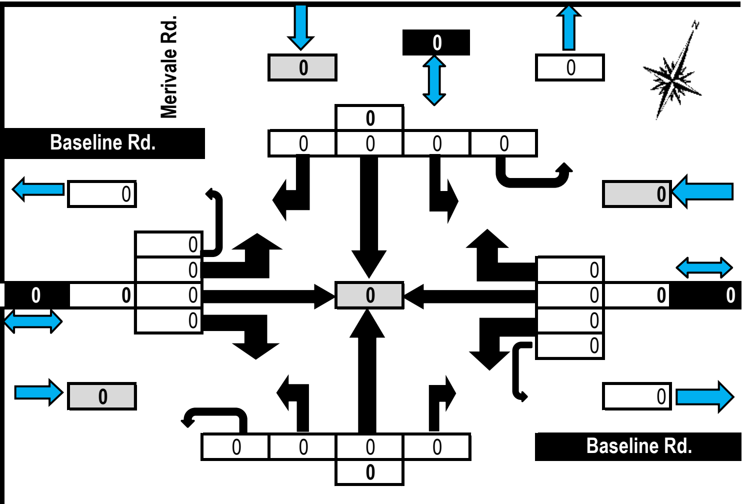
Traffic Survey Time Period(s)
1100-1500
4 Hours

Merivale Rd.

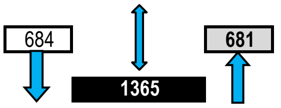
Pedestrians Crossing Each Approach





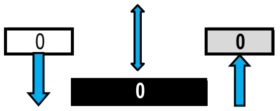


OFF Peak Hour Summary



Summary - OFF Peak Hr.	
Peak Hr.	1330-1430
Volume	3945
% of Total	26.6%
PHF	0.92

EVENING Peak Hour Summary

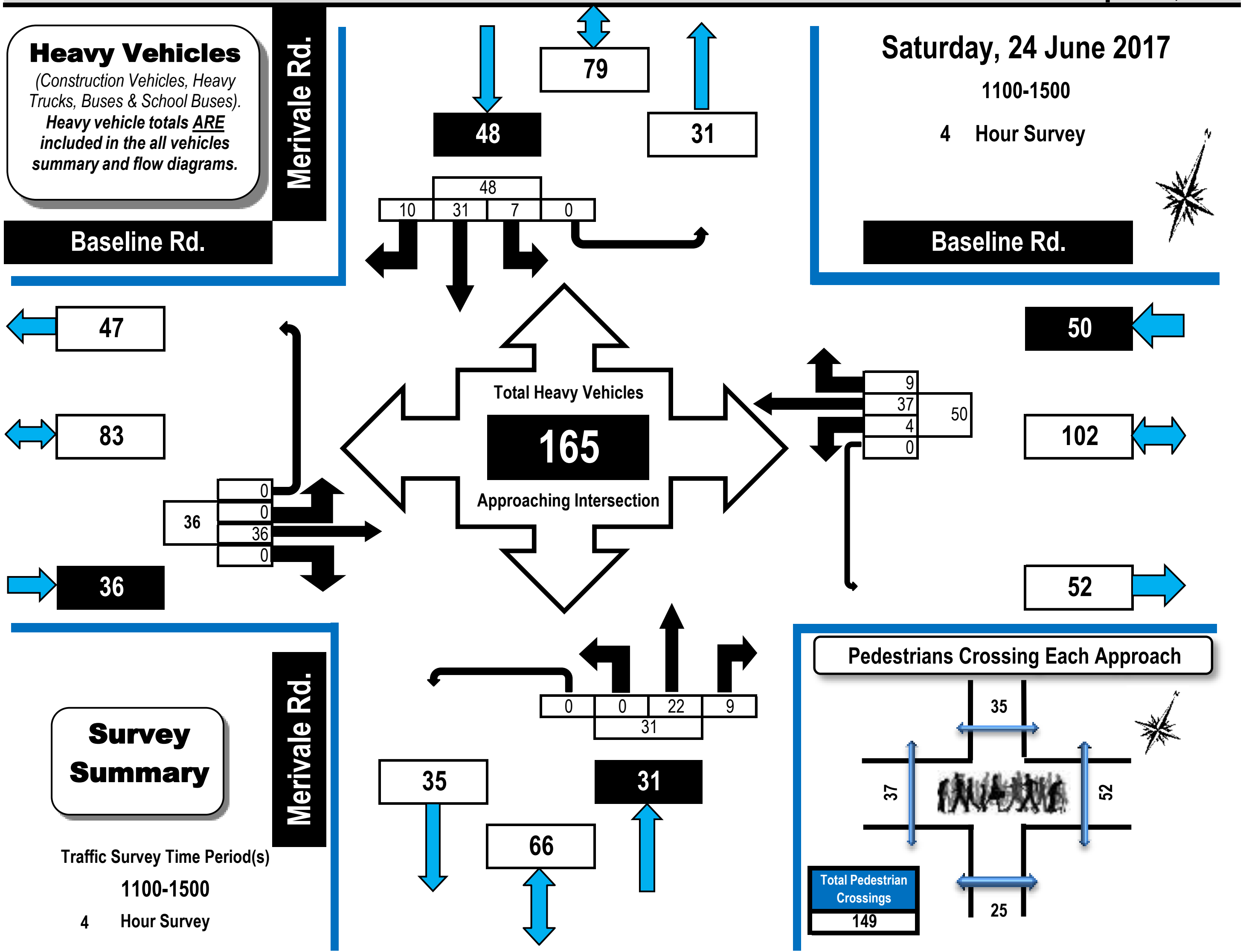


Summary - EVNG Peak Hr.	
Peak Hr.	2100-2200
Volume	0
% of Total	0.0%
PHF	#DIV/0!

Turning Movement Count
Heavy Vehicle Summary
Flow Diagram

Heavy Trucks, Buses,
and School Buses

Baseline Road & Merivale Road — Nepean, ON



Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals <u>ARE</u> included in the all vehicles summary and flow diagrams.

Saturday, 24 June 2017
1100-1500
4 Hour Survey

Survey Summary

Traffic Survey Time Period(s)
1100-1500
4 Hour Survey

	Baseline Rd. Eastbound					Baseline Rd. Westbound					Merivale Rd. Northbound					Merivale Rd. Southbound					
Time Period	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	G.Tot.
0500-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000-1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100-1200	0	15	0	0	15	2	9	2	0	13	0	2	2	0	4	3	7	4	0	14	46
1200-1300	0	11	0	0	11	1	8	3	0	12	0	8	3	0	11	3	9	4	0	16	50
1300-1400	0	7	0	0	7	1	9	4	0	14	0	5	4	0	9	0	5	1	0	6	36
1400-1500	0	3	0	0	3	0	11	0	0	11	0	7	0	0	7	1	10	1	0	12	33
1500-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800-1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900-2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	36	0	0	36	4	37	9	0	50	0	22	9	0	31	7	31	10	0	48	165

Turning Movement Count

Pedestrian Crossings Summary
and Flow Diagram

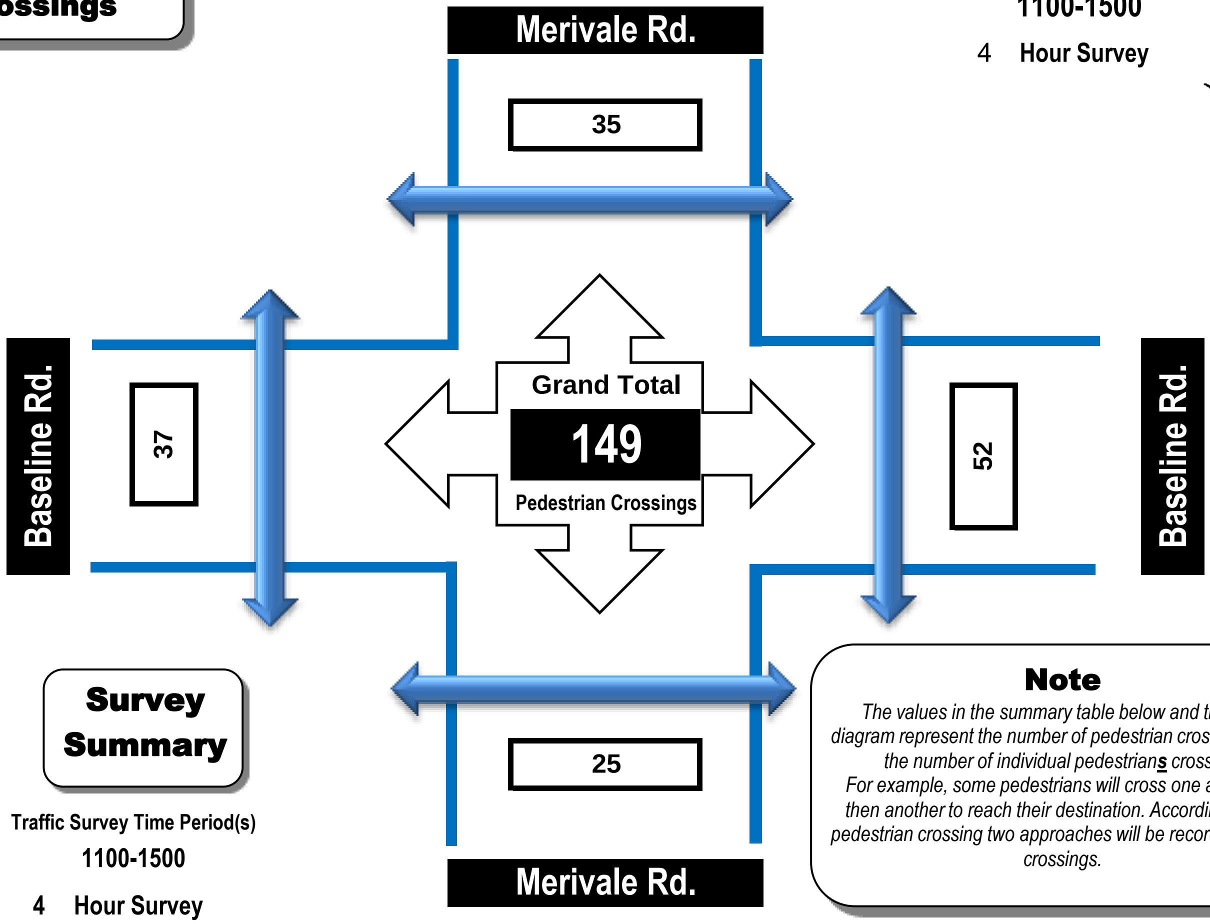
Baseline Road & Merivale Road   Nepean, ON

Pedestrian Crossings

Saturday, 24 June 2017

1100-1500

4 Hour Survey



Survey Summary

Traffic Survey Time Period(s)

1100-1500

4 Hour Survey

Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Baseline Rd.	East Side Crossing Baseline Rd.	Street Total	South Side Crossing Merivale Rd.	North Side Crossing Merivale Rd.	Street Total	Grand Total
0500-0600	0	0	0	0	0	0	0
0600-0700	0	0	0	0	0	0	0
0700-0800	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0
0900-1000	0	0	0	0	0	0	0
1000-1100	0	0	0	0	0	0	0
1100-1200	6	15	21	5	4	9	30
1200-1300	5	19	24	5	15	20	44
1300-1400	19	12	31	14	14	28	59
1400-1500	7	6	13	1	2	3	16
1500-1600	0	0	0	0	0	0	0
1600-1700	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0
1800-1900	0	0	0	0	0	0	0
1900-2000	0	0	0	0	0	0	0
2000-2100	0	0	0	0	0	0	0
2100-2200	0	0	0	0	0	0	0
Totals	37	52	89	25	35	60	149

Public Works - Traffic Services

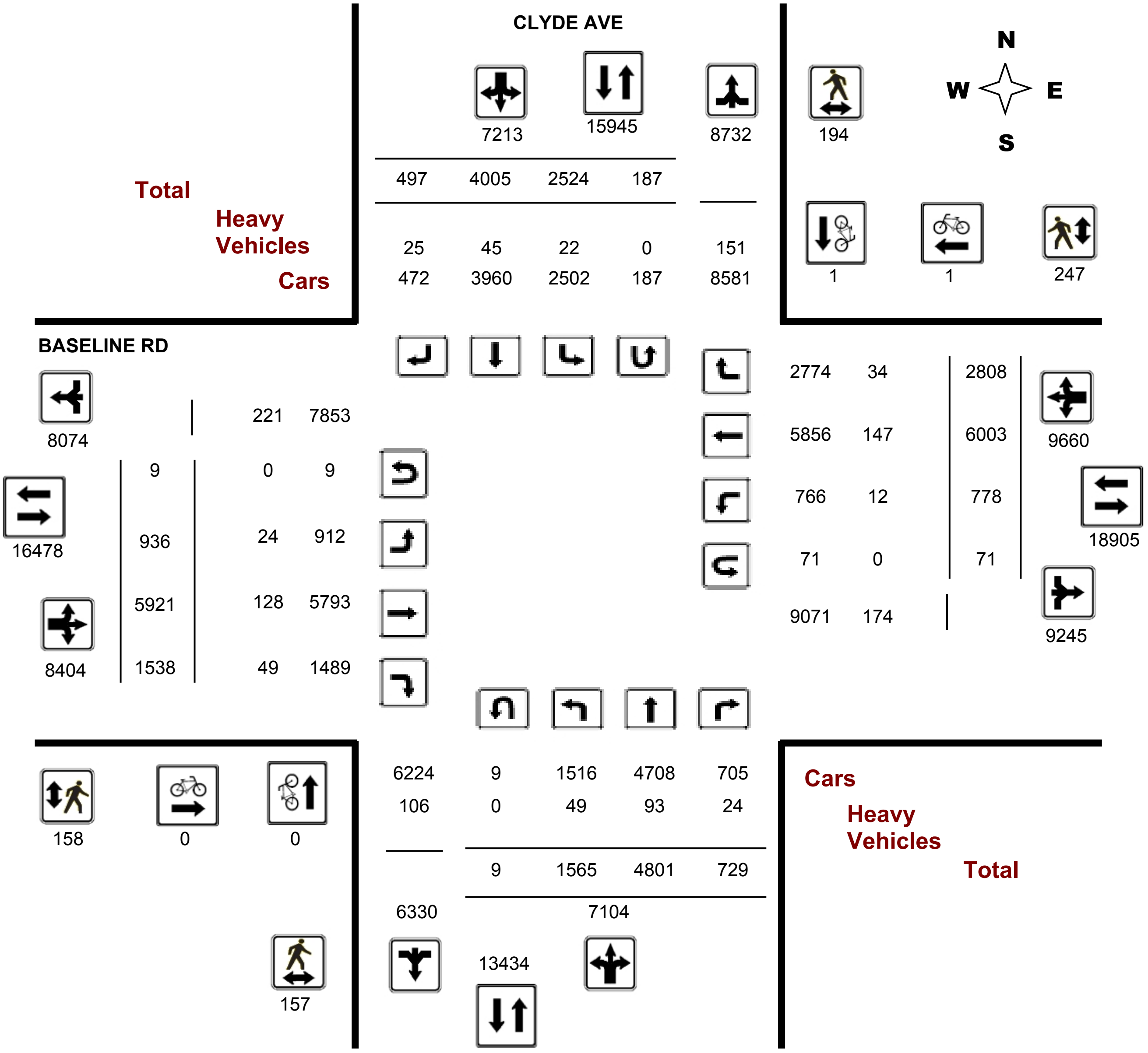
Turning Movement Count - Full Study Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016

WO#: 35655

Device: Miovision



Comments

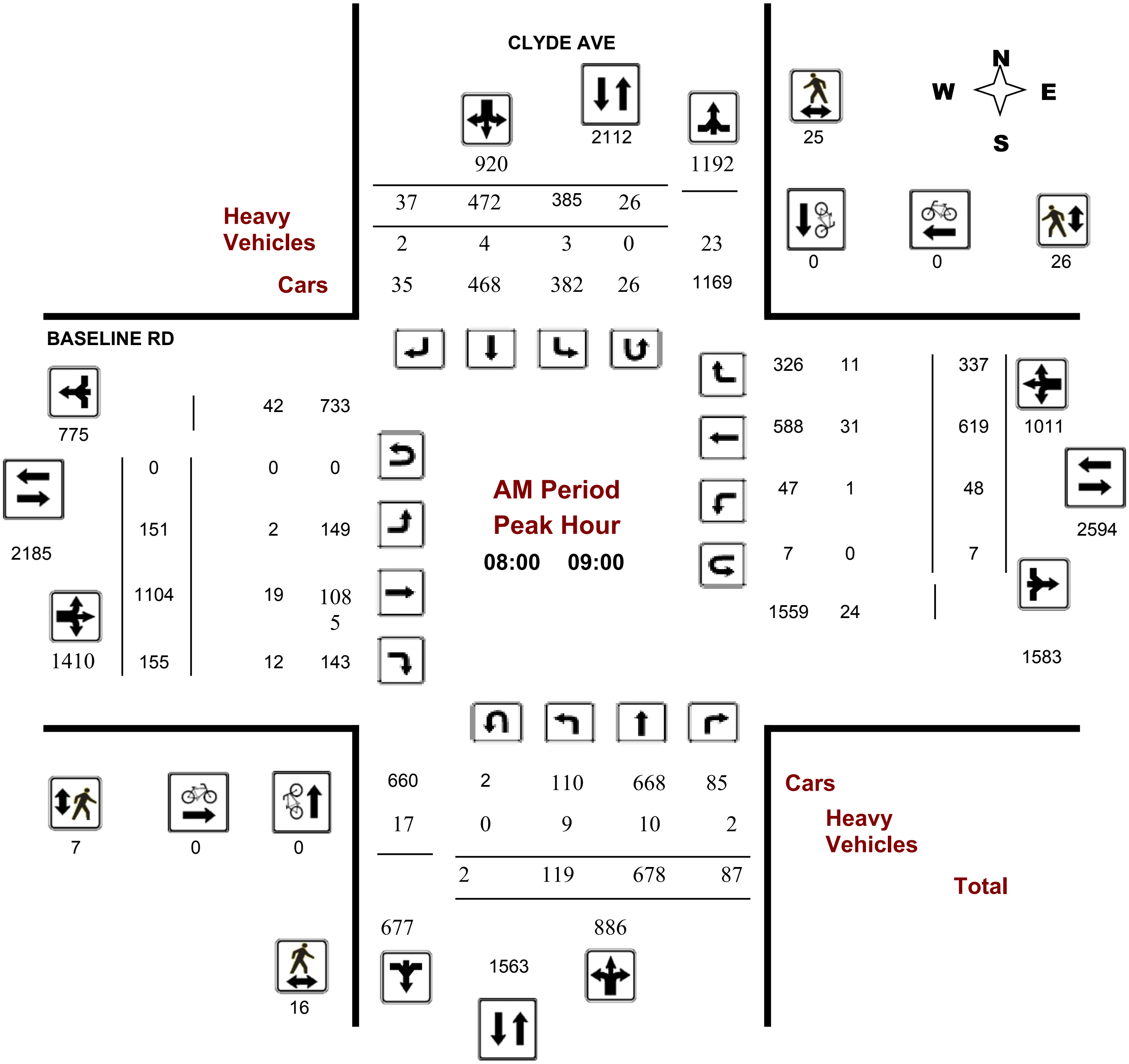
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016
Start Time: 07:00

WO No: 35655
Device: Miovision



Comments

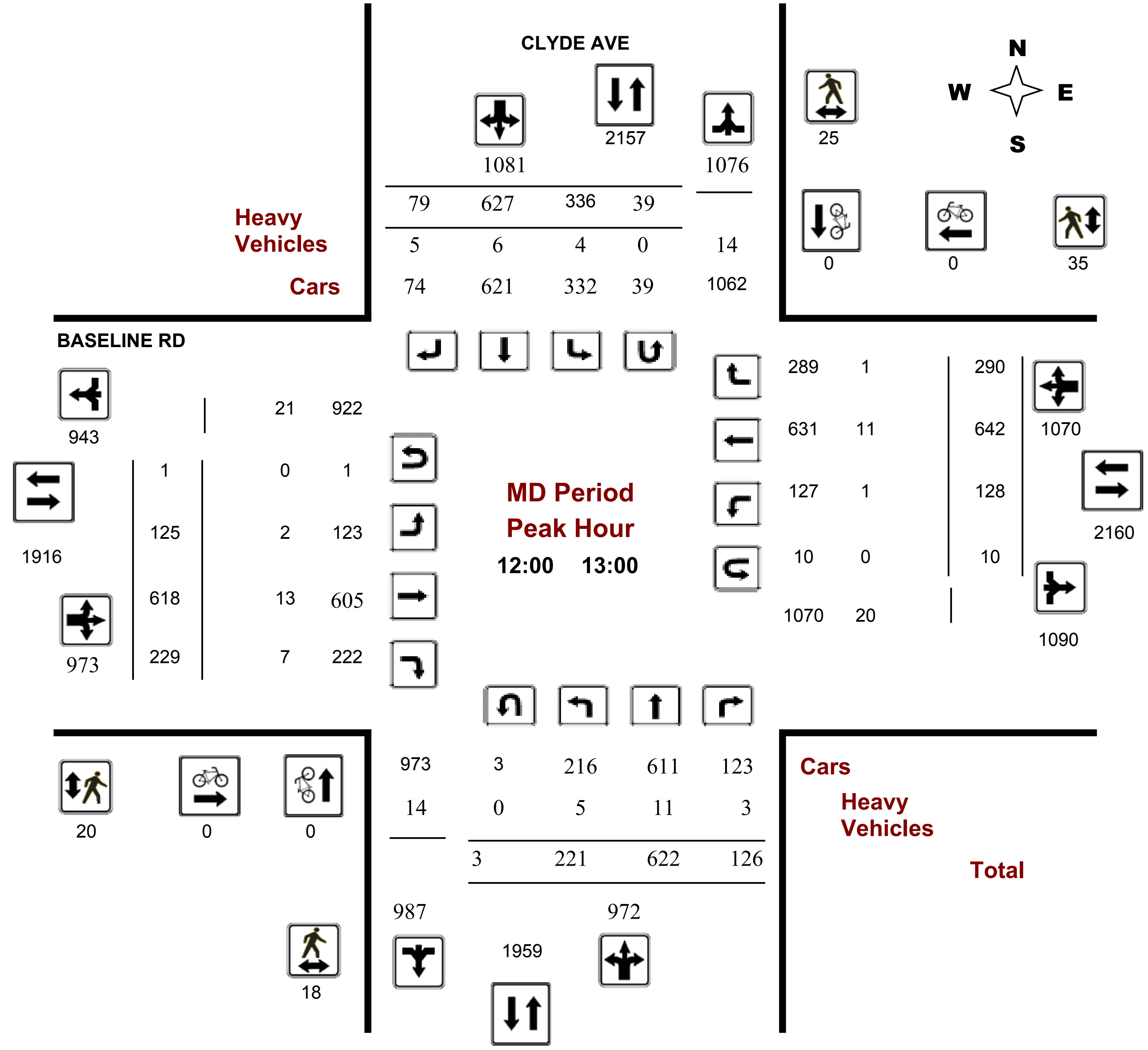
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016 **WO No:** 35655

Start Time: 07:00 **Device:** Miovision



Comments

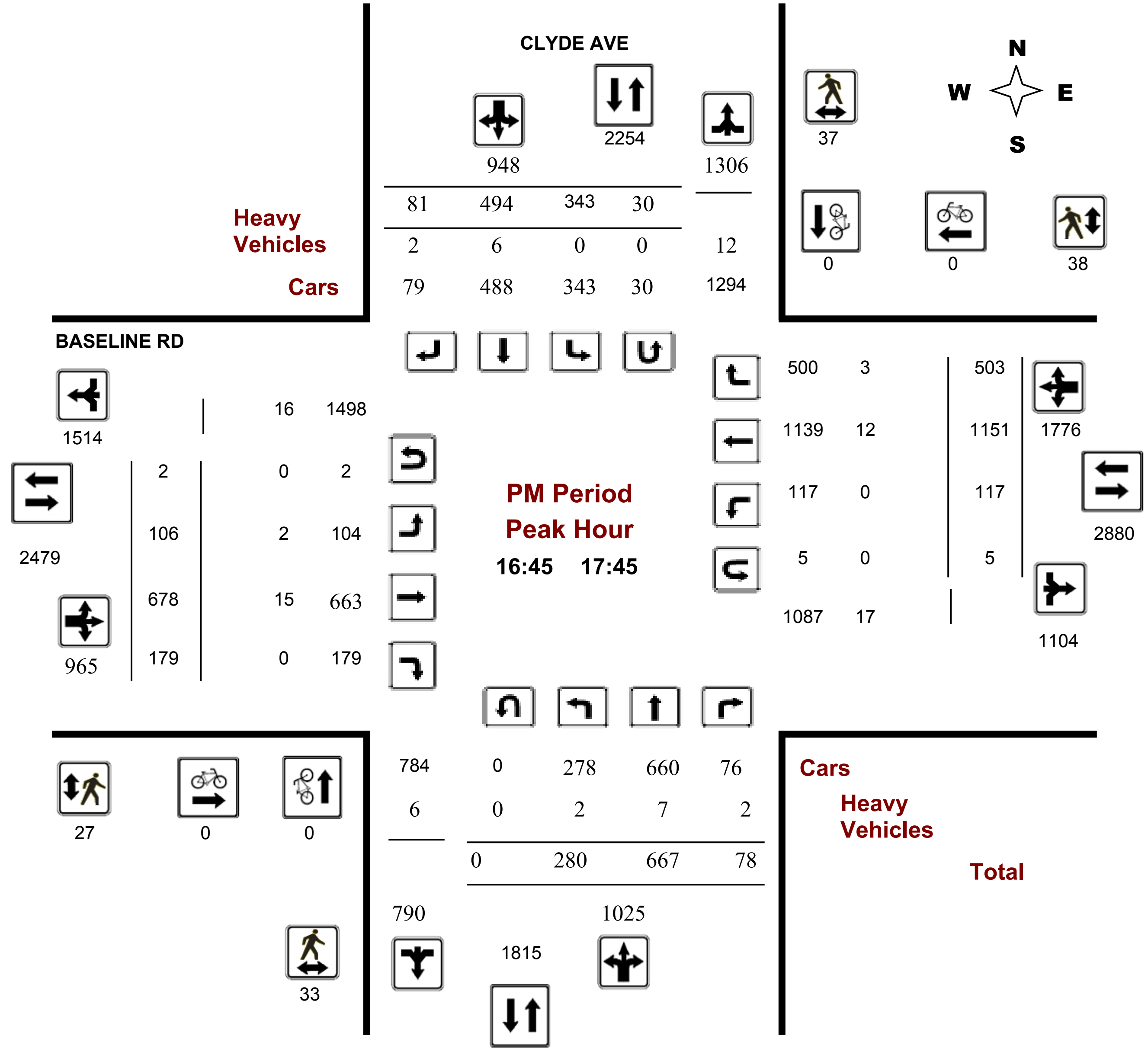
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016 **WO No:** 35655

Start Time: 07:00 **Device:** Miovision



Comments

Public Works - Traffic Services

Work Order
35655

Turning Movement Count - Full Study Summary Report

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016

Total Observed U-Turns

Northbound: 9 Southbound: 187
Eastbound: 9 Westbound: 71

AADT Factor
1.00

Full Study

	CLYDE AVE									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	66	454	50	**570**	266	429	25	**720**	**1290**	128	932	105	**1165**	45	437	199	**681**	**1846**	**3136**
08:00 09:00	119	678	87	**884**	385	472	37	**894**	**1778**	151	1104	155	**1410**	48	619	337	**1004**	**2414**	**4192**
09:00 10:00	135	506	97	**738**	289	494	54	**837**	**1575**	106	707	209	**1022**	87	570	277	**934**	**1956**	**3531**
11:30 12:30	213	593	116	**922**	345	607	57	**1009**	**1931**	108	629	235	**972**	141	628	287	**1056**	**2028**	**3959**
12:30 13:30	241	606	115	**962**	314	588	85	**987**	**1949**	110	572	237	**919**	118	607	283	**1008**	**1927**	**3876**
15:00 16:00	232	682	94	**1008**	261	441	77	**779**	**1787**	116	550	203	**869**	121	899	470	**1490**	**2359**	**4146**
16:00 17:00	279	654	90	**1023**	303	469	83	**855**	**1878**	122	768	194	**1084**	106	1099	479	**1684**	**2768**	**4646**
17:00 18:00	280	628	80	**988**	361	505	79	**945**	**1933**	95	659	200	**954**	112	1144	476	**1732**	**2686**	**4619**
Sub Total	1565	4801	729	**7095**	2524	4005	497	**7026**	**14121**	936	5921	1538	**8395**	778	6003	2808	**9589**	**17984**	**32105**
U Turns				**9**				**187**	**196**				**9**				**71**	**80**	**276**
Total	1565	4801	729	**7104**	2524	4005	497	**7213**	**14317**	936	5921	1538	**8404**	778	6003	2808	**9660**	**18064**	**32381**
EQ 12Hr	2175	6673	1013	**9875**	3508	5567	691	**10026**	**19901**	1301	8230	2138	**11682**	1081	8344	3903	**13427**	**25109**	**45010**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	2175	6673	1013	**9875**	3508	5567	691	**10026**	**19901**	1301	8230	2138	**11682**	1081	8344	3903	**13427**	**25109**	**45010**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**1.00**						
AVG 24Hr	2850	8742	1327	**12936**	4596	7293	905	**13134**	**26070**	1704	10782	2801	**15303**	1417	10931	5113	**17590**	**32893**	**58963**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Public Works - Traffic Services

W.O. 35655

Turning Movement Count - 15 Minute Summary Report

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016

Total Observed U-Turns

Northbound: 9 Southbound: 187
Eastbound: 9 Westbound: 71

		CLYDE AVE									BASELINE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	13	86	9	**108**	62	69	3	**137**	**245**	20	191	25	**236**	10	78	35	**124**	**360**	**605**
07:15	07:30	10	102	15	**127**	52	108	6	**168**	**295**	33	228	27	**288**	13	93	38	**149**	**437**	**732**
07:30	07:45	17	120	14	**151**	81	100	8	**192**	**343**	23	251	22	**296**	11	129	54	**196**	**492**	**835**
07:45	08:00	26	146	12	**184**	71	152	8	**233**	**417**	52	262	31	**345**	11	137	72	**223**	**568**	**985**
08:00	08:15	27	152	15	**195**	103	102	9	**221**	**416**	32	312	24	**368**	9	188	80	**277**	**645**	**1061**
08:15	08:30	22	178	25	**225**	84	124	8	**223**	**448**	40	243	25	**308**	11	131	89	**235**	**543**	**991**
08:30	08:45	40	153	21	**215**	99	116	9	**233**	**448**	37	307	56	**400**	8	162	97	**267**	**667**	**1115**
08:45	09:00	30	195	26	**251**	99	130	11	**243**	**494**	42	242	50	**334**	20	138	71	**232**	**566**	**1060**
09:00	09:15	34	120	22	**176**	92	100	13	**213**	**389**	24	226	47	**297**	21	166	73	**268**	**565**	**954**
09:15	09:30	28	143	24	**195**	66	148	7	**230**	**425**	33	167	59	**260**	16	133	82	**234**	**494**	**919**
09:30	09:45	36	117	28	**181**	64	119	22	**210**	**391**	25	176	53	**254**	16	142	62	**222**	**476**	**867**
09:45	10:00	37	126	23	**186**	67	127	12	**214**	**400**	24	138	50	**213**	34	129	60	**225**	**438**	**838**
11:30	11:45	43	152	20	**215**	80	150	7	**241**	**456**	21	146	60	**228**	35	127	66	**230**	**458**	**914**
11:45	12:00	50	130	33	**215**	87	135	15	**244**	**459**	21	158	64	**243**	31	171	61	**263**	**506**	**965**
12:00	12:15	58	176	31	**266**	86	178	18	**291**	**557**	34	135	53	**222**	40	143	71	**257**	**479**	**1036**
12:15	12:30	62	135	32	**229**	92	144	17	**263**	**492**	32	190	58	**280**	35	187	89	**313**	**593**	**1085**
12:30	12:45	45	157	30	**233**	66	152	24	**251**	**484**	33	138	53	**225**	25	149	77	**254**	**479**	**963**
12:45	13:00	56	154	33	**244**	92	153	20	**276**	**520**	26	155	65	**246**	28	163	53	**246**	**492**	**1012**
13:00	13:15	65	155	29	**249**	70	148	21	**246**	**495**	32	144	55	**231**	33	149	78	**260**	**491**	**986**
13:15	13:30	75	140	23	**240**	86	135	20	**249**	**489**	19	135	64	**219**	32	146	75	**254**	**473**	**962**
15:00	15:15	55	177	33	**265**	47	116	11	**176**	**441**	34	129	51	**214**	37	176	99	**316**	**530**	**971**
15:15	15:30	62	174	28	**264**	71	124	25	**223**	**487**	32	153	62	**248**	26	237	120	**384**	**632**	**1119**
15:30	15:45	68	165	19	**252**	62	92	15	**173**	**425**	25	145	40	**210**	32	230	131	**395**	**605**	**1030**
15:45	16:00	47	166	14	**227**	81	109	26	**221**	**448**	25	123	50	**198**	26	256	120	**406**	**604**	**1052**
16:00	16:15	72	169	30	**271**	81	109	18	**210**	**481**	37	175	43	**255**	32	251	119	**403**	**658**	**1139**
16:15	16:30	55	170	21	**246**	81	123	24	**230**	**476**	32	223	59	**315**	24	263	120	**409**	**724**	**1200**
16:30	16:45	77	157	25	**259**	69	108	24	**208**	**467**	23	187	60	**270**	20	291	120	**434**	**704**	**1171**
16:45	17:00	75	158	14	**247**	72	129	17	**227**	**474**	30	183	32	**245**	30	294	120	**446**	**691**	**1165**
17:00	17:15	70	161	25	**256**	89	123	19	**234**	**490**	23	176	36	**236**	27	289	125	**443**	**679**	**1169**
17:15	17:30	74	175	18	**267**	89	107	24	**230**	**497**	33	163	59	**255**	30	288	132	**451**	**706**	**1203**
17:30	17:45	61	173	21	**255**	93	135	21	**257**	**512**	20	156	52	**229**	30	280	126	**436**	**665**	**1177**
17:45	18:00	75	119	16	**210**	90	140	15	**246**	**456**	19	164	53	**236**	25	287	93	**408**	**644**	**1100**
TOTAL:		1565	4801	729	**7104**	2524	4005	497	**7213**	**14317**	936	5921	1538	**8404**	778	6003	2808	**9660**	**18064**	**32381**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

Work Order
35655

Turning Movement Count - 15 Min U-Turn Total Report

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	3	0	1	4
07:15	07:30	0	2	0	5	7
07:30	07:45	0	3	0	2	5
07:45	08:00	0	2	0	3	5
08:00	08:15	1	7	0	0	8
08:15	08:30	0	7	0	4	11
08:30	08:45	1	9	0	0	10
08:45	09:00	0	3	0	3	6
09:00	09:15	0	8	0	8	16
09:15	09:30	0	9	1	3	13
09:30	09:45	0	5	0	2	7
09:45	10:00	0	8	1	2	11
11:30	11:45	0	4	1	2	7
11:45	12:00	2	7	0	0	9
12:00	12:15	1	9	0	3	13
12:15	12:30	0	10	0	2	12
12:30	12:45	1	9	1	3	14
12:45	13:00	1	11	0	2	14
13:00	13:15	0	7	0	0	7
13:15	13:30	2	8	1	1	12
15:00	15:15	0	2	0	4	6
15:15	15:30	0	3	1	1	5
15:30	15:45	0	4	0	2	6
15:45	16:00	0	5	0	4	9
16:00	16:15	0	2	0	1	3
16:15	16:30	0	2	1	2	5
16:30	16:45	0	7	0	3	10
16:45	17:00	0	9	0	2	11
17:00	17:15	0	3	1	2	6
17:15	17:30	0	10	0	1	11
17:30	17:45	0	8	1	0	9
17:45	18:00	0	1	0	3	4
Total		9	187	9	71	276

Public Works - Traffic Services

W.O.
35655

Turning Movement Count - Heavy Vehicle Report

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, January 20, 2016

	CLYDE AVE									**BASELINE RD**									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00 08:00	3	12	2	**17**	0	2	2	**4**	**21**	3	17	6	**26**	2	23	2	**27**	**53**	**74**
08:00 09:00	9	10	2	**21**	3	4	2	**9**	**30**	2	19	12	**33**	1	31	11	**43**	**76**	**106**
09:00 10:00	8	10	3	**21**	1	7	3	**11**	**32**	5	21	9	**35**	2	19	5	**26**	**61**	**93**
11:30 12:30	10	15	4	**29**	6	4	2	**12**	**41**	3	6	6	**15**	2	18	0	**20**	**35**	**76**
12:30 13:30	7	12	3	**22**	2	10	6	**18**	**40**	5	19	9	**33**	3	14	2	**19**	**52**	**92**
15:00 16:00	6	14	5	**25**	6	7	3	**16**	**41**	3	15	4	**22**	2	15	10	**27**	**49**	**90**
16:00 17:00	3	13	4	**20**	3	6	5	**14**	**34**	2	16	3	**21**	0	12	3	**15**	**36**	**70**
17:00 18:00	3	7	1	**11**	1	5	2	**8**	**19**	1	15	0	**16**	0	15	1	**16**	**32**	**51**
Sub Total	49	93	24	**166**	22	45	25	**92**	**258**	24	128	49	**201**	12	147	34	**193**	**394**	**652**
U-Turns (Heavy Vehicles)				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	49	93	24	**0**	22	45	25	**92**	**258**	24	128	49	**201**	12	147	34	**193**	**394**	**652**

Heavy Vehicles are vehicles having one rear axle with four or more wheels, or having two or more rear axles. These vehicles include most O.C. Transpo, school and inter-city buses. Further, they ARE included in the Turning Movement Count Summary.

Public Works - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
35655

BASELINE RD @ CLYDE AVE

Count Date: Wednesday, January 20, 2016

Start Time: 07:00

	CLYDE AVE			BASELINE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	0	0	**0**	0	1	**1**	**1**
08:00 09:00	0	0	**0**	0	0	**0**	**0**
09:00 10:00	0	0	**0**	0	0	**0**	**0**
11:30 12:30	0	1	**1**	0	0	**0**	**1**
12:30 13:30	0	0	**0**	0	0	**0**	**0**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
16:00 17:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	0	**0**	0	0	**0**	**0**
Total	0	1	**1**	0	1	**1**	**2**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Public Works - Traffic Services

Work Order
35655

Turning Movement Count - Pedestrian Volume Report

BASELINE RD @ CLYDE AVE

Count Date: Wednesday, January 20, 2016 **Start Time:** 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	5	0	**5**	1	3	**4**	**9**
07:15 07:30	2	5	**7**	5	3	**8**	**15**
07:30 07:45	1	2	**3**	0	8	**8**	**11**
07:45 08:00	6	6	**12**	5	6	**11**	**23**
07:00 08:00	14	13	**27**	11	20	**31**	**58**
08:00 08:15	4	4	**8**	0	8	**8**	**16**
08:15 08:30	4	9	**13**	1	7	**8**	**21**
08:30 08:45	3	5	**8**	3	3	**6**	**14**
08:45 09:00	5	7	**12**	3	8	**11**	**23**
08:00 09:00	16	25	**41**	7	26	**33**	**74**
09:00 09:15	7	6	**13**	5	10	**15**	**28**
09:15 09:30	1	5	**6**	2	4	**6**	**12**
09:30 09:45	2	2	**4**	2	6	**8**	**12**
09:45 10:00	2	4	**6**	3	5	**8**	**14**
09:00 10:00	12	17	**29**	12	25	**37**	**66**
11:30 11:45	6	3	**9**	4	5	**9**	**18**
11:45 12:00	3	7	**10**	6	6	**12**	**22**
12:00 12:15	5	3	**8**	9	6	**15**	**23**
12:15 12:30	3	4	**7**	3	1	**4**	**11**
11:30 12:30	17	17	**34**	22	18	**40**	**74**
12:30 12:45	4	7	**11**	6	14	**20**	**31**
12:45 13:00	6	11	**17**	2	14	**16**	**33**
13:00 13:15	3	5	**8**	3	10	**13**	**21**
13:15 13:30	5	5	**10**	5	5	**10**	**20**
12:30 13:30	18	28	**46**	16	43	**59**	**105**
15:00 15:15	5	11	**16**	14	7	**21**	**37**
15:15 15:30	6	5	**11**	9	6	**15**	**26**
15:30 15:45	7	7	**14**	11	12	**23**	**37**
15:45 16:00	3	6	**9**	6	6	**12**	**21**
15:00 16:00	21	29	**50**	40	31	**71**	**121**
16:00 16:15	8	6	**14**	4	8	**12**	**26**
16:15 16:30	9	6	**15**	4	19	**23**	**38**
16:30 16:45	4	6	**10**	13	12	**25**	**35**
16:45 17:00	10	9	**19**	10	8	**18**	**37**
16:00 17:00	31	27	**58**	31	47	**78**	**136**
17:00 17:15	12	11	**23**	11	10	**21**	**44**
17:15 17:30	7	11	**18**	5	10	**15**	**33**
17:30 17:45	4	6	**10**	1	10	**11**	**21**
17:45 18:00	5	10	**15**	2	7	**9**	**24**
17:00 18:00	28	38	**66**	19	37	**56**	**122**
Total	157	194	**351**	158	247	**405**	**756**

Comment:

Transportation Services - Traffic Services

W.O. 36506

Turning Movement Count - 15 Minute Summary Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016

Total Observed U-Turns

Northbound: 33 Southbound: 7
Eastbound: 0 Westbound: 1

		CLYDE AVE									MERIVALE RD/LOTTA AVE									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
11:00	11:15	20	260	149	**429**	28	235	13	**276**	**705**	19	16	10	**45**	190	28	38	**256**	**301**	**1006**
11:15	11:30	21	231	163	**415**	24	257	8	**289**	**704**	23	13	13	**49**	143	19	48	**210**	**259**	**963**
11:30	11:45	31	262	148	**441**	27	254	11	**292**	**733**	19	17	15	**51**	187	21	47	**255**	**306**	**1039**
11:45	12:00	20	230	169	**419**	24	251	9	**284**	**703**	19	9	8	**36**	170	21	47	**238**	**274**	**977**
12:00	12:15	19	259	159	**439**	22	264	8	**294**	**733**	6	14	7	**27**	182	18	42	**242**	**269**	**1002**
12:15	12:30	27	234	180	**442**	25	279	6	**310**	**752**	12	8	9	**29**	208	30	52	**290**	**319**	**1071**
12:30	12:45	12	271	137	**421**	31	258	11	**300**	**721**	12	14	20	**46**	184	14	46	**244**	**290**	**1011**
12:45	13:00	16	240	182	**439**	28	277	7	**312**	**751**	15	15	9	**39**	163	11	48	**222**	**261**	**1012**
13:00	13:15	18	265	175	**460**	19	231	8	**259**	**719**	22	9	13	**44**	190	14	53	**257**	**301**	**1020**
13:15	13:30	16	256	170	**446**	25	266	16	**307**	**753**	14	19	13	**46**	147	23	47	**217**	**263**	**1016**
13:30	13:45	25	249	153	**428**	19	237	5	**261**	**689**	18	14	11	**43**	180	18	55	**254**	**297**	**986**
13:45	14:00	16	223	174	**417**	21	240	7	**269**	**686**	9	11	9	**29**	191	19	59	**269**	**298**	**984**
14:00	14:15	16	259	171	**448**	21	266	10	**298**	**746**	11	17	10	**38**	180	20	43	**243**	**281**	**1027**
14:15	14:30	22	259	155	**441**	18	264	10	**292**	**733**	18	18	6	**42**	201	15	55	**271**	**313**	**1046**
14:30	14:45	18	261	176	**458**	22	307	11	**341**	**799**	11	13	8	**32**	216	20	41	**277**	**309**	**1108**
14:45	15:00	27	258	162	**448**	29	303	14	**348**	**796**	17	13	11	**41**	166	16	56	**238**	**279**	**1075**
15:00	15:15	17	284	167	**470**	25	232	6	**264**	**734**	17	17	8	**42**	156	18	59	**233**	**275**	**1009**
15:15	15:30	21	281	143	**446**	20	220	7	**247**	**693**	17	19	12	**48**	161	30	36	**227**	**275**	**968**
15:30	15:45	21	320	188	**530**	23	243	4	**270**	**800**	15	13	2	**30**	156	19	38	**213**	**243**	**1043**
15:45	16:00	22	270	168	**462**	23	240	4	**267**	**729**	11	9	7	**27**	144	15	34	**193**	**220**	**949**
TOTAL:		405	5172	3289	**8899**	474	5124	175	**5780**	**14679**	305	278	201	**784**	3515	389	944	**4849**	**5633**	**20312**

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
36506

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Saturday, November 12, 2016

Start Time: 11:00

	CLYDE AVE			MERIVALE RD/LOTTA AVE			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
11:00 12:00	1	0	**1**	0	0	**0**	**1**
12:00 13:00	0	0	**0**	0	2	**2**	**2**
13:00 14:00	2	0	**2**	0	0	**0**	**2**
14:00 15:00	1	0	**1**	0	0	**0**	**1**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
Total	4	0	**4**	0	2	**2**	**6**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

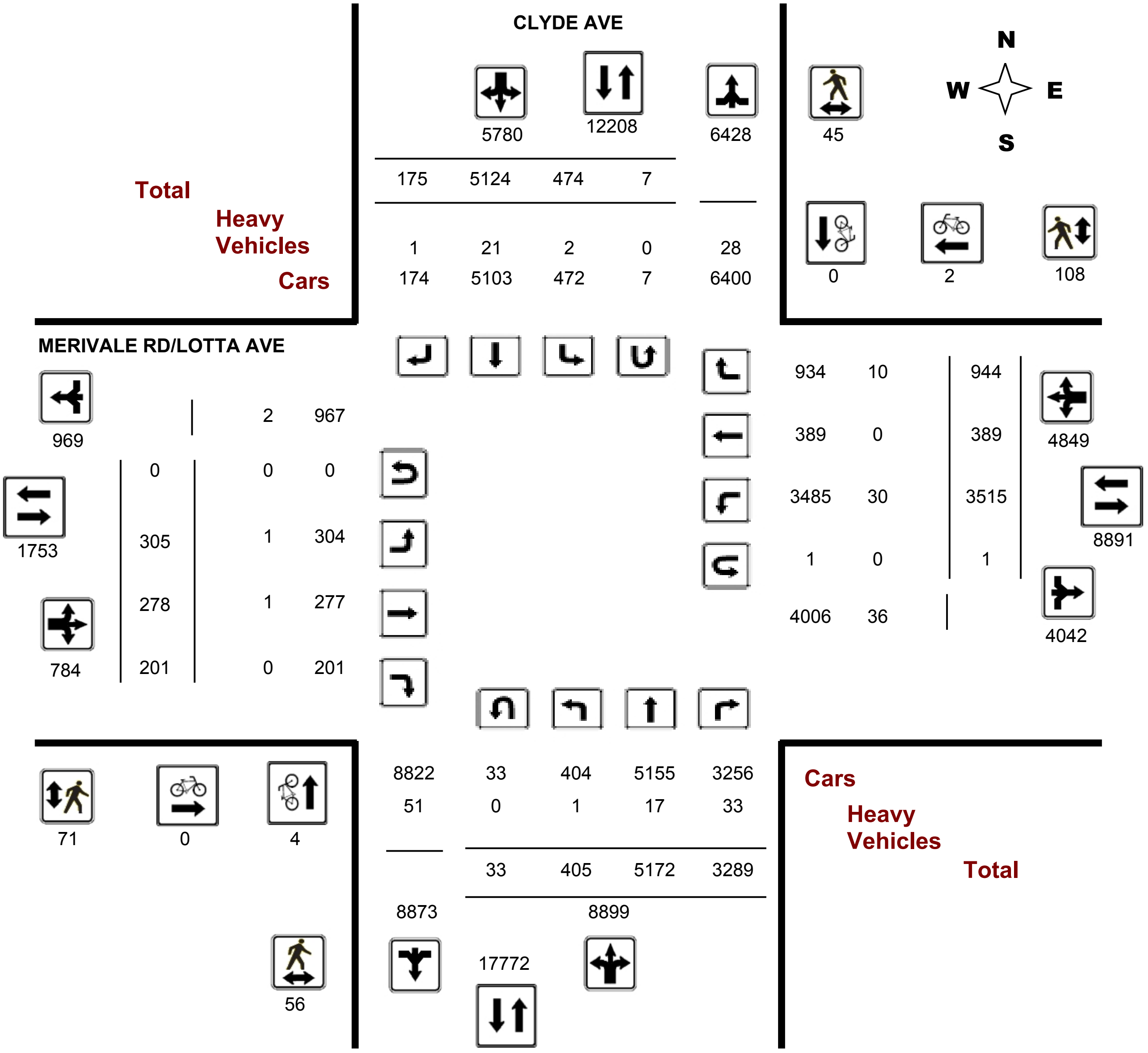
Turning Movement Count - Full Study Diagram

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016

WO#: 36506

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
36506

Turning Movement Count - Heavy Vehicle Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016

	CLYDE AVE									MERIVALE RD/LOTTA AVE									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
11:00 12:00	1	4	11	**16**	0	4	0	**4**	**20**	0	0	0	**0**	8	0	2	**10**	**10**	**30**
12:00 13:00	0	6	9	**15**	1	7	0	**8**	**23**	1	0	0	**1**	5	0	2	**7**	**8**	**31**
13:00 14:00	0	2	7	**9**	1	2	0	**3**	**12**	0	1	0	**1**	7	0	2	**9**	**10**	**22**
14:00 15:00	0	4	2	**6**	0	2	1	**3**	**9**	0	0	0	**0**	5	0	3	**8**	**8**	**17**
15:00 16:00	0	1	4	**5**	0	6	0	**6**	**11**	0	0	0	**0**	5	0	1	**6**	**6**	**17**
Sub Total	1	17	33	**51**	2	21	1	**24**	**75**	1	1	0	**2**	30	0	10	**40**	**42**	**117**
U-Turns (Heavy Vehicles)				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	1	17	33	**0**	2	21	1	**24**	**75**	1	1	0	**2**	30	0	10	**40**	**42**	**117**

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

Work Order
36506

Turning Movement Count - Pedestrian Volume Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Saturday, November 12, 2016 **Start Time:** 11:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
11:00 11:15	0	1	**1**	2	6	**8**	**9**
11:15 11:30	0	3	**3**	1	4	**5**	**8**
11:30 11:45	1	6	**7**	7	12	**19**	**26**
11:45 12:00	0	1	**1**	3	4	**7**	**8**
11:00 12:00	1	11	**12**	13	26	**39**	**51**
12:00 12:15	5	0	**5**	7	6	**13**	**18**
12:15 12:30	5	1	**6**	2	6	**8**	**14**
12:30 12:45	0	0	**0**	0	0	**0**	**0**
12:45 13:00	7	0	**7**	0	8	**8**	**15**
12:00 13:00	17	1	**18**	9	20	**29**	**47**
13:00 13:15	2	1	**3**	6	6	**12**	**15**
13:15 13:30	2	2	**4**	6	7	**13**	**17**
13:30 13:45	9	4	**13**	5	7	**12**	**25**
13:45 14:00	5	7	**12**	0	10	**10**	**22**
13:00 14:00	18	14	**32**	17	30	**47**	**79**
14:00 14:15	8	3	**11**	7	5	**12**	**23**
14:15 14:30	2	0	**2**	5	2	**7**	**9**
14:30 14:45	4	3	**7**	4	4	**8**	**15**
14:45 15:00	0	1	**1**	3	4	**7**	**8**
14:00 15:00	14	7	**21**	19	15	**34**	**55**
15:00 15:15	2	3	**5**	3	3	**6**	**11**
15:15 15:30	1	5	**6**	4	7	**11**	**17**
15:30 15:45	0	1	**1**	3	2	**5**	**6**
15:45 16:00	3	3	**6**	3	5	**8**	**14**
15:00 16:00	6	12	**18**	13	17	**30**	**48**
Total	56	45	**101**	71	108	**179**	**280**

Comment:

Work Order
36506

Turning Movement Count - Full Study Summary (No AADT) Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016

Total Observed U-Turns

Northbound: 33 Southbound: 7

Eastbound: 0 Westbound: 1

Full Study

	CLYDE AVE									MERIVALE RD/LOTTA AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
11:00 12:00	92	983	629	**1704**	103	997	41	**1141**	**2845**	80	55	46	**181**	690	89	180	**959**	**1140**	**3985**
12:00 13:00	74	1004	658	**1736**	106	1078	32	**1216**	**2952**	45	51	45	**141**	737	73	188	**998**	**1139**	**4091**
13:00 14:00	75	993	672	**1740**	84	974	36	**1094**	**2834**	63	53	46	**162**	708	74	214	**996**	**1158**	**3992**
14:00 15:00	83	1037	664	**1784**	90	1140	45	**1275**	**3059**	57	61	35	**153**	763	71	195	**1029**	**1182**	**4241**
15:00 16:00	81	1155	666	**1902**	91	935	21	**1047**	**2949**	60	58	29	**147**	617	82	167	**866**	**1013**	**3962**
Sub Total	405	5172	3289	**8866**	474	5124	175	**5773**	**14639**	305	278	201	**784**	3515	389	944	**4848**	**5632**	**20271**
U Turns				**33**				**7**	**40**				**0**				**1**	**1**	**41**
Total	405	5172	3289	**8899**	474	5124	175	**5780**	**14679**	305	278	201	**784**	3515	389	944	**4849**	**5633**	**20312**

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

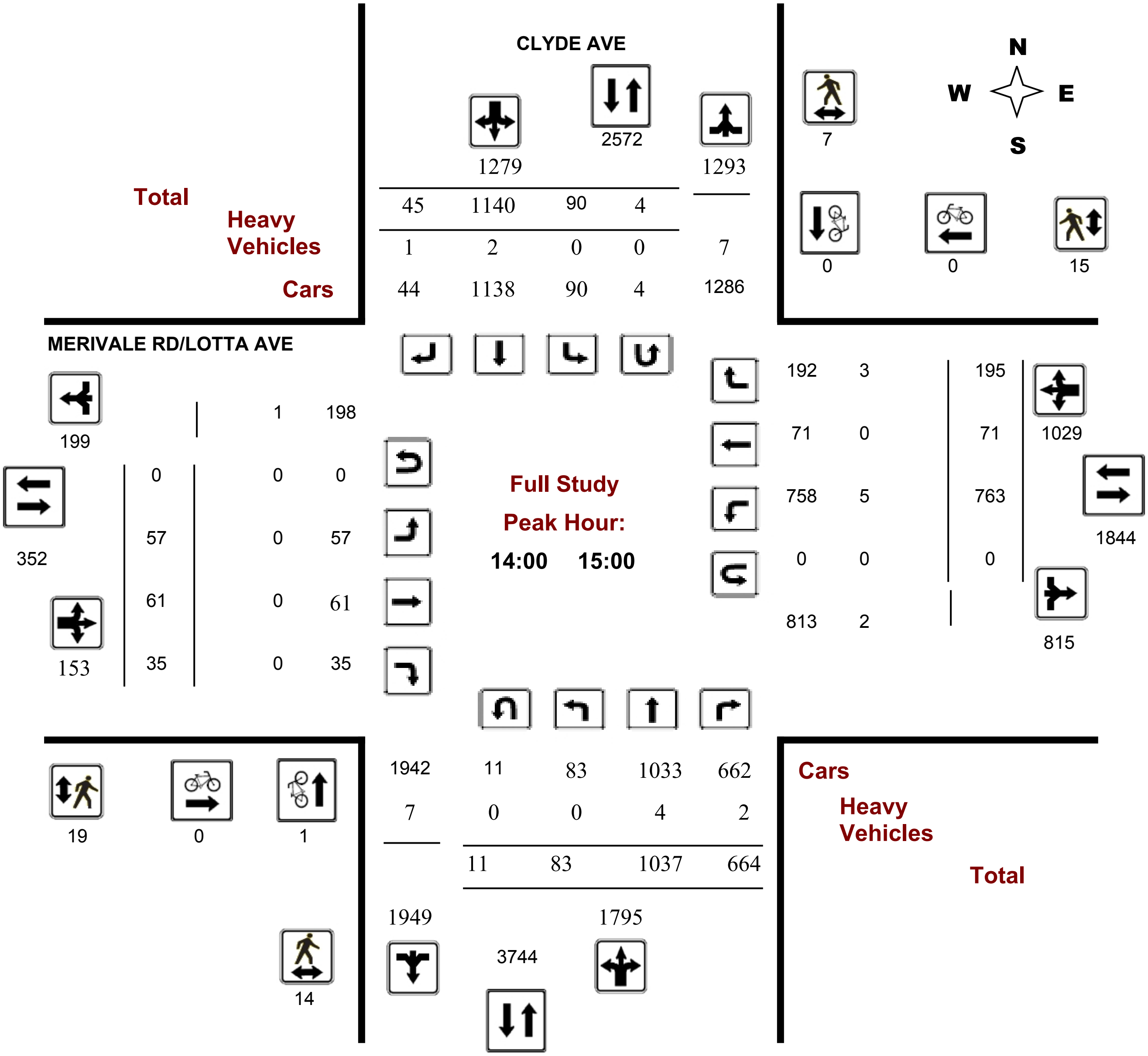
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016 **WO No:** 36506

Start Time: 11:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order
36506

Turning Movement Count - 15 Min U-Turn Total Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Saturday, November 12, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
11:00	11:15	0	0	0	0	0
11:15	11:30	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	2	0	0	0	2
12:15	12:30	1	0	0	0	1
12:30	12:45	1	0	0	0	1
12:45	13:00	1	0	0	0	1
13:00	13:15	2	1	0	0	3
13:15	13:30	4	0	0	0	4
13:30	13:45	1	0	0	1	2
13:45	14:00	4	1	0	0	5
14:00	14:15	2	1	0	0	3
14:15	14:30	5	0	0	0	5
14:30	14:45	3	1	0	0	4
14:45	15:00	1	2	0	0	3
15:00	15:15	2	1	0	0	3
15:15	15:30	1	0	0	0	1
15:30	15:45	1	0	0	0	1
15:45	16:00	2	0	0	0	2
Total		33	7	0	1	41

Transportation Services - Traffic Services

W.O. 35504

Turning Movement Count - 15 Minute Summary Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Total Observed U-Turns

Northbound: 40 Southbound: 6
Eastbound: 0 Westbound: 0

		CLYDE AVE									MERIVALE RD/LOTTA AVE									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	3	123	88	**214**	3	104	1	**108**	**322**	4	5	3	**12**	73	4	12	**89**	**101**	**423**
07:15	07:30	4	156	132	**292**	6	133	0	**139**	**431**	3	7	3	**13**	72	7	13	**92**	**105**	**536**
07:30	07:45	6	177	172	**355**	5	150	1	**156**	**511**	1	8	4	**13**	80	5	12	**97**	**110**	**621**
07:45	08:00	3	218	174	**396**	6	151	5	**162**	**558**	6	7	4	**17**	87	4	19	**110**	**127**	**685**
08:00	08:15	0	228	184	**412**	10	159	3	**172**	**584**	11	21	5	**37**	74	6	13	**93**	**130**	**714**
08:15	08:30	0	230	182	**412**	11	189	0	**200**	**612**	4	20	4	**28**	120	12	17	**149**	**177**	**789**
08:30	08:45	0	197	169	**366**	10	152	2	**165**	**531**	5	17	4	**26**	101	9	14	**124**	**150**	**681**
08:45	09:00	0	206	132	**339**	13	197	2	**213**	**552**	11	10	6	**27**	95	7	23	**125**	**152**	**704**
09:00	09:15	12	172	115	**300**	5	177	3	**185**	**485**	7	8	6	**21**	93	6	20	**119**	**140**	**625**
09:15	09:30	12	175	112	**300**	15	154	4	**173**	**473**	5	11	11	**27**	116	4	21	**141**	**168**	**641**
09:30	09:45	11	151	104	**268**	19	164	5	**188**	**456**	10	10	6	**26**	115	13	22	**150**	**176**	**632**
09:45	10:00	14	158	112	**285**	11	215	11	**237**	**522**	12	6	6	**24**	127	8	28	**163**	**187**	**709**
11:30	11:45	14	219	123	**358**	16	230	10	**256**	**614**	17	12	18	**47**	137	15	27	**179**	**226**	**840**
11:45	12:00	24	196	130	**352**	24	224	11	**259**	**611**	16	16	11	**43**	157	17	30	**204**	**247**	**858**
12:00	12:15	14	213	134	**362**	27	233	7	**267**	**629**	14	11	11	**36**	131	23	34	**188**	**224**	**853**
12:15	12:30	18	196	132	**348**	20	230	9	**261**	**609**	18	13	16	**47**	153	15	31	**199**	**246**	**855**
12:30	12:45	14	220	147	**381**	21	234	13	**268**	**649**	13	11	15	**39**	124	22	40	**186**	**225**	**874**
12:45	13:00	23	229	161	**419**	18	262	9	**289**	**708**	14	5	17	**36**	151	16	48	**215**	**251**	**959**
13:00	13:15	11	238	142	**391**	21	230	3	**254**	**645**	12	17	12	**41**	139	12	42	**193**	**234**	**879**
13:15	13:30	16	203	147	**370**	18	186	4	**208**	**578**	16	14	13	**43**	157	17	29	**203**	**246**	**824**
15:00	15:15	11	197	136	**345**	15	175	7	**197**	**542**	16	9	15	**40**	179	20	51	**250**	**290**	**832**
15:15	15:30	9	233	126	**368**	17	206	6	**229**	**597**	9	10	6	**25**	167	24	34	**225**	**250**	**847**
15:30	15:45	16	217	136	**370**	11	187	6	**204**	**574**	12	10	8	**30**	185	20	35	**240**	**270**	**844**
15:45	16:00	19	208	142	**370**	17	203	1	**221**	**591**	10	11	13	**34**	177	23	42	**242**	**276**	**867**
16:00	16:15	3	227	172	**404**	22	200	2	**224**	**628**	16	11	12	**39**	153	36	40	**229**	**268**	**896**
16:15	16:30	3	195	154	**354**	18	190	6	**214**	**568**	10	10	10	**30**	198	35	45	**278**	**308**	**876**
16:30	16:45	6	199	153	**360**	14	190	3	**207**	**567**	6	11	10	**27**	208	30	39	**277**	**304**	**871**
16:45	17:00	13	224	149	**387**	15	196	2	**213**	**600**	5	9	10	**24**	205	26	31	**262**	**286**	**886**
17:00	17:15	13	194	150	**357**	22	176	4	**202**	**559**	10	10	4	**24**	204	30	40	**274**	**298**	**857**
17:15	17:30	11	213	165	**390**	22	205	3	**231**	**621**	7	13	10	**30**	183	37	47	**267**	**297**	**918**
17:30	17:45	13	195	156	**366**	23	210	2	**236**	**602**	14	14	12	**40**	199	30	41	**270**	**310**	**912**
17:45	18:00	21	189	140	**353**	21	259	11	**291**	**644**	6	20	6	**32**	215	33	43	**291**	**323**	**967**
TOTAL:		337	6396	4571	**11344**	496	6171	156	**6829**	**18173**	320	367	291	**978**	4575	566	983	**6124**	**7102**	**25275**

Note: U-Turns are included in Totals. **Comment:**

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
35504

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Wednesday, April 13, 2016

Start Time: 07:00

	CLYDE AVE			MERIVALE RD/LOTTA AVE			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	1	0	**1**	0	0	**0**	**1**
08:00 09:00	1	0	**1**	1	1	**2**	**3**
09:00 10:00	0	0	**0**	0	1	**1**	**1**
11:30 12:30	0	1	**1**	1	0	**1**	**2**
12:30 13:30	2	0	**2**	0	0	**0**	**2**
15:00 16:00	0	1	**1**	0	0	**0**	**1**
16:00 17:00	1	0	**1**	0	1	**1**	**2**
17:00 18:00	0	1	**1**	0	5	**5**	**6**
Total	5	3	**8**	2	8	**10**	**18**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

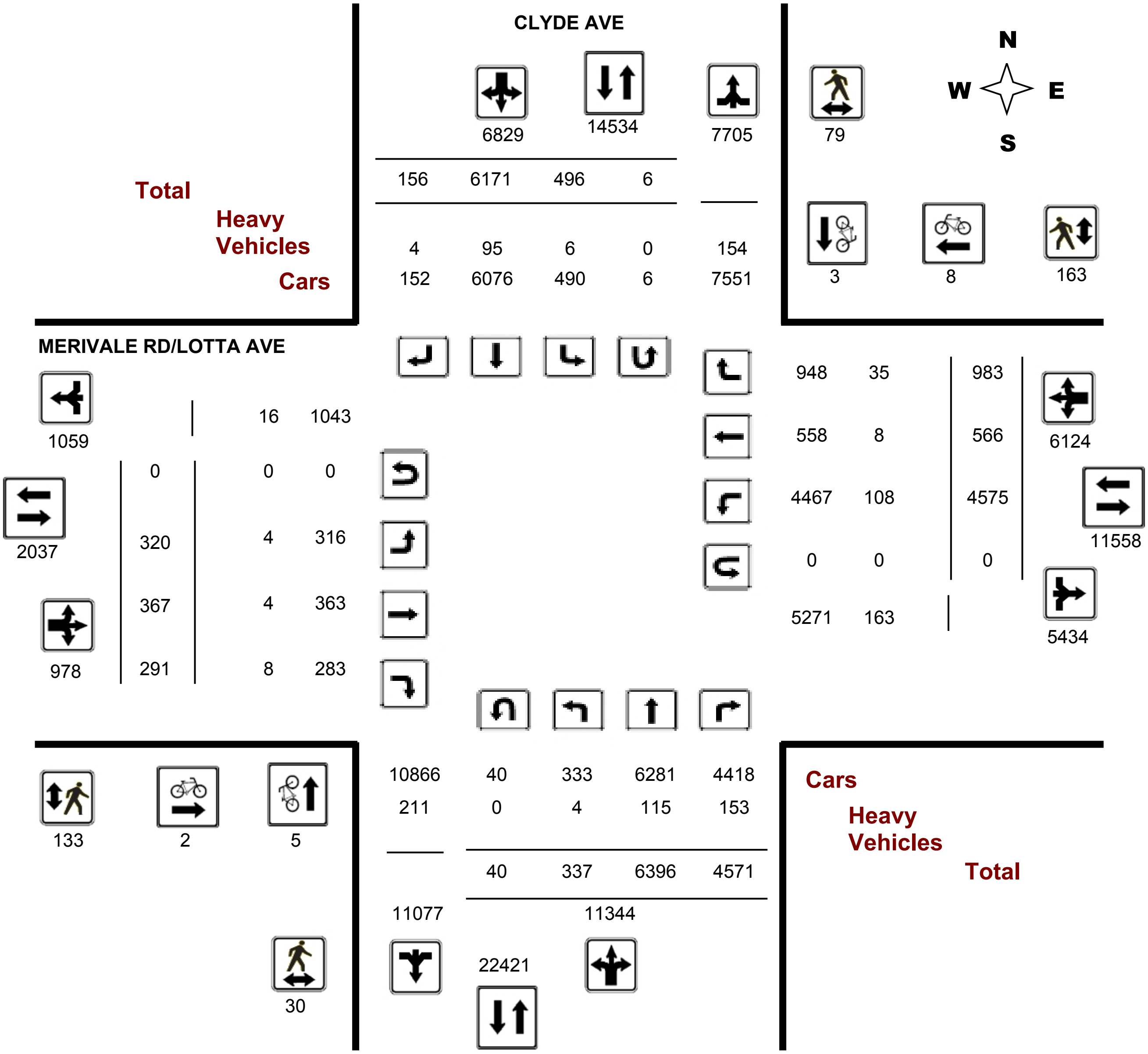
Turning Movement Count - Full Study Diagram

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

WO#: 35504

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
35504

Turning Movement Count - Heavy Vehicle Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

		CLYDE AVE									MERIVALE RD/LOTTA AVE									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	08:00	0	26	27	**53**	0	14	1	**15**	**68**	0	0	0	**0**	12	2	2	**16**	**16**	**84**
08:00	09:00	0	18	24	**42**	4	11	0	**15**	**57**	1	0	1	**2**	11	2	4	**17**	**19**	**76**
09:00	10:00	0	17	24	**41**	0	17	1	**18**	**59**	0	0	3	**3**	13	0	6	**19**	**22**	**81**
11:30	12:30	1	18	27	**46**	1	17	2	**20**	**66**	1	0	2	**3**	14	1	5	**20**	**23**	**89**
12:30	13:30	1	13	21	**35**	0	9	0	**9**	**44**	1	1	2	**4**	17	1	5	**23**	**27**	**71**
15:00	16:00	1	9	12	**22**	0	11	0	**11**	**33**	1	1	0	**2**	11	1	4	**16**	**18**	**51**
16:00	17:00	0	11	9	**20**	1	13	0	**14**	**34**	0	2	0	**2**	16	1	5	**22**	**24**	**58**
17:00	18:00	1	3	9	**13**	0	3	0	**3**	**16**	0	0	0	**0**	14	0	4	**18**	**18**	**34**
Sub Total		4	115	153	**272**	6	95	4	**105**	**377**	4	4	8	**16**	108	8	35	**151**	**167**	**544**
U-Turns (Heavy Vehicles)					**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total		4	115	153	**0**	6	95	4	**105**	**377**	4	4	8	**16**	108	8	35	**151**	**167**	**544**

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

Work Order
35504

Turning Movement Count - Pedestrian Volume Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Wednesday, April 13, 2016 **Start Time:** 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	0	**1**	1	1	**2**	**3**
07:15 07:30	0	2	**2**	0	1	**1**	**3**
07:30 07:45	0	0	**0**	2	1	**3**	**3**
07:45 08:00	2	1	**3**	3	0	**3**	**6**
07:00 08:00	3	3	**6**	6	3	**9**	**15**
08:00 08:15	0	1	**1**	2	4	**6**	**7**
08:15 08:30	0	2	**2**	3	3	**6**	**8**
08:30 08:45	0	2	**2**	3	0	**3**	**5**
08:45 09:00	2	1	**3**	6	1	**7**	**10**
08:00 09:00	2	6	**8**	14	8	**22**	**30**
09:00 09:15	0	3	**3**	3	4	**7**	**10**
09:15 09:30	0	1	**1**	4	2	**6**	**7**
09:30 09:45	2	1	**3**	1	4	**5**	**8**
09:45 10:00	0	2	**2**	5	2	**7**	**9**
09:00 10:00	2	7	**9**	13	12	**25**	**34**
11:30 11:45	3	1	**4**	4	7	**11**	**15**
11:45 12:00	0	1	**1**	3	3	**6**	**7**
12:00 12:15	3	2	**5**	9	5	**14**	**19**
12:15 12:30	1	0	**1**	2	10	**12**	**13**
11:30 12:30	7	4	**11**	18	25	**43**	**54**
12:30 12:45	0	3	**3**	7	7	**14**	**17**
12:45 13:00	0	7	**7**	9	8	**17**	**24**
13:00 13:15	0	7	**7**	11	3	**14**	**21**
13:15 13:30	3	4	**7**	5	6	**11**	**18**
12:30 13:30	3	21	**24**	32	24	**56**	**80**
15:00 15:15	0	1	**1**	6	3	**9**	**10**
15:15 15:30	2	5	**7**	1	9	**10**	**17**
15:30 15:45	0	5	**5**	5	8	**13**	**18**
15:45 16:00	2	2	**4**	4	9	**13**	**17**
15:00 16:00	4	13	**17**	16	29	**45**	**62**
16:00 16:15	1	3	**4**	5	6	**11**	**15**
16:15 16:30	1	2	**3**	6	10	**16**	**19**
16:30 16:45	2	3	**5**	6	7	**13**	**18**
16:45 17:00	2	3	**5**	3	3	**6**	**11**
16:00 17:00	6	11	**17**	20	26	**46**	**63**
17:00 17:15	0	5	**5**	4	19	**23**	**28**
17:15 17:30	1	5	**6**	1	9	**10**	**16**
17:30 17:45	1	2	**3**	4	6	**10**	**13**
17:45 18:00	1	2	**3**	5	2	**7**	**10**
17:00 18:00	3	14	**17**	14	36	**50**	**67**
Total	30	79	**109**	133	163	**296**	**405**

Comment:

Transportation Services - Traffic Services

Work Order
35504

Turning Movement Count - Full Study Summary Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Total Observed U-Turns

Northbound: 40 Southbound: 6
Eastbound: 0 Westbound: 0

AADT Factor
.90

Full Study

	CLYDE AVE									MERIVALE RD/LOTTA AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	16	674	566	**1256**	20	538	7	**565**	**1821**	14	27	14	**55**	312	20	56	**388**	**443**	**2264**
08:00 09:00	0	861	667	**1528**	44	697	7	**748**	**2276**	31	68	19	**118**	390	34	67	**491**	**609**	**2885**
09:00 10:00	49	656	443	**1148**	50	710	23	**783**	**1931**	34	35	29	**98**	451	31	91	**573**	**671**	**2602**
11:30 12:30	70	824	519	**1413**	87	917	37	**1041**	**2454**	65	52	56	**173**	578	70	122	**770**	**943**	**3397**
12:30 13:30	64	890	597	**1551**	78	912	29	**1019**	**2570**	55	47	57	**159**	571	67	159	**797**	**956**	**3526**
15:00 16:00	55	855	540	**1450**	60	771	20	**851**	**2301**	47	40	42	**129**	708	87	162	**957**	**1086**	**3387**
16:00 17:00	25	845	628	**1498**	69	776	13	**858**	**2356**	37	41	42	**120**	764	127	155	**1046**	**1166**	**3522**
17:00 18:00	58	791	611	**1460**	88	850	20	**958**	**2418**	37	57	32	**126**	801	130	171	**1102**	**1228**	**3646**
Sub Total	337	6396	4571	**11304**	496	6171	156	**6823**	**18127**	320	367	291	**978**	4575	566	983	**6124**	**7102**	**25229**
U Turns				**40**				**6**	**46**				**0**				**0**	**0**	**46**
Total	337	6396	4571	**11344**	496	6171	156	**6829**	**18173**	320	367	291	**978**	4575	566	983	**6124**	**7102**	**25275**
EQ 12Hr	468	8890	6354	**15768**	689	8578	217	**9492**	**25260**	445	510	404	**1359**	6359	787	1366	**8512**	**9871**	**35131**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	422	8001	5718	**14191**	620	7720	195	**8543**	**22734**	400	459	364	**1223**	5723	708	1230	**7661**	**8884**	**31618**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	552	10482	7491	**18591**	813	10113	256	**11191**	**29782**	524	601	477	**1603**	7498	928	1611	**10036**	**11639**	**41421**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

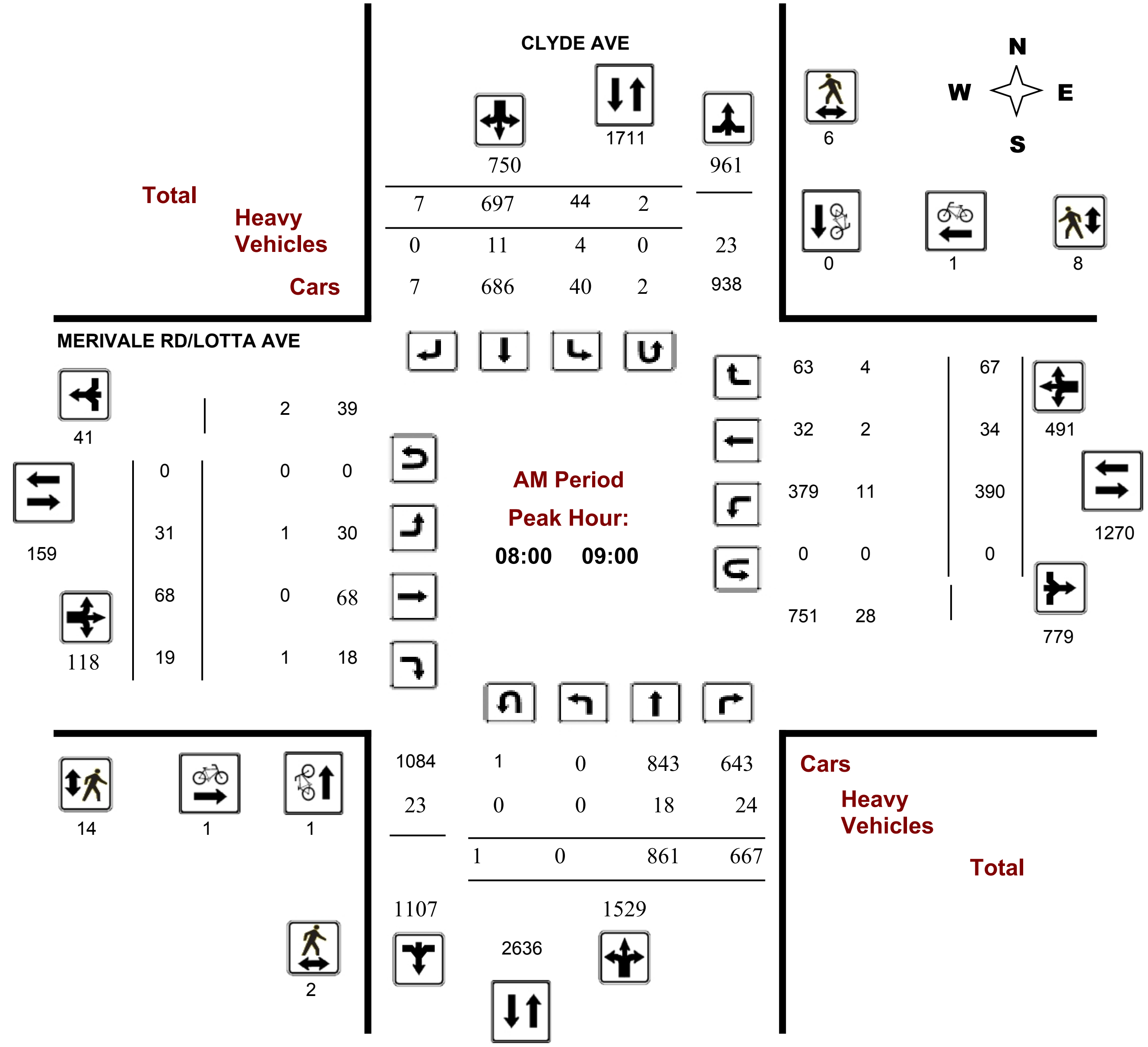
MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

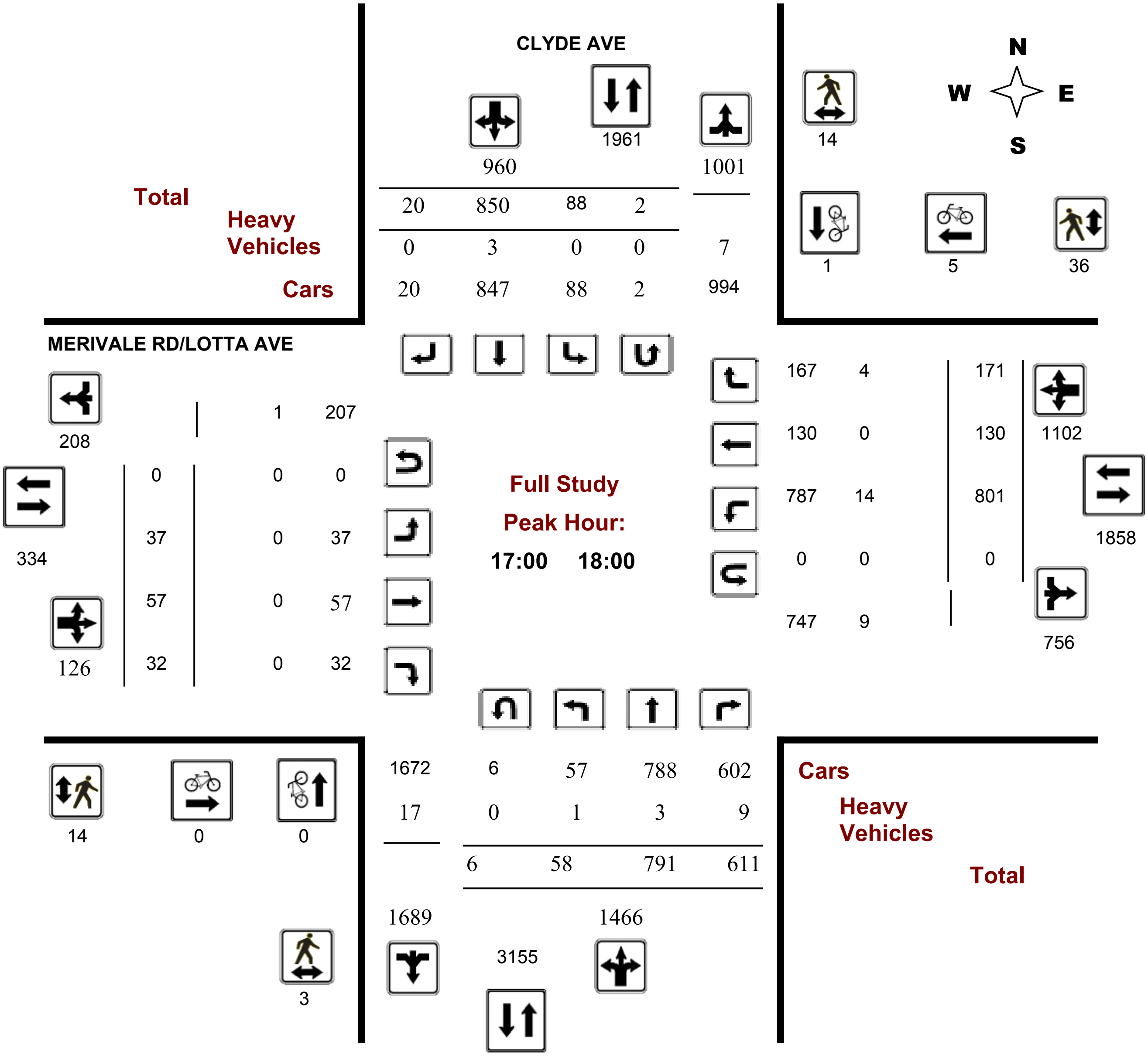
MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision



Comments

Turning Movement Count - Full Study Peak Hour Diagram

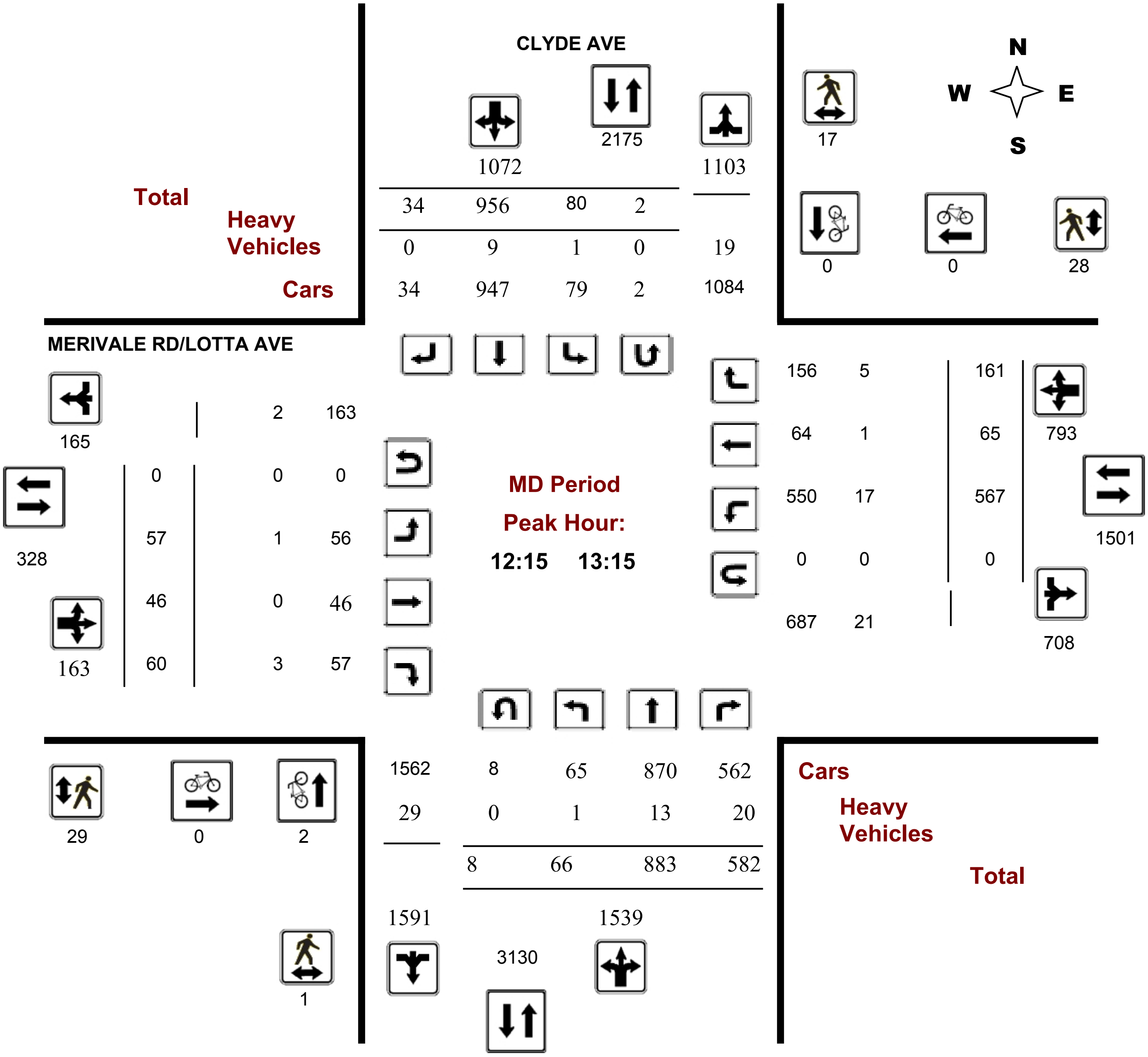
MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision



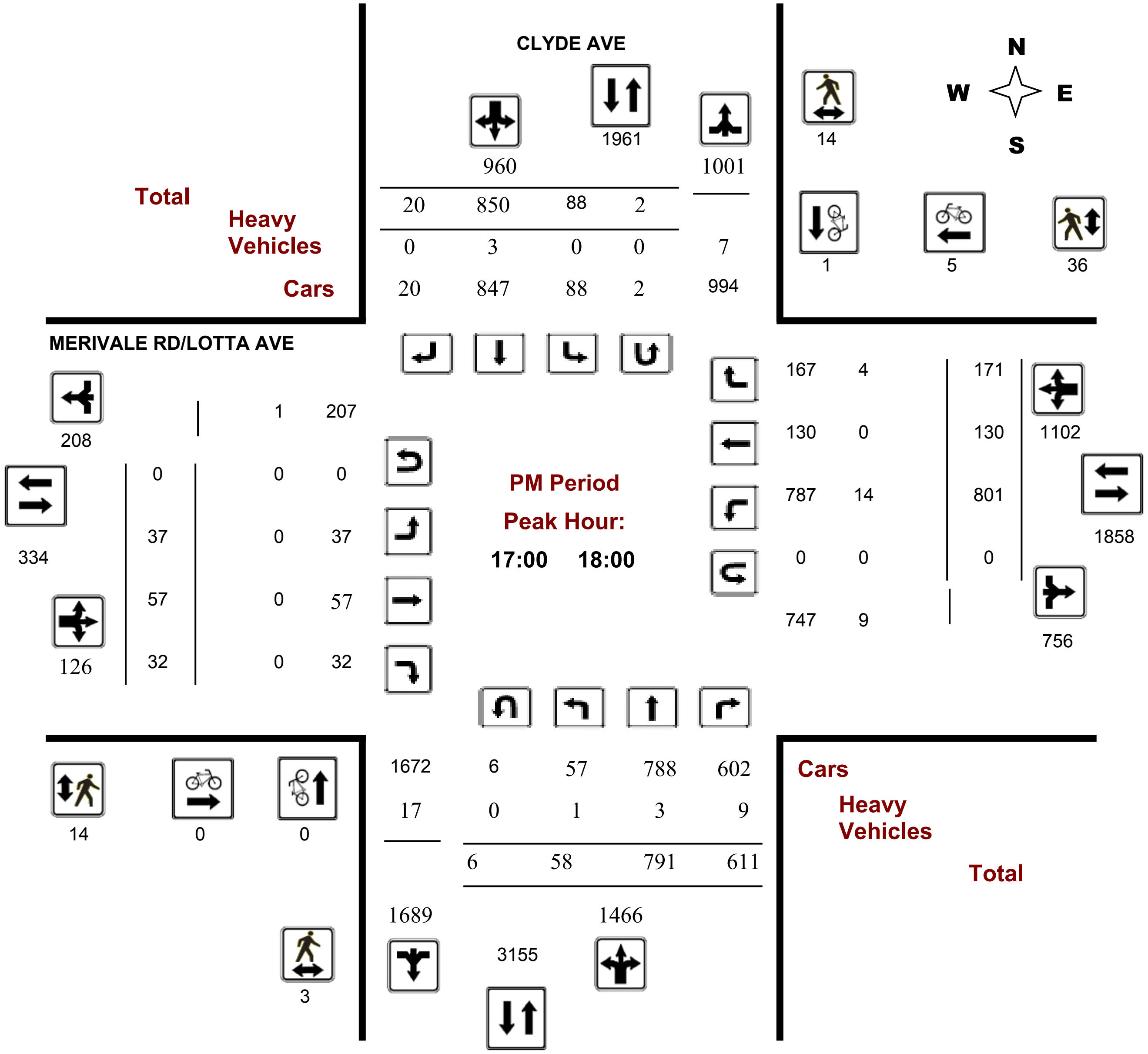
Comments

Turning Movement Count - Full Study Peak Hour Diagram

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016 **WO No:** 35504

Start Time: 07:00 **Device:** Miovision



Comments

Turning Movement Count - 15 Min U-Turn Total Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	1	0	0	0	1
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	1	0	0	1
08:45	09:00	1	1	0	0	2
09:00	09:15	1	0	0	0	1
09:15	09:30	1	0	0	0	1
09:30	09:45	2	0	0	0	2
09:45	10:00	1	0	0	0	1
11:30	11:45	2	0	0	0	2
11:45	12:00	2	0	0	0	2
12:00	12:15	1	0	0	0	1
12:15	12:30	2	2	0	0	4
12:30	12:45	0	0	0	0	0
12:45	13:00	6	0	0	0	6
13:00	13:15	0	0	0	0	0
13:15	13:30	4	0	0	0	4
15:00	15:15	1	0	0	0	1
15:15	15:30	0	0	0	0	0
15:30	15:45	1	0	0	0	1
15:45	16:00	1	0	0	0	1
16:00	16:15	2	0	0	0	2
16:15	16:30	2	0	0	0	2
16:30	16:45	2	0	0	0	2
16:45	17:00	1	0	0	0	1
17:00	17:15	0	0	0	0	0
17:15	17:30	1	1	0	0	2
17:30	17:45	2	1	0	0	3
17:45	18:00	3	0	0	0	3
Total		40	6	0	0	46

Transportation Services - Traffic Services

W.O. 35707

Turning Movement Count - 15 Minute Summary Report

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 3
Eastbound: 0 Westbound: 0

		MERIVALE RD									BASELINE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	55	30	**85**	51	69	38	**158**	**243**	28	182	1	**211**	13	126	49	**188**	**399**	**642**
07:15	07:30	0	90	39	**129**	51	65	54	**170**	**299**	45	244	1	**290**	16	186	51	**253**	**543**	**842**
07:30	07:45	0	123	39	**162**	62	70	62	**194**	**356**	46	249	0	**295**	24	215	79	**318**	**613**	**969**
07:45	08:00	0	90	42	**132**	78	77	69	**224**	**356**	40	262	5	**307**	20	242	99	**361**	**668**	**1024**
08:00	08:15	0	144	65	**209**	78	83	83	**244**	**453**	48	251	1	**300**	31	192	91	**314**	**614**	**1067**
08:15	08:30	0	131	55	**186**	91	83	73	**248**	**434**	55	291	2	**348**	27	245	84	**356**	**704**	**1138**
08:30	08:45	0	167	48	**215**	70	77	66	**213**	**428**	62	214	3	**279**	34	217	110	**361**	**640**	**1068**
08:45	09:00	0	125	44	**169**	74	83	62	**219**	**388**	57	251	0	**308**	24	243	90	**357**	**665**	**1053**
09:00	09:15	0	91	35	**126**	56	83	52	**191**	**317**	68	219	4	**291**	43	167	81	**291**	**582**	**899**
09:15	09:30	0	59	43	**102**	45	72	53	**170**	**272**	57	223	3	**283**	40	222	98	**360**	**643**	**915**
09:30	09:45	0	64	44	**108**	56	59	52	**167**	**275**	55	253	2	**310**	59	175	81	**315**	**625**	**900**
09:45	10:00	0	63	44	**107**	59	89	66	**214**	**321**	44	181	7	**232**	35	145	44	**224**	**456**	**777**
11:30	11:45	0	73	45	**118**	54	96	61	**212**	**330**	52	126	5	**183**	54	171	53	**278**	**461**	**791**
11:45	12:00	0	67	46	**113**	48	104	66	**218**	**331**	62	143	6	**211**	52	167	53	**272**	**483**	**814**
12:00	12:15	0	71	47	**118**	63	112	73	**248**	**366**	48	171	7	**226**	44	168	62	**274**	**500**	**866**
12:15	12:30	0	77	49	**126**	52	114	63	**229**	**355**	63	156	2	**221**	53	127	55	**235**	**456**	**811**
12:30	12:45	1	103	50	**154**	60	81	51	**192**	**346**	64	139	4	**207**	40	174	57	**271**	**478**	**824**
12:45	13:00	0	89	52	**141**	57	107	57	**222**	**363**	62	164	9	**235**	52	149	44	**245**	**480**	**843**
13:00	13:15	0	84	54	**138**	64	92	48	**204**	**342**	45	121	3	**169**	40	147	63	**250**	**419**	**761**
13:15	13:30	0	67	60	**127**	54	99	52	**205**	**332**	48	148	1	**197**	41	146	55	**242**	**439**	**771**
15:00	15:15	0	107	44	**151**	75	118	57	**250**	**401**	60	168	5	**233**	52	244	46	**342**	**575**	**976**
15:15	15:30	0	87	41	**128**	68	130	57	**255**	**383**	48	178	7	**233**	58	307	55	**420**	**653**	**1036**
15:30	15:45	0	105	45	**150**	95	147	81	**323**	**473**	49	198	5	**252**	58	289	59	**406**	**658**	**1131**
15:45	16:00	1	99	59	**159**	77	133	80	**290**	**449**	66	185	5	**256**	66	296	62	**424**	**680**	**1129**
16:00	16:15	0	90	48	**138**	98	143	82	**323**	**461**	58	216	5	**279**	69	299	56	**424**	**703**	**1164**
16:15	16:30	0	108	61	**169**	81	144	95	**320**	**489**	54	249	2	**305**	54	302	52	**408**	**713**	**1202**
16:30	16:45	0	98	45	**143**	106	139	97	**342**	**485**	64	246	4	**314**	59	270	42	**371**	**685**	**1170**
16:45	17:00	0	91	40	**131**	80	169	82	**331**	**462**	61	238	3	**302**	63	290	56	**409**	**711**	**1173**
17:00	17:15	0	128	65	**193**	89	169	104	**362**	**555**	64	239	3	**306**	75	284	54	**413**	**719**	**1274**
17:15	17:30	0	122	48	**170**	86	151	79	**316**	**486**	61	216	4	**281**	64	287	67	**418**	**699**	**1185**
17:30	17:45	0	104	45	**149**	66	129	71	**266**	**415**	80	217	2	**299**	75	260	65	**400**	**699**	**1114**
17:45	18:00	0	85	34	**119**	85	119	77	**281**	**400**	64	209	7	**280**	59	219	53	**331**	**611**	**1011**
TOTAL:		2	3057	1506	**4565**	2229	3406	2163	**7801**	**12366**	1778	6547	118	**8443**	1494	6971	2066	**10531**	**18974**	**31340**

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
35707

BASELINE RD @ MERIVALE RD

Count Date: Tuesday, February 09, 2016

Start Time: 07:00

	MERIVALE RD			BASELINE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	2	1	**3**	1	0	**1**	**4**
08:00 09:00	0	0	**0**	1	0	**1**	**1**
09:00 10:00	0	0	**0**	0	0	**0**	**0**
11:30 12:30	0	0	**0**	0	0	**0**	**0**
12:30 13:30	0	0	**0**	0	0	**0**	**0**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
16:00 17:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	0	**0**	1	0	**1**	**1**
Total	2	1	**3**	3	0	**3**	**6**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

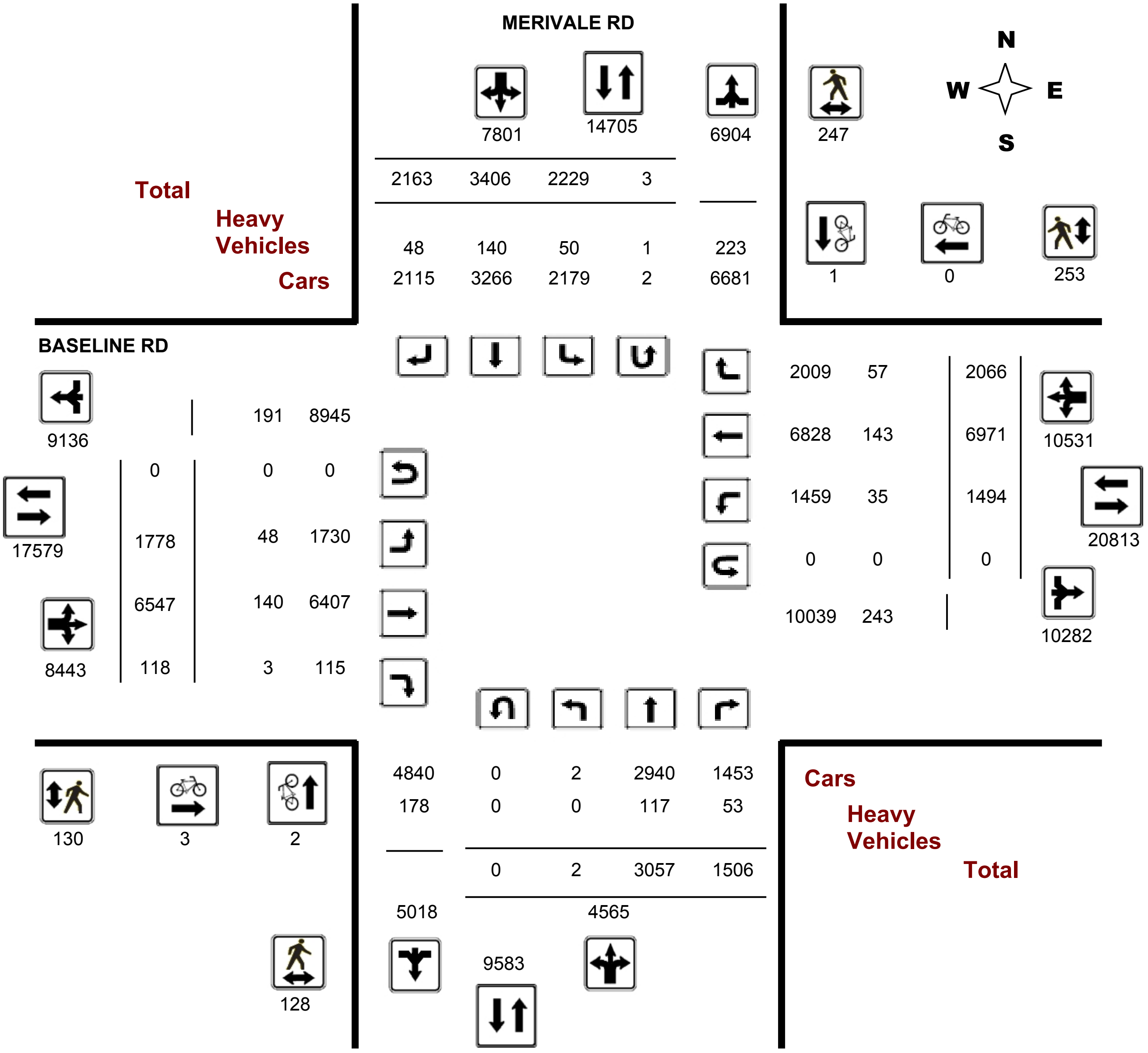
Turning Movement Count - Full Study Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016

WO#: 35707

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
35707

Turning Movement Count - Heavy Vehicle Report

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016

	MERIVALE RD									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 08:00	0	18	8	**26**	6	17	5	**28**	**54**	8	12	1	**21**	3	21	17	**41**	**62**	**116**
08:00 09:00	0	21	6	**27**	9	18	11	**38**	**65**	6	23	1	**30**	7	27	9	**43**	**73**	**138**
09:00 10:00	0	21	3	**24**	8	20	6	**34**	**58**	11	33	1	**45**	6	22	12	**40**	**85**	**143**
11:30 12:30	0	17	15	**32**	3	19	10	**32**	**64**	4	9	0	**13**	7	13	8	**28**	**41**	**105**
12:30 13:30	0	11	7	**18**	13	18	5	**37**	**55**	7	13	0	**20**	9	17	5	**31**	**51**	**106**
15:00 16:00	0	12	7	**19**	2	21	6	**29**	**48**	6	18	0	**24**	0	22	4	**26**	**50**	**98**
16:00 17:00	0	8	5	**13**	6	16	3	**25**	**38**	4	17	0	**21**	1	10	1	**12**	**33**	**71**
17:00 18:00	0	9	2	**11**	3	11	2	**16**	**27**	2	15	0	**17**	2	11	1	**14**	**31**	**58**
Sub Total	0	117	53	**170**	50	140	48	**239**	**409**	48	140	3	**191**	35	143	57	**235**	**426**	**835**
U-Turns (Heavy Vehicles)				**0**				**1**	**1**				**0**				**0**	**0**	**1**
Total	0	117	53	**0**	50	140	48	**240**	**410**	48	140	3	**191**	35	143	57	**235**	**426**	**836**

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

Work Order
35707

Turning Movement Count - Pedestrian Volume Report

BASELINE RD @ MERIVALE RD

Count Date: Tuesday, February 09, 2016 **Start Time:** 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	2	3	2	4	6	9
07:15 07:30	6	2	8	5	6	11	19
07:30 07:45	1	14	15	2	12	14	29
07:45 08:00	5	10	15	6	11	17	32
07:00 08:00	13	28	41	15	33	48	89
08:00 08:15	3	11	14	4	13	17	31
08:15 08:30	5	12	17	3	12	15	32
08:30 08:45	5	3	8	8	7	15	23
08:45 09:00	7	7	14	8	7	15	29
08:00 09:00	20	33	53	23	39	62	115
09:00 09:15	2	1	3	4	2	6	9
09:15 09:30	3	8	11	2	5	7	18
09:30 09:45	3	8	11	2	9	11	22
09:45 10:00	6	3	9	6	6	12	21
09:00 10:00	14	20	34	14	22	36	70
11:30 11:45	3	1	4	2	3	5	9
11:45 12:00	1	3	4	2	4	6	10
12:00 12:15	13	8	21	9	15	24	45
12:15 12:30	0	3	3	0	2	2	5
11:30 12:30	17	15	32	13	24	37	69
12:30 12:45	1	6	7	5	8	13	20
12:45 13:00	6	10	16	3	10	13	29
13:00 13:15	6	3	9	3	6	9	18
13:15 13:30	1	6	7	4	9	13	20
12:30 13:30	14	25	39	15	33	48	87
15:00 15:15	0	7	7	2	5	7	14
15:15 15:30	1	7	8	1	12	13	21
15:30 15:45	6	16	22	8	17	25	47
15:45 16:00	4	14	18	5	11	16	34
15:00 16:00	11	44	55	16	45	61	116
16:00 16:15	4	9	13	5	7	12	25
16:15 16:30	9	13	22	7	7	14	36
16:30 16:45	6	17	23	4	8	12	35
16:45 17:00	3	7	10	3	5	8	18
16:00 17:00	22	46	68	19	27	46	114
17:00 17:15	6	9	15	6	10	16	31
17:15 17:30	3	11	14	4	7	11	25
17:30 17:45	2	12	14	2	7	9	23
17:45 18:00	6	4	10	3	6	9	19
17:00 18:00	17	36	53	15	30	45	98
Total	128	247	375	130	253	383	758

Comment:

Work Order
35707

Turning Movement Count - Full Study Summary Report

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 3
Eastbound: 0 Westbound: 0

AADT Factor
1.00

Full Study

	MERIVALE RD									BASELINE RD										
	Northbound				Southbound					Eastbound				Westbound						
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	358	150	**508**	242	281	223	**746**	**1254**	159	937	7	**1103**	73	769	278	**1120**	**2223**	**3477**
08:00 09:00	0	567	212	**779**	313	326	284	**923**	**1702**	222	1007	6	**1235**	116	897	375	**1388**	**2623**	**4325**
09:00 10:00	0	277	166	**443**	216	303	223	**742**	**1185**	224	876	16	**1116**	177	709	304	**1190**	**2306**	**3491**
11:30 12:30	0	288	187	**475**	217	426	263	**906**	**1381**	225	596	20	**841**	203	633	223	**1059**	**1900**	**3281**
12:30 13:30	1	343	216	**560**	235	379	208	**822**	**1382**	219	572	17	**808**	173	616	219	**1008**	**1816**	**3198**
15:00 16:00	1	398	189	**588**	315	528	275	**1118**	**1706**	223	729	22	**974**	234	1136	222	**1592**	**2566**	**4272**
16:00 17:00	0	387	194	**581**	365	595	356	**1316**	**1897**	237	949	14	**1200**	245	1161	206	**1612**	**2812**	**4709**
17:00 18:00	0	439	192	**631**	326	568	331	**1225**	**1856**	269	881	16	**1166**	273	1050	239	**1562**	**2728**	**4584**
Sub Total	2	3057	1506	**4565**	2229	3406	2163	**7798**	**12363**	1778	6547	118	**8443**	1494	6971	2066	**10531**	**18974**	**31337**
U Turns				**0**				**3**	**3**				**0**				**0**	**0**	**3**
Total	2	3057	1506	**4565**	2229	3406	2163	**7801**	**12366**	1778	6547	118	**8443**	1494	6971	2066	**10531**	**18974**	**31340**
EQ 12Hr	3	4249	2093	**6345**	3098	4734	3007	**10843**	**17188**	2471	9100	164	**11736**	2077	9690	2872	**14638**	**26374**	**43562**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	3	4249	2093	**6345**	3098	4734	3007	**10843**	**17188**	2471	9100	164	**11736**	2077	9690	2872	**14638**	**26374**	**43562**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	4	5566	2742	**8312**	4059	6202	3939	**14205**	**22517**	3238	11921	215	**15374**	2720	12693	3762	**19176**	**34550**	**57067**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

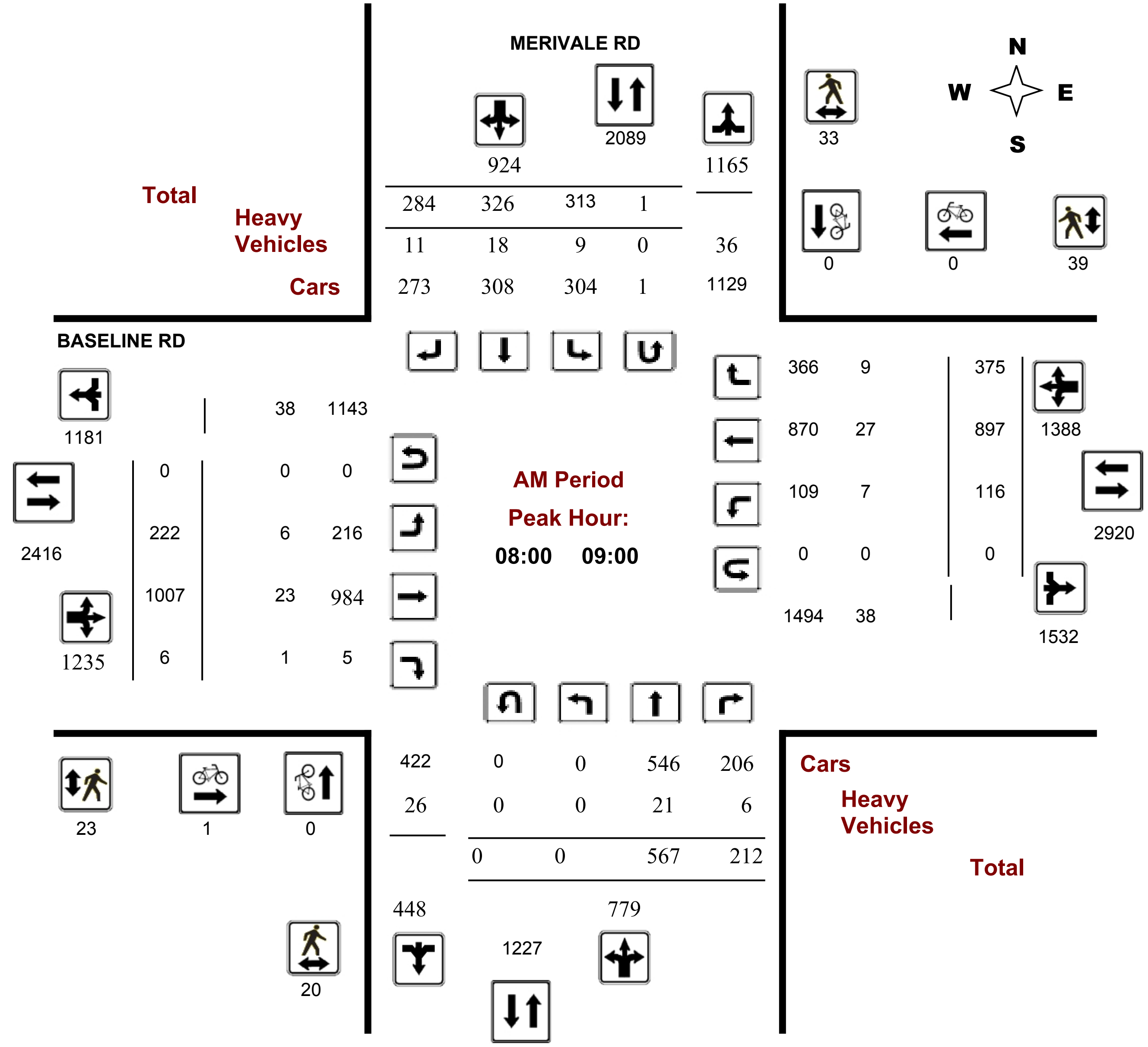
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016 **WO No:** 35707

Start Time: 07:00 **Device:** Miovision



Comments

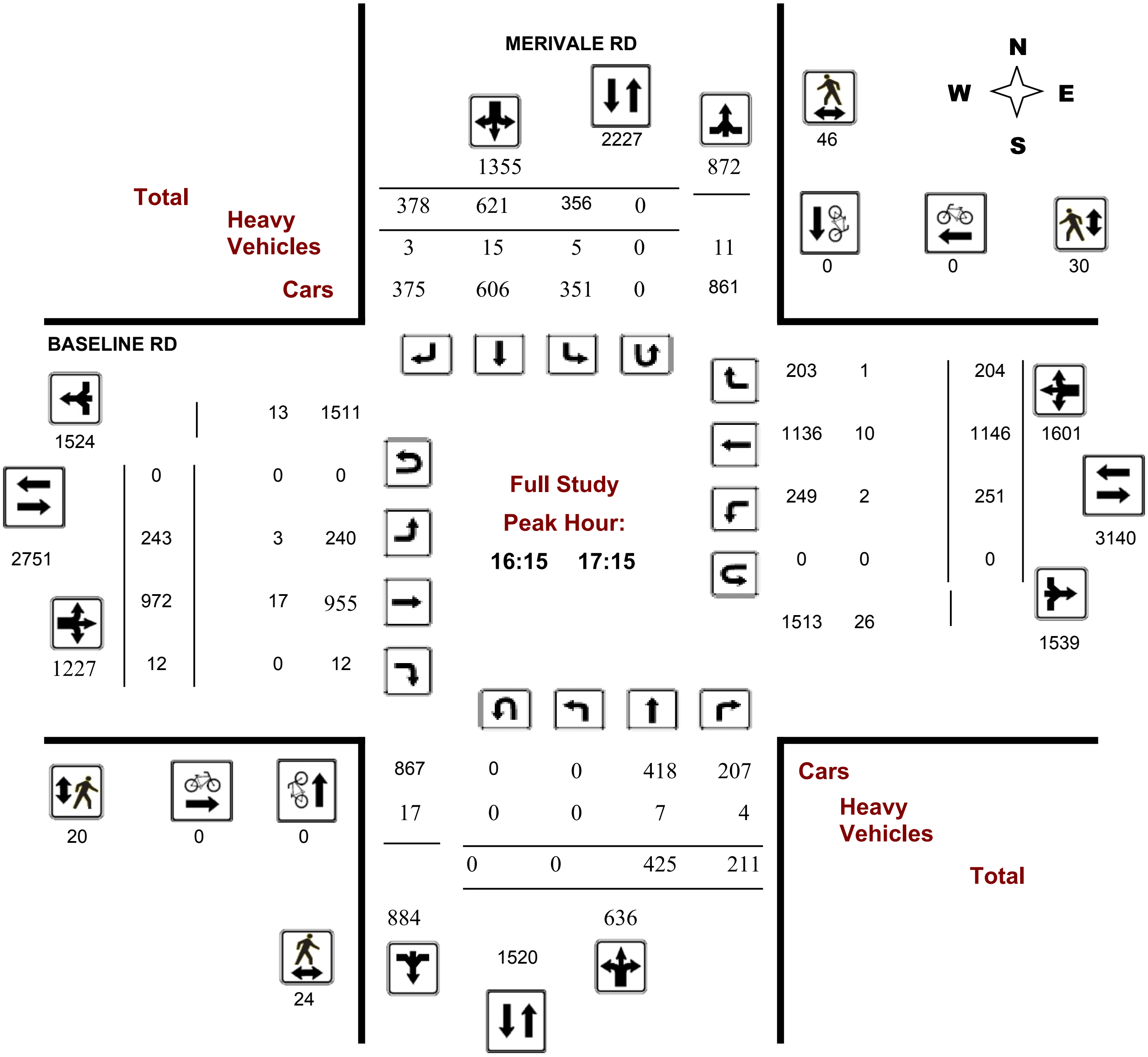
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016 **WO No:** 35707

Start Time: 07:00 **Device:** Miovision



Comments

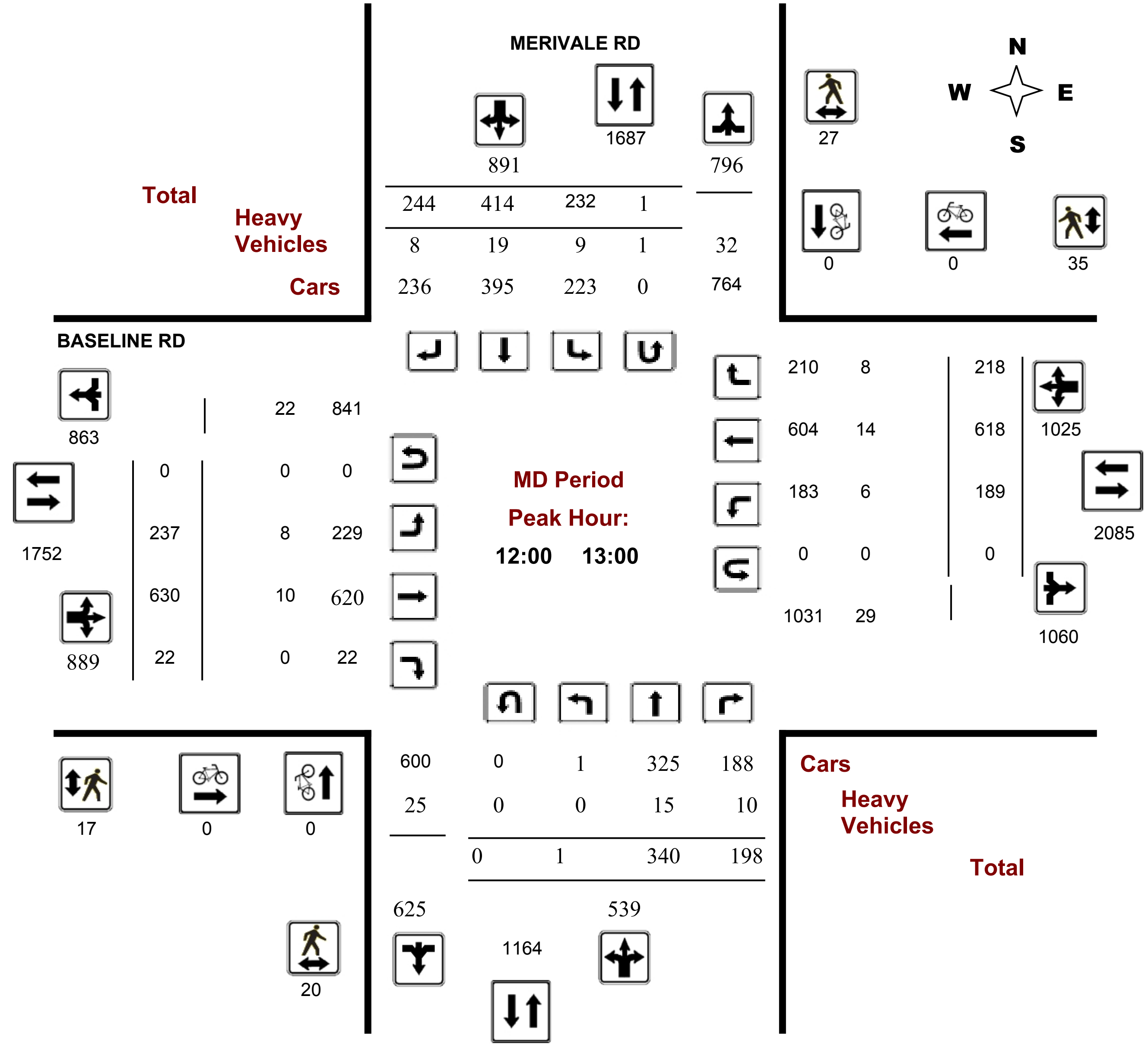
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016 **WO No:** 35707

Start Time: 07:00 **Device:** Miovision



Comments

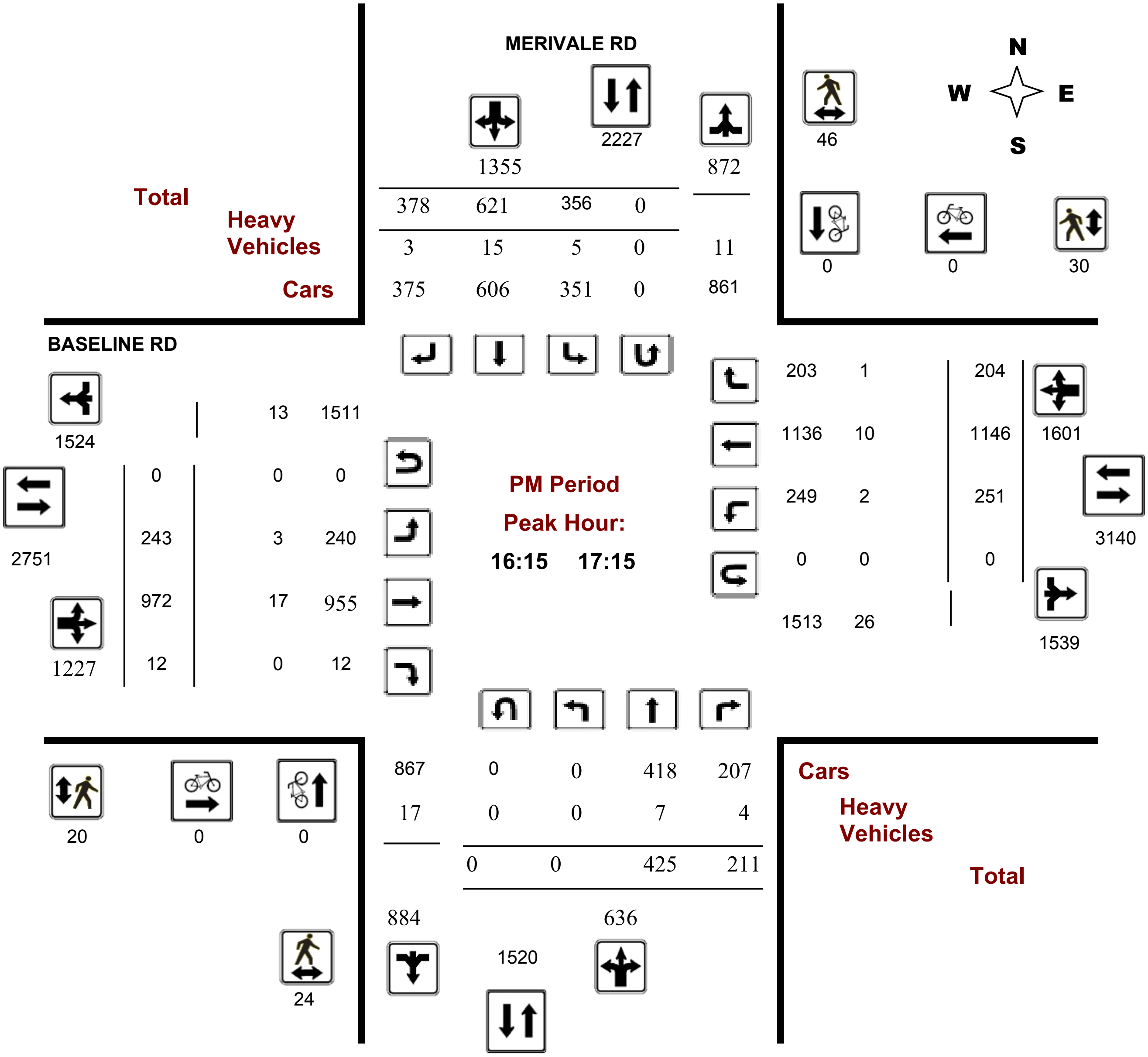
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016 **WO No:** 35707

Start Time: 07:00 **Device:** Miovision



Comments

Work Order
35707

Turning Movement Count - 15 Min U-Turn Total Report

BASELINE RD @ MERIVALE RD

Survey Date: Tuesday, February 09, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	1	0	0	1
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	1	0	0	1
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	1	0	0	1
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	3	0	0	3

Transportation Services - Traffic Services

W.O. 822

Turning Movement Count - 15 Minute Summary Report

BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

Total Observed U-Turns

Northbound: 1 Southbound: 2
Eastbound: 0 Westbound: 0

		MERIVALE RD									BASELINE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
11:00	11:15	0	268	40	308	36	84	51	171	479	71	276	0	347	63	84	43	190	537	1016
11:15	11:30	0	260	61	321	51	101	54	206	527	65	260	0	325	52	96	64	212	537	1064
11:30	11:45	0	299	44	343	44	94	61	199	542	69	313	1	383	77	67	43	187	570	1112
11:45	12:00	0	297	62	359	65	104	55	225	584	72	283	0	355	72	99	66	237	592	1176
12:00	12:15	0	312	52	364	48	109	41	198	562	80	323	0	403	69	83	50	202	605	1167
12:15	12:30	0	210	72	282	57	110	64	231	513	61	206	0	267	66	91	71	228	495	1008
12:30	12:45	0	201	67	268	54	90	55	199	467	69	205	0	274	69	79	70	218	492	959
12:45	13:00	0	199	60	259	61	119	67	247	506	78	197	0	275	68	95	60	223	498	1004
13:00	13:15	0	246	56	302	59	99	67	225	527	50	249	0	299	62	90	55	207	506	1033
13:15	13:30	0	203	61	264	59	87	50	196	460	73	194	0	267	54	86	66	206	473	933
13:30	13:45	0	225	63	288	54	99	61	214	502	74	235	0	309	71	101	60	232	541	1043
13:45	14:00	0	209	61	270	54	106	63	223	493	75	230	0	305	60	106	61	227	532	1025
14:00	14:15	0	237	57	294	65	103	60	228	522	53	257	0	310	53	109	54	216	526	1048
14:15	14:30	0	202	80	282	53	88	56	197	479	64	215	0	279	78	109	88	275	554	1033
14:30	14:45	0	252	61	314	41	76	54	171	485	75	263	1	339	65	81	61	207	546	1031
14:45	15:00	3	242	69	314	58	98	65	222	536	64	246	0	310	75	98	66	239	549	1085
15:00	15:15	0	266	57	323	50	102	68	220	543	76	264	0	340	84	59	53	196	536	1079
15:15	15:30	1	188	45	234	56	114	48	218	452	79	189	0	268	69	93	48	210	478	930
15:30	15:45	0	232	50	282	57	92	61	210	492	54	233	0	287	44	80	50	174	461	953
15:45	16:00	1	194	64	259	59	81	57	197	456	73	196	1	270	65	101	59	225	495	951
TOTAL:		5	4742	1182	5930	1081	1956	1158	4197	10127	1375	4834	3	6212	1316	1807	1188	4311	10523	20650

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
822

BASELINE RD @ MERIVALE RD

Count Date: Saturday, August 20, 2011

Start Time: 11:00

	MERIVALE RD			BASELINE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
11:00 12:00	9	6	**15**	3	6	**9**	**24**
12:00 13:00	7	1	**8**	0	6	**6**	**14**
13:00 14:00	4	0	**4**	0	4	**4**	**8**
14:00 15:00	4	0	**4**	0	3	**3**	**7**
15:00 16:00	4	1	**5**	0	1	**1**	**6**
Total	28	8	**36**	3	20	**23**	**59**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

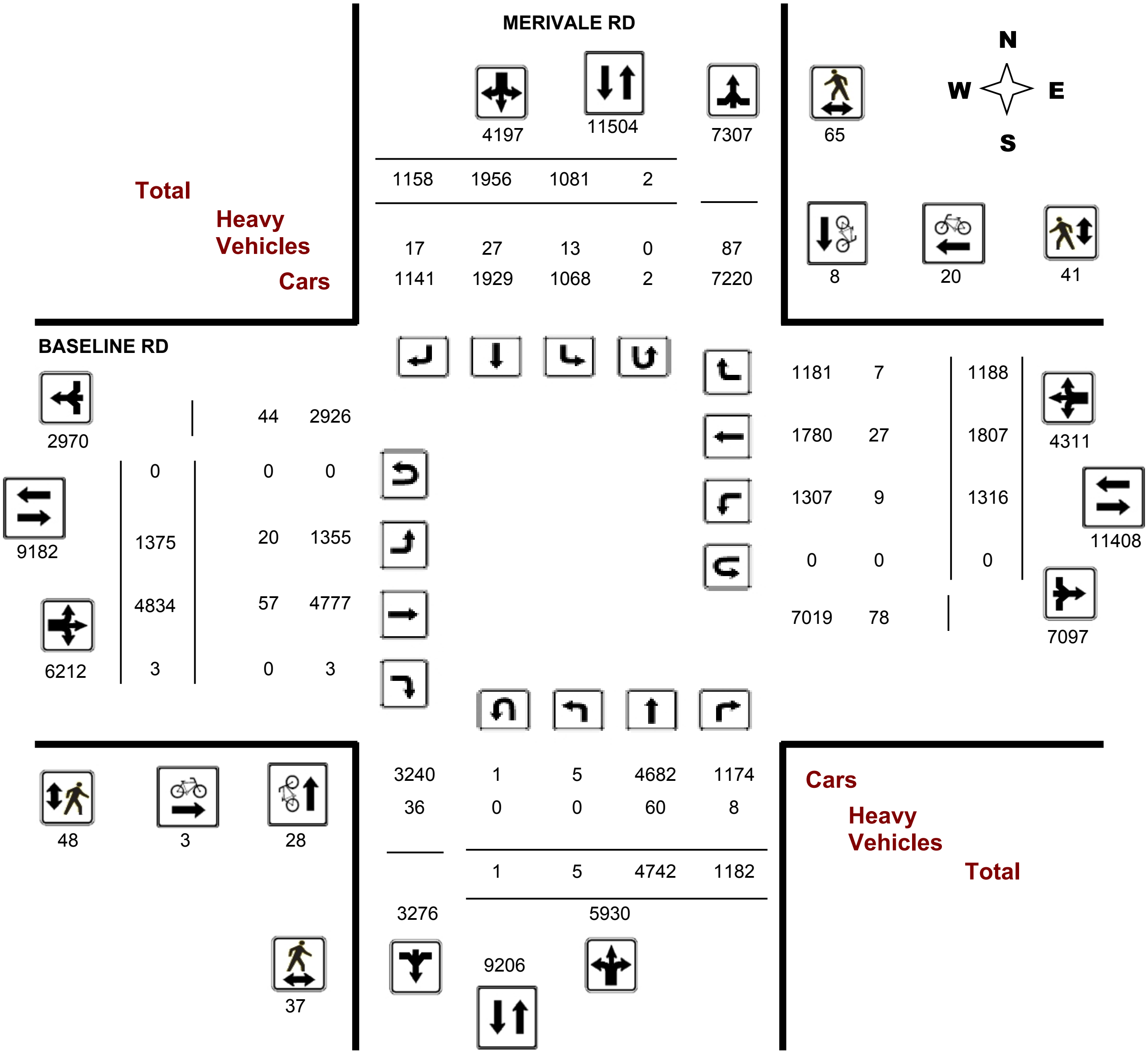
Turning Movement Count - Full Study Diagram

BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

WO#: 822

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
822

Turning Movement Count - Heavy Vehicle Report

BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

	MERIVALE RD									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
11:00 12:00	0	11	2	**13**	1	8	2	**11**	**24**	3	9	0	**12**	3	10	2	**15**	**27**	**51**
12:00 13:00	0	13	2	**15**	4	4	1	**9**	**24**	3	12	0	**15**	1	2	2	**5**	**20**	**44**
13:00 14:00	0	14	0	**14**	1	3	7	**11**	**25**	6	14	0	**20**	1	5	0	**6**	**26**	**51**
14:00 15:00	0	14	2	**16**	3	5	2	**10**	**26**	5	14	0	**19**	3	6	2	**11**	**30**	**56**
15:00 16:00	0	8	2	**10**	4	7	5	**16**	**26**	3	8	0	**11**	1	4	1	**6**	**17**	**43**
Sub Total	0	60	8	**68**	13	27	17	**57**	**125**	20	57	0	**77**	9	27	7	**43**	**120**	**245**
U-Turns (Heavy Vehicles)				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	60	8	**0**	13	27	17	**57**	**125**	20	57	0	**77**	9	27	7	**43**	**120**	**245**

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

Work Order
822

Turning Movement Count - Pedestrian Volume Report

BASELINE RD @ MERIVALE RD

Count Date: Saturday, August 20, 2011 **Start Time:** 11:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
11:00 11:15	1	4	**5**	0	1	**1**	**6**
11:15 11:30	1	1	**2**	3	1	**4**	**6**
11:30 11:45	1	2	**3**	1	1	**2**	**5**
11:45 12:00	4	8	**12**	2	4	**6**	**18**
11:00 12:00	7	15	**22**	6	7	**13**	**35**
12:00 12:15	1	0	**1**	5	1	**6**	**7**
12:15 12:30	0	2	**2**	0	1	**1**	**3**
12:30 12:45	5	0	**5**	4	5	**9**	**14**
12:45 13:00	1	3	**4**	4	3	**7**	**11**
12:00 13:00	7	5	**12**	13	10	**23**	**35**
13:00 13:15	4	4	**8**	5	6	**11**	**19**
13:15 13:30	3	5	**8**	3	3	**6**	**14**
13:30 13:45	5	3	**8**	3	7	**10**	**18**
13:45 14:00	0	1	**1**	2	0	**2**	**3**
13:00 14:00	12	13	**25**	13	16	**29**	**54**
14:00 14:15	2	1	**3**	4	1	**5**	**8**
14:15 14:30	0	0	**0**	0	1	**1**	**1**
14:30 14:45	1	3	**4**	0	0	**0**	**4**
14:45 15:00	3	4	**7**	1	4	**5**	**12**
14:00 15:00	6	8	**14**	5	6	**11**	**25**
15:00 15:15	1	8	**9**	0	0	**0**	**9**
15:15 15:30	0	2	**2**	2	0	**2**	**4**
15:30 15:45	1	12	**13**	3	0	**3**	**16**
15:45 16:00	3	2	**5**	6	2	**8**	**13**
15:00 16:00	5	24	**29**	11	2	**13**	**42**
Total	37	65	**102**	48	41	**89**	**191**

Comment:

Transportation Services - Traffic Services

Work Order
822

Turning Movement Count - Full Study Summary (No AADT) Report

BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

Total Observed U-Turns

Northbound: 1
Southbound: 2
Eastbound: 0
Westbound: 0

Full Study

	MERIVALE RD									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
11:00 12:00	0	1124	207	**1331**	196	383	221	**800**	**2131**	277	1132	1	**1410**	264	346	216	**826**	**2236**	**4367**
12:00 13:00	0	922	251	**1173**	220	428	227	**875**	**2048**	288	931	0	**1219**	272	348	251	**871**	**2090**	**4138**
13:00 14:00	0	883	241	**1124**	226	391	241	**858**	**1982**	272	908	0	**1180**	247	383	242	**872**	**2052**	**4034**
14:00 15:00	3	933	267	**1203**	217	365	235	**817**	**2020**	256	981	1	**1238**	271	397	269	**937**	**2175**	**4195**
15:00 16:00	2	880	216	**1098**	222	389	234	**845**	**1943**	282	882	1	**1165**	262	333	210	**805**	**1970**	**3913**
Sub Total	5	4742	1182	**5929**	1081	1956	1158	**4195**	**10124**	1375	4834	3	**6212**	1316	1807	1188	**4311**	**10523**	**20647**
U Turns				**1**				**2**	**3**				**0**				**0**	**0**	**3**
Total	5	4742	1182	**5930**	1081	1956	1158	**4197**	**10127**	1375	4834	3	**6212**	1316	1807	1188	**4311**	**10523**	**20650**

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Turning Movement Count - Full Study Peak Hour Diagram

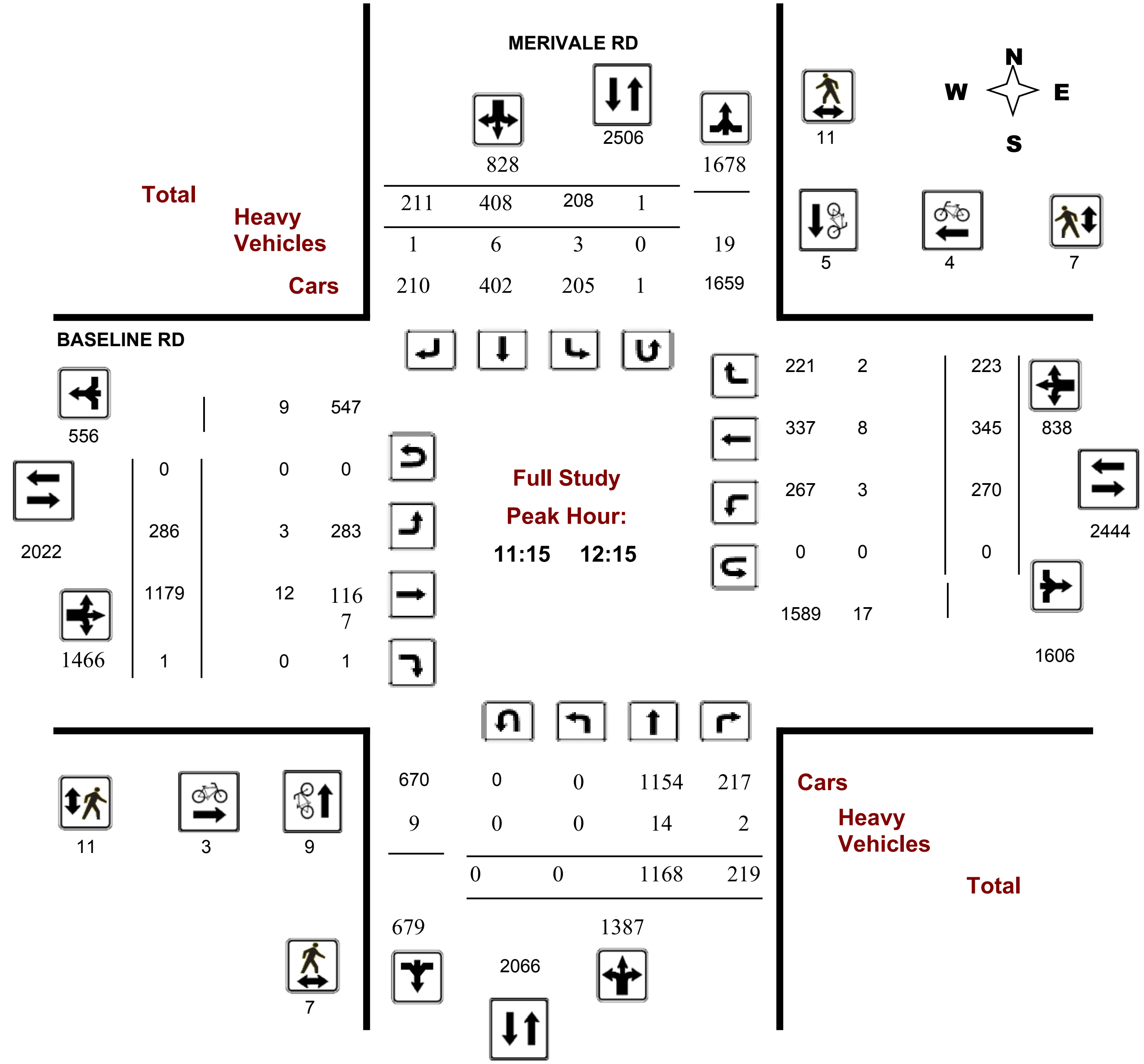
BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

Start Time: 11:00

WO No: 822

Device: Miovision



Comments

Transportation Services - Traffic Services

Work Order
822

Turning Movement Count - 15 Min U-Turn Total Report

BASELINE RD @ MERIVALE RD

Survey Date: Saturday, August 20, 2011

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
11:00	11:15	0	0	0	0	0
11:15	11:30	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	1	0	0	1
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
13:30	13:45	0	0	0	0	0
13:45	14:00	0	0	0	0	0
14:00	14:15	0	0	0	0	0
14:15	14:30	0	0	0	0	0
14:30	14:45	1	0	0	0	1
14:45	15:00	0	1	0	0	1
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
Total		1	2	0	0	3

Transportation Services - Traffic Services

W.O. 35839

Turning Movement Count - 15 Minute Summary Report

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016

Total Observed U-Turns

Northbound:	40	Southbound:	108
Eastbound:	3	Westbound:	64

		CLYDE AVE									**BASELINE RD**									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
11:00	11:15	52	135	46	**234**	70	166	16	**254**	**488**	32	147	78	**257**	32	145	55	**234**	**491**	**979**
11:15	11:30	61	218	27	**310**	82	168	23	**276**	**586**	25	132	57	**214**	37	141	59	**242**	**456**	**1042**
11:30	11:45	70	164	20	**256**	76	164	20	**268**	**524**	34	136	79	**250**	46	149	67	**266**	**516**	**1040**
11:45	12:00	71	177	37	**290**	77	188	22	**290**	**580**	23	123	75	**221**	44	132	64	**243**	**464**	**1044**
12:00	12:15	63	169	30	**263**	74	173	21	**272**	**535**	48	149	91	**288**	29	164	64	**260**	**548**	**1083**
12:15	12:30	81	186	19	**287**	83	197	26	**310**	**597**	20	139	89	**248**	32	156	66	**255**	**503**	**1100**
12:30	12:45	87	193	21	**301**	81	167	14	**264**	**565**	33	170	63	**266**	35	157	64	**259**	**525**	**1090**
12:45	13:00	69	175	32	**278**	88	184	6	**286**	**564**	24	140	76	**241**	26	136	84	**247**	**488**	**1052**
13:00	13:15	74	184	34	**293**	72	174	18	**272**	**565**	42	165	64	**271**	41	174	69	**289**	**560**	**1125**
13:15	13:30	84	197	28	**311**	108	214	26	**353**	**664**	37	149	69	**255**	36	158	102	**302**	**557**	**1221**
13:30	13:45	88	207	33	**331**	85	186	13	**287**	**618**	30	161	63	**254**	50	171	76	**302**	**556**	**1174**
13:45	14:00	93	216	24	**337**	87	214	24	**332**	**669**	28	127	75	**230**	30	151	67	**252**	**482**	**1151**
14:00	14:15	72	177	31	**281**	84	174	19	**286**	**567**	39	143	88	**270**	43	175	69	**288**	**558**	**1125**
14:15	14:30	85	226	26	**339**	94	181	24	**304**	**643**	22	135	79	**236**	29	141	75	**247**	**483**	**1126**
14:30	14:45	92	194	25	**312**	79	177	16	**276**	**588**	31	198	84	**313**	39	164	65	**272**	**585**	**1173**
14:45	15:00	88	215	31	**336**	83	175	19	**281**	**617**	36	146	80	**262**	48	124	69	**243**	**505**	**1122**
15:00	15:15	70	172	14	**257**	69	154	26	**252**	**509**	29	146	85	**261**	40	166	76	**288**	**549**	**1058**
15:15	15:30	79	228	26	**334**	84	177	23	**293**	**627**	27	135	74	**236**	34	143	71	**252**	**488**	**1115**
15:30	15:45	75	197	24	**298**	87	175	11	**279**	**577**	25	155	57	**237**	35	179	65	**279**	**516**	**1093**
15:45	16:00	85	194	37	**320**	85	195	14	**305**	**625**	25	138	65	**228**	25	164	71	**263**	**491**	**1116**
TOTAL:		1539	3824	565	**5968**	1648	3603	381	**5740**	**11708**	610	2934	1491	**5038**	731	3090	1398	**5283**	**10321**	**22029**

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
35839

BASELINE RD @ CLYDE AVE

Count Date: Saturday, April 02, 2016

Start Time: 11:00

	CLYDE AVE			BASELINE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
11:00 12:00	0	0	**0**	0	0	**0**	**0**
12:00 13:00	0	0	**0**	1	0	**1**	**1**
13:00 14:00	0	0	**0**	0	2	**2**	**2**
14:00 15:00	0	1	**1**	2	0	**2**	**3**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
Total	0	1	**1**	3	2	**5**	**6**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

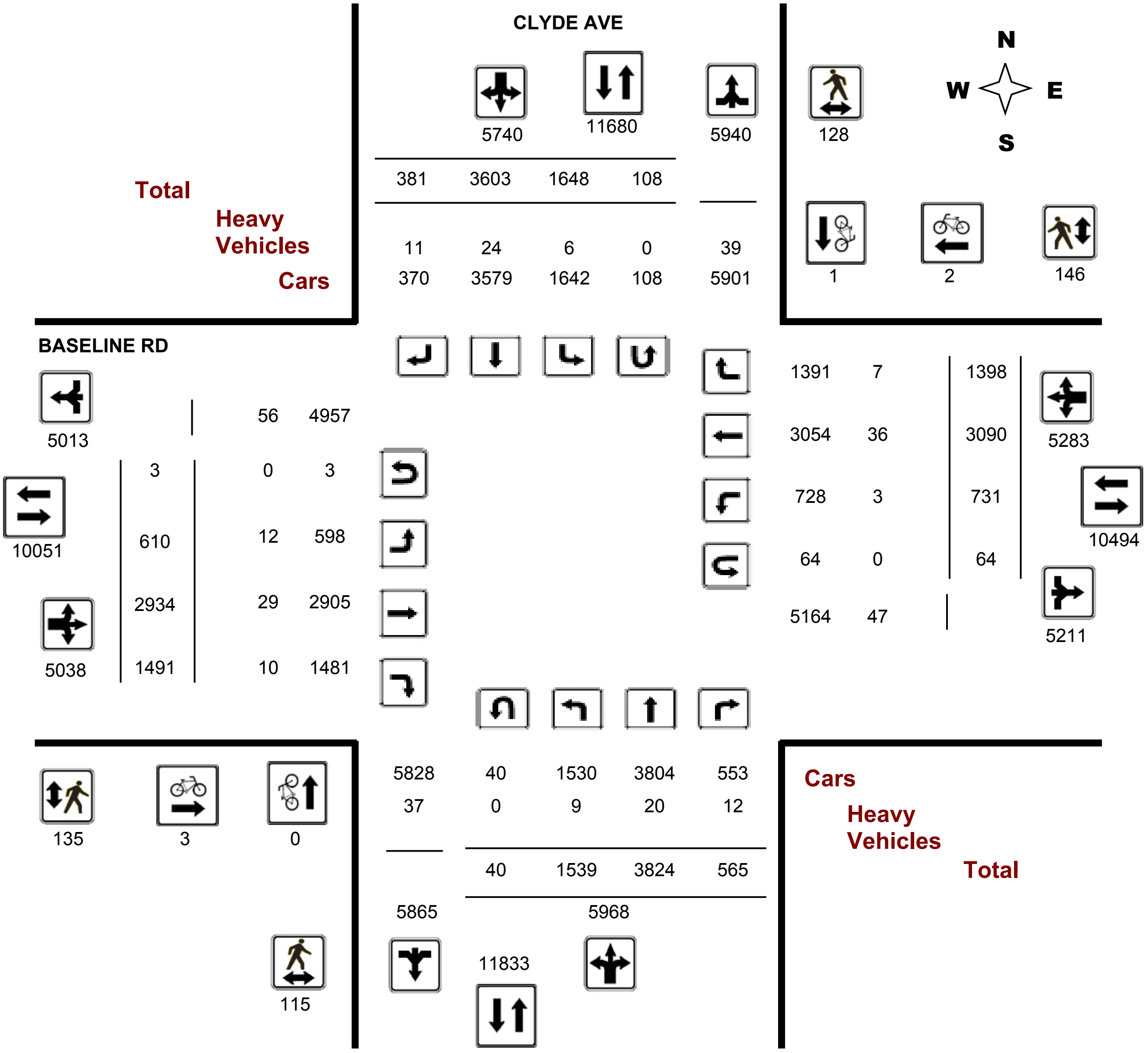
Turning Movement Count - Full Study Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016

WO#: 35839

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
35839

Turning Movement Count - Heavy Vehicle Report

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016

	CLYDE AVE									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
11:00 12:00	2	4	2	**8**	2	5	2	**9**	**17**	3	6	3	**12**	1	8	0	**9**	**21**	**38**
12:00 13:00	2	3	2	**7**	1	5	3	**9**	**16**	2	8	2	**12**	1	7	3	**11**	**23**	**39**
13:00 14:00	1	5	4	**10**	3	3	2	**8**	**18**	2	7	2	**11**	1	8	3	**12**	**23**	**41**
14:00 15:00	3	3	2	**8**	0	5	2	**7**	**15**	3	3	2	**8**	0	6	1	**7**	**15**	**30**
15:00 16:00	1	5	2	**8**	0	6	2	**8**	**16**	2	5	1	**8**	0	7	0	**7**	**15**	**31**
Sub Total	9	20	12	**41**	6	24	11	**41**	**82**	12	29	10	**51**	3	36	7	**46**	**97**	**179**
U-Turns (Heavy Vehicles)				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	9	20	12	**0**	6	24	11	**41**	**82**	12	29	10	**51**	3	36	7	**46**	**97**	**179**

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

Work Order
35839

Turning Movement Count - Pedestrian Volume Report

BASELINE RD @ CLYDE AVE

Count Date: Saturday, April 02, 2016 **Start Time:** 11:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
11:00 11:15	7	4	**11**	10	4	**14**	**25**
11:15 11:30	1	4	**5**	5	3	**8**	**13**
11:30 11:45	3	3	**6**	4	4	**8**	**14**
11:45 12:00	3	5	**8**	5	12	**17**	**25**
11:00 12:00	14	16	**30**	24	23	**47**	**77**
12:00 12:15	6	2	**8**	6	4	**10**	**18**
12:15 12:30	8	15	**23**	12	12	**24**	**47**
12:30 12:45	4	4	**8**	4	3	**7**	**15**
12:45 13:00	5	4	**9**	5	2	**7**	**16**
12:00 13:00	23	25	**48**	27	21	**48**	**96**
13:00 13:15	9	4	**13**	3	6	**9**	**22**
13:15 13:30	7	10	**17**	15	10	**25**	**42**
13:30 13:45	10	11	**21**	7	3	**10**	**31**
13:45 14:00	1	10	**11**	5	10	**15**	**26**
13:00 14:00	27	35	**62**	30	29	**59**	**121**
14:00 14:15	9	8	**17**	2	16	**18**	**35**
14:15 14:30	10	0	**10**	4	11	**15**	**25**
14:30 14:45	5	12	**17**	7	9	**16**	**33**
14:45 15:00	1	9	**10**	6	7	**13**	**23**
14:00 15:00	25	29	**54**	19	43	**62**	**116**
15:00 15:15	8	10	**18**	12	7	**19**	**37**
15:15 15:30	8	10	**18**	13	10	**23**	**41**
15:30 15:45	6	2	**8**	6	8	**14**	**22**
15:45 16:00	4	1	**5**	4	5	**9**	**14**
15:00 16:00	26	23	**49**	35	30	**65**	**114**
Total	115	128	**243**	135	146	**281**	**524**

Comment:

Transportation Services - Traffic Services

Work Order
35839

Turning Movement Count - Full Study Summary (No AADT) Report

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016

Total Observed U-Turns

Northbound:	40	Southbound:	108
Eastbound:	3	Westbound:	64

Full Study

	CLYDE AVE									BASELINE RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
11:00 12:00	254	694	130	**1078**	305	686	81	**1072**	**2150**	114	538	289	**941**	159	567	245	**971**	**1912**	**4062**
12:00 13:00	300	723	102	**1125**	326	721	67	**1114**	**2239**	125	598	319	**1042**	122	613	278	**1013**	**2055**	**4294**
13:00 14:00	339	804	119	**1262**	352	788	81	**1221**	**2483**	137	602	271	**1010**	157	654	314	**1125**	**2135**	**4618**
14:00 15:00	337	812	113	**1262**	340	707	78	**1125**	**2387**	128	622	331	**1081**	159	604	278	**1041**	**2122**	**4509**
15:00 16:00	309	791	101	**1201**	325	701	74	**1100**	**2301**	106	574	281	**961**	134	652	283	**1069**	**2030**	**4331**
Sub Total	1539	3824	565	**5928**	1648	3603	381	**5632**	**11560**	610	2934	1491	**5035**	731	3090	1398	**5219**	**10254**	**21814**
U Turns				**40**				**108**	**148**				**3**				**64**	**67**	**215**
Total	1539	3824	565	**5968**	1648	3603	381	**5740**	**11708**	610	2934	1491	**5038**	731	3090	1398	**5283**	**10321**	**22029**

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

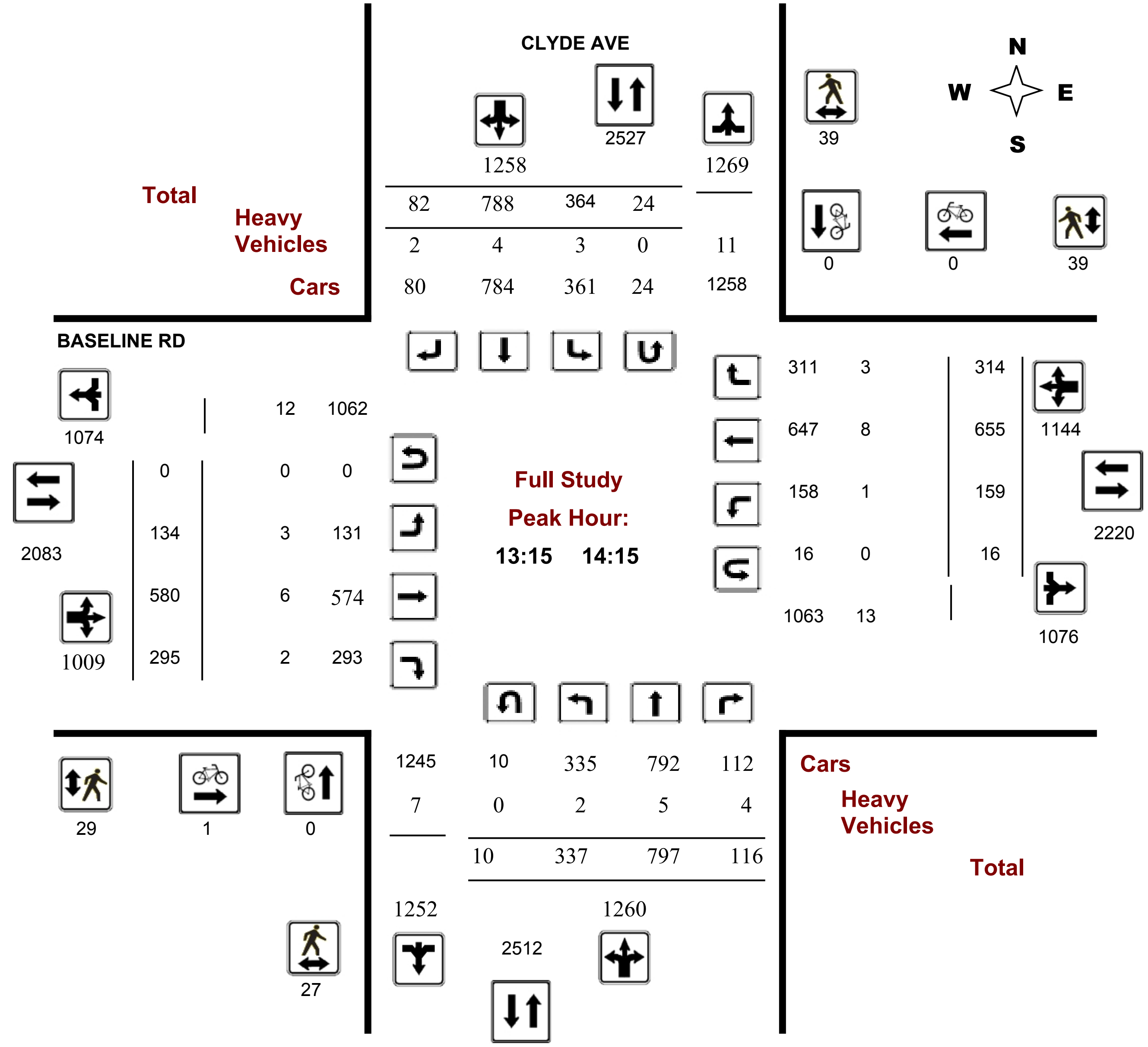
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016 **WO No:** 35839

Start Time: 11:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order
35839

Turning Movement Count - 15 Min U-Turn Total Report

BASELINE RD @ CLYDE AVE

Survey Date: Saturday, April 02, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
11:00	11:15	1	2	0	2	5
11:15	11:30	4	3	0	5	12
11:30	11:45	2	8	1	4	15
11:45	12:00	5	3	0	3	11
12:00	12:15	1	4	0	3	8
12:15	12:30	1	4	0	1	6
12:30	12:45	0	2	0	3	5
12:45	13:00	2	8	1	1	12
13:00	13:15	1	8	0	5	14
13:15	13:30	2	5	0	6	13
13:30	13:45	3	3	0	5	11
13:45	14:00	4	7	0	4	15
14:00	14:15	1	9	0	1	11
14:15	14:30	2	5	0	2	9
14:30	14:45	1	4	0	4	9
14:45	15:00	2	4	0	2	8
15:00	15:15	1	3	1	6	11
15:15	15:30	1	9	0	4	14
15:30	15:45	2	6	0	0	8
15:45	16:00	4	11	0	3	18
Total		40	108	3	64	215

Appendix C

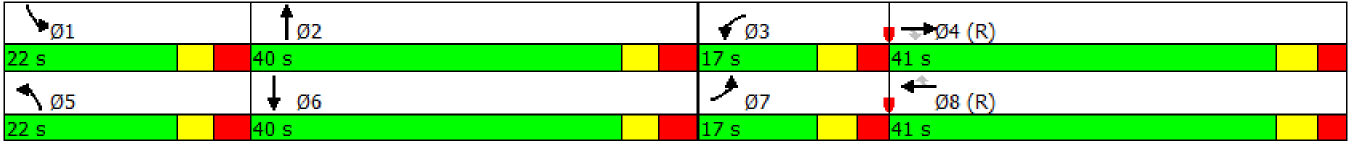
Existing Conditions Analysis

1: Clyde Avenue & Baseline Road

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	151	1104	155	55	619	337	122	684	87	411	472	37
Future Volume (vph)	151	1104	155	55	619	337	122	684	87	411	472	37
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	2%	5%	3%	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	159	1162	163	58	652	355	128	720	92	433	497	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	1162	163	58	652	355	128	812	0	433	536	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.2	39.4	39.4	8.8	34.6	34.6	10.2	32.4		15.4	37.6	
Actuated g/C Ratio	0.09	0.33	0.33	0.07	0.29	0.29	0.08	0.27		0.13	0.31	
v/c Ratio	1.01	1.10	0.34	0.47	0.69	0.66	0.48	0.92		1.03	0.52	
Control Delay	128.7	97.8	8.0	76.1	36.6	14.9	57.9	58.8		102.6	35.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	128.7	97.8	8.0	76.1	36.6	14.9	57.9	58.8		102.6	35.7	
LOS	F	F	A	E	D	B	E	E		F	D	
Approach Delay		91.3			31.5			58.7			65.6	
Approach LOS		F			C			E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 64.5	Intersection LOS: E
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	
Description: Bus lanes not included in analysis	

Splits and Phases: 1: Clyde Avenue & Baseline Road

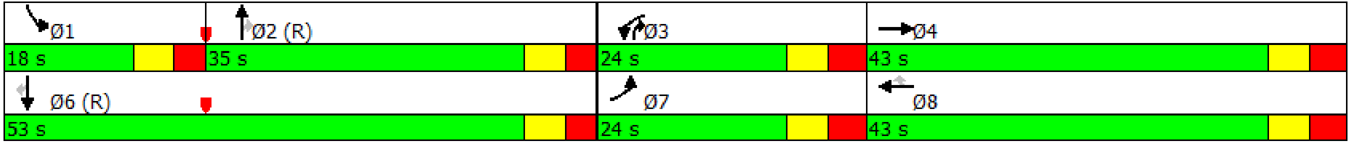


4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	222	1012	8	123	897	375	0	567	212	313	326	284
Future Volume (vph)	222	1012	8	123	897	375	0	567	212	313	326	284
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	234	1065	8	129	944	395	0	597	223	329	343	299
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	1073	0	129	944	395	0	597	223	329	343	299
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	18.9	41.0		15.9	38.0	38.0		30.0	47.9	13.1	48.1	48.1
Actuated g/C Ratio	0.16	0.34		0.13	0.32	0.32		0.25	0.40	0.11	0.40	0.40
v/c Ratio	0.88	0.93		0.58	0.88	0.69		0.70	0.35	0.92	0.25	0.39
Control Delay	45.0	32.2		58.9	49.5	26.5		46.3	13.6	83.5	24.6	4.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	32.2		58.9	49.5	26.5		46.3	13.6	83.5	24.6	4.2
LOS	D	C		E	D	C		D	B	F	C	A
Approach Delay		34.5			44.2			37.4			38.3	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 45 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 38.9	Intersection LOS: D
Intersection Capacity Utilization 90.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Merivale Road & Baseline Road

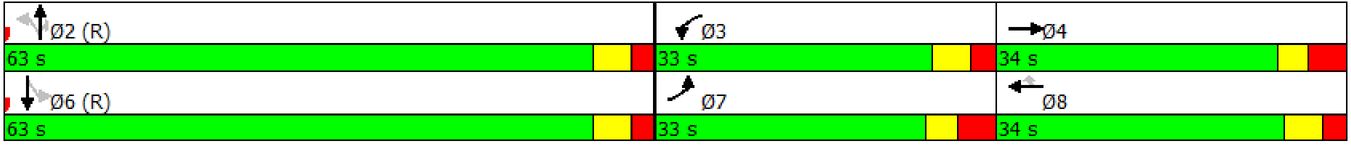


5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	31	68	19	392	34	74	1	863	667	46	697	7
Future Volume (vph)	31	68	19	392	34	74	1	863	667	46	697	7
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	72	20	413	36	78	1	908	702	48	734	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	92	0	413	36	78	1	908	702	48	741	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2	6		
Detector Phase	7	4		3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	30.0	30.0	30.0	30.0	30.0	
Total Split (s)	33.0	34.0		33.0	34.0	34.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	25.4%	26.2%		25.4%	26.2%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	9.9	14.2		22.8	32.3	32.3	78.0	78.0	78.0	78.0	78.0	
Actuated g/C Ratio	0.08	0.11		0.18	0.25	0.25	0.60	0.60	0.60	0.60	0.60	
v/c Ratio	0.26	0.47		0.72	0.08	0.18	0.00	0.45	0.61	0.18	0.37	
Control Delay	60.9	56.1		57.9	39.0	8.3	13.0	16.0	3.6	16.1	14.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.9	56.1		57.9	39.0	8.3	13.0	16.0	3.6	16.1	14.8	
LOS	E	E		E	D	A	B	B	A	B	B	
Approach Delay		57.4			49.3			10.6			14.9	
Approach LOS		E			D			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 74.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



2: Site Access #1 & Baseline Road

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1602	13	0	1011	0	6
Future Volume (Veh/h)	1602	13	0	1011	0	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1686	14	0	1064	0	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.69		0.69	0.69
vC, conflicting volume			1700		2048	850
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1115		1619	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			429		65	748

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1124	576	355	355	355	6
Volume Left	0	0	0	0	0	0
Volume Right	0	14	0	0	0	6
cSH	1700	1700	1700	1700	1700	748
Volume to Capacity	0.66	0.34	0.21	0.21	0.21	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.9
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.9
Approach LOS						A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	9	884	9	0	682
Future Volume (Veh/h)	0	9	884	9	0	682
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	9	931	9	0	718
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.92	0.86			0.86	
vC, conflicting volume	1294	470			940	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	548	57			604	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	430	857			834	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	9	621	319	359	359
Volume Left	0	0	0	0	0
Volume Right	9	0	9	0	0
cSH	857	1700	1700	1700	1700
Volume to Capacity	0.01	0.37	0.19	0.21	0.21
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.2	0.0		0.0	
Approach LOS	A				

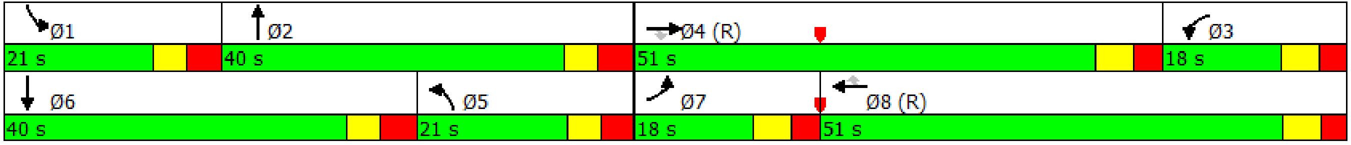
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	108	678	179	122	1151	503	293	693	79	373	494	81
Future Volume (vph)	108	678	179	122	1151	503	293	693	79	373	494	81
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	110	692	183	124	1174	513	299	707	81	381	504	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	692	183	124	1174	513	299	788	0	381	587	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0		21.0	40.0	
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%		16.2%	30.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.0	44.7	44.7	11.5	45.2	45.2	18.8	33.0		14.4	28.6	
Actuated g/C Ratio	0.08	0.34	0.34	0.09	0.35	0.35	0.14	0.25		0.11	0.22	
v/c Ratio	0.77	0.62	0.34	0.83	0.99	0.84	0.63	0.95		1.05	0.82	
Control Delay	90.8	38.7	4.8	73.4	47.2	18.1	75.2	83.8		115.0	57.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	90.8	38.7	4.8	73.4	47.2	18.1	75.2	83.8		115.0	57.0	
LOS	F	D	A	E	D	B	E	F		F	E	
Approach Delay		38.2			40.8			81.4			79.8	
Approach LOS		D			D			F			E	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 19 (15%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 57.1 Intersection LOS: E
Intersection Capacity Utilization 100.6% ICU Level of Service G
Analysis Period (min) 15
Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	243	992	19	222	1146	251	0	425	211	356	621	378
Future Volume (vph)	243	992	19	222	1146	251	0	425	211	356	621	378
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	248	1012	19	227	1169	256	0	434	215	363	634	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	1031	0	227	1169	256	0	434	215	363	634	386
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	28.0	50.0		28.0	50.0	50.0		35.0	28.0	17.0	52.0	52.0
Total Split (%)	21.5%	38.5%		21.5%	38.5%	38.5%		26.9%	21.5%	13.1%	40.0%	40.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	22.3	46.3		21.7	45.7	45.7		30.0	53.7	12.0	47.0	47.0
Actuated g/C Ratio	0.17	0.36		0.17	0.35	0.35		0.23	0.41	0.09	0.36	0.36
v/c Ratio	0.86	0.86		0.80	0.98	0.43		0.55	0.33	1.20	0.52	0.52
Control Delay	70.2	45.9		73.4	63.9	16.1		42.0	10.2	165.8	34.5	7.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	45.9		73.4	63.9	16.1		42.0	10.2	165.8	34.5	7.3
LOS	E	D		E	E	B		D	B	F	C	A
Approach Delay		50.6			57.8			31.4			61.4	
Approach LOS		D			E			C			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 45 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

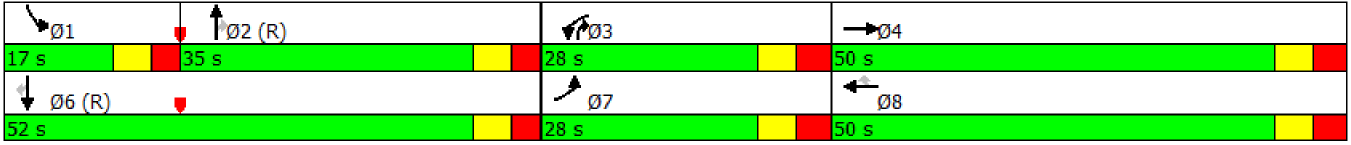
Maximum v/c Ratio: 1.20

Intersection Signal Delay: 53.5 Intersection LOS: D

Intersection Capacity Utilization 98.4% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road

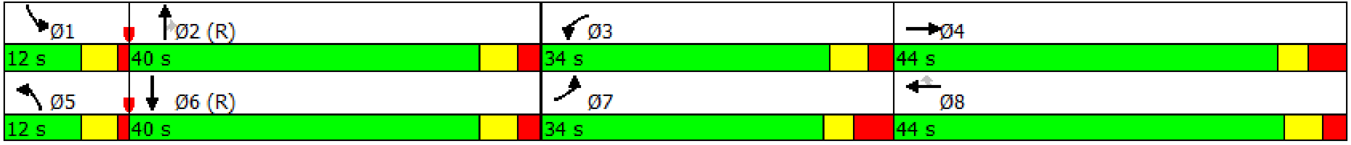


5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	37	57	32	808	130	189	64	797	611	90	950	20
Future Volume (vph)	37	57	32	808	130	189	64	797	611	90	950	20
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	38	58	33	824	133	193	65	813	623	92	969	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	91	0	824	133	193	65	813	623	92	989	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	9.5	30.0	30.0	9.5	30.0	
Total Split (s)	34.0	44.0		34.0	44.0	44.0	12.0	40.0	40.0	12.0	40.0	
Total Split (%)	26.2%	33.8%		26.2%	33.8%	33.8%	9.2%	30.8%	30.8%	9.2%	30.8%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	1.0	2.3	2.3	1.0	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	0.5	-1.0	-1.0	0.5	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.2	13.6		29.0	34.9	34.9	10.3	53.0	53.0	14.3	59.4	
Actuated g/C Ratio	0.08	0.10		0.22	0.27	0.27	0.08	0.41	0.41	0.11	0.46	
v/c Ratio	0.29	0.46		1.12	0.28	0.36	0.49	0.59	0.65	0.49	0.64	
Control Delay	61.2	48.1		125.3	63.2	28.0	68.8	32.8	6.2	41.8	32.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.2	48.1		125.3	63.2	28.0	68.8	32.8	6.2	41.8	32.6	
LOS	E	D		F	E	C	E	C	A	D	C	
Approach Delay		51.9			101.8			23.3			33.4	
Approach LOS		D			F			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 77.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



Existing PM

2: Site Access #1 & Baseline Road

06/28/2017

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1130	36	0	1776	0	26
Future Volume (Veh/h)	1130	36	0	1776	0	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1189	38	0	1869	0	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1227		1831	614
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			850		1583	106
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			646		82	765

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	793	434	623	623	623	27
Volume Left	0	0	0	0	0	0
Volume Right	0	38	0	0	0	27
cSH	1700	1700	1700	1700	1700	765
Volume to Capacity	0.47	0.26	0.37	0.37	0.37	0.04
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.9
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.9
Approach LOS						A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
	↙	↖	↑	↗	↘	↓
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	40	1026	24	0	795
Future Volume (Veh/h)	0	40	1026	24	0	795
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	42	1080	25	0	837
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.89	0.81			0.81	
vC, conflicting volume	1511	552			1105	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	536	0			675	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			100	
cM capacity (veh/h)	424	884			744	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	42	720	385	418	418
Volume Left	0	0	0	0	0
Volume Right	42	0	25	0	0
cSH	884	1700	1700	1700	1700
Volume to Capacity	0.05	0.42	0.23	0.25	0.25
Queue Length 95th (m)	1.1	0.0	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.3	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

1: Clyde Avenue & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	134	580	295	165	655	314	365	834	116	388	788	82
Future Volume (vph)	134	580	295	165	655	314	365	834	116	388	788	82
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	141	611	311	174	689	331	384	878	122	408	829	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	611	311	174	689	331	384	1000	0	408	915	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	34.6	34.6	10.5	34.6	34.6	15.4	33.1		15.4	33.1	
Actuated g/C Ratio	0.09	0.29	0.29	0.09	0.29	0.29	0.13	0.28		0.13	0.28	
v/c Ratio	0.95	0.66	0.59	1.18	0.71	0.61	0.91	1.12		0.97	1.01	
Control Delay	117.3	41.6	12.8	172.1	51.6	20.7	78.5	107.7		89.1	74.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	117.3	41.6	12.8	172.1	51.6	20.7	78.5	107.7		89.1	74.5	
LOS	F	D	B	F	D	C	E	F		F	E	
Approach Delay		43.2			60.6			99.6			79.0	
Approach LOS		D			E			F			E	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 53 (44%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18

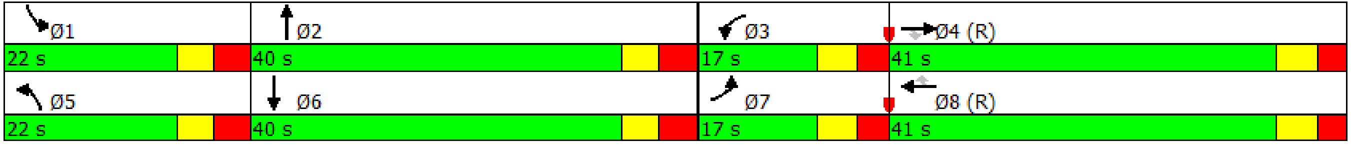
Intersection Signal Delay: 72.6 Intersection LOS: E

Intersection Capacity Utilization 95.9% ICU Level of Service F

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road

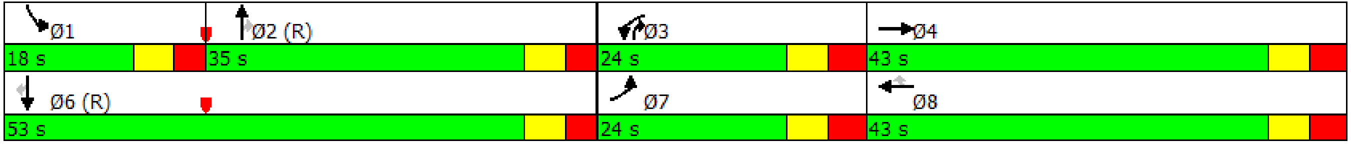


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	299	831	20	254	782	177	0	445	236	243	449	276
Future Volume (vph)	299	831	20	254	782	177	0	445	236	243	449	276
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%	2%	5%	4%	3%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	315	875	21	267	823	186	0	468	248	256	473	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	315	896	0	267	823	186	0	468	248	256	473	291
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5		0.5	0.0	0.5	0.5	0.5
Total Lost Time (s)	7.6	7.6		7.6	7.6	7.6		7.1	7.1	7.0	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	16.4	34.9		16.4	34.9	34.9		28.4	45.3	11.0	46.4	46.4
Actuated g/C Ratio	0.14	0.29		0.14	0.29	0.29		0.24	0.38	0.09	0.39	0.39
v/c Ratio	1.36	0.96		1.16	0.86	0.36		0.60	0.41	0.86	0.38	0.40
Control Delay	221.0	52.8		153.7	50.5	9.7		44.7	16.1	80.2	27.6	4.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	221.0	52.8		153.7	50.5	9.7		44.7	16.1	80.2	27.6	4.5
LOS	F	D		F	D	A		D	B	F	C	A
Approach Delay		96.5			66.1			34.8			34.2	
Approach LOS		F			E			C			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 88 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.36
Intersection Signal Delay: 61.8 Intersection LOS: E
Intersection Capacity Utilization 99.1% ICU Level of Service F
Analysis Period (min) 15

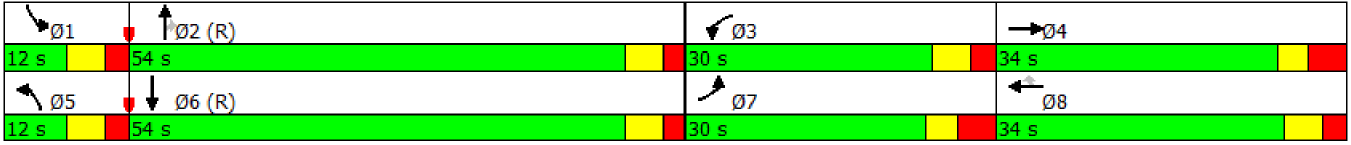
Splits and Phases: 4: Merivale Road & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	57	61	35	772	71	225	94	1047	664	90	1140	45
Future Volume (vph)	57	61	35	772	71	225	94	1047	664	90	1140	45
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	60	64	37	813	75	237	99	1102	699	95	1200	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	101	0	813	75	237	99	1102	699	95	1247	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	11.0	30.0	30.0	11.0	30.0	
Total Split (s)	30.0	34.0		30.0	34.0	34.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	23.1%	26.2%		23.1%	26.2%	26.2%	9.2%	41.5%	41.5%	9.2%	41.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Total Lost Time (s)	7.3	7.3		6.7	6.7	6.7	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	9.5	12.0		23.3	28.4	28.4	17.2	51.1	51.1	16.6	50.4	
Actuated g/C Ratio	0.07	0.09		0.18	0.22	0.22	0.13	0.39	0.39	0.13	0.39	
v/c Ratio	0.49	0.58		1.38	0.19	0.47	0.44	0.83	0.75	0.44	0.95	
Control Delay	70.3	58.4		221.5	44.8	8.6	59.6	42.2	11.8	60.0	55.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.3	58.4		221.5	44.8	8.6	59.6	42.2	11.8	60.0	55.0	
LOS	E	E		F	D	A	E	D	B	E	D	
Approach Delay		62.9			164.9			31.9			55.4	
Approach LOS		E			F			C			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 60 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 73.0	Intersection LOS: E
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1084	59	0	1134	0	37
Future Volume (Veh/h)	1084	59	0	1134	0	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1141	62	0	1194	0	39
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			1203		1570	602
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			857		1294	139
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			653		129	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	761	442	398	398	398	39
Volume Left	0	0	0	0	0	0
Volume Right	0	62	0	0	0	39
cSH	1700	1700	1700	1700	1700	741
Volume to Capacity	0.45	0.26	0.23	0.23	0.23	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	1.3
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.1
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Existing SAT
3: Clyde Avenue & Site Access #2

06/28/2017

	↙	↖	↑	↗	↘	↓
Movement	**WBL**	**WBR**	**NBT**	**NBR**	**SBL**	**SBT**
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	55	1260	40	0	1248
Future Volume (Veh/h)	0	55	1260	40	0	1248
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	58	1326	42	0	1314
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.84	0.70			0.70	
vC, conflicting volume	2004	684			1368	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	394	0			682	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			100	
cM capacity (veh/h)	487	763			638	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	884	484	657	657
Volume Left	0	0	0	0	0
Volume Right	58	0	42	0	0
cSH	763	1700	1700	1700	1700
Volume to Capacity	0.08	0.52	0.28	0.39	0.39
Queue Length 95th (m)	1.9	0.0	0.0	0.0	0.0
Control Delay (s)	10.1	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.1	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix D

Existing Road Safety Conditions

Total Area

Classification of Accident	*Rear End*	*Turning Movement*	*Sideswipe*	*Angle*	*Approaching*	*Single Vehicle (other)*	*Single vehicle (Unattended vehicle)*	*Other*	*Total*	
P.D. only	84	13	24	14	0	4	0	1	140	89%
Non-fatal injury	12	2	0	1	0	1	0	0	16	10%
Non reportable	1	0	0	0	0	0	0	0	1	1%
Fatal injury	0	1	0	0	0	0	0	0	1	1%
Total	**97**	**15**	**24**	**15**	**0**	**5**	**0**	**1**	**158**	100%
	#1 or 61%	#3 or 10%	#2 or 15%	#3 or 10%	#7 or 0%	#5 or 3%	#7 or 0%	#6 or 1%		

BASELINE RD / CLYDE AVE

Years	*Total # Collisions*	*24 Hr AADT Veh Volume*	*Days*	*Collisions/MEV*
2013-2015	67	58,963	1095	**1.04**

Classification of Accident	*Rear End*	*Turning Movement*	*Sideswipe*	*Angle*	*Approaching*	*Single Vehicle (other)*	*Single vehicle (Unattended vehicle)*	*Other*	*Total*	
P.D. only	35	7	9	7	0	0	0	0	58	87%
Non-fatal injury	6	0	0	1	0	1	0	0	8	12%
Non reportable	1	0	0	0	0	0	0	0	1	2%
Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	**42**	**7**	**9**	**8**	**0**	**1**	**0**	**0**	**67**	100%
	63%	10%	13%	12%	0%	2%	0%	0%		

CLYDE AVE / MERIVALE RD

Years	*Total # Collisions*	*24 Hr AADT Veh Volume*	*Days*	*Collisions/MEV*
2013-2015	53	41,421	1095	**1.17**

Classification of Accident	*Rear End*	*Turning Movement*	*Sideswipe*	*Angle*	*Approaching*	*Single Vehicle (other)*	*Single vehicle (Unattended vehicle)*	*Other*	*Total*	
P.D. only	28	5	5	5	0	3	0	0	46	87%
Non-fatal injury	5	2	0	0	0	0	0	0	7	13%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Fatal Injury	0	1	0	0	0	0	0	0	1	2%
Total	**33**	**7**	**5**	**5**	**0**	**3**	**0**	**0**	**53**	100%
	62%	13%	9%	9%	0%	6%	0%	0%		

BASELINE RD / MERIVALE RD

Years	*Total # Collisions*	*24 Hr AADT Veh Volume*	*Days*	*Collisions/MEV*
2013-2015	37	57,067	1095	**0.59**

Classification of Accident	*Rear End*	*Turning Movement*	*Sideswipe*	*Angle*	*Approaching*	*Single Vehicle (other)*	*Single vehicle (Unattended vehicle)*	*Other*	*Total*	
P.D. only	21	1	10	2	0	1	0	1	36	97%
Non-fatal injury	1	0	0	0	0	0	0	0	1	3%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Fatal Injury	0	0	0	0	0	0	0	0	0	0%
Total	**22**	**1**	**10**	**2**	**0**	**1**	**0**	**1**	**37**	100%
	59%	3%	27%	5%	0%	3%	0%	3%		

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2015

Location: BASELINE RD @ CLYDE AVE

Traffic Control: Traffic signal

Total Collisions: 46

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-26, Sun,13:56	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	
2014-Feb-22, Sat,12:45	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-14, Fri,18:27	Clear	Rear end	P.D. only	Wet	East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Mar-05, Wed,21:06	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2014-Apr-03, Thu,21:25	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pole (utility, power)	

2014-Mar-07, Fri,17:24	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2014-Mar-24, Mon,09:33	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2014-May-07, Wed,17:16	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Jun-05, Thu,19:46	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Jul-27, Sun,16:39	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Jul-02, Wed,10:25	Clear	Rear end	P.D. only	Dry	South	Going ahead	Delivery van	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2014-Jul-22, Tue,17:40	Clear	Rear end	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2014-Jul-03, Thu,08:20	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2014-Aug-24, Sun,09:50	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Aug-19, Tue,18:14	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Oct-09, Thu,16:20	Rain	Rear end	P.D. only	Wet	West	Turning right	Delivery van	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Dec-14, Sun,20:12	Fog, mist, smoke, dust	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jan-20, Tue,11:00	Clear	Rear end	Non-fatal injury	Ice	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Jul-03, Thu,06:05	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2014-Oct-29, Wed,16:30	Clear	Rear end	P.D. only	Dry	North	Turning right	Passenger van	Other motor vehicle

					North	Turning right	Automobile, station wagon	Other motor vehicle
2014-Nov-28, Fri,16:58	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					South	Making "U" turn	Automobile, station wagon	Other motor vehicle
2014-Dec-19, Fri,14:40	Clear	Turning movement	P.D. only	Dry	East	Turning left	Municipal transit bus	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Sep-25, Thu,16:46	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jan-25, Sun,20:25	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Dec-26, Fri,16:27	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Motorcycle	Skidding/sliding
					East	Turning left	Automobile, station wagon	Other motor vehicle
2015-Mar-20, Fri,09:15	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-31, Tue,16:21	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle

					West	Stopped	Passenger van	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-06, Fri,09:35	Clear	Angle	P.D. only	Loose snow	West	Slowing or stopping	Passenger van	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle
2015-Jan-28, Wed,13:45	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Unknown	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Mar-11, Wed,00:00	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-02, Fri,10:30	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Feb-08, Sun,13:06	Clear	Rear end	P.D. only	Ice	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Dec-25, Thu,15:09	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Mar-14, Sat,19:17	Freezing Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle

					West	Going ahead	Pick-up truck	Other motor vehicle
2015-Apr-15, Wed,09:58	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-03, Tue,18:27	Snow	Angle	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-May-08, Fri,19:52	Clear	Rear end	Non-fatal injury	Dry	West	Unknown	Unknown	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Aug-31, Mon,12:09	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2015-Jul-03, Fri,16:04	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2015-Jun-20, Sat,17:55	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-17, Tue,17:11	Clear	Sideswipe	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle

2015-Jun-08, Mon,17:47	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2015-Jun-20, Sat,15:50	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Oct-29, Thu,12:54	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Truck - open	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	
2015-Dec-11, Fri,18:00	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Dec-05, Sat,23:12	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	

Location: MERIVALE RD/LOTTA AVE @ CLYDE AVE

Traffic Control: Traffic signal **Total Collisions:** 40

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-13, Thu,08:00	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	

2014-Jan-17, Fri,12:20	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Mar-22, Sat,12:32	Snow	Turning movement	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2014-Feb-18, Tue,08:07	Snow	Rear end	P.D. only	Loose snow	North	Turning right	Automobile, station wagon	Skidding/sliding
					North	Turning right	Pick-up truck	Other motor vehicle
2014-May-20, Tue,19:20	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Passenger van	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Nov-27, Thu,08:26	Clear	Turning movement	Fatal injury	Dry	South	Turning right	Truck - dump	Cyclist
					South	Going ahead	Bicycle	Other motor vehicle
2014-Apr-24, Thu,19:15	Clear	Angle	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle
					West	Turning left	Pick-up truck	Other motor vehicle
2014-Jul-06, Sun,12:58	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2014-Aug-12, Tue,12:16	Rain	Rear end	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle

					North	Turning right	Pick-up truck	Other motor vehicle
2014-Aug-22, Fri,08:38	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-23, Fri,17:13	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2014-Oct-25, Sat,14:56	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-21, Wed,14:47	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Pick-up truck	Other motor vehicle
2014-Dec-15, Mon,14:15	Clear	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Passenger van	Other motor vehicle
2014-Oct-04, Sat,11:59	Rain	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2014-Dec-10, Wed,17:55	Snow	Rear end	P.D. only	Loose snow	West	Going ahead	Unknown	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2015-May-05, Tue,19:01	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Sep-05, Fri,16:00	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Apr-30, Thu,09:45	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Apr-30, Thu,12:59	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2014-Dec-24, Wed,12:00	Rain	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2015-Jan-09, Fri,08:00	Clear	Turning movement	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-23, Fri,16:58	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle

2015-May-05, Tue,12:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Police vehicle	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Nov-01, Sun,11:36	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2014-May-26, Mon,07:28	Rain	SMV other	P.D. only	Wet	West	Turning left	Pick-up truck	Pole (utility, power)
2015-Jan-15, Thu,15:30	Clear	Turning movement	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Aug-18, Tue,17:26	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Feb-01, Sun,21:15	Clear	SMV other	P.D. only	Packed snow	North	Going ahead	Pick-up truck	Debris on road
2015-Feb-13, Fri,14:29	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Jul-11, Sat,16:01	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Passenger van	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle

2015-Aug-19, Wed,18:12	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Jul-31, Fri,12:25	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-19, Sun,13:39	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Passenger van	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jun-29, Mon,18:06	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Oct-21, Wed,18:34	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Nov-09, Mon,18:55	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Oct-16, Fri,09:07	Clear	Rear end	P.D. only	Dry	North	Turning right	Pick-up truck	Other motor vehicle

					North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2015-Oct-28, Wed,21:24	Rain	SMV other	P.D. only	Wet	West	Turning left	Automobile, station wagon	Skidding/sliding
2015-Oct-19, Mon,17:07	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2015

Location: BASELINE RD @ MERIVALE RD

Traffic Control: Traffic signal

Total Collisions: 37

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-03, Fri,08:30	Clear	Sideswipe	P.D. only	Wet	South	Unknown	Pick-up truck	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Jan-10, Fri,16:20	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Jan-27, Mon,20:13	Clear	Rear end	P.D. only	Wet	West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Stopped	Passenger van	Other motor vehicle	
2014-Feb-22, Sat,16:11	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2014-Feb-20, Thu,20:00	Clear	Other	P.D. only	Wet	Unknown	Unknown	Unknown	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2014-Apr-06, Sun,19:00	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	

					North	Turning right	Passenger van	Other motor vehicle
2014-Mar-09, Sun,14:00	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2014-Apr-25, Fri,17:43	Clear	Rear end	Non-fatal injury	Dry	South	Turning right	Passenger van	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-23, Wed,18:29	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2014-Aug-12, Tue,10:34	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Pick-up truck	Skidding/sliding
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Aug-28, Thu,20:48	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Nov-21, Fri,12:40	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2014-Sep-22, Mon,06:50	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle

2014-Sep-29, Mon,17:04	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2014-Dec-03, Wed,15:36	Snow	Rear end	P.D. only	Slush	West	Slowing or stopping	Pick-up truck	Other motor vehicle
					West	Stopped	Passenger van	Other motor vehicle
2015-Jan-30, Fri,12:52	Clear	Rear end	P.D. only	Slush	West	Going ahead	Truck - closed	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Feb-23, Mon,08:48	Clear	Rear end	P.D. only	Wet	North	Changing lanes	Truck - tank	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2014-Sep-16, Tue,17:23	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Sep-09, Tue,15:15	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2014-Nov-18, Tue,15:05	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jul-02, Thu,16:52	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Mar-27, Fri,08:15	Freezing Rain	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Slowing or stopping	Pick-up truck	Other motor vehicle
2015-Jan-18, Sun,02:31	Clear	Angle	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-09, Fri,17:00	Snow	Rear end	P.D. only	Loose snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2015-Mar-09, Mon,18:01	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2015-Sep-01, Tue,11:34	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Aug-11, Tue,15:40	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Stopped	Passenger van	Other motor vehicle
2015-Jan-05, Mon,14:06	Snow	SMV other	P.D. only	Ice	West	Going ahead	Pick-up truck	Skidding/sliding

2015-Jun-19, Fri,16:55	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Sep-06, Sun,21:10	Clear	Sideswipe	P.D. only	Dry	South	Turning left	Unknown	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Sep-06, Sun,18:13	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2015-Sep-27, Sun,17:24	Clear	Sideswipe	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					East	Turning left	Pick-up truck	Other motor vehicle
2015-Oct-03, Sat,17:23	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Pick-up truck	Other motor vehicle
2015-Oct-16, Fri,12:08	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Nov-30, Mon,10:54	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Oct-04, Sun,12:29	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle

					North	Turning right	Pick-up truck	Other motor vehicle
2015-Dec-15, Tue,17:57	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2013-01-01 TO: 2014-01-01

BASELINE RD & MERIVALE RD

Former Municipality: **Ottawa** Traffic Control: **Traffic signal** Number of Collisions: **17**

	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR		SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	No. PED
1	2013-01-18	Fri	23:18	Snow	Dark	Sideswipe	P.D. only	V1	S	Loose snow	Going ahead	Automobile, station	Other motor vehicle	0
								V2	S	Loose snow	Going ahead	Pick-up truck	Other motor vehicle	
2	2013-02-27	We	16:15	Snow	Daylight	Sideswipe	P.D. only	V1	S	Loose snow	Going ahead	Passenger van	Other motor vehicle	0
								V2	S	Loose snow	Stopped	Automobile, station	Other motor vehicle	
3	2013-03-15	Fri	11:31	Snow	Daylight	Rear end	Non-fatal	V1	W	Loose snow	Turning right	Unknown	Other motor vehicle	0
								V2	W	Loose snow	Turning right	Automobile, station	Other motor vehicle	
4	2013-04-23	Tue	15:00	Clear	Daylight	Sideswipe	P.D. only	V2	E	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V1	E	Dry	Changing lanes	Automobile, station	Other motor vehicle	
5	2013-05-19	Sun	16:20	Rain	Daylight	Sideswipe	P.D. only	V1	W	Wet	Changing lanes	Automobile, station	Other motor vehicle	0
								V2	W	Wet	Turning left	Automobile, station	Other motor vehicle	
								V3	W	Wet	Turning left	Automobile, station	Other motor vehicle	
6	2013-06-24	Mo	18:43	Clear	Daylight	Sideswipe	P.D. only	V1	S	Dry	Changing lanes	Automobile, station	Other motor vehicle	0
								V2	S	Dry	Going ahead	Automobile, station	Other motor vehicle	
7	2013-06-27	Thu	09:03	Clear	Daylight	Rear end	P.D. only	V1	E	Dry	Slowing or	Automobile, station	Other motor vehicle	0
								V2	E	Dry	Stopped	Automobile, station	Other motor vehicle	
8	2013-07-07	Sun	14:13	Rain	Daylight	Rear end	P.D. only	V1	W	Wet	Going ahead	Automobile, station	Other motor vehicle	0
								V2	W	Wet	Slowing or	Automobile, station	Other motor vehicle	
								V3	W	Wet	Slowing or	Automobile, station	Other motor vehicle	
								V4	W	Wet	Slowing or	Pick-up truck	Other motor vehicle	
9	2013-07-25	Thu	13:37	Clear	Daylight	Single vehicle	P.D. only	V1	S	Dry	Turning left	Pick-up truck	Curb	0
10	2013-08-30	Fri	10:56	Clear	Daylight	Rear end	P.D. only	V1	W	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2	W	Dry	Stopped	Automobile, station	Other motor vehicle	
								V3	W	Dry	Stopped	Pick-up truck	Other motor vehicle	
11	2013-10-04	Fri	16:33	Clear	Daylight	Angle	Non-fatal	V1	W	Wet	Going ahead	Bicycle	Other motor vehicle	0
								V2	N	Wet	Turning right	Pick-up truck	Cyclist	
12	2013-10-12	Sat	14:23	Clear	Daylight	Turning	P.D. only	V1	N	Dry	Turning right	Automobile, station	Other motor vehicle	0
								V2	S	Dry	Turning left	Automobile, station	Other motor vehicle	

(Note: Time of Day = "00:00" represents unknown collision time

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2013-01-01 **TO: 2014-01-01**

13	2013-10-26	Sat	14:08	Rain	Daylight	Rear end	P.D. only	V1	E	Wet	Slowing or	Automobile, station	Other motor vehicle	0
								V2	E	Wet	Slowing or	Automobile, station	Other motor vehicle	
								V3	E	Wet	Slowing or	Passenger van	Other motor vehicle	
								V4	E	Wet	Slowing or	Pick-up truck	Other motor vehicle	
								V5	E	Wet	Stopped	Pick-up truck	Other motor vehicle	
14	2013-11-01	Fri	17:34	Clear	Dark	Rear end	P.D. only	V1	W	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2	W	Dry	Stopped	Automobile, station	Other motor vehicle	
15	2013-11-17	Sun	03:30	Clear	Dark	Rear end	Non-fatal	V1	S	Dry	Turning left	Pick-up truck	Other motor vehicle	0
								V2	S	Dry	Turning left	Automobile, station	Other motor vehicle	
								V3	S	Dry	Turning left	Automobile, station	Other motor vehicle	
16	2013-12-06	Fri	13:30	Clear	Daylight	Rear end	P.D. only	V1	E	Dry	Slowing or	Truck and trailer	Other motor vehicle	0
								V2	E	Dry	Slowing or	Automobile, station	Other motor vehicle	
17	2013-12-20	Fri	05:44	Snow	Dark	Single vehicle	P.D. only	V1	W	Loose snow	Going ahead	Automobile, station	Pole (sign, parking	0

(Note: Time of Day = "00:00" represents unknown collision time

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2013-01-01 **TO: 2014-01-01**

BASELINE RD & CLYDE AVE

Former Municipality: **Ottawa** Traffic Control: **Traffic signal** Number of Collisions: **21**

	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	No. PED
1	2013-01-21	Mo	08:20	Clear	Daylight	Sideswipe	P.D. only	V1 E	Dry	Changing lanes	Passenger van	Other motor vehicle	0
								V2 E	Dry	Stopped	Pick-up truck	Other motor vehicle	
2	2013-01-28	Mo	14:00	Snow	Daylight	Rear end	P.D. only	V1 W	Loose snow	Turning left	Pick-up truck	Skidding/Sliding	0
								V2 W	Loose snow	Turning left	Pick-up truck	Other motor vehicle	
3	2013-02-07	Thu	18:30	Clear	Dark	Rear end	P.D. only	V1 W	Dry	Changing lanes	Automobile, station	Other motor vehicle	0
								V2 W	Dry	Stopped	Pick-up truck	Other motor vehicle	
4	2013-04-18	Thu	08:48	Clear	Daylight	Rear end	P.D. only	V1 E	Dry	Changing lanes	Pick-up truck	Other motor vehicle	0
								V2 E	Dry	Stopped	Automobile, station	Other motor vehicle	
5	2013-05-06	Mo	15:44	Clear	Daylight	Rear end	P.D. only	V1 S	Dry	Going ahead	Passenger van	Other motor vehicle	0
								V2 S	Dry	Stopped	Pick-up truck	Other motor vehicle	
								V3 S	Dry	Stopped	Pick-up truck	Other motor vehicle	
6	2013-05-26	Sun	15:00	Clear	Daylight	Rear end	P.D. only	V1 E	Dry	Slowing or	Pick-up truck	Other motor vehicle	0
								V2 E	Dry	Slowing or	Pick-up truck	Other motor vehicle	
7	2013-06-19	We	16:01	Clear	Daylight	Rear end	P.D. only	V1 S	Dry	Slowing or	Automobile, station	Other motor vehicle	0
								V2 S	Dry	Stopped	Pick-up truck	Other motor vehicle	
8	2013-08-06	Tue	16:25	Clear	Daylight	Sideswipe	P.D. only	V1 N	Dry	Turning left	Automobile, station	Other motor vehicle	0
								V2 N	Dry	Going ahead	Automobile, station	Other motor vehicle	
9	2013-09-30	Mo	08:35	Clear	Daylight	Rear end	P.D. only	V1 E	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2 E	Dry	Stopped	Automobile, station	Other motor vehicle	
10	2013-10-02	We	15:15	Clear	Daylight	Rear end	P.D. only	V1 N	Dry	Slowing or	Automobile, station	Other motor vehicle	0
								V2 N	Dry	Slowing or	Automobile, station	Other motor vehicle	
11	2013-10-10	Thu	09:19	Clear	Daylight	Angle	P.D. only	V2 S	Dry	Turning left	Delivery van	Other motor vehicle	0
								V3 S	Dry	Turning left	Automobile, station	Other motor vehicle	
								V1 W	Dry	Going ahead	Passenger van	Other motor vehicle	

(Note: Time of Day = "00:00" represents unknown collision time

12	2013-10-19	Sat	14:08	Rain	Daylight	Rear end	Non-fatal	V1 E	Wet	Going ahead	Pick-up truck	Other motor vehicle	0
								V2 E	Wet	Stopped	Passenger van	Other motor vehicle	
								V3 E	Wet	Going ahead	Automobile, station	Other motor vehicle	
								V4 E	Wet	Stopped	Automobile, station	Other motor vehicle	
13	2013-10-20	Sun	15:55	Clear	Daylight	Angle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Other motor vehicle	0
								V2 S	Dry	Turning left	Automobile, station	Other motor vehicle	
14	2013-10-30	We	16:05	Clear	Daylight	Rear end	Non	V1 S	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2 S	Dry	Slowing or	Automobile, station	Other motor vehicle	
15	2013-11-13	We	16:04	Clear	Dusk	Rear end	P.D. only	V1 S	Dry	Turning left	School bus	Other motor vehicle	0
								V2 S	Dry	Turning left	Passenger van	Other motor vehicle	
16	2013-11-15	Fri	10:48	Clear	Daylight	Angle	P.D. only	V1 E	Dry	Turning right	Truck - closed	Other motor vehicle	0
								V2 S	Dry	Going ahead	Automobile, station	Other motor vehicle	
17	2013-11-19	Tue	22:30	Clear	Dark	Angle	P.D. only	V1 W	Dry	Going ahead	Passenger van	Other motor vehicle	0
								V2 N	Dry	Going ahead	Automobile, station	Other motor vehicle	
18	2013-11-27	We	06:20	Snow	Dark	Rear end	P.D. only	V1 W	Packed snow	Slowing or	Pick-up truck	Other motor vehicle	0
								V2 W	Packed snow	Stopped	Automobile, station	Other motor vehicle	
19	2013-11-28	Thu	09:30	Clear	Daylight	Sideswipe	P.D. only	V1 W	Slush	Changing lanes	Unknown	Other motor vehicle	0
								V2 W	Slush	Stopped	Automobile, station	Other motor vehicle	
20	2013-12-08	Sun	09:45	Clear	Daylight	Rear end	P.D. only	V1 S	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2 S	Dry	Stopped	Automobile, station	Other motor vehicle	
21	2013-12-16	Mo	10:30	Clear	Daylight	Rear end	P.D. only	V1 E	Wet	Turning right	Automobile, station	Other motor vehicle	0
								V2 E	Wet	Turning right	Pick-up truck	Other motor vehicle	

CLYDE AVE & MERIVALE RD

Former Municipality: **Nepean** Traffic Control: **Traffic signal** Number of Collisions: **14**

	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	No. PED
22	2013-01-02	We	17:38	Clear	Dusk	Rear end	P.D. only	V1 W	Ice	Turning left	Automobile, station	Other motor vehicle	0
								V2 W	Ice	Turning left	Automobile, station	Other motor vehicle	
23	2013-01-24	Thu	09:51	Clear	Daylight	Angle	P.D. only	V1 E	Ice	Unknown	Automobile, station	Other motor vehicle	0
								V2 S	Ice	Turning left	Automobile, station	Other motor vehicle	
24	2013-02-08	Fri	09:45	Snow	Daylight	Rear end	P.D. only	V1 N	Loose snow	Going ahead	Automobile, station	Other motor vehicle	0
								V2 N	Loose snow	Stopped	Automobile, station	Other motor vehicle	

25	2013-02-09	Sat	12:45	Clear	Daylight	Rear end	P.D. only	V1	N	Wet	Slowing or	Automobile, station	Other motor vehicle	0
								V2	N	Wet	Stopped	Pick-up truck	Other motor vehicle	
26	2013-02-20	We	12:37	Snow	Daylight	Turning	Non-fatal	V1	S	Slush	Turning left	Automobile, station	Other motor vehicle	0
								V2	N	Slush	Going ahead	Passenger van	Other motor vehicle	
27	2013-04-26	Fri	11:00	Clear	Daylight	Turning	P.D. only	V1	W	Wet	Turning left	Automobile, station	Other motor vehicle	0
								V2	W	Wet	Turning left	Automobile, station	Other motor vehicle	
28	2013-06-14	Fri	16:10	Clear	Daylight	Rear end	P.D. only	V1	N	Dry	Turning right	Pick-up truck	Other motor vehicle	0
								V2	N	Dry	Turning right	Automobile, station	Other motor vehicle	
29	2013-07-26	Fri	10:23	Clear	Daylight	Sideswipe	P.D. only	V1	W	Dry	Turning left	Automobile, station	Other motor vehicle	0
								V2	W	Dry	Turning left	Pick-up truck	Other motor vehicle	
30	2013-07-27	Sat	14:58	Clear	Daylight	Rear end	P.D. only	V1	W	Dry	Turning left	Automobile, station	Other motor vehicle	0
								V2	W	Dry	Turning left	Automobile, station	Other motor vehicle	
								V3	W	Dry	Turning left	Pick-up truck	Other motor vehicle	
31	2013-07-31	We	12:08	Clear	Daylight	Rear end	Non-fatal	V1	N	Dry	Turning right	Automobile, station	Other motor vehicle	0
								V2	N	Dry	Turning right	Automobile, station	Other motor vehicle	
								V3	N	Dry	Turning right	Passenger van	Other motor vehicle	
32	2013-08-22	Thu	13:00	Rain	Daylight	Rear end	P.D. only	V1	W	Wet	Slowing or	Passenger van	Other motor vehicle	0
								V2	W	Wet	Stopped	Automobile, station	Other motor vehicle	
33	2013-10-22	Tue	08:06	Clear	Daylight	Rear end	P.D. only	V1	N	Wet	Turning right	Automobile, station	Other motor vehicle	0
								V2	N	Wet	Turning right	Passenger van	Other motor vehicle	
34	2013-10-26	Sat	12:00	Rain	Daylight	Rear end	P.D. only	V1	S	Wet	Going ahead	Automobile, station	Other motor vehicle	0
								V2	S	Wet	Slowing or	Automobile, station	Other motor vehicle	

COMMENTS: EXACT LOCATION UNKNOWN.

35	2013-11-15	Fri	08:30	Clear	Daylight	Rear end	P.D. only	V1	N	Dry	Going ahead	Automobile, station	Other motor vehicle	0
								V2	N	Dry	Slowing or	Pick-up truck	Other motor vehicle	

(Note: Time of Day = "00:00" represents unknown collision time

Appendix E

Site Trip Generation

Trip Generation

ITE Vehicle Trip Generation Rates

Land Use	Data Source	Trip Rate		
		AM Peak	PM Peak	SAT Peak
High-Turnover (Sit-Down) Restaurant	ITE 932	10.81	9.85	14.07
Shopping Center (New)	ITE 820	0.96	3.71	4.82
Shopping Center (Existing)	ITE 820	0.96	3.71	4.82

Modified Person Trip Generation Rates

Land Use	Data Source	Person Trip Rate		
		AM Peak	PM Peak	SAT Peak
High-Turnover (Sit-Down) Restaurant	ITE 932	14.05	12.81	18.29
Shopping Center (New)	ITE 820	1.25	4.82	6.27
Shopping Center (Existing)	ITE 820	1.25	4.82	6.27
Note: 1.3 factor to account for typical North American auto occupancy values of approximately 1.15 and combined transit and non-motorized modal shares of less than 10%				

ITE Fitted Curve Equations

Land Use	Data Source	Fitted Curve Equation								
		AM Peak			PM Peak			SAT Peak		
High-Turnover (Sit-Down) Restaurant	ITE 932	N/A	0.00(x)	+ 0.00	N/A	0.00(x)	+ 0.00	N/A	0.00(x)	+ 0.00
Shopping Center (New)	ITE 820	Ln(T)=	0.61Ln(x)	+ 2.24	Ln(T)=	0.67Ln(x)	+ 3.31	Ln(T)=	0.65Ln(x)	+ 3.78
Shopping Center (Existing)	ITE 820	Ln(T)=	0.61Ln(x)	+ 2.24	Ln(T)=	0.67Ln(x)	+ 3.31	Ln(T)=	0.65Ln(x)	+ 3.78

Modified Person Trip Generation

Land Use	Data Source	Area	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)			SAT Peak (Person Trips/hr)		
			In	Out	Total	In	Out	Total	In	Out	Total
		ft²	55%	45%		60%	40%		53%	47%	
High-Turnover (Sit-Down) Restaurant	ITE 932	4,500 ft²	34	29	63	34	24	58	43	39	82
		ft²	62%	38%		48%	52%		52%	48%	
Shopping Center (New)	ITE 820	12,000 ft²	34	22	56	90	98	188	148	138	286
		ft²	62%	38%		48%	52%		52%	48%	
Shopping Center (Existing)	ITE 820	16,000 ft²	40	26	66	109	119	228	179	166	345
		Total	108	77	185	233	241	474	370	343	713

igh-Turnover (Sit-Down) Restaurant Trip Generation

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)			SAT Peak (Person Trips/hr)		
		In	Out	Total	In	Out	Total	In	Out	Total
Auto Driver	55%	19	16	35	19	14	33	24	22	46
Auto Passenger	15%	6	5	11	6	4	10	7	6	13
Transit	20%	6	6	12	6	4	10	8	8	16
Non-motorized	10%	3	2	5	3	2	5	4	3	7
Total Person Trips	100%	34	29	63	34	24	58	43	39	82
Less Pass-by (25%)		-4	-4	-8	-4	-4	-8	-6	-6	-12
Total 'New' High-Turnover (Sit-Down) Restaurant Auto Trips		**15**	**12**	**27**	**15**	**10**	**25**	**18**	**16**	**34**

Shopping Center (New) Trip Generation

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)			SAT Peak (Person Trips/hr)		
		In	Out	Total	In	Out	Total	In	Out	Total
Auto Driver	55%	19	13	32	50	54	104	82	76	158
Auto Passenger	15%	6	3	9	13	15	28	23	21	44
Transit	20%	6	4	10	18	20	38	29	28	57
Non-motorized	10%	3	2	5	9	9	18	14	13	27
Total Person Trips	100%	34	22	56	90	98	188	148	138	286
Less Pass-by (35%)		-6	-6	-12	-18	-18	-36	-28	-28	-56
Total 'New' Shopping Center (New) Auto Trips		**13**	**7**	**20**	**32**	**36**	**68**	**54**	**48**	**102**

Shopping Center (Existing) Trip Generation

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)			SAT Peak (Person Trips/hr)		
		In	Out	Total	In	Out	Total	In	Out	Total
Auto Driver	55%	22	15	37	60	66	126	99	92	191
Auto Passenger	15%	6	4	10	17	18	35	27	25	52
Transit	20%	8	5	13	22	24	46	36	33	69
Non-motorized	10%	4	2	6	10	11	21	17	16	33
Total Person Trips	100%	40	26	66	109	119	228	179	166	345
Total 'New' Shopping Center (Existing) Auto Trips		**22**	**15**	**37**	**60**	**66**	**126**	**99**	**92**	**191**

Total Site Vehicle Trip Generation

Travel Mode	**AM Peak (veh/hr)**			**PM Peak (veh/hr)**			**SAT Peak (veh/hr)**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
-Turnover (Sit-Down) Restaurant Trip Generation	19	16	35	19	14	33	24	22	46
Shopping Center (New) Trip Generation	19	13	32	50	54	104	82	76	158
Shopping Center (Existing) Trip Generation	22	15	37	60	66	126	99	92	191
n-Turnover (Sit-Down) Restaurant Pass-by (25%)	-4	-4	-8	-4	-4	-8	-6	-6	-12
Shopping Center (New) Pass-by (35%)	-6	-6	-12	-18	-18	-36	-28	-28	-56
Total 'New' Auto Trips	**50**	**34**	**84**	**107**	**112**	**219**	**171**	**156**	**327**

Appendix F

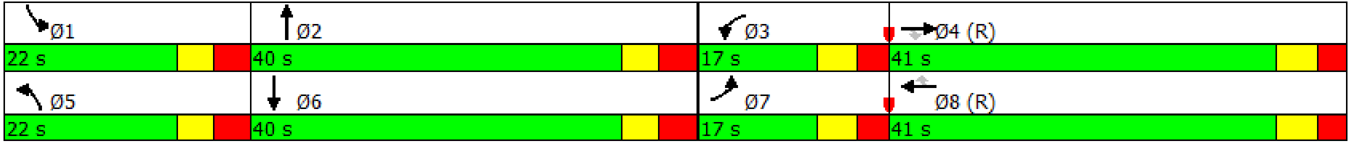
2020 Future Background Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	163	1195	168	60	670	365	132	740	94	445	511	40
Future Volume (vph)	163	1195	168	60	670	365	132	740	94	445	511	40
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	2%	5%	3%	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	172	1258	177	63	705	384	139	779	99	468	538	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	1258	177	63	705	384	139	878	0	468	580	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	38.6	38.6	9.0	34.6	34.6	10.6	33.1		15.4	37.9	
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.29	0.29	0.09	0.28		0.13	0.32	
v/c Ratio	1.16	1.21	0.38	0.50	0.74	0.72	0.50	0.98		1.11	0.56	
Control Delay	172.1	142.1	9.7	75.5	39.6	18.7	58.1	67.9		125.5	36.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	172.1	142.1	9.7	75.5	39.6	18.7	58.1	67.9		125.5	36.5	
LOS	F	F	A	E	D	B	E	E		F	D	
Approach Delay		130.7			34.6			66.6			76.3	
Approach LOS		F			C			E			E	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 82.4 Intersection LOS: F
Intersection Capacity Utilization 101.9% ICU Level of Service G
Analysis Period (min) 15
Description: Bus lanes not included in analysis

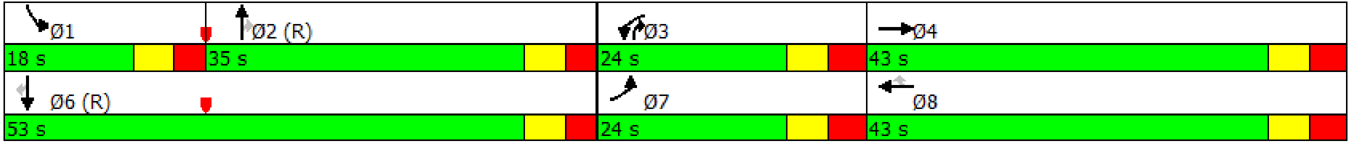
Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	240	1095	8	133	971	406	0	614	229	339	353	307
Future Volume (vph)	240	1095	8	133	971	406	0	614	229	339	353	307
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	253	1153	8	140	1022	427	0	646	241	357	372	323
Shared Lane Traffic (%)												
Lane Group Flow (vph)	253	1161	0	140	1022	427	0	646	241	357	372	323
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	19.0	40.7		16.3	38.0	38.0		30.0	48.3	13.0	48.0	48.0
Actuated g/C Ratio	0.16	0.34		0.14	0.32	0.32		0.25	0.40	0.11	0.40	0.40
v/c Ratio	0.94	1.01		0.61	0.95	0.74		0.76	0.37	1.00	0.27	0.42
Control Delay	49.0	42.9		59.9	58.7	30.3		48.6	14.5	102.0	25.0	4.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	42.9		59.9	58.7	30.3		48.6	14.5	102.0	25.0	4.3
LOS	D	D		E	E	C		D	B	F	C	A
Approach Delay		44.0			51.2			39.3			44.7	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 45 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 45.6	Intersection LOS: D
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Merivale Road & Baseline Road



5: Clyde Avenue & Lotta Avenue/Merivale Road

06/29/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	34	74	21	424	37	80	1	934	722	50	754	8
Future Volume (vph)	34	74	21	424	37	80	1	934	722	50	754	8
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	78	22	446	39	84	1	983	760	53	794	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	100	0	446	39	84	1	983	760	53	802	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2	6		
Detector Phase	7	4		3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	30.0	30.0	30.0	30.0	30.0	
Total Split (s)	33.0	34.0		33.0	34.0	34.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	25.4%	26.2%		25.4%	26.2%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	10.1	14.6		23.8	33.6	33.6	76.6	76.6	76.6	76.6	76.6	
Actuated g/C Ratio	0.08	0.11		0.18	0.26	0.26	0.59	0.59	0.59	0.59	0.59	
v/c Ratio	0.28	0.50		0.75	0.09	0.19	0.00	0.50	0.65	0.23	0.41	
Control Delay	61.1	57.0		58.3	38.1	8.7	14.0	17.5	4.0	18.2	16.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1	57.0		58.3	38.1	8.7	14.0	17.5	4.0	18.2	16.1	
LOS	E	E		E	D	A	B	B	A	B	B	
Approach Delay		58.1			49.6			11.6			16.2	
Approach LOS		E			D			B			B	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

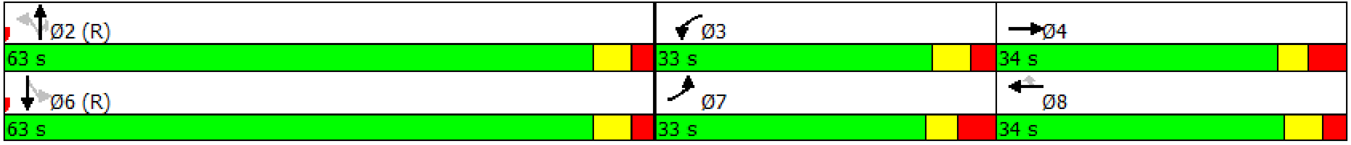
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 78.1%	ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



2: Site Access #1 & Baseline Road

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1734	13	0	1094	0	6
Future Volume (Veh/h)	1734	13	0	1094	0	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1825	14	0	1152	0	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			1839		2216	920
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1333		1874	13
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			358		44	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1217	622	384	384	384	6
Volume Left	0	0	0	0	0	0
Volume Right	0	14	0	0	0	6
cSH	1700	1700	1700	1700	1700	741
Volume to Capacity	0.72	0.37	0.23	0.23	0.23	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.9
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.9
Approach LOS						A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Future Background 2020 AM

3: Clyde Avenue & Site Access #2

06/29/2017

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	9	957	9	0	738
Future Volume (Veh/h)	0	9	957	9	0	738
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	9	1007	9	0	777
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.90	0.84			0.84	
vC, conflicting volume	1400	508			1016	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	552	16			625	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	419	884			796	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	9	671	345	388	388
Volume Left	0	0	0	0	0
Volume Right	9	0	9	0	0
cSH	884	1700	1700	1700	1700
Volume to Capacity	0.01	0.39	0.20	0.23	0.23
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0
Control Delay (s)	9.1	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.1	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	38.2%	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)	117	734	194	132	1246	544	316	748	86	404	535	88
Future Volume (vph)	117	734	194	132	1246	544	316	748	86	404	535	88
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	119	749	198	135	1271	555	322	763	88	412	546	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	749	198	135	1271	555	322	851	0	412	636	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0		21.0	40.0	
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%		16.2%	30.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.2	44.6	44.6	11.5	44.9	44.9	17.6	33.1		14.4	29.9	
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.35	0.35	0.14	0.25		0.11	0.23	
v/c Ratio	0.82	0.68	0.37	0.91	1.09	0.92	0.72	1.03		1.13	0.85	
Control Delay	97.0	40.3	5.9	82.4	75.0	26.5	77.9	96.9		139.1	58.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	97.0	40.3	5.9	82.4	75.0	26.5	77.9	96.9		139.1	58.2	
LOS	F	D	A	F	E	C	E	F		F	E	
Approach Delay		40.2			61.8			91.7			90.0	
Approach LOS		D			E			F			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 19 (15%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

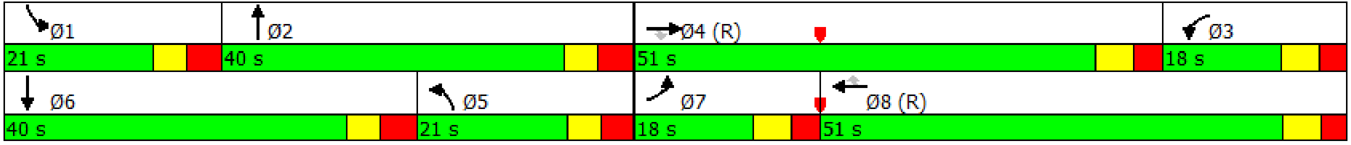
Intersection Signal Delay: 69.7 Intersection LOS: E

Intersection Capacity Utilization 104.9% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	263	1072	20	239	1240	272	0	460	228	385	672	409
Future Volume (vph)	263	1072	20	239	1240	272	0	460	228	385	672	409
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	268	1094	20	244	1265	278	0	469	233	393	686	417
Shared Lane Traffic (%)												
Lane Group Flow (vph)	268	1114	0	244	1265	278	0	469	233	393	686	417
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	28.0	50.0		28.0	50.0	50.0		35.0	28.0	17.0	52.0	52.0
Total Split (%)	21.5%	38.5%		21.5%	38.5%	38.5%		26.9%	21.5%	13.1%	40.0%	40.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	22.8	45.8		22.2	45.2	45.2		30.0	54.2	12.0	47.0	47.0
Actuated g/C Ratio	0.18	0.35		0.17	0.35	0.35		0.23	0.42	0.09	0.36	0.36
v/c Ratio	0.91	0.94		0.84	1.07	0.47		0.60	0.35	1.30	0.56	0.56
Control Delay	74.2	51.9		77.5	88.7	18.2		44.0	10.5	201.5	35.4	9.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	51.9		77.5	88.7	18.2		44.0	10.5	201.5	35.4	9.2
LOS	E	D		E	F	B		D	B	F	D	A
Approach Delay		56.3			76.2			32.9			71.7	
Approach LOS		E			E			C			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 45 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

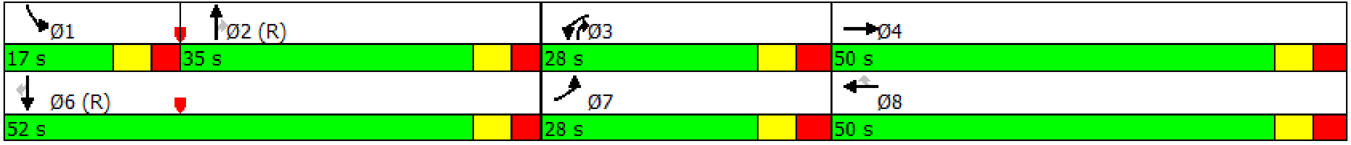
Maximum v/c Ratio: 1.30

Intersection Signal Delay: 64.1 Intersection LOS: E

Intersection Capacity Utilization 103.2% ICU Level of Service G

Analysis Period (min) 15

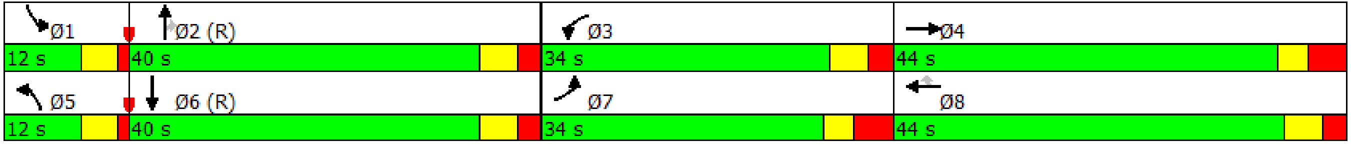
Splits and Phases: 4: Merivale Road & Baseline Road



	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	40	62	35	874	141	203	69	862	661	97	1028	22
Future Volume (vph)	40	62	35	874	141	203	69	862	661	97	1028	22
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	41	63	36	892	144	207	70	880	674	99	1049	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	99	0	892	144	207	70	880	674	99	1071	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	9.5	30.0	30.0	9.5	30.0	
Total Split (s)	34.0	44.0		34.0	44.0	44.0	12.0	40.0	40.0	12.0	40.0	
Total Split (%)	26.2%	33.8%		26.2%	33.8%	33.8%	9.2%	30.8%	30.8%	9.2%	30.8%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	1.0	2.3	2.3	1.0	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	0.5	-1.0	-1.0	0.5	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.4	14.1		29.0	35.2	35.2	10.9	51.3	51.3	15.6	56.1	
Actuated g/C Ratio	0.08	0.11		0.22	0.27	0.27	0.08	0.39	0.39	0.12	0.43	
v/c Ratio	0.30	0.49		1.22	0.30	0.38	0.50	0.66	0.71	0.49	0.74	
Control Delay	61.4	49.6		158.1	63.3	27.5	68.3	35.7	8.9	41.0	37.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.4	49.6		158.1	63.3	27.5	68.3	35.7	8.9	41.0	37.0	
LOS	E	D		F	E	C	E	D	A	D	D	
Approach Delay		53.0			125.3			26.0			37.3	
Approach LOS		D			F			C			D	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 59.6 Intersection LOS: E
Intersection Capacity Utilization 82.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1223	36	0	1922	0	26
Future Volume (Veh/h)	1223	36	0	1922	0	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1287	38	0	2023	0	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1325		1980	662
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			919		1733	96
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			594		63	758

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	858	467	674	674	674	27
Volume Left	0	0	0	0	0	0
Volume Right	0	38	0	0	0	27
cSH	1700	1700	1700	1700	1700	758
Volume to Capacity	0.50	0.27	0.40	0.40	0.40	0.04
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.9
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.9
Approach LOS						A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	40	1111	24	0	861
Future Volume (Veh/h)	0	40	1111	24	0	861
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	42	1169	25	0	906
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.87	0.79			0.79	
vC, conflicting volume	1634	597			1194	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	541	0			707	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			100	
cM capacity (veh/h)	412	854			699	

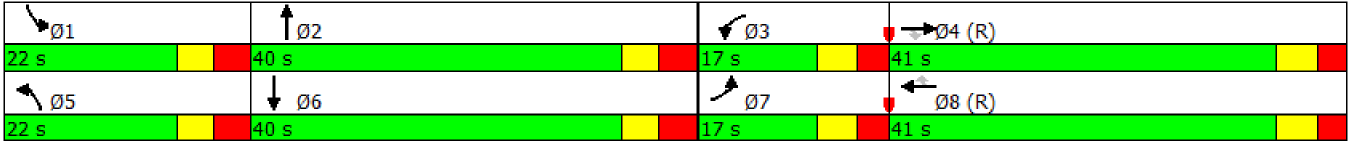
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	42	779	415	453	453
Volume Left	0	0	0	0	0
Volume Right	42	0	25	0	0
cSH	854	1700	1700	1700	1700
Volume to Capacity	0.05	0.46	0.24	0.27	0.27
Queue Length 95th (m)	1.2	0.0	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.4	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	43.2%	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)	145	628	319	179	709	340	394	900	126	420	853	89
Future Volume (vph)	145	628	319	179	709	340	394	900	126	420	853	89
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	153	661	336	188	746	358	415	947	133	442	898	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	661	336	188	746	358	415	1080	0	442	992	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	34.6	34.6	10.5	34.6	34.6	15.4	33.1		15.4	33.1	
Actuated g/C Ratio	0.09	0.29	0.29	0.09	0.29	0.29	0.13	0.28		0.13	0.28	
v/c Ratio	1.03	0.71	0.64	1.27	0.76	0.66	0.99	1.21		1.05	1.09	
Control Delay	136.7	43.3	15.7	202.4	53.6	24.1	92.9	141.5		107.8	98.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	136.7	43.3	15.7	202.4	53.6	24.1	92.9	141.5		107.8	98.7	
LOS	F	D	B	F	D	C	F	F		F	F	
Approach Delay		47.6			67.1			128.0			101.5	
Approach LOS		D			E			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 53 (44%), Referenced to phase 4:EBT and 8:WBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 89.1	Intersection LOS: F
Intersection Capacity Utilization 100.0%	ICU Level of Service F
Analysis Period (min) 15	
Description: Bus lanes not included in analysis	

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	317	880	21	268	830	188	0	472	250	258	476	293
Future Volume (vph)	317	880	21	268	830	188	0	472	250	258	476	293
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%	2%	5%	4%	3%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	334	926	22	282	874	198	0	497	263	272	501	308
Shared Lane Traffic (%)												
Lane Group Flow (vph)	334	948	0	282	874	198	0	497	263	272	501	308
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5		0.5	0.0	0.5	0.5	0.5
Total Lost Time (s)	7.6	7.6		7.6	7.6	7.6		7.1	7.1	7.0	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	16.4	35.4		16.4	35.4	35.4		27.9	44.8	11.0	45.9	45.9
Actuated g/C Ratio	0.14	0.30		0.14	0.30	0.30		0.23	0.37	0.09	0.38	0.38
v/c Ratio	1.45	1.00		1.22	0.90	0.38		0.65	0.44	0.91	0.40	0.42
Control Delay	251.4	58.5		175.5	54.0	10.9		46.3	17.1	88.2	28.2	4.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	251.4	58.5		175.5	54.0	10.9		46.3	17.1	88.2	28.2	4.5
LOS	F	E		F	D	B		D	B	F	C	A
Approach Delay		108.8			73.0			36.2			36.6	
Approach LOS		F			E			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 88 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

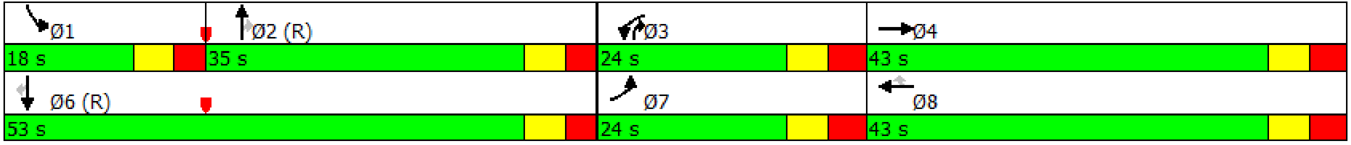
Maximum v/c Ratio: 1.45

Intersection Signal Delay: 68.2 Intersection LOS: E

Intersection Capacity Utilization 101.0% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	62	66	38	835	77	241	102	1132	719	97	1234	49
Future Volume (vph)	62	66	38	835	77	241	102	1132	719	97	1234	49
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	65	69	40	879	81	254	107	1192	757	102	1299	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	109	0	879	81	254	107	1192	757	102	1351	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	11.0	30.0	30.0	11.0	30.0	
Total Split (s)	30.0	34.0		30.0	34.0	34.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	23.1%	26.2%		23.1%	26.2%	26.2%	9.2%	41.5%	41.5%	9.2%	41.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Total Lost Time (s)	7.3	7.3		6.7	6.7	6.7	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	9.8	12.5		23.3	28.5	28.5	18.1	49.7	49.7	17.6	49.1	
Actuated g/C Ratio	0.08	0.10		0.18	0.22	0.22	0.14	0.38	0.38	0.14	0.38	
v/c Ratio	0.51	0.61		1.49	0.21	0.48	0.45	0.92	0.82	0.45	1.06	
Control Delay	70.7	60.0		267.7	44.9	8.5	59.4	50.7	16.6	59.6	82.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.7	60.0		267.7	44.9	8.5	59.4	50.7	16.6	59.6	82.6	
LOS	E	E		F	D	A	E	D	B	E	F	
Approach Delay		64.0			198.6			38.6			81.0	
Approach LOS		E			F			D			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 60 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.49

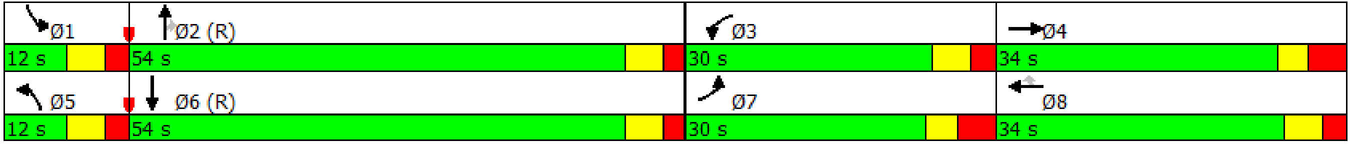
Intersection Signal Delay: 91.8 Intersection LOS: F

Intersection Capacity Utilization 91.9% ICU Level of Service F

Analysis Period (min) 15

Description: the EB Thru movement is forced off after 10s of green if the ped is not actuated

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1173	59	0	1227	0	37
Future Volume (Veh/h)	1173	59	0	1227	0	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1235	62	0	1292	0	39
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1297		1697	648
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			926		1413	136
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			603		106	729

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	823	474	431	431	431	39
Volume Left	0	0	0	0	0	0
Volume Right	0	62	0	0	0	39
cSH	1700	1700	1700	1700	1700	729
Volume to Capacity	0.48	0.28	0.25	0.25	0.25	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	1.3
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.2
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.2
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	55	1364	40	0	1351
Future Volume (Veh/h)	0	55	1364	40	0	1351
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	58	1436	42	0	1422
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.80	0.66			0.66	
vC, conflicting volume	2168	739			1478	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	444	0			701	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			100	
cM capacity (veh/h)	431	718			591	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	957	521	711	711
Volume Left	0	0	0	0	0
Volume Right	58	0	42	0	0
cSH	718	1700	1700	1700	1700
Volume to Capacity	0.08	0.56	0.31	0.42	0.42
Queue Length 95th (m)	2.0	0.0	0.0	0.0	0.0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.5	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix G

2020 Total Future Analysis

Future Total 2020 AM
1: Clyde Avenue & Baseline Road

06/28/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	163	1201	168	60	670	365	136	749	94	457	511	40
Future Volume (vph)	163	1201	168	60	670	365	136	749	94	457	511	40
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	2%	5%	3%	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	172	1264	177	63	705	384	143	788	99	481	538	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	1264	177	63	705	384	143	887	0	481	580	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	38.6	38.6	9.0	34.6	34.6	10.8	33.1		15.4	37.7	
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.29	0.29	0.09	0.28		0.13	0.31	
v/c Ratio	1.16	1.22	0.38	0.50	0.74	0.72	0.51	0.99		1.14	0.56	
Control Delay	172.1	144.4	9.7	75.5	39.6	18.7	58.0	70.2		135.5	36.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	172.1	144.4	9.7	75.5	39.6	18.7	58.0	70.2		135.5	36.7	
LOS	F	F	A	E	D	B	E	E		F	D	
Approach Delay		132.6			34.6			68.5			81.5	
Approach LOS		F			C			E			F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.22

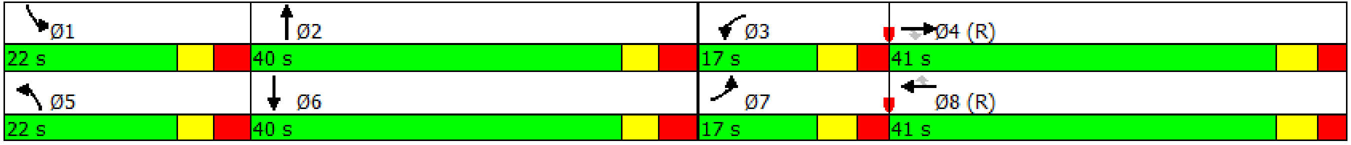
Intersection Signal Delay: 84.6 Intersection LOS: F

Intersection Capacity Utilization 102.5% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	240	1102	10	142	971	406	0	614	229	339	353	307
Future Volume (vph)	240	1102	10	142	971	406	0	614	229	339	353	307
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	253	1160	11	149	1022	427	0	646	241	357	372	323
Shared Lane Traffic (%)												
Lane Group Flow (vph)	253	1171	0	149	1022	427	0	646	241	357	372	323
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	19.0	40.4		16.6	38.0	38.0		30.0	48.6	13.0	48.0	48.0
Actuated g/C Ratio	0.16	0.34		0.14	0.32	0.32		0.25	0.40	0.11	0.40	0.40
v/c Ratio	0.94	1.03		0.63	0.95	0.74		0.76	0.37	1.00	0.27	0.42
Control Delay	49.3	48.4		61.0	58.7	30.3		48.6	14.4	102.0	25.0	4.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	48.4		61.0	58.7	30.3		48.6	14.4	102.0	25.0	4.3
LOS	D	D		E	E	C		D	B	F	C	A
Approach Delay		48.6			51.3			39.3			44.7	
Approach LOS		D			D			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 45 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

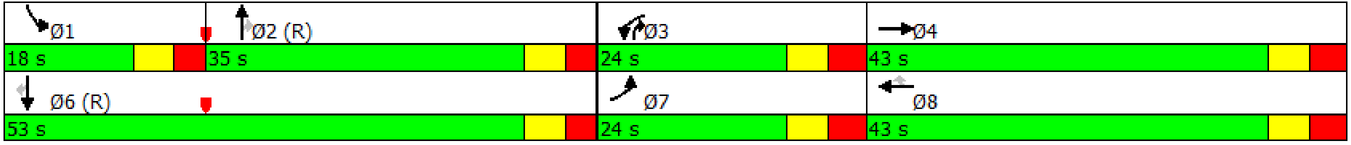
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 47.0	Intersection LOS: D
Intersection Capacity Utilization 92.6%	ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	34	74	21	426	37	89	1	937	722	50	754	8
Future Volume (vph)	34	74	21	426	37	89	1	937	722	50	754	8
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	78	22	448	39	94	1	986	760	53	794	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	100	0	448	39	94	1	986	760	53	802	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2	6		
Detector Phase	7	4		3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	30.0	30.0	30.0	30.0	30.0	
Total Split (s)	33.0	34.0		33.0	34.0	34.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	25.4%	26.2%		25.4%	26.2%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	10.1	14.6		23.8	33.6	33.6	76.6	76.6	76.6	76.6	76.6	
Actuated g/C Ratio	0.08	0.11		0.18	0.26	0.26	0.59	0.59	0.59	0.59	0.59	
v/c Ratio	0.28	0.50		0.75	0.09	0.21	0.00	0.50	0.65	0.23	0.41	
Control Delay	61.1	57.0		58.4	38.1	8.4	14.0	17.6	4.0	18.3	16.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1	57.0		58.4	38.1	8.4	14.0	17.6	4.0	18.3	16.1	
LOS	E	E		E	D	A	B	B	A	B	B	
Approach Delay		58.1			48.9			11.7			16.2	
Approach LOS		E			D			B			B	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

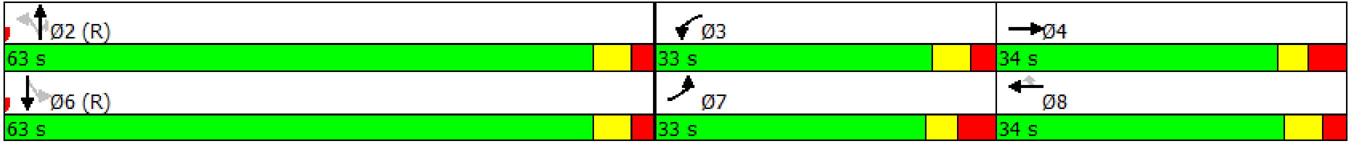
Maximum v/c Ratio: 0.75

Intersection Signal Delay: 21.3 Intersection LOS: C

Intersection Capacity Utilization 78.1% ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1729	37	0	1094	0	20
Future Volume (Veh/h)	1729	37	0	1094	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1820	39	0	1152	0	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			1859		2224	930
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1362		1885	27
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			349		43	726

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1213	646	384	384	384	21
Volume Left	0	0	0	0	0	0
Volume Right	0	39	0	0	0	21
cSH	1700	1700	1700	1700	1700	726
Volume to Capacity	0.71	0.38	0.23	0.23	0.23	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.1
Approach LOS						B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

3: Clyde Avenue & Site Access #2

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	27	952	26	0	738
Future Volume (Veh/h)	0	27	952	26	0	738
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	28	1002	27	0	777
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.90	0.83			0.83	
vC, conflicting volume	1404	514			1029	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	552	21			637	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	418	877			786	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	28	668	361	388	388
Volume Left	0	0	0	0	0
Volume Right	28	0	27	0	0
cSH	877	1700	1700	1700	1700
Volume to Capacity	0.03	0.39	0.21	0.23	0.23
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.2	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	38.7%	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)	117	744	194	132	1246	544	326	768	86	424	535	88
Future Volume (vph)	117	744	194	132	1246	544	326	768	86	424	535	88
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	119	759	198	135	1271	555	333	784	88	433	546	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	759	198	135	1271	555	333	872	0	433	636	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0		21.0	40.0	
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%		16.2%	30.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.2	44.6	44.6	11.5	44.9	44.9	17.6	33.1		14.4	29.9	
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.35	0.35	0.14	0.25		0.11	0.23	
v/c Ratio	0.82	0.69	0.37	0.91	1.09	0.92	0.75	1.05		1.19	0.85	
Control Delay	97.0	40.6	5.9	82.4	75.0	26.5	78.3	102.1		158.2	58.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	97.0	40.6	5.9	82.4	75.0	26.5	78.3	102.1		158.2	58.2	
LOS	F	D	A	F	E	C	E	F		F	E	
Approach Delay		40.4			61.8			95.5			98.8	
Approach LOS		D			E			F			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 19 (15%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

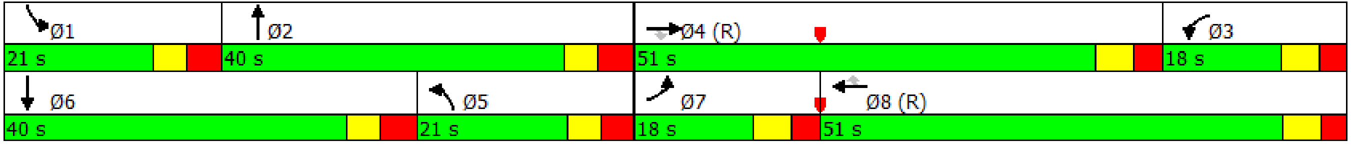
Intersection Signal Delay: 72.5 Intersection LOS: E

Intersection Capacity Utilization 105.5% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	263	1087	25	254	1240	272	0	460	228	385	672	409
Future Volume (vph)	263	1087	25	254	1240	272	0	460	228	385	672	409
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	268	1109	26	259	1265	278	0	469	233	393	686	417
Shared Lane Traffic (%)												
Lane Group Flow (vph)	268	1135	0	259	1265	278	0	469	233	393	686	417
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	28.0	50.0		28.0	50.0	50.0		35.0	28.0	17.0	52.0	52.0
Total Split (%)	21.5%	38.5%		21.5%	38.5%	38.5%		26.9%	21.5%	13.1%	40.0%	40.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	22.8	45.5		22.5	45.2	45.2		30.0	54.5	12.0	47.0	47.0
Actuated g/C Ratio	0.18	0.35		0.17	0.35	0.35		0.23	0.42	0.09	0.36	0.36
v/c Ratio	0.91	0.96		0.88	1.07	0.47		0.60	0.35	1.30	0.56	0.56
Control Delay	74.3	54.9		82.5	88.7	18.2		44.1	10.4	201.5	35.4	9.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	54.9		82.5	88.7	18.2		44.1	10.4	201.5	35.4	9.2
LOS	E	D		F	F	B		D	B	F	D	A
Approach Delay		58.6			76.9			32.9			71.7	
Approach LOS		E			E			C			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 45 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

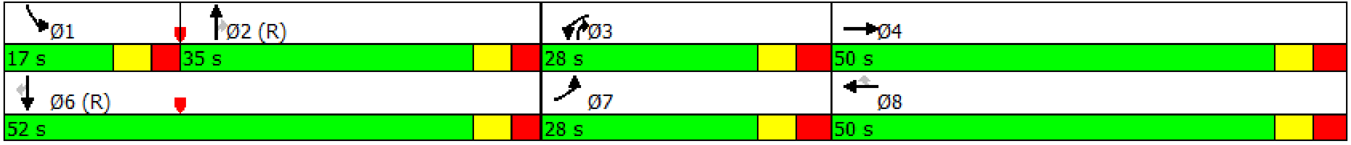
Maximum v/c Ratio: 1.30

Intersection Signal Delay: 65.0 Intersection LOS: E

Intersection Capacity Utilization 103.2% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	40	62	35	879	141	218	69	867	661	97	1028	22
Future Volume (vph)	40	62	35	879	141	218	69	867	661	97	1028	22
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	41	63	36	897	144	222	70	885	674	99	1049	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	99	0	897	144	222	70	885	674	99	1071	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	9.5	30.0	30.0	9.5	30.0	
Total Split (s)	34.0	44.0		34.0	44.0	44.0	12.0	40.0	40.0	12.0	40.0	
Total Split (%)	26.2%	33.8%		26.2%	33.8%	33.8%	9.2%	30.8%	30.8%	9.2%	30.8%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	1.0	2.3	2.3	1.0	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	0.5	-1.0	-1.0	0.5	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.4	14.1		29.0	35.2	35.2	10.9	51.3	51.3	15.6	56.1	
Actuated g/C Ratio	0.08	0.11		0.22	0.27	0.27	0.08	0.39	0.39	0.12	0.43	
v/c Ratio	0.30	0.49		1.22	0.30	0.39	0.50	0.66	0.71	0.49	0.74	
Control Delay	61.4	49.6		160.2	62.5	27.0	68.3	35.8	9.1	41.0	37.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.4	49.6		160.2	62.5	27.0	68.3	35.8	9.1	41.0	37.0	
LOS	E	D		F	E	C	E	D	A	D	D	
Approach Delay		53.0			125.6			26.2			37.3	
Approach LOS		D			F			C			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

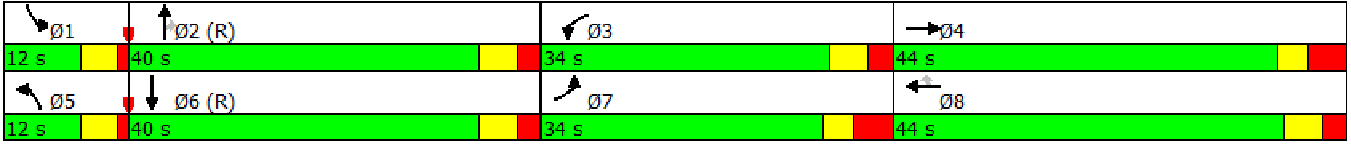
Maximum v/c Ratio: 1.22

Intersection Signal Delay: 60.1 Intersection LOS: E

Intersection Capacity Utilization 82.5% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1212	77	0	1922	0	57
Future Volume (Veh/h)	1212	77	0	1922	0	57
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1276	81	0	2023	0	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1357		1991	678
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			950		1741	103
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	92
cM capacity (veh/h)			576		62	747

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	851	506	674	674	674	60
Volume Left	0	0	0	0	0	0
Volume Right	0	81	0	0	0	60
cSH	1700	1700	1700	1700	1700	747
Volume to Capacity	0.50	0.30	0.40	0.40	0.40	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	2.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.2
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.2
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

3: Clyde Avenue & Site Access #2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	80	1100	55	0	861
Future Volume (Veh/h)	0	80	1100	55	0	861
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	84	1158	58	0	906
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.87	0.79			0.79	
vC, conflicting volume	1640	608			1216	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542	0			730	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	90			100	
cM capacity (veh/h)	411	852			684	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	84	772	444	453	453
Volume Left	0	0	0	0	0
Volume Right	84	0	58	0	0
cSH	852	1700	1700	1700	1700
Volume to Capacity	0.10	0.45	0.26	0.27	0.27
Queue Length 95th (m)	2.5	0.0	0.0	0.0	0.0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.7	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

1: Clyde Avenue & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	145	643	319	179	709	340	407	927	126	450	853	89
Future Volume (vph)	145	643	319	179	709	340	407	927	126	450	853	89
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	153	677	336	188	746	358	428	976	133	474	898	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	677	336	188	746	358	428	1109	0	474	992	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	34.6	34.6	10.5	34.6	34.6	15.4	33.1		15.4	33.1	
Actuated g/C Ratio	0.09	0.29	0.29	0.09	0.29	0.29	0.13	0.28		0.13	0.28	
v/c Ratio	1.03	0.73	0.64	1.27	0.76	0.66	1.02	1.24		1.13	1.09	
Control Delay	136.7	43.9	16.4	202.4	53.6	24.1	99.9	154.4		130.1	98.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	136.7	43.9	16.4	202.4	53.6	24.1	99.9	154.4		130.1	98.7	
LOS	F	D	B	F	D	C	F	F		F	F	
Approach Delay		48.2			67.1			139.2			108.8	
Approach LOS		D			E			F			F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 53 (44%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.27

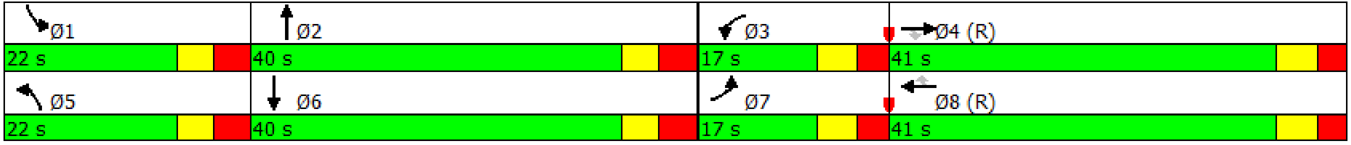
Intersection Signal Delay: 94.6 Intersection LOS: F

Intersection Capacity Utilization 101.6% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	317	900	28	291	830	188	0	472	250	258	476	293
Future Volume (vph)	317	900	28	291	830	188	0	472	250	258	476	293
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%	2%	5%	4%	3%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	334	947	29	306	874	198	0	497	263	272	501	308
Shared Lane Traffic (%)												
Lane Group Flow (vph)	334	976	0	306	874	198	0	497	263	272	501	308
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5		0.5	0.0	0.5	0.5	0.5
Total Lost Time (s)	7.6	7.6		7.6	7.6	7.6		7.1	7.1	7.0	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	16.4	35.4		16.4	35.4	35.4		27.9	44.8	11.0	45.9	45.9
Actuated g/C Ratio	0.14	0.30		0.14	0.30	0.30		0.23	0.37	0.09	0.38	0.38
v/c Ratio	1.45	1.03		1.32	0.90	0.38		0.65	0.44	0.91	0.40	0.42
Control Delay	251.3	65.7		213.6	54.0	10.9		46.3	17.1	88.2	28.2	4.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	251.3	65.7		213.6	54.0	10.9		46.3	17.1	88.2	28.2	4.5
LOS	F	E		F	D	B		D	B	F	C	A
Approach Delay		113.0			83.2			36.2			36.6	
Approach LOS		F			F			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 88 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

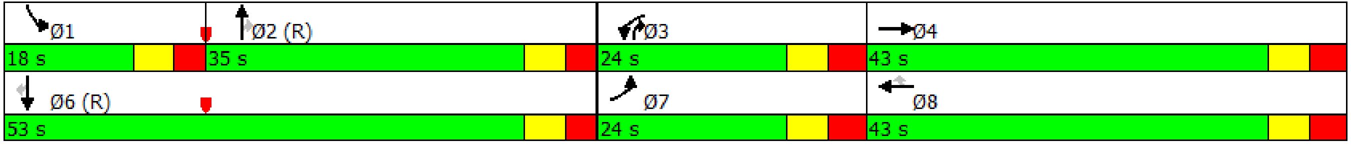
Maximum v/c Ratio: 1.45

Intersection Signal Delay: 72.8 Intersection LOS: E

Intersection Capacity Utilization 101.0% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



Future Total 2020 SAT

5: Clyde Avenue & Lotta Avenue/Merivale Road

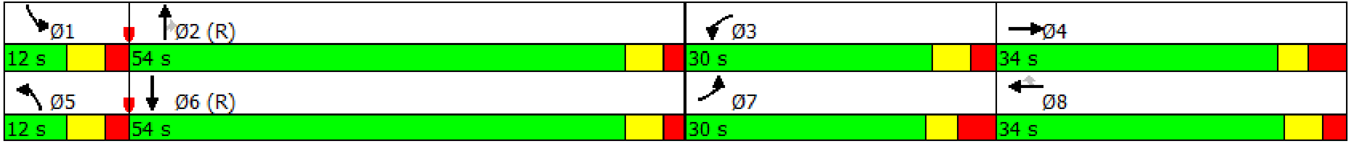
06/28/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	62	66	38	842	77	264	102	1140	719	97	1234	49
Future Volume (vph)	62	66	38	842	77	264	102	1140	719	97	1234	49
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	65	69	40	886	81	278	107	1200	757	102	1299	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	109	0	886	81	278	107	1200	757	102	1351	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	11.0	30.0	30.0	11.0	30.0	
Total Split (s)	30.0	34.0		30.0	34.0	34.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	23.1%	26.2%		23.1%	26.2%	26.2%	9.2%	41.5%	41.5%	9.2%	41.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Total Lost Time (s)	7.3	7.3		6.7	6.7	6.7	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	9.8	12.5		23.3	28.5	28.5	18.1	49.7	49.7	17.6	49.1	
Actuated g/C Ratio	0.08	0.10		0.18	0.22	0.22	0.14	0.38	0.38	0.14	0.38	
v/c Ratio	0.51	0.61		1.50	0.21	0.51	0.45	0.93	0.82	0.45	1.06	
Control Delay	70.7	60.0		272.6	44.9	8.5	59.4	51.5	17.0	59.6	82.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.7	60.0		272.6	44.9	8.5	59.4	51.5	17.0	59.6	82.6	
LOS	E	E		F	D	A	E	D	B	E	F	
Approach Delay		64.0			198.8			39.3			81.0	
Approach LOS		E			F			D			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 60 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 92.7 Intersection LOS: F
Intersection Capacity Utilization 92.1% ICU Level of Service F
Analysis Period (min) 15
Description: the EB Thru movement is forced off after 10s of green if the ped is not actuated

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1156	121	0	1227	0	81
Future Volume (Veh/h)	1156	121	0	1227	0	81
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1217	127	0	1292	0	85
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1344		1711	672
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			969		1419	145
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			576		104	715

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	811	533	431	431	431	85
Volume Left	0	0	0	0	0	0
Volume Right	0	127	0	0	0	85
cSH	1700	1700	1700	1700	1700	715
Volume to Capacity	0.48	0.31	0.25	0.25	0.25	0.12
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	3.1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.7
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.7
Approach LOS						B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

3: Clyde Avenue & Site Access #2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	112	1347	87	0	1351
Future Volume (Veh/h)	0	112	1347	87	0	1351
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	118	1418	92	0	1422
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.79	0.66			0.66	
vC, conflicting volume	2175	755			1510	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	447	0			743	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	84			100	
cM capacity (veh/h)	428	716			568	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	945	565	711	711
Volume Left	0	0	0	0	0
Volume Right	118	0	92	0	0
cSH	716	1700	1700	1700	1700
Volume to Capacity	0.16	0.56	0.33	0.42	0.42
Queue Length 95th (m)	4.5	0.0	0.0	0.0	0.0
Control Delay (s)	11.0	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.0	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix H

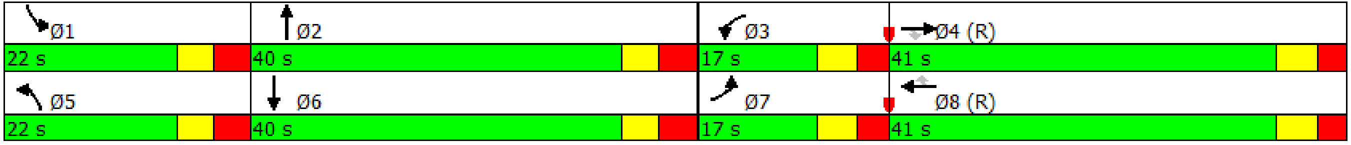
2025 Future Background Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	180	1319	185	66	740	403	145	816	104	491	564	44
Future Volume (vph)	180	1319	185	66	740	403	145	816	104	491	564	44
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	2%	5%	3%	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	189	1388	195	69	779	424	153	859	109	517	594	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	189	1388	195	69	779	424	153	968	0	517	640	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	38.4	38.4	9.2	34.6	34.6	11.2	33.1		15.4	37.3	
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.29	0.29	0.09	0.28		0.13	0.31	
v/c Ratio	1.28	1.35	0.41	0.53	0.82	0.80	0.53	1.08		1.23	0.62	
Control Delay	210.4	196.1	11.7	74.1	42.4	23.3	58.1	94.4		165.7	38.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	210.4	196.1	11.7	74.1	42.4	23.3	58.1	94.4		165.7	38.5	
LOS	F	F	B	E	D	C	E	F		F	D	
Approach Delay		177.3			37.7			89.4			95.4	
Approach LOS		F			D			F			F	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.35
Intersection Signal Delay: 107.6 Intersection LOS: F
Intersection Capacity Utilization 107.7% ICU Level of Service G
Analysis Period (min) 15
Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	265	1208	9	146	1072	448	0	678	253	374	390	339
Future Volume (vph)	265	1208	9	146	1072	448	0	678	253	374	390	339
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	279	1272	9	154	1128	472	0	714	266	394	411	357
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	1281	0	154	1128	472	0	714	266	394	411	357
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	19.0	40.2		16.8	38.0	38.0		30.0	48.8	13.0	48.0	48.0
Actuated g/C Ratio	0.16	0.34		0.14	0.32	0.32		0.25	0.41	0.11	0.40	0.40
v/c Ratio	1.04	1.13		0.65	1.05	0.82		0.84	0.41	1.11	0.30	0.45
Control Delay	69.0	90.3		61.6	82.0	36.6		53.2	15.7	128.6	25.4	4.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	90.3		61.6	82.0	36.6		53.2	15.7	128.6	25.4	4.5
LOS	E	F		E	F	D		D	B	F	C	A
Approach Delay		86.5			68.0			43.0			54.0	
Approach LOS		F			E			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 45 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

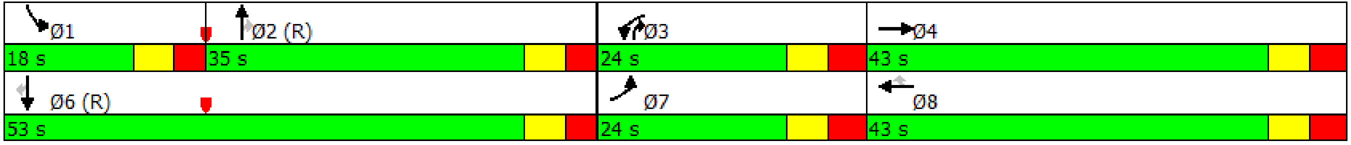
Maximum v/c Ratio: 1.13

Intersection Signal Delay: 65.8 Intersection LOS: E

Intersection Capacity Utilization 98.0% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



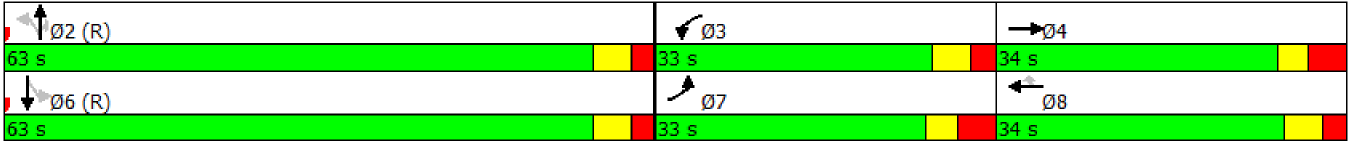
5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	37	81	23	468	41	87	1	1031	797	55	833	8
Future Volume (vph)	37	81	23	468	41	87	1	1031	797	55	833	8
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	85	24	493	43	92	1	1085	839	58	877	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	109	0	493	43	92	1	1085	839	58	885	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2	6		
Detector Phase	7	4		3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	30.0	30.0	30.0	30.0	30.0	
Total Split (s)	33.0	34.0		33.0	34.0	34.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	25.4%	26.2%		25.4%	26.2%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	10.3	15.2		25.1	32.5	32.5	74.7	74.7	74.7	74.7	74.7	
Actuated g/C Ratio	0.08	0.12		0.19	0.25	0.25	0.57	0.57	0.57	0.57	0.57	
v/c Ratio	0.30	0.53		0.78	0.10	0.21	0.00	0.56	0.71	0.31	0.46	
Control Delay	61.4	57.6		59.1	38.3	8.4	15.0	19.7	5.4	22.2	17.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.4	57.6		59.1	38.3	8.4	15.0	19.7	5.4	22.2	17.8	
LOS	E	E		E	D	A	B	B	A	C	B	
Approach Delay		58.6			50.3			13.5			18.1	
Approach LOS		E			D			B			B	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 83.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1915	13	0	1208	0	6
Future Volume (Veh/h)	1915	13	0	1208	0	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2016	14	0	1272	0	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			2030		2447	1015
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1611		2208	157
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			280		26	601

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1344	686	424	424	424	6
Volume Left	0	0	0	0	0	0
Volume Right	0	14	0	0	0	6
cSH	1700	1700	1700	1700	1700	601
Volume to Capacity	0.79	0.40	0.25	0.25	0.25	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.0
Lane LOS						B
Approach Delay (s)	0.0		0.0			11.0
Approach LOS						B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	9	1056	9	0	815
Future Volume (Veh/h)	0	9	1056	9	0	815
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	9	1112	9	0	858
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.88	0.80			0.80	
vC, conflicting volume	1546	560			1121	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	554	0			662	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	408	872			741	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	9	741	380	429	429
Volume Left	0	0	0	0	0
Volume Right	9	0	9	0	0
cSH	872	1700	1700	1700	1700
Volume to Capacity	0.01	0.44	0.22	0.25	0.25
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.2	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	41.1%	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)	129	810	214	146	1376	601	348	823	94	446	590	97
Future Volume (vph)	129	810	214	146	1376	601	348	823	94	446	590	97
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	132	827	218	149	1404	613	355	840	96	455	602	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	827	218	149	1404	613	355	936	0	455	701	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0		21.0	40.0	
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%		16.2%	30.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.5	44.6	44.6	11.5	44.6	44.6	15.9	33.1		14.4	31.6	
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.34	0.34	0.12	0.25		0.11	0.24	
v/c Ratio	0.89	0.75	0.41	1.00	1.21	1.03	0.88	1.13		1.25	0.89	
Control Delay	106.9	42.8	7.8	97.3	125.1	48.4	88.2	124.1		179.9	60.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	106.9	42.8	7.8	97.3	125.1	48.4	88.2	124.1		179.9	60.6	
LOS	F	D	A	F	F	D	F	F		F	E	
Approach Delay		43.5			101.5			114.3			107.6	
Approach LOS		D			F			F			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 19 (15%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

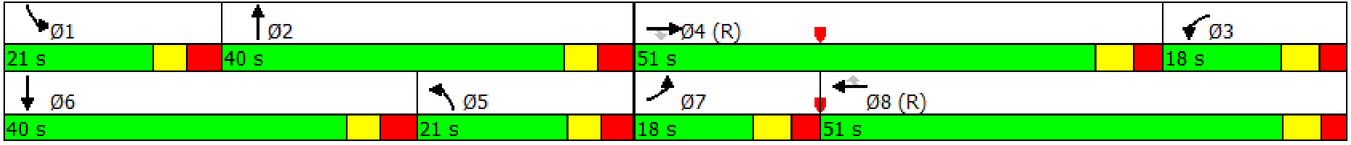
Maximum v/c Ratio: 1.25

Intersection Signal Delay: 93.8	Intersection LOS: F
Intersection Capacity Utilization 111.1%	ICU Level of Service H

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	290	1182	21	262	1370	300	0	508	252	425	742	452
Future Volume (vph)	290	1182	21	262	1370	300	0	508	252	425	742	452
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	296	1206	21	267	1398	306	0	518	257	434	757	461
Shared Lane Traffic (%)												
Lane Group Flow (vph)	296	1227	0	267	1398	306	0	518	257	434	757	461
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	28.0	50.0		28.0	50.0	50.0		35.0	28.0	17.0	52.0	52.0
Total Split (%)	21.5%	38.5%		21.5%	38.5%	38.5%		26.9%	21.5%	13.1%	40.0%	40.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	23.0	45.3		22.7	45.0	45.0		30.0	54.7	12.0	47.0	47.0
Actuated g/C Ratio	0.18	0.35		0.17	0.35	0.35		0.23	0.42	0.09	0.36	0.36
v/c Ratio	0.99	1.04		0.90	1.19	0.52		0.66	0.39	1.43	0.62	0.62
Control Delay	85.9	72.8		85.3	133.0	20.7		46.9	11.7	253.9	36.8	12.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	85.9	72.8		85.3	133.0	20.7		46.9	11.7	253.9	36.8	12.1
LOS	F	E		F	F	C		D	B	F	D	B
Approach Delay		75.4			109.1			35.2			87.0	
Approach LOS		E			F			D			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 45 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

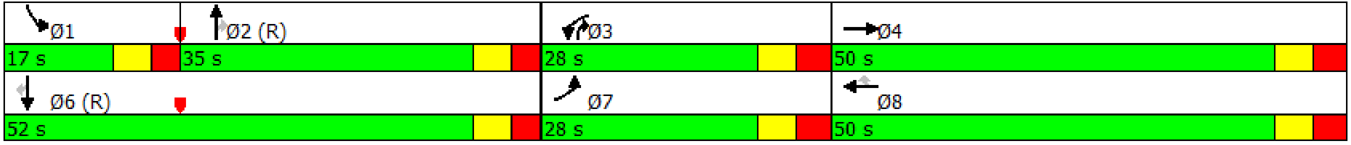
Maximum v/c Ratio: 1.43

Intersection Signal Delay: 84.6 Intersection LOS: F

Intersection Capacity Utilization 109.7% ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road

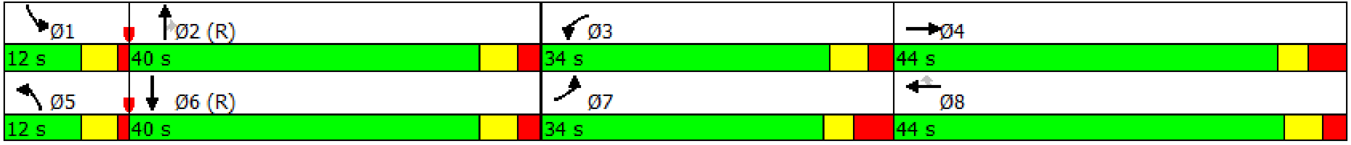


5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	44	68	38	964	155	222	76	951	730	108	1135	24
Future Volume (vph)	44	68	38	964	155	222	76	951	730	108	1135	24
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	45	69	39	984	158	227	78	970	745	110	1158	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	108	0	984	158	227	78	970	745	110	1182	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	9.5	30.0	30.0	9.5	30.0	
Total Split (s)	34.0	44.0		34.0	44.0	44.0	12.0	40.0	40.0	12.0	40.0	
Total Split (%)	26.2%	33.8%		26.2%	33.8%	33.8%	9.2%	30.8%	30.8%	9.2%	30.8%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	1.0	2.3	2.3	1.0	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	0.5	-1.0	-1.0	0.5	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.6	14.6		29.0	35.4	35.4	11.9	48.7	48.7	17.6	54.4	
Actuated g/C Ratio	0.08	0.11		0.22	0.27	0.27	0.09	0.37	0.37	0.14	0.42	
v/c Ratio	0.33	0.52		1.34	0.33	0.40	0.50	0.76	0.80	0.48	0.84	
Control Delay	61.7	51.6		206.6	63.3	27.0	66.8	40.9	14.4	39.1	41.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.7	51.6		206.6	63.3	27.0	66.8	40.9	14.4	39.1	41.6	
LOS	E	D		F	E	C	E	D	B	D	D	
Approach Delay		54.5			160.3			31.0			41.4	
Approach LOS		D			F			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 73.1	Intersection LOS: E
Intersection Capacity Utilization 89.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1350	36	0	2122	0	26
Future Volume (Veh/h)	1350	36	0	2122	0	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1421	38	0	2234	0	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.78		0.78	0.78
vC, conflicting volume			1459		2185	730
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1016		1950	76
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			527		44	753

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	947	512	745	745	745	27
Volume Left	0	0	0	0	0	0
Volume Right	0	38	0	0	0	27
cSH	1700	1700	1700	1700	1700	753
Volume to Capacity	0.56	0.30	0.44	0.44	0.44	0.04
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.0
Lane LOS						A
Approach Delay (s)	0.0		0.0			10.0
Approach LOS						A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

Future Background 2025 PM

3: Clyde Avenue & Site Access #2 06/29/2017

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	40	1226	24	0	950
Future Volume (Veh/h)	0	40	1226	24	0	950
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	42	1291	25	0	1000
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.85	0.75			0.75	
vC, conflicting volume	1804	658			1316	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540	0			746	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			100	
cM capacity (veh/h)	399	810			641	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	42	861	455	500	500
Volume Left	0	0	0	0	0
Volume Right	42	0	25	0	0
cSH	810	1700	1700	1700	1700
Volume to Capacity	0.05	0.51	0.27	0.29	0.29
Queue Length 95th (m)	1.2	0.0	0.0	0.0	0.0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.7	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	46.6%	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)	160	693	353	197	783	375	433	989	139	464	942	98
Future Volume (vph)	160	693	353	197	783	375	433	989	139	464	942	98
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	168	729	372	207	824	395	456	1041	146	488	992	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	729	372	207	824	395	456	1187	0	488	1095	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	34.6	34.6	10.5	34.6	34.6	15.4	33.1		15.4	33.1	
Actuated g/C Ratio	0.09	0.29	0.29	0.09	0.29	0.29	0.13	0.28		0.13	0.28	
v/c Ratio	1.14	0.79	0.71	1.40	0.84	0.73	1.08	1.33		1.16	1.20	
Control Delay	163.8	46.4	20.0	246.6	56.9	29.1	117.0	190.0		141.1	140.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	163.8	46.4	20.0	246.6	56.9	29.1	117.0	190.0		141.1	140.6	
LOS	F	D	B	F	E	C	F	F		F	F	
Approach Delay		54.2			76.8			169.7			140.8	
Approach LOS		D			E			F			F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 53 (44%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.40

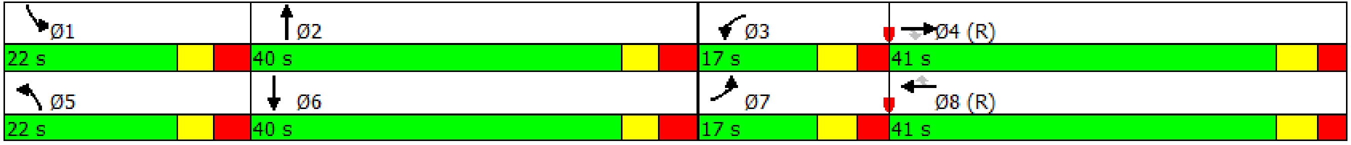
Intersection Signal Delay: 114.8 Intersection LOS: F

Intersection Capacity Utilization 105.4% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	350	969	22	292	916	207	0	521	277	285	526	323
Future Volume (vph)	350	969	22	292	916	207	0	521	277	285	526	323
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%	2%	5%	4%	3%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	368	1020	23	307	964	218	0	548	292	300	554	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1043	0	307	964	218	0	548	292	300	554	340
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5		0.5	0.0	0.5	0.5	0.5
Total Lost Time (s)	7.6	7.6		7.6	7.6	7.6		7.1	7.1	7.0	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	16.4	35.4		16.4	35.4	35.4		27.9	44.8	11.0	45.9	45.9
Actuated g/C Ratio	0.14	0.30		0.14	0.30	0.30		0.23	0.37	0.09	0.38	0.38
v/c Ratio	1.59	1.10		1.33	0.99	0.42		0.72	0.49	1.01	0.44	0.45
Control Delay	309.4	87.0		215.2	69.6	13.1		48.5	18.9	108.2	29.0	4.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	309.4	87.0		215.2	69.6	13.1		48.5	18.9	108.2	29.0	4.6
LOS	F	F		F	E	B		D	B	F	C	A
Approach Delay		145.0			91.4			38.2			41.9	
Approach LOS		F			F			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 88 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

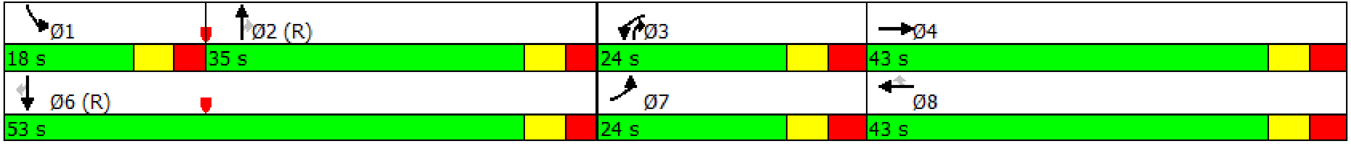
Maximum v/c Ratio: 1.59

Intersection Signal Delay: 85.7 Intersection LOS: F

Intersection Capacity Utilization 104.6% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	68	73	42	921	85	263	112	1249	794	108	1362	54
Future Volume (vph)	68	73	42	921	85	263	112	1249	794	108	1362	54
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	72	77	44	969	89	277	118	1315	836	114	1434	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	121	0	969	89	277	118	1315	836	114	1491	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	11.0	30.0	30.0	11.0	30.0	
Total Split (s)	30.0	34.0		30.0	34.0	34.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	23.1%	26.2%		23.1%	26.2%	26.2%	9.2%	41.5%	41.5%	9.2%	41.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Total Lost Time (s)	7.3	7.3		6.7	6.7	6.7	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.4	13.3		23.3	28.9	28.9	18.6	48.1	48.1	18.4	47.8	
Actuated g/C Ratio	0.08	0.10		0.18	0.22	0.22	0.14	0.37	0.37	0.14	0.37	
v/c Ratio	0.53	0.64		1.65	0.23	0.51	0.49	1.05	0.92	0.48	1.20	
Control Delay	71.0	61.6		331.9	44.8	8.4	60.1	79.3	27.6	60.1	136.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.0	61.6		331.9	44.8	8.4	60.1	79.3	27.6	60.1	136.7	
LOS	E	E		F	D	A	E	E	C	E	F	
Approach Delay		65.1			245.7			59.3			131.3	
Approach LOS		E			F			E			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 60 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.65

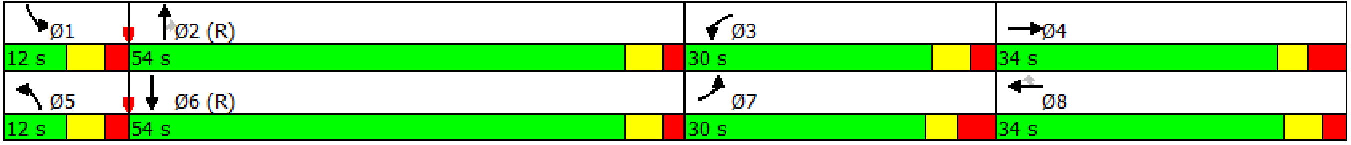
Intersection Signal Delay: 126.9 Intersection LOS: F

Intersection Capacity Utilization 99.0% ICU Level of Service F

Analysis Period (min) 15

Description: the EB Thru movement is forced off after 10s of green if the ped is not actuated

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1295	59	0	1355	0	37
Future Volume (Veh/h)	1295	59	0	1355	0	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1363	62	0	1426	0	39
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1425		1869	712
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1022		1580	127
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			537		79	716

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	909	516	475	475	475	39
Volume Left	0	0	0	0	0	0
Volume Right	0	62	0	0	0	39
cSH	1700	1700	1700	1700	1700	716
Volume to Capacity	0.53	0.30	0.28	0.28	0.28	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	1.3
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.3
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.3
Approach LOS						B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	55	1506	40	0	1491
Future Volume (Veh/h)	0	55	1506	40	0	1491
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	58	1585	42	0	1569
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.79	0.66			0.66	
vC, conflicting volume	2390	814			1627	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	705	0			906	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			100	
cM capacity (veh/h)	293	711			490	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	1057	570	784	784
Volume Left	0	0	0	0	0
Volume Right	58	0	42	0	0
cSH	711	1700	1700	1700	1700
Volume to Capacity	0.08	0.62	0.34	0.46	0.46
Queue Length 95th (m)	2.0	0.0	0.0	0.0	0.0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.5	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix I

2025 Total Future Analysis

1: Clyde Avenue & Baseline Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰↰	↑↱	
Traffic Volume (vph)	180	1325	185	66	740	403	149	825	104	503	564	44
Future Volume (vph)	180	1325	185	66	740	403	149	825	104	503	564	44
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	2%	5%	3%	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	189	1395	195	69	779	424	157	868	109	529	594	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	189	1395	195	69	779	424	157	977	0	529	640	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	38.4	38.4	9.2	34.6	34.6	11.3	33.1		15.4	37.2	
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.29	0.29	0.09	0.28		0.13	0.31	
v/c Ratio	1.28	1.35	0.41	0.53	0.82	0.80	0.53	1.09		1.26	0.62	
Control Delay	210.4	198.9	11.7	74.1	42.4	23.3	58.1	97.6		176.4	38.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	210.4	198.9	11.7	74.1	42.4	23.3	58.1	97.6		176.4	38.7	
LOS	F	F	B	E	D	C	E	F		F	D	
Approach Delay		179.6			37.7			92.2			101.0	
Approach LOS		F			D			F			F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.35

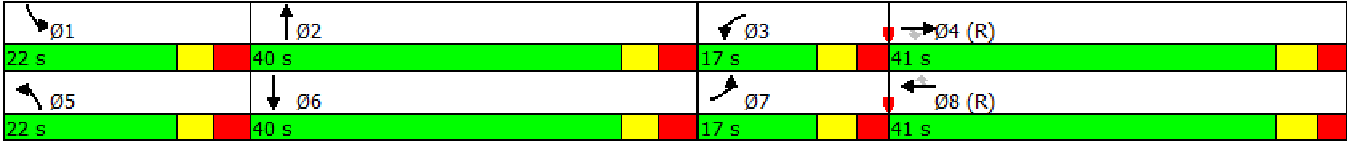
Intersection Signal Delay: 110.2 Intersection LOS: F

Intersection Capacity Utilization 108.5% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	265	1215	11	155	1072	448	0	678	253	374	390	339
Future Volume (vph)	265	1215	11	155	1072	448	0	678	253	374	390	339
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	279	1279	12	163	1128	472	0	714	266	394	411	357
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	1291	0	163	1128	472	0	714	266	394	411	357
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	19.0	39.9		17.1	38.0	38.0		30.0	49.1	13.0	48.0	48.0
Actuated g/C Ratio	0.16	0.33		0.14	0.32	0.32		0.25	0.41	0.11	0.40	0.40
v/c Ratio	1.04	1.15		0.67	1.05	0.82		0.84	0.41	1.11	0.30	0.45
Control Delay	69.2	98.2		62.8	82.0	36.6		53.2	15.6	128.6	25.4	4.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	98.2		62.8	82.0	36.6		53.2	15.6	128.6	25.4	4.5
LOS	E	F		E	F	D		D	B	F	C	A
Approach Delay		93.1			68.0			43.0			54.0	
Approach LOS		F			E			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 45 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

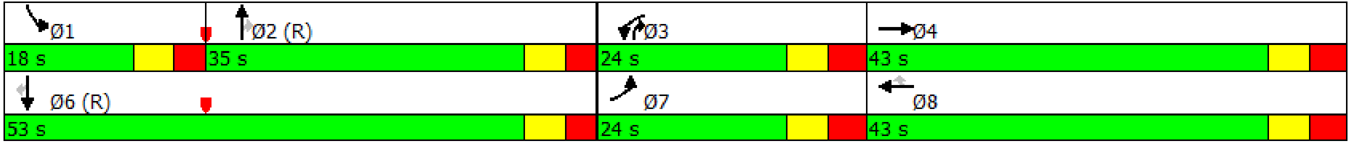
Maximum v/c Ratio: 1.15

Intersection Signal Delay: 67.7 Intersection LOS: E

Intersection Capacity Utilization 98.0% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



Future Total 2025 AM
5: Clyde Avenue & Lotta Avenue/Merivale Road

06/28/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	37	81	23	470	41	96	1	1034	797	55	833	8
Future Volume (vph)	37	81	23	470	41	96	1	1034	797	55	833	8
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	85	24	495	43	101	1	1088	839	58	877	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	109	0	495	43	101	1	1088	839	58	885	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2	6		
Detector Phase	7	4		3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	30.0	30.0	30.0	30.0	30.0	
Total Split (s)	33.0	34.0		33.0	34.0	34.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	25.4%	26.2%		25.4%	26.2%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	10.3	15.2		25.2	32.6	32.6	74.6	74.6	74.6	74.6	74.6	
Actuated g/C Ratio	0.08	0.12		0.19	0.25	0.25	0.57	0.57	0.57	0.57	0.57	
v/c Ratio	0.30	0.53		0.79	0.10	0.23	0.00	0.56	0.71	0.31	0.46	
Control Delay	61.4	57.6		59.2	38.3	8.2	15.0	19.8	5.4	22.4	17.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.4	57.6		59.2	38.3	8.2	15.0	19.8	5.4	22.4	17.8	
LOS	E	E		E	D	A	B	B	A	C	B	
Approach Delay		58.6			49.7			13.6			18.1	
Approach LOS		E			D			B			B	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

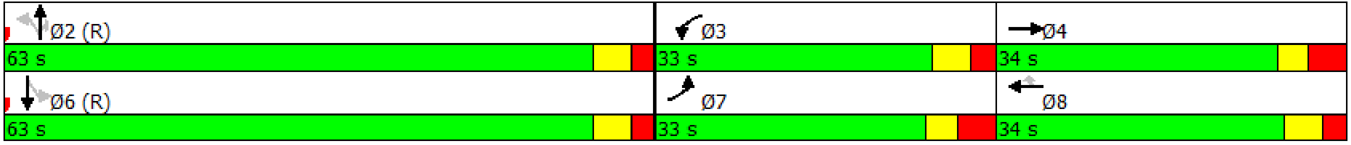
Maximum v/c Ratio: 0.79

Intersection Signal Delay: 22.9 Intersection LOS: C

Intersection Capacity Utilization 83.0% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1910	37	0	1208	0	20
Future Volume (Veh/h)	1910	37	0	1208	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2011	39	0	1272	0	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			2050		2454	1025
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1639		2219	171
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			273		26	588

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1341	709	424	424	424	21
Volume Left	0	0	0	0	0	0
Volume Right	0	39	0	0	0	21
cSH	1700	1700	1700	1700	1700	588
Volume to Capacity	0.79	0.42	0.25	0.25	0.25	0.04
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.3
Lane LOS						B
Approach Delay (s)	0.0		0.0			11.3
Approach LOS						B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

3: Clyde Avenue & Site Access #2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	27	1051	26	0	815
Future Volume (Veh/h)	0	27	1051	26	0	815
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	28	1106	27	0	858
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.88	0.80			0.80	
vC, conflicting volume	1548	566			1133	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	552	0			673	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	408	870			733	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	28	737	396	429	429
Volume Left	0	0	0	0	0
Volume Right	28	0	27	0	0
cSH	870	1700	1700	1700	1700
Volume to Capacity	0.03	0.43	0.23	0.25	0.25
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.3	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	41.5%	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)	129	820	214	146	1376	601	358	843	94	466	590	97
Future Volume (vph)	129	820	214	146	1376	601	358	843	94	466	590	97
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	132	837	218	149	1404	613	365	860	96	476	602	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	837	218	149	1404	613	365	956	0	476	701	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0		21.0	40.0	
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%		16.2%	30.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	11.5	44.6	44.6	11.5	44.6	44.6	15.9	33.1		14.4	31.6	
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.34	0.34	0.12	0.25		0.11	0.24	
v/c Ratio	0.89	0.76	0.41	1.00	1.21	1.03	0.91	1.15		1.31	0.89	
Control Delay	106.9	43.2	7.8	97.3	125.1	48.4	91.1	131.9		201.5	60.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	106.9	43.2	7.8	97.3	125.1	48.4	91.1	131.9		201.5	60.6	
LOS	F	D	A	F	F	D	F	F		F	E	
Approach Delay		43.8			101.5			120.6			117.6	
Approach LOS		D			F			F			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 19 (15%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.31

Intersection Signal Delay: 97.3

Intersection LOS: F

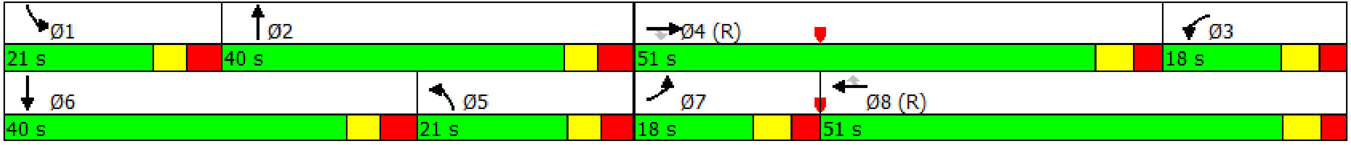
Intersection Capacity Utilization 112.3%

ICU Level of Service H

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	290	1197	26	277	1370	300	0	508	252	425	742	452
Future Volume (vph)	290	1197	26	277	1370	300	0	508	252	425	742	452
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	296	1221	27	283	1398	306	0	518	257	434	757	461
Shared Lane Traffic (%)												
Lane Group Flow (vph)	296	1248	0	283	1398	306	0	518	257	434	757	461
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	28.0	50.0		28.0	50.0	50.0		35.0	28.0	17.0	52.0	52.0
Total Split (%)	21.5%	38.5%		21.5%	38.5%	38.5%		26.9%	21.5%	13.1%	40.0%	40.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	-2.1	-2.1		-2.1	-2.1	-2.1		-1.6	-3.1	-1.5	-1.6	-1.6
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	23.0	45.0		23.0	45.0	45.0		30.0	55.0	12.0	47.0	47.0
Actuated g/C Ratio	0.18	0.35		0.18	0.35	0.35		0.23	0.42	0.09	0.36	0.36
v/c Ratio	0.99	1.07		0.95	1.19	0.52		0.66	0.38	1.43	0.62	0.62
Control Delay	85.8	80.0		93.0	133.0	20.7		47.0	11.6	253.9	36.8	12.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	80.0		93.0	133.0	20.7		47.0	11.6	253.9	36.8	12.1
LOS	F	E		F	F	C		D	B	F	D	B
Approach Delay		81.1			110.0			35.2			87.0	
Approach LOS		F			F			D			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 45 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

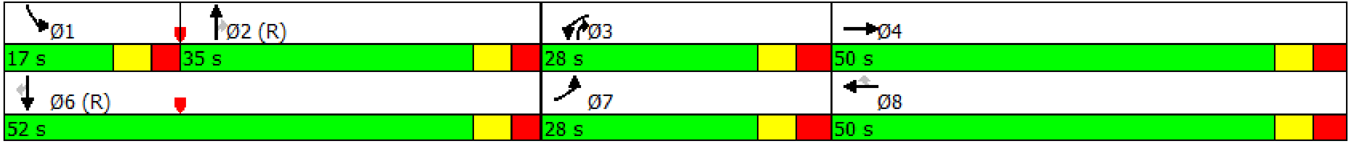
Maximum v/c Ratio: 1.43

Intersection Signal Delay: 86.4 Intersection LOS: F

Intersection Capacity Utilization 109.7% ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	44	68	38	969	155	237	76	956	730	108	1135	24
Future Volume (vph)	44	68	38	969	155	237	76	956	730	108	1135	24
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	45	69	39	989	158	242	78	976	745	110	1158	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	108	0	989	158	242	78	976	745	110	1182	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	9.5	30.0	30.0	9.5	30.0	
Total Split (s)	34.0	44.0		34.0	44.0	44.0	12.0	40.0	40.0	12.0	40.0	
Total Split (%)	26.2%	33.8%		26.2%	33.8%	33.8%	9.2%	30.8%	30.8%	9.2%	30.8%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	1.0	2.3	2.3	1.0	2.3	
Lost Time Adjust (s)	-1.8	-1.8		-1.2	-1.2	-1.2	0.5	-1.0	-1.0	0.5	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.6	14.6		29.0	35.4	35.4	11.9	48.7	48.7	17.6	54.4	
Actuated g/C Ratio	0.08	0.11		0.22	0.27	0.27	0.09	0.37	0.37	0.14	0.42	
v/c Ratio	0.33	0.52		1.35	0.33	0.42	0.50	0.77	0.80	0.48	0.84	
Control Delay	61.7	51.6		209.0	62.6	26.4	66.8	41.0	14.6	39.1	41.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.7	51.6		209.0	62.6	26.4	66.8	41.0	14.6	39.1	41.6	
LOS	E	D		F	E	C	E	D	B	D	D	
Approach Delay		54.5			160.5			31.2			41.4	
Approach LOS		D			F			C			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

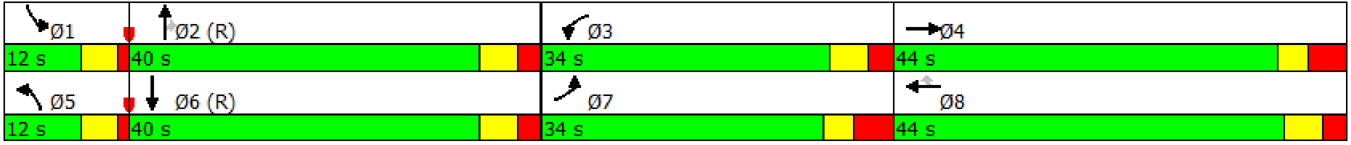
Maximum v/c Ratio: 1.35

Intersection Signal Delay: 73.6 Intersection LOS: E

Intersection Capacity Utilization 89.5% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1339	77	0	2122	0	57
Future Volume (Veh/h)	1339	77	0	2122	0	57
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1409	81	0	2234	0	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.77		0.77	0.77
vC, conflicting volume			1490		2194	745
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1046		1957	82
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	92
cM capacity (veh/h)			511		43	743

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	939	551	745	745	745	60
Volume Left	0	0	0	0	0	0
Volume Right	0	81	0	0	0	60
cSH	1700	1700	1700	1700	1700	743
Volume to Capacity	0.55	0.32	0.44	0.44	0.44	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	2.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.3
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.3
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	80	1215	55	0	950
Future Volume (Veh/h)	0	80	1215	55	0	950
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	84	1279	58	0	1000
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.84	0.74			0.74	
vC, conflicting volume	1808	668			1337	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	539	0			767	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	90			100	
cM capacity (veh/h)	399	808			627	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	84	853	484	500	500
Volume Left	0	0	0	0	0
Volume Right	84	0	58	0	0
cSH	808	1700	1700	1700	1700
Volume to Capacity	0.10	0.50	0.28	0.29	0.29
Queue Length 95th (m)	2.6	0.0	0.0	0.0	0.0
Control Delay (s)	10.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	10.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.2%	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)	160	708	353	197	783	375	446	1016	139	494	942	98
Future Volume (vph)	160	708	353	197	783	375	446	1016	139	494	942	98
Confl. Peds. (#/hr)	194		157	157		194	158		247	247		194
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	168	745	372	207	824	395	469	1069	146	520	992	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	745	372	207	824	395	469	1215	0	520	1095	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9		11.6	39.9	
Total Split (s)	17.0	41.0	41.0	17.0	41.0	41.0	22.0	40.0		22.0	40.0	
Total Split (%)	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%	18.3%	33.3%		18.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6		3.3	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9		6.6	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	10.5	34.6	34.6	10.5	34.6	34.6	15.4	33.1		15.4	33.1	
Actuated g/C Ratio	0.09	0.29	0.29	0.09	0.29	0.29	0.13	0.28		0.13	0.28	
v/c Ratio	1.14	0.80	0.71	1.40	0.84	0.73	1.11	1.36		1.24	1.20	
Control Delay	163.8	47.3	20.6	246.6	56.9	29.1	126.3	203.1		168.4	140.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	163.8	47.3	20.6	246.6	56.9	29.1	126.3	203.1		168.4	140.6	
LOS	F	D	C	F	E	C	F	F		F	F	
Approach Delay		54.8			76.8			181.7			149.6	
Approach LOS		D			E			F			F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 53 (44%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.40

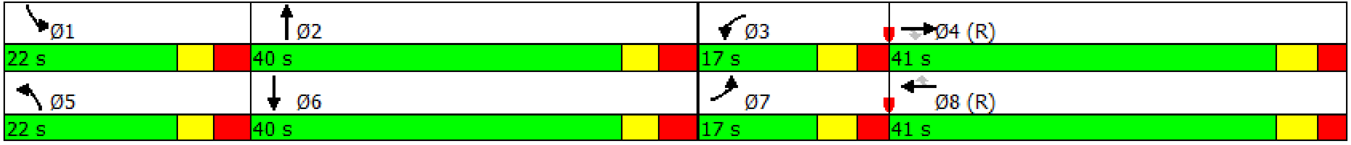
Intersection Signal Delay: 121.0 Intersection LOS: F

Intersection Capacity Utilization 107.0% ICU Level of Service G

Analysis Period (min) 15

Description: Bus lanes not included in analysis

Splits and Phases: 1: Clyde Avenue & Baseline Road



4: Merivale Road & Baseline Road

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↑↑	↱	↰↰	↑↑	↱
Traffic Volume (vph)	350	989	29	315	916	207	0	521	277	285	526	323
Future Volume (vph)	350	989	29	315	916	207	0	521	277	285	526	323
Confl. Peds. (#/hr)	33		20	20		33	23		39	39		23
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%	2%	5%	4%	3%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	368	1041	31	332	964	218	0	548	292	300	554	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1072	0	332	964	218	0	548	292	300	554	340
Turn Type	Prot	NA		Prot	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	8		2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0		10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	12.1	41.1		12.1	41.1	41.1		34.6	12.1	11.5	34.6	34.6
Total Split (s)	24.0	43.0		24.0	43.0	43.0		35.0	24.0	18.0	53.0	53.0
Total Split (%)	20.0%	35.8%		20.0%	35.8%	35.8%		29.2%	20.0%	15.0%	44.2%	44.2%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.4	3.4		3.4	3.4	3.4		2.9	3.4	2.8	2.9	2.9
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5		0.5	0.0	0.5	0.5	0.5
Total Lost Time (s)	7.6	7.6		7.6	7.6	7.6		7.1	7.1	7.0	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag	Lag		Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None		None	None	None		C-Max	None	None	C-Max	C-Max
Act Effct Green (s)	16.4	35.4		16.4	35.4	35.4		27.9	44.8	11.0	45.9	45.9
Actuated g/C Ratio	0.14	0.30		0.14	0.30	0.30		0.23	0.37	0.09	0.38	0.38
v/c Ratio	1.59	1.13		1.44	0.99	0.42		0.72	0.49	1.01	0.44	0.45
Control Delay	309.3	99.6		257.5	69.6	13.1		48.5	18.9	108.2	29.0	4.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	309.3	99.6		257.5	69.6	13.1		48.5	18.9	108.2	29.0	4.6
LOS	F	F		F	E	B		D	B	F	C	A
Approach Delay		153.2			102.7			38.2			41.9	
Approach LOS		F			F			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 88 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

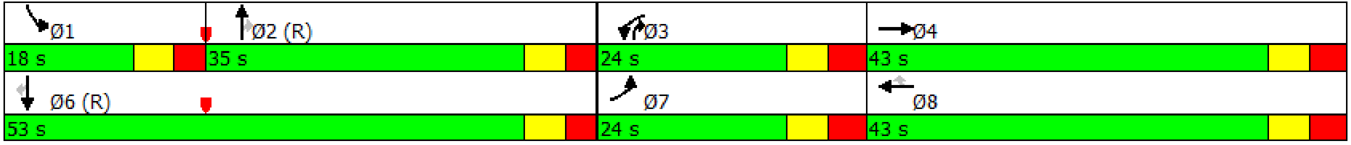
Maximum v/c Ratio: 1.59

Intersection Signal Delay: 91.9 Intersection LOS: F

Intersection Capacity Utilization 104.6% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Merivale Road & Baseline Road



5: Clyde Avenue & Lotta Avenue/Merivale Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰↰	↑	↱	↰	↑↑	↱	↰	↑↱	
Traffic Volume (vph)	68	73	42	928	85	286	112	1257	794	108	1362	54
Future Volume (vph)	68	73	42	928	85	286	112	1257	794	108	1362	54
Confl. Peds. (#/hr)	6		2	2		6	14		8	8		14
Confl. Bikes (#/hr)			1			1						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	72	77	44	977	89	301	118	1323	836	114	1434	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	121	0	977	89	301	118	1323	836	114	1491	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	33.8		11.2	33.2	33.2	11.0	30.0	30.0	11.0	30.0	
Total Split (s)	30.0	34.0		30.0	34.0	34.0	12.0	54.0	54.0	12.0	54.0	
Total Split (%)	23.1%	26.2%		23.1%	26.2%	26.2%	9.2%	41.5%	41.5%	9.2%	41.5%	
Yellow Time (s)	3.0	3.0		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	3.8	3.8		2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Total Lost Time (s)	7.3	7.3		6.7	6.7	6.7	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.4	13.3		23.3	28.9	28.9	18.6	48.1	48.1	18.4	47.8	
Actuated g/C Ratio	0.08	0.10		0.18	0.22	0.22	0.14	0.37	0.37	0.14	0.37	
v/c Ratio	0.53	0.64		1.66	0.23	0.55	0.49	1.06	0.92	0.48	1.20	
Control Delay	71.0	61.6		337.7	44.8	10.6	60.1	81.2	28.1	60.1	136.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.0	61.6		337.7	44.8	10.6	60.1	81.2	28.1	60.1	136.7	
LOS	E	E		F	D	B	E	F	C	E	F	
Approach Delay		65.1			246.6			60.6			131.3	
Approach LOS		E			F			E			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 60 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.66

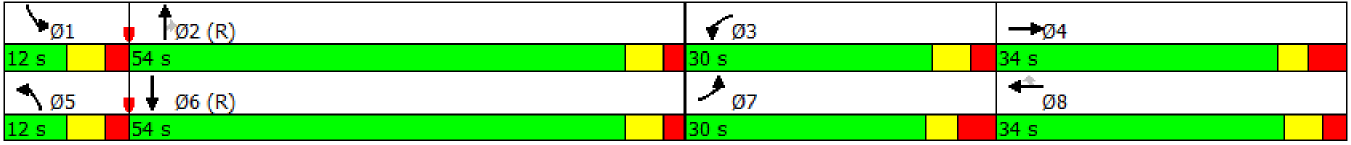
Intersection Signal Delay: 128.3 Intersection LOS: F

Intersection Capacity Utilization 99.2% ICU Level of Service F

Analysis Period (min) 15

Description: the EB Thru movement is forced off after 10s of green if the ped is not actuated

Splits and Phases: 5: Clyde Avenue & Lotta Avenue/Merivale Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱			↑↑↑		↱
Traffic Volume (veh/h)	1278	121	0	1355	0	81
Future Volume (Veh/h)	1278	121	0	1355	0	81
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1345	127	0	1426	0	85
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	85					
pX, platoon unblocked			0.79		0.79	0.79
vC, conflicting volume			1472		1884	736
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1066		1587	135
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			513		78	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	897	575	475	475	475	85
Volume Left	0	0	0	0	0	0
Volume Right	0	127	0	0	0	85
cSH	1700	1700	1700	1700	1700	703
Volume to Capacity	0.53	0.34	0.28	0.28	0.28	0.12
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	3.1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.8
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.8
Approach LOS						B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

3: Clyde Avenue & Site Access #2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
	↙	↖	↑	↗	↘	↓
Lane Configurations		↱	↑↱			↑↑
Traffic Volume (veh/h)	0	112	1489	87	0	1491
Future Volume (Veh/h)	0	112	1489	87	0	1491
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	118	1567	92	0	1569
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			296			120
pX, platoon unblocked	0.79	0.66			0.66	
vC, conflicting volume	2398	830			1659	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	714	0			955	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	83			100	
cM capacity (veh/h)	289	711			469	

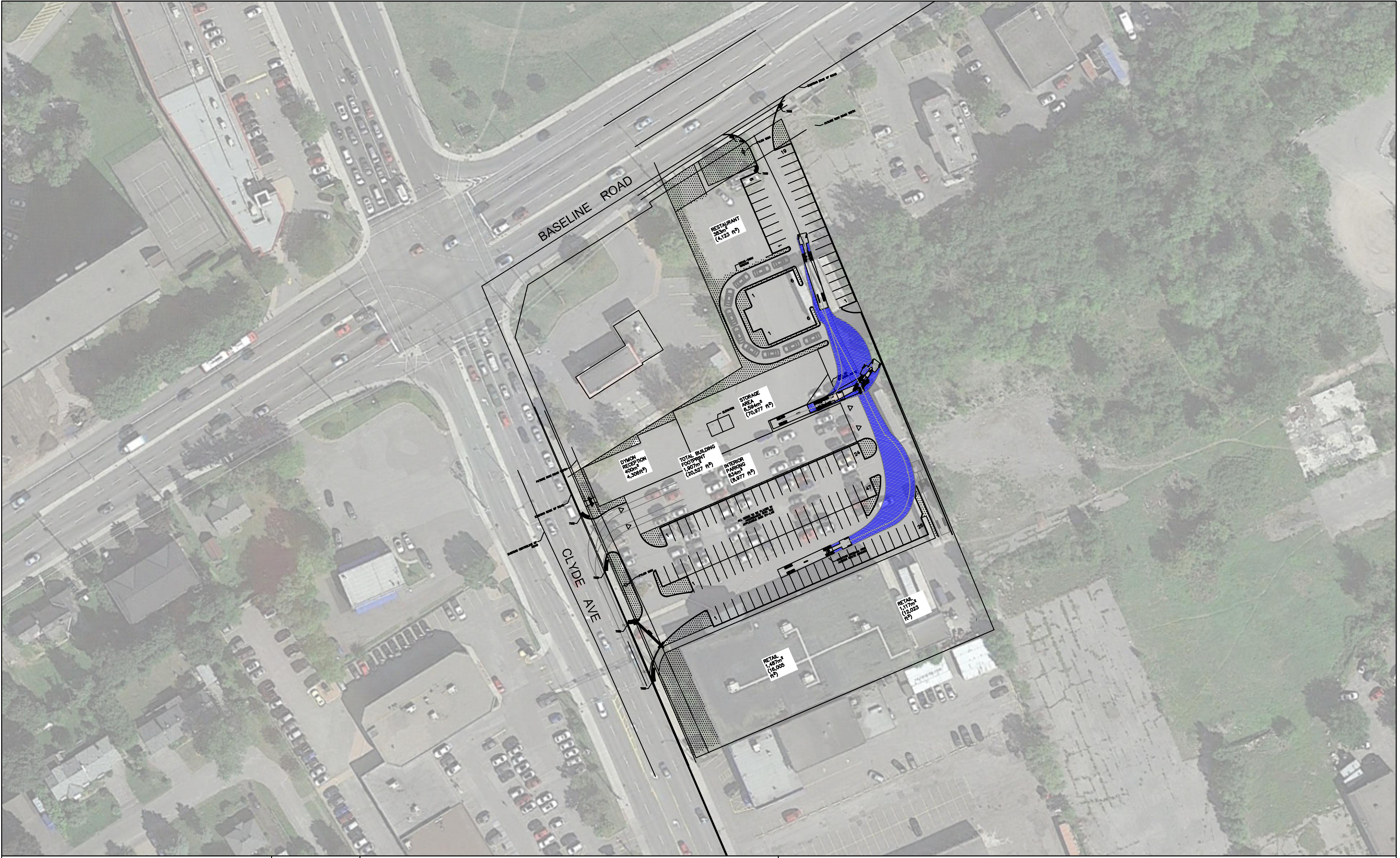
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	1045	614	784	784
Volume Left	0	0	0	0	0
Volume Right	118	0	92	0	0
cSH	711	1700	1700	1700	1700
Volume to Capacity	0.17	0.61	0.36	0.46	0.46
Queue Length 95th (m)	4.5	0.0	0.0	0.0	0.0
Control Delay (s)	11.1	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.1	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix J

Turning Templates

Page Setup: ----



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Parsons PLUS
experience the Parsons advantage

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

N

Legend

Not to Scale

Drawing Description: 1375 Clyde Truck Turning Template- WB-20 -1

Client: Dymon

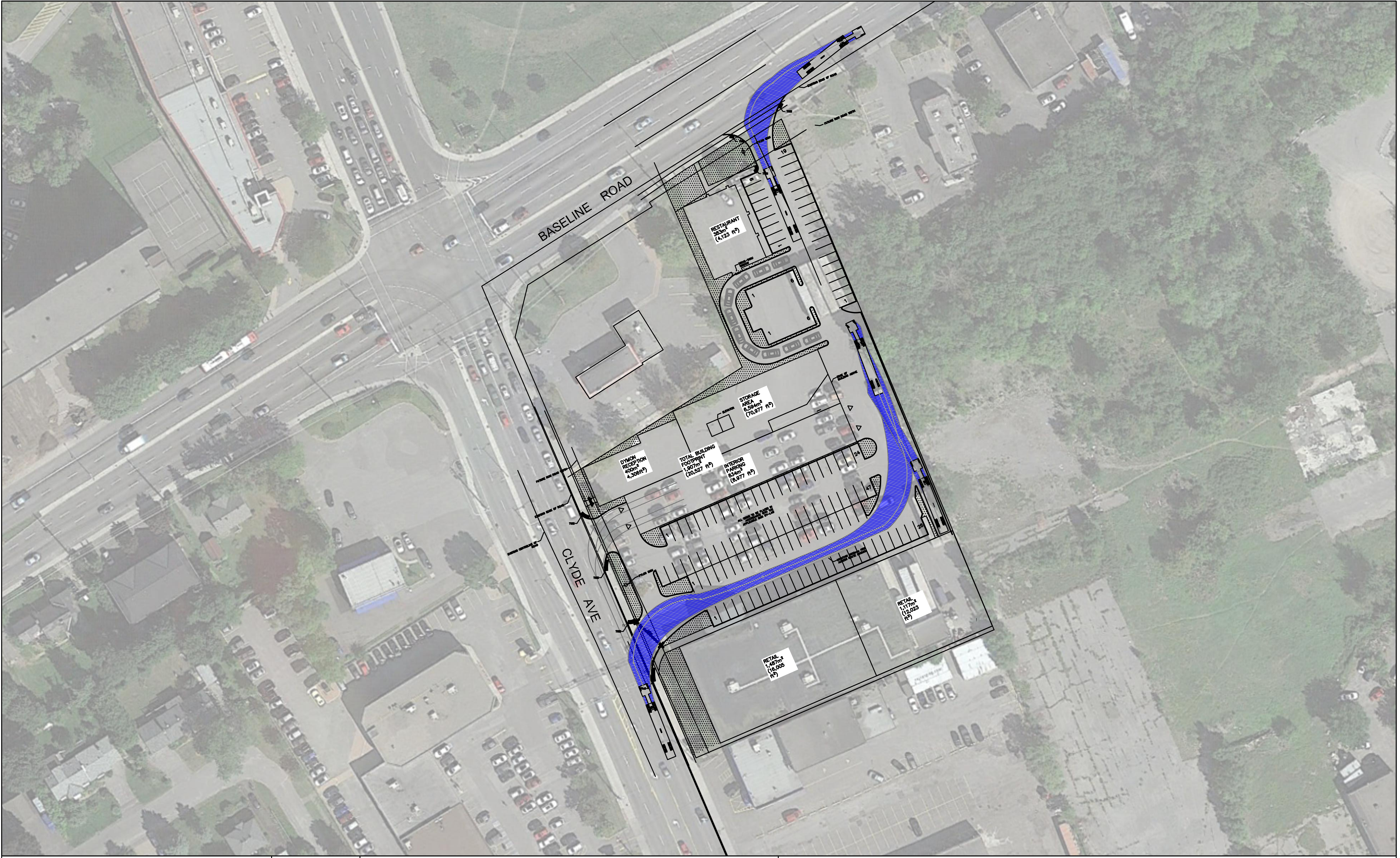
Date: June 30, 2017

Figure Number: 001

Project Number: 476370

Project Description: 1375 Clyde Redevelopment

Page Setup: ----



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Consultant's Information: \\XCCAN57FS01\Data\ISO\476370\1000\DWGS\1375 CLYDE AVE.dwg

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NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

N

Legend

Not to Scale

Drawing Description: 1375 Clyde Truck Turning Template - WB-20-2

Client: Dymon

Date: June 30, 2017

Figure Number: 002

Project Number: 476370

Project Description: 1375 Clyde Redevelopment