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2280 City Park Drive Residential Development

Plan of Subdivision - TIA Strategy Report

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2280 City Park Drive
Residential Development
Plan of Subdivision
TIA Strategy [Draft] Report

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TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise [check ✓ appropriate field(s)] is either transportation engineering ☑ or transportation planning ☐.

[1,2] **License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.**

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Dated at Ottawa this 24 day of January, 20 19 .
(City)

Name: Ronald Jack
(Please Print)

Professional Title: Senior Transportation Engineer

Signature of Individual certifier that s/he meets the above four criteria

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REGISTERED PROFESSIONAL ENGINEER
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24-Jan-19
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PLAN OF SUBDIVISION TIA STRATEGY REPORT

1. INTRODUCTION

The following has been prepared in support of a Plan of Subdivision Application for RioCan's proposed mixed use, but predominantly residential redevelopment, located at 2280 City Park Drive within the Gloucester Silver City Centre lands. Transportation-related City comments for the 2280 City Park Transportation Impact Assessment Forecasting Report have been provided in **Appendix A**. The following Strategy Report has been updated to respond to these comments.

2. PROPOSED DEVELOPMENT

The subject site, in its local context depicted in Figure 1, is located adjacent to the south of City Park Drive and directly adjacent to the Blair LRT Station. The proposed redevelopment will consist of five residential phases (933 total units) and a future commercial/retail phase. The first residential phase is under construction and the second residential phase is into the City for Site Plan Approval. A summary of all phases follows in Table 1.

Table 1: Phasing Summary

Phase	Land Use	Quantity	Proposed Parking
1	Apartments	220 units in 23 storeys	137
2	Apartments	208 units in 20 storeys	189
3	Apartments	175 units in 18 storeys	106
4	Apartments	155 units in 16 storeys	94
5	Apartments	175 units in 18 storeys	96
Future	Retail/commercial	1,520m² in 2 storeys	Unknown

The site previously accommodated 7,247 m² of commercial retail space and a 465 m² restaurant. All commercial space has been demolished, the restaurant remains and the Phase 1 220-unit apartment building is nearing the end of construction. As the 465 m² restaurant remains operational and as the future retail totals 1,520 m² the net increase in retail/commercial that needs to be accounted for in the analysis herein is 1,055 m².

Figure 1 : Local Context

Access to the site as shown in the Figure 2 Development Plan, is provided via two existing connections to City Park Drive. The first is an all-way STOP intersection that is aligned with the Silver City access to the north. The second is the three-legged west access that is STOP controlled on the minor approach. The access locations for the Development Plan and for the Plan of Subdivision (Figure 3) will generally remain unchanged from the existing configuration. For the purposes of this study it has been assumed that the subject development will be built and occupied by 2030.

As can be seen from review of the Plan of Subdivision TIA Screening Form (**Appendix A**), the Trip Generator and Location Triggers are met, but the Safety Trigger is not.

3. EXISTING CONDITIONS

3.1. STUDY AREA

The subject site is bound by City Park Drive to the north, the LRT corridor to the south, the Blair LRT Station to the east and a vacant lot to the west. As previously noted, access to/from the subject site is currently, and will continue to be provided via two full-movement connections to City Park Drive. With regard to the existing conditions at study area intersections, the following intersections were considered.

- Aviation/Ogilvie
- City Park/Ogilvie/Bathgate
- City Park/Ogilvie/ CSIS
- Ogilvie/Silver City/CSIS
- Blair/Ogilvie
- Blair/Shopping Centre/OR-174 WB Off Ramp
- Blair/OR-174 EB On-Off Ramp
- The two site connections to City Park

3.2. AREA ROAD NETWORK

City Park Drive is a crescent-shaped east-west Major Collector roadway with a two-lane cross-section that intersects Ogilvie Road at both its terminuses. Both these intersections are signalized. Within the study area, the unposted speed limit is understood to be 50 km/h and on-street parking is permitted along both sides of the roadway for most of its length.

Blair Road is a north-south arterial roadway that extends from Innes Road in the south to approximately 80 m north of Massey Lane in the north. Within the study area, Blair Road has a six-lane cross-section, south of Ogilvie Road, and a three-lane cross-section north of Ogilvie Road. Its posted speed limit is 70 km/h south of Ogilvie Road and 50 km/h north of Ogilvie Road. It is located approximately 550 m from the Phase 2 site.

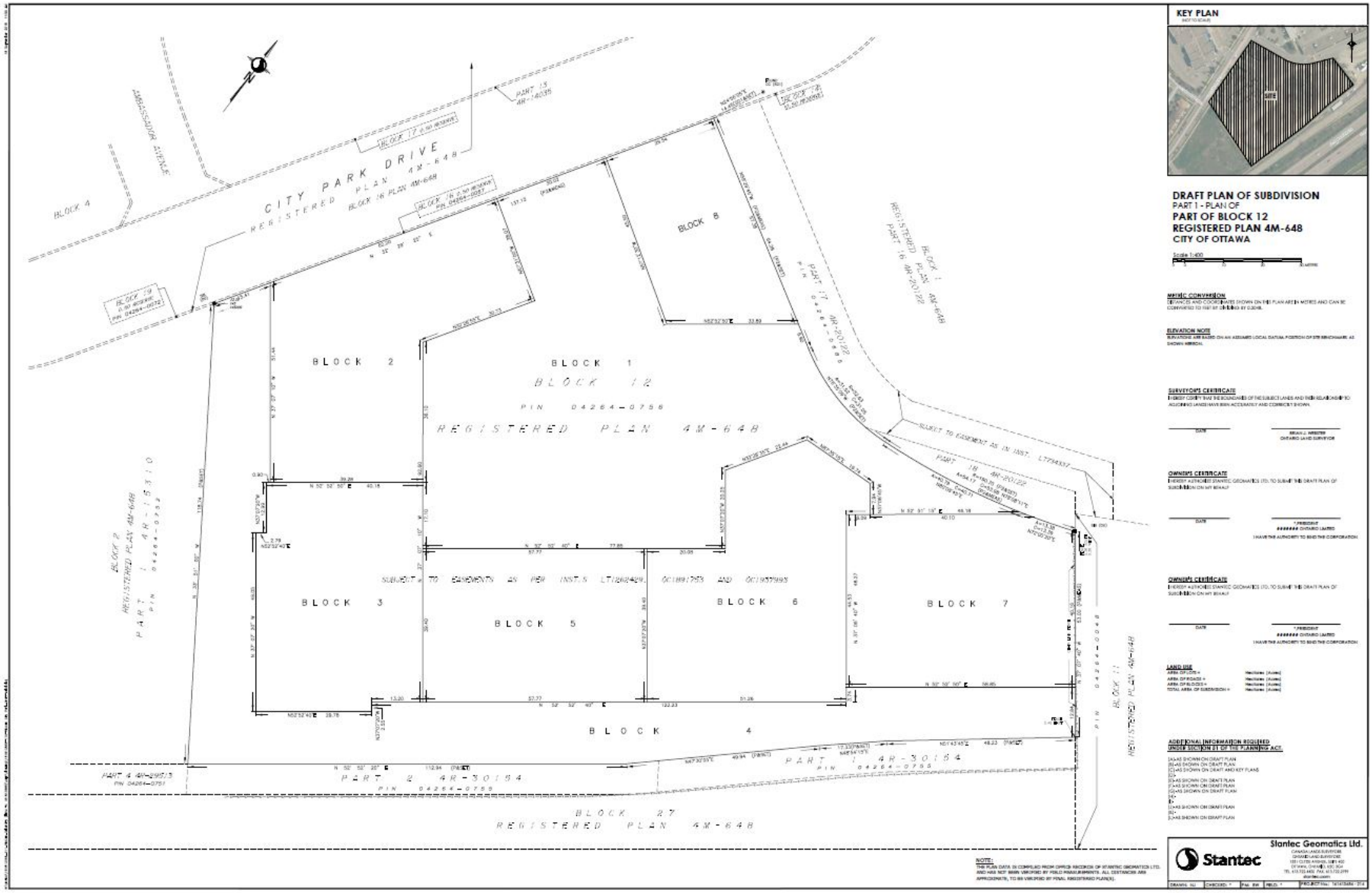
Ogilvie Road is an east-west arterial roadway that extends from St. Laurent Boulevard in the west (where it continues as Coventry Road) to approximately 40 m north of Quincy Avenue in the east. Within the study area it has a four-lane cross-section with auxiliary turn lanes provided at major intersections. Its posted speed limit is 60 km/h. It is located approximately 400 m from the Phase 2 site.

Aviation Parkway is a north-south federally owned roadway, which extends from the Aviation Museum in the north to HWY 417 in the south. Within the study area, Aviation Parkway has a four-lane cross section with auxiliary turn lanes provided as major intersection. The posted speed limit is noted as 60 km/h. It is located approximately 1.5 km from the Phase 2 site.

OR-174 is an east-west City Freeway with a four-lane cross-section. It extends from Highway 417 in the west and Canaan Road in the east, where it continues as County Road 17. Within the study area, the posted speed limit is 100 km/h.

Figure 2 : Proposed Development Plan

Figure 3 : Draft Plan of Subdivision

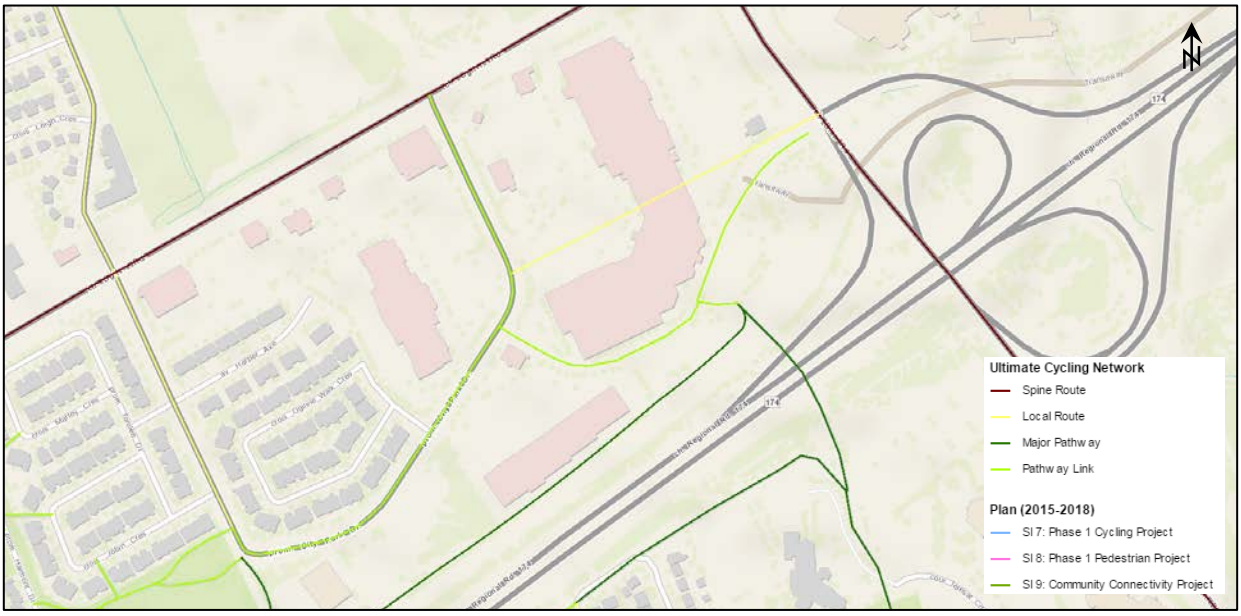


3.3. AREA PEDESTRIAN AND BICYCLE NETWORKS

With respect to area pedestrian connectivity, sidewalks exist along both sides of most study area roadways. The private Service Road connecting City Park Drive and Blair Road has a sidewalk along the south side of the roadway only. This is an important pedestrian connection as it provides direct access between the subject site and the existing Blair LRT Station.

With regard to cycling, the 2013 City's Transportation Master Plan (TMP) identifies Ogilvie Road and Blair Road as Spine Routes with dedicated bike lanes along both sides of Ogilvie Road and Blair Road (north of Ogilvie Road). In addition, an existing major pathway along the west side of Aviation Parkway provides connections to other cycling facilities north of the study area. Within the vicinity of the subject site, a Community Connectivity Project is identified between the site's southern frontage and the future LRT corridor, which is planned to be constructed by 2018. Figure 4 illustrates the planned and existing cycling facilities.

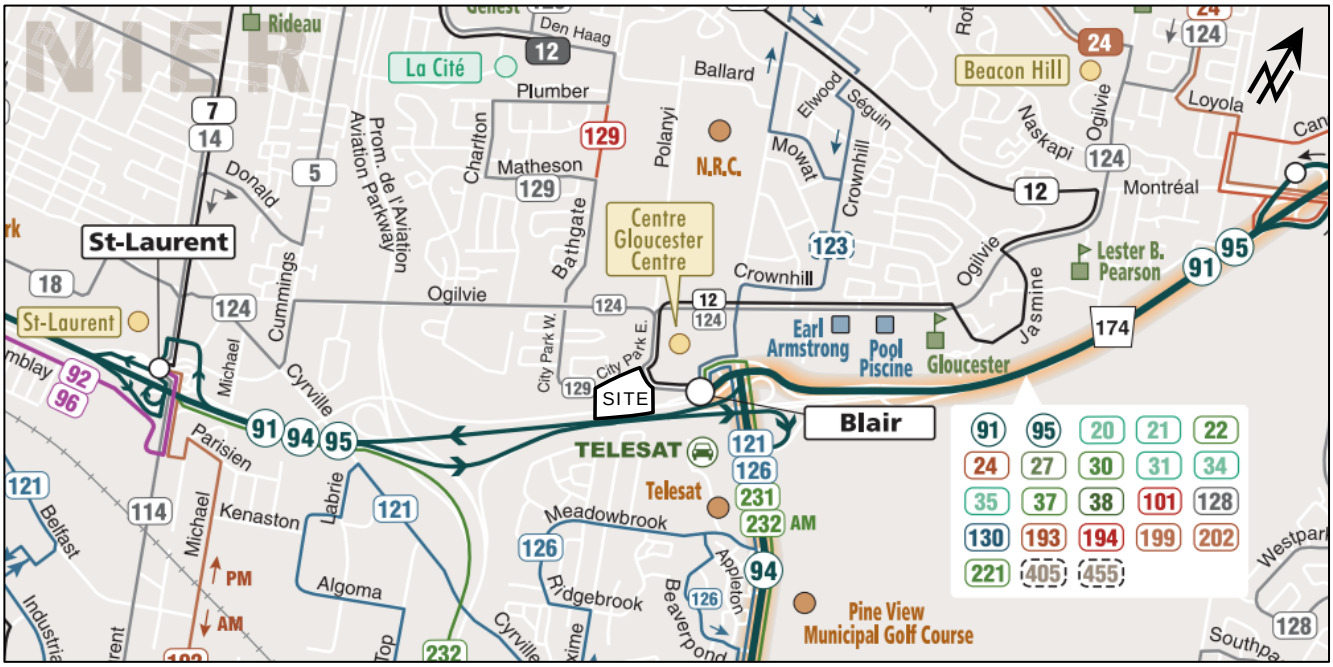
Figure 4 : Cycling Network



3.4. TRANSIT NETWORK

OC Transpo's Blair Rapid Transit (BRT) Station is located within walking distance (200 to 300 m) from the subject site. This station to be operational in the first half of 2019 and will be the terminus of the City's future Phase 1 Confederation Line (LRT). Additionally, local transit service (Route #129) is provided along City Park Drive with a bus stop located at the site's main driveway connection. The existing transit network and service in the vicinity of the Study Area is shown in Figure 5.

Figure 5 : Area Transit Network



3.5. EXISTING INTERSECTION OPERATION

To establish the baseline intersection operations for the study area intersections, an operational analysis of the existing traffic conditions has been undertaken. The most recent turning movement counts were obtained from the City of Ottawa. The available City counts were undertaken between 2013 and 2015. To reflect 2018 conditions the turning movement counts were adjusted using a 1.0% annual background growth rate. Figure 6 shows the resultant traffic volumes at the Study Area intersections. **Appendix B** contains detailed traffic data sheets, including turning movement counts and signal timing plans for the study area intersections.

To assess the peak hour traffic conditions a level of service analysis has been undertaken using Trafficware Synchro 10.0, 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 lane arrangements
- Existing signal timing (provided by the City of Ottawa)
- Heavy vehicle equivalent factor of 1.70 (as per the City of Ottawa TIA guidelines)
- Default values for all other inputs (as defined by Synchro 10.0)

The results of the operational analysis are summarized in Table 2. Synchro analysis outputs are provided in **Appendix C.**

Figure 6 : 2018 Peak Hour Traffic Volumes

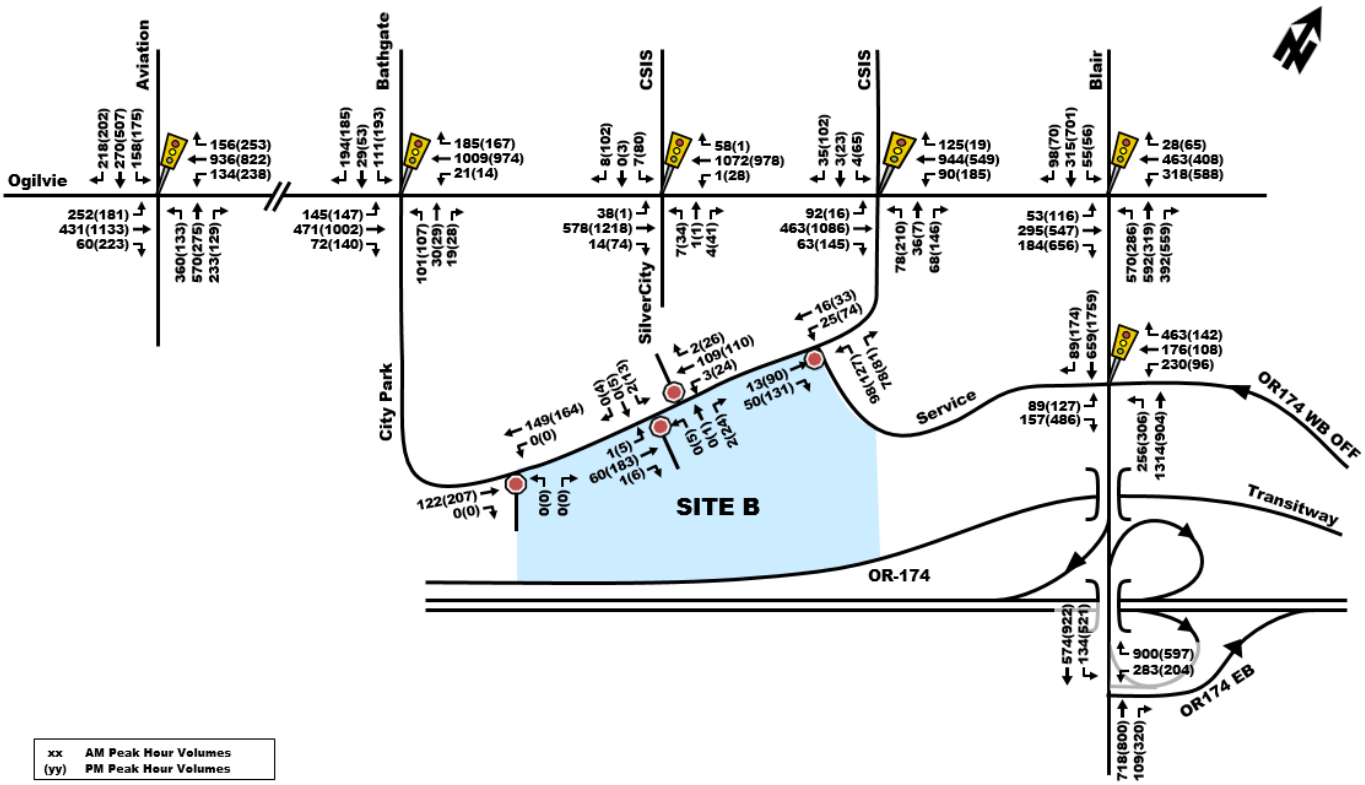


Table 2: Intersection Operational Analysis - 2018 Existing Traffic Conditions

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Aviation/Ogilvie (S)	E(F)	0.99(1.12)	NBL(WBL)	50.5(40.2)	D(D)	0.90(0.82)
City Park/Bathgate/Ogilvie (S)	B(B)	0.62(0.62)	NBL(SBL)	15.2(15.4)	A(A)	0.58(0.56)
Ogilvie/Silver City/CSIS (S)	A(A)	0.42(0.51)	WBT(EBT)	3.0(6.2)	A(A)	0.41(0.48)
City Park/CSIS/Ogilvie (S)	A(D)	0.54(0.81)	NBT(NBT)	11.0(18.2)	A(B)	0.43(0.70)
Blair/Ogilvie (S)	D(E)	0.83(0.93)	NBT(SBT)	41.5(38.9)	C(D)	0.73(0.81)
Blair/OR-174 OFF (S)	D(C)	0.86(0.79)	WBR(EBR)	26.6(26.2)	D(C)	0.82(0.72)
Blair/OR-174 EB On-Off Ramp (S)	C(F)	0.74(1.32)	WBL(SBT)	10.8(33.9)	A(D)	0.58(0.84)
City Park/Service Road (U)	A(B)	9.8(12.6)	NB(NB)	6.8(6.0)	A(A)	-
City Park/Silver City/Site (U)	A(A)	7.6(8.5)	WB(WB)	7.5(8.3)	A(A)	-
City Park/W Site Access (U)	A(A)	0.0(0.0)	NB(NB)	0.0(0.0)	A(A)	-

Notes:
- Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.
- (U) - Unsignalized Intersection
- (S) - Signalized Intersection

As shown in Table 2, the key study area intersections 'as a whole' are currently operating acceptably, at a LoS 'D' or better during the morning and afternoon peak hours. With regards to 'critical movements' at study area intersections, all intersections except Aviation/Ogilvie and Blair/OR-174 EB On-Off Ramps are operating acceptably, at an LoS 'E' or better during peak hours with regard to City of Ottawa operating standards. The intersection of Ogilvie/Blair operates poorly with LoS 'E' during the PM peak for the southbound through movement. The intersection of Aviation/Ogilvie

operates with a LoS 'F' during the PM peak period for left turning movements in both westbound and southbound directions and the Blair/OR-174 EB Ramp intersection operated at LoS 'F' for the southbound left-turn movement. This is due to the high volumes experienced at these intersections for these movements.

3.6. COLLISION ANALYSIS

Collision history for the five-year period of 2013 through to and including 2017 was obtained from the City of Ottawa for the following intersections: Ogilvie Road/City Park Drive/Bathgate Drive, Ogilvie Road/City Park Drive, Blair Road/OR Regional Road (RR) 174S/Ramp 61/Shopping Centre; Additionally, mid-block data for Ogilvie Road between City Park Drive/Bathgate Drive and City Park Drive east intersections was obtained.

A total of 389 collisions were recorded at or near the study intersections. Most collisions (76%) involved only property damage, indicating low impact speeds, and the remaining 24% involved personal injuries. No recorded fatalities were within the study area. The primary causes of collisions cited by police include: rear ends (59% or 229 collisions), turning movement (16% or 62 collisions), sideswipe (11% or 42 collisions), angle (7% or 29 collisions), single vehicle-other (5% or 21 collisions) and other (1% or 5 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 and road segments within the study area, reported collisions have historically take place at a rate of:

- 1.26 collisions/MEV at the Blair Road and Ogilvie Road intersection.
- 0.08 collisions/MEV at the Blair Road and OR174 IC112 Ramp 25 intersection.
- 1.59 collisions/MEV at the Blair Road and RR 174 N/OR174 Ramp 61/Shopping Centre intersection.
- 1.11 collisions/MEV at the Blair Road and OR174 IC112 Ramp 15 intersection.
- 0.14 collisions/MEV at the Blair Road and OR174 IC112 Ramp 31 intersection.
- 1.11 collisions/MEV at the Ogilvie Road and Bathgate/City Park intersection.
- 1.24 collisions/MEV at the Ogilvie Road and CSIS/City Park intersection.

A total of 9 non-fatal incidents involving pedestrians occurred within the five-year period. 5 of these incidents occur at Ogilvie Road and CSIS/City Park intersection, 3 at Ogilvie Road and Bathgate/City Park intersection and 1 at Ogilvie and Blair intersection.

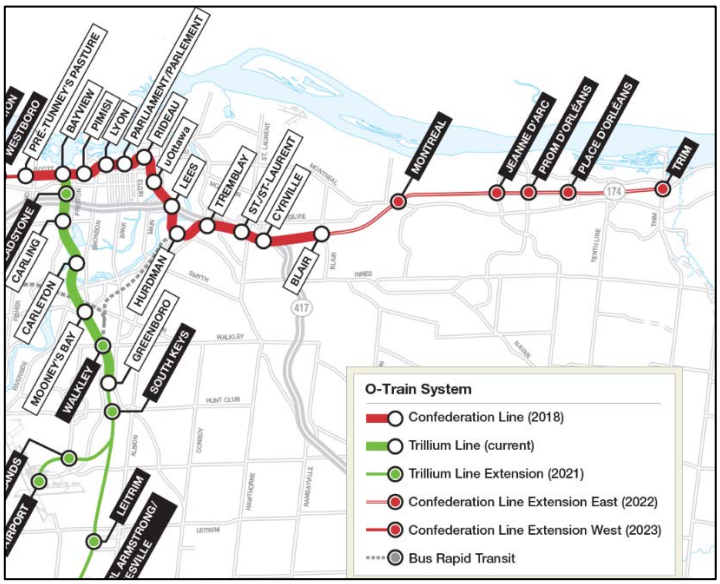
The source of the collision data is provided by the City of Ottawa and related analysis is provided within **Appendix D**.

4. PLANNED CONDITIONS

4.1. PLANNED STUDY AREA TRANSPORTATION NETWORK CHANGES

As mentioned in Section 2.4 of this report, Phase 1 Confederation Line is will be completed in the first half of 2019. Phase 1 Confederation Line will extend from Tunney's Pasture eastbound through the downtown to Blair Station. Phase 2 Confederation Extension East will continue from Blair Station east through to Trim Station. Phase 2 Confederation Line anticipated year of completion is 2022. Planned LRT construction segments and projected completion times are shown in Figure 7 below.

Figure 7 : Planned LRT Phase 2



4.2. OTHER AREA DEVELOPMENT

According to the City's development application search tool, the following developments are planned within the vicinity of the subject site.

2012 Ogilvie Road

Trinity has acquired the Shoppers City East site location located off Ogilvie Road East of Blair Road. The site is being redeveloped, replacing approximately 150,000 ft^2 of retail and some office space with approximately 200,000 ft^2 of retail space. Phase 1 consisting of approximately 40,000 ft^2 of retail space has been completed and Phase 2 consisting of approximately 160,000 ft^2 is currently awaiting approval.

5. STUDY AREA

5.1. TRANSIT

As mentioned previously in Section 2.4, the transit options available include: A bus stop on City Park Drive, a BRT station and a future LRT station all within a 400 m walking distance.

5.2. NETWORK CONCEPT

East-West Screenline, SL-16 is located along the east side of Highway 174 Blair and the screenline for north-south travel is SL-54. The closest point of crossing these screenlines are over 2.0 km away; Therefore, as these screenlines are not in the immediate vicinity of the proposed site, they do not provide any intrinsic value to the area capacity and the impact of the development is anticipated to be minimal. As such, no screenline analysis will be considered.

5.3. INTERSECTION DESIGN

The proposed Plan of Subdivision will access the adjacent road network through two existing intersections off City Park Drive. Site-generated traffic will primarily use the two City Park Drive intersections with Ogilvie Road and the internal shopping centre road that connects to Blair Road at a signalized intersection with the OR 174 westbound off-ramp.

6. TIME PERIODS

Given the land use, the weekday morning and afternoon peak hours are considered the critical time periods for operational analysis for this residential development.

7. HORIZON YEAR

For the purposes of the operational analysis it is assumed that the five phases development will be completed by the year 2030, which for purposes of this study will also be considered the horizon year, as it is 12 years out.

8. EXEMPTIONS REVIEW

The following Table 3 contains the recommended TIA Guideline exemptions.

Table 3: Recommended TIA Exemptions Summary

Module	Element	Exemption Consideration
4.1 Development Design	4.1.2 Circulation and Access	Not required for Plans of Subdivisions
4.2 Parking	4.2.1 Supply Parking	Not required for Plans of Subdivisions
	4.2.2 Spillover Parking	Not required for Plans of Subdivisions
4.8 Network Concept	-	The proposed development is not expected to generate more than 200 person-trips during peak hour in excess of the equivalent volume permitted by established zoning

In addition to the above recommendations of the Exemptions Review, the following exemptions are also proposed for both Step 3 – Forecasting and Step 4 – Analysis and are summarized in Table 4.

Table 4: Additional Recommended Exemptions Summary

Module	Element	Exemption Consideration
4.3 Boundary Street Design	All Elements	City Park Drive is the only boundary street and it is currently a divided 2-lane local roadway with sidewalks and cycle lanes on both sides of the road. Limited scope/opportunity for improvements to this corridor.

9. DEVELOPMENT – GENERATED TRAFFIC

9.1. SITE TRIP GENERATION

The appropriate trip generation rates for the residential Plan of Subdivision are summarized in Table 5.

Table 5: 2009 TRANS and ITE Trip Generation Rates

Land Use	Data Source	Trip Rates	
		AM Peak	PM Peak
High-Rise Apartments	TRANS	T = 0.24(du)	T = 0.27(du)
Retail	ITE 820	T = 0.94(X)	T = 3.81(X)

Notes: T = Average Vehicle Trip Ends
du = dwelling units
X = 1,000 ft² GFA

9.1.1. TRANS RESIDENTIAL TRIPS

The trip generation rates for the proposed Phases 3, 4 and 5 residential development were obtained from the City's 2009 TRANS Vehicle Trip Generation for the residential units. Phases 1 and 2 have completed TIAs and their projected traffic volumes are added to the background traffic volumes in Figure 11 below. Table 6 summarizes the resultant vehicle trips for existing conditions.

Table 6: Residential Phases 3, 4 and 5 Vehicle Trip Generation – Existing TRANS Conditions

Land Use	Source	Units	AM Peak (veh/h)			PM Peak (veh/h)		
			In	Out	Total	In	Out	Total
High-rise apartments	TRANS	505 units	29	92	121	84	52	136

The TRANS person trip rates and existing modal shares were used to calculate an equivalent person trip generation for the proposed development. These trips represent the existing conditions, however, as the LRT will be constructed and in operation at build out, these trips do not reflect the vehicle impact from the site. Table 7 provides a summary of how the total person trips were calculated.

Table 7: TRANS Person Trip Generation – Residential Use

Travel Mode	AM Mode Share	AM Peak (persons/h)			PM Mode Share	PM Peak (persons/h)		
		In	Out	Total		In	Out	Total
Auto Driver	37%	29	92	121	40%	84	52	136
Auto Passenger	8%	7	19	26	9%	19	11	30
Transit	41%	33	101	134	37%	79	47	126
Non-motorized	14%	11	35	46	14%	30	18	48
Total People Trips	**100%**	**80**	**247**	**327**	**100%**	**212**	**128**	**340**

9.1.2. ADJUSTED RESIDENTIAL TRIPS

As this site is adjacent to the new Confederation LRT station and by 2030, at full build out, the LRT will extend across the City, the transit modes are expected to have reached the City's Transit-Oriented Development (TOD) targets by build out. These are shown in Table 8.

Table 8: Adjusted Mode Share Percentages

Travel Mode	Mode Share	
	AM	PM
Auto Driver	15%	15%
Auto Passenger	5%	5%
Transit	65%	65%
Non-Motorized	15%	15%

The resulting person trips by mode based on the City's target mode splits for 2030 are summarized in Table 9.

Table 9: Adjusted TRANS Person Trip Generation – Residential Use

Travel Mode	Mode Share	AM Peak (persons/h)			PM Peak (persons/h)		
		In	Out	Total	In	Out	Total
Auto Driver	15%	12	38	50	31	20	51
Auto Passenger	5%	4	12	16	10	7	17
Transit	65%	50	162	212	137	84	221
Non-motorized	15%	11	38	49	31	20	51
Total People Trips	**100%**	**77**	**250**	**327**	**209**	**131**	**340**

In review of the values of the modal split in Table 8, the projected peak hour vehicle trips from the proposed phases 3, 4 and 5 apartment units (505 units) are in the range of 50 veh/h two-way total. The projected transit trips, making use of the adjacent LRT station are projected to be in the range of 212 to 221 persons per hour during peak hours.

9.1.3. RETAIL TRIPS

The trip generation rates for the proposed retail development were obtained from the 10th Edition of the ITE Trip Generation Manual. Table 10 summarizes the projected person trips for proposed retail development using the 1.28 factor for person trips as per the TIA Guidelines.

Table 10: Projected Person Trip Generation – Retail

Land Use	Source	Area	AM Peak (persons/h)			PM Peak (persons/h)		
			In	Out	Total	In	Out	Total
Retail	ITE 820	16,360 ft^2	12	8	20	38	42	80

The person trips summarized in Table 10 were then reduced by modal share values derived from the City's targets for TOD developments. These targets are outlined in Table 8 and the resultant vehicle, transit and active mode trips are summarized in Table 11.

Table 11: Person Trip Generation by Mode Share – Retail Use

Travel Mode	Mode Share	AM Peak (persons/h)			PM Peak (persons/h)		
		In	Out	Total	In	Out	Total
Auto Driver	15%	2	2	4	6	7	13
Auto Passenger	5%	1	0	1	2	2	4
Transit	65%	8	5	13	25	27	52
Non-motorized	15%	1	1	2	5	6	11
Total People Trips	100%	12	8	20	38	42	80

As shown in Table 11, the projected vehicle trips associated with the retail portion of the site range from 5 to 13 veh/h during peak hours. Transit trips to/from the retail are projected to be 13 and 53 persons/h during the morning and afternoon peak hours, respectively.

9.1.4. TOTAL TRIP GENERATION

The Phases 3, 4 and 5 residential and retail trip generations outlined in Sections 8.1.2 and 8.1.3 are combined together to generate the total projected person trips to/from the proposed development for the 2030 conditions.

Table 12: Total Person Trip Generation by Mode Share

Travel Mode	Mode Share	AM Peak (persons/h)			PM Peak (persons/h)		
		In	Out	Total	In	Out	Total
Auto Driver	15%	14	40	54	37	27	64
Auto Passenger	5%	5	12	17	12	9	21
Transit	65%	58	167	225	162	111	273
Non-motorized	15%	12	39	51	36	26	62
Total People Trips	100%	89	258	347	247	173	420

9.1.5. MODE SHARES

See Section 8.1.2 and 8.1.3 for information.

9.2. VEHICLE TRAFFIC DISTRIBUTION AND ASSIGNMENT

Traffic distribution was based on the site's connectivity to the existing road network and our knowledge of the surrounding area. The resultant distribution is outlined as follows and is depicted in Figure 8.

- 65% to/from the west;
- 5% to/from the north/northwest;
- 20% to/from the south; and
- 10% to/from the east/northeast.

9.3. NET SITE-GENERATED VEHICLE TRIPS

Based on the foregoing assumptions on Plan of Subdivision vehicle trip distribution depicted in Figure 8, the assignment of the associated peak hour vehicle trips to the study area is depicted in Figure 9.

Figure 8 : Site-Generated Traffic Distribution Assumptions

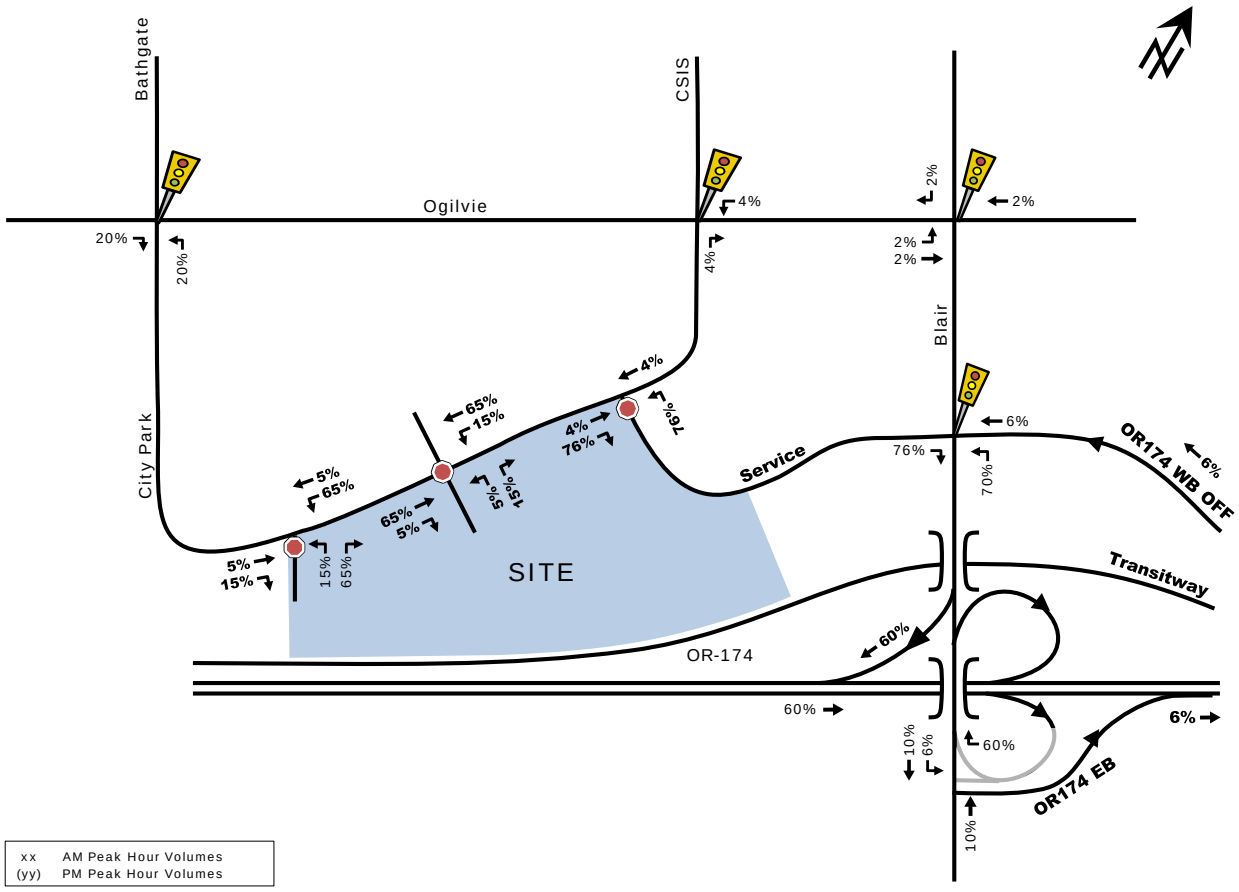
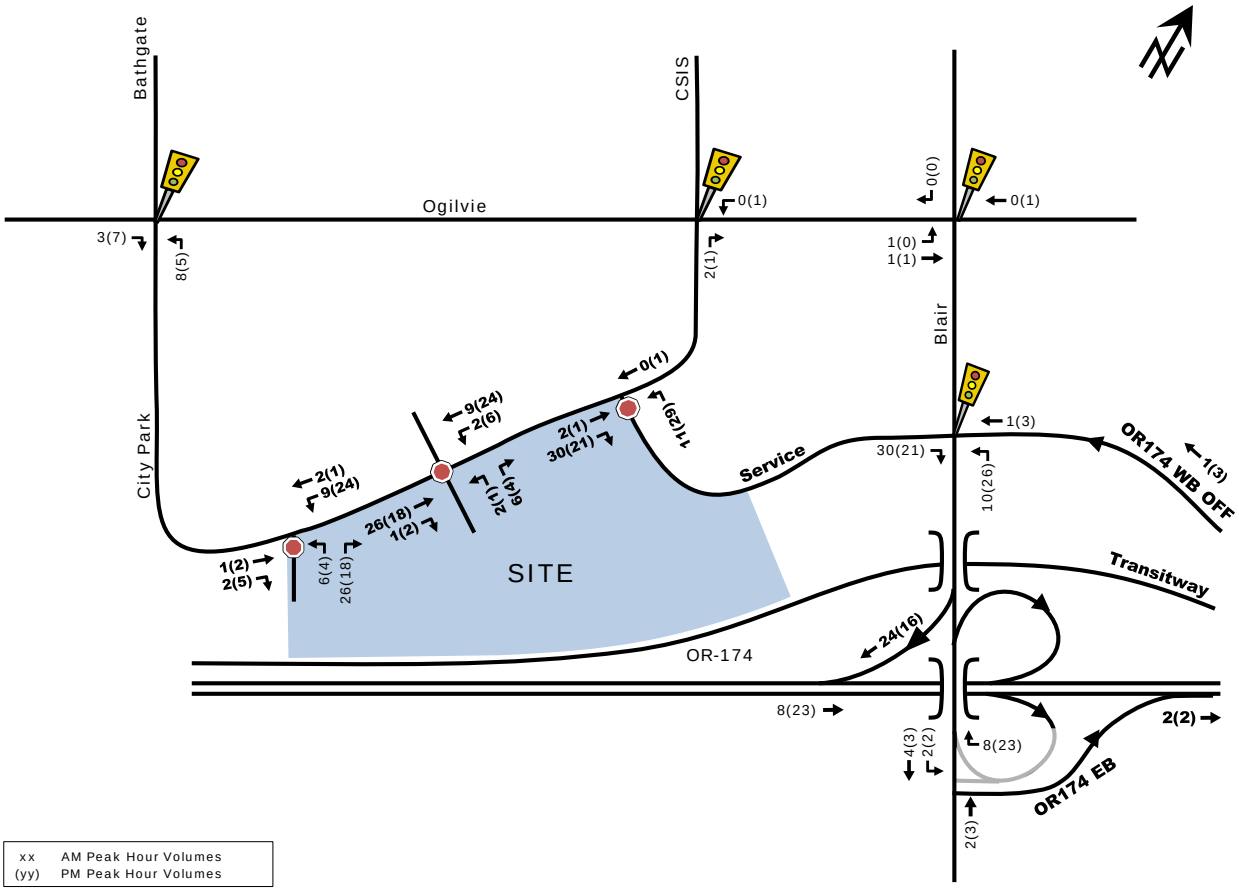


Figure 9 : New Site-Generated Peak Hour Traffic Assignment



10. BACKGROUND TRAFFIC NETWORK

10.1. TRANSPORTATION NETWORK CHANGES

Several notable transportation network changes are proposed within the study area as per the 2013 TMP - 2031 Affordable Network, they are listed as follows:

Blair Road network changes

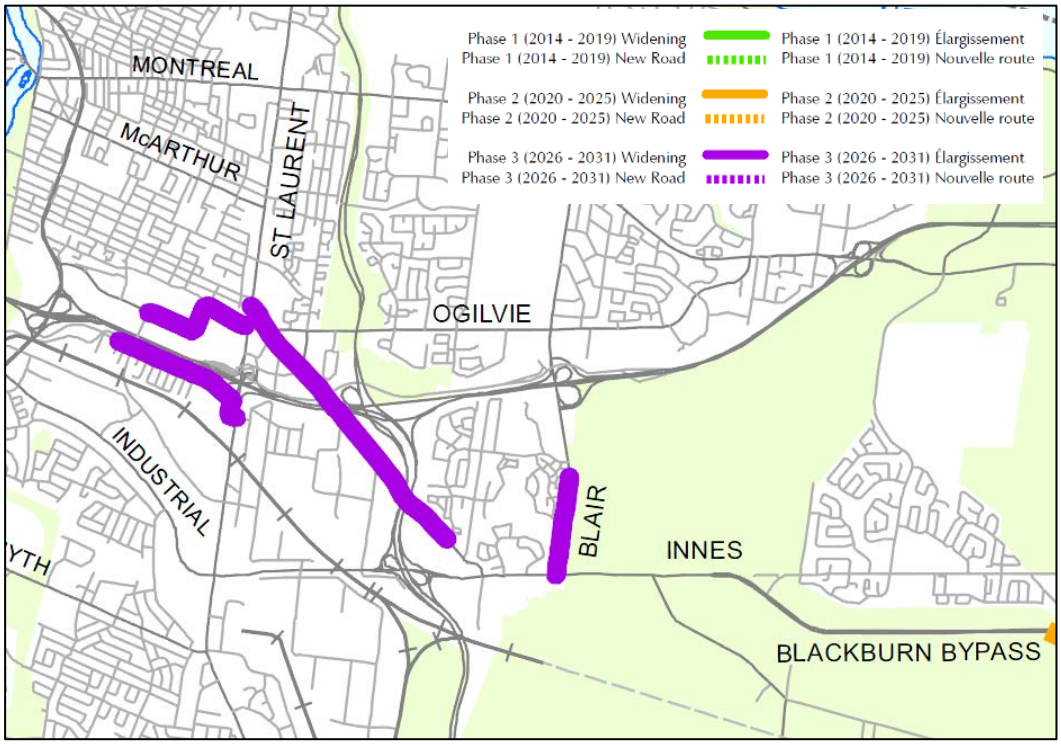
- Widen from two to four lanes between Meadowbrook Road and Innes Road;
- Exclusive bus lanes and transit signal priority between Blair Station and Montreal Road. Bus lanes to be provided through a combination of road widening (north of Ogilvie Road) and conversion of existing traffic lanes (south of Ogilvie Road);
- Transit signal priority and queue jump lanes between Innes Road and Blair Station; and
- Affordable: Eastern extension of LRT service following Ottawa Road 174 between Blair Station and Place d'Orléans Station.

Ogilvie Road network changes

- Transit signal priority between Blair Road and St. Laurent Boulevard.

The widening from two to four lanes proposed on Blair Road between Meadowbrook Road and Innes Road is displayed in Figure 10, as per the TMP's 2031 Affordable Network.

Figure 10 : Road Network-2031 Affordable Network



10.2. BACKGROUND TRAFFIC GROWTH

The background traffic growth rate for Blair Road in the immediate study area was calculated based on historical traffic count data (years 2008 and 2013) provided by the City of Ottawa at the Blair/Shopping Centre/174 WB Offramp intersection, as depicted in Table 12. Detailed background traffic growth analysis is included as **Appendix E**.

Table 13: Blair/Service Road/174 WB offramp Historical Background Growth (2008 – 2013)

Time Period	Percent Annual Change				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	-6.53%	-7.17%	-4.08%	-5.61%	**-6.40%**
AM Peak	-3.18%	-6.41%	-2.29%	-6.51%	**-4.59%**
PM Peak	-6.67%	-6.39%	3.98%	-5.45%	**-5.67%**

As shown in Table 13, the intersection has experienced approximately -5% to -6% overall annual growth within recent years (calculated as a weighted average). As these negative growth rates are unlikely to continue, a 0% per annum traffic growth factor has been assumed along Blair Road, for the horizon years 2021, and 2026

The background traffic growth through the immediate study area along Ogilvie Road (summarized in Table 14) was calculated based on historical traffic count data (years 2006, 2009 and 2013) provided by the City of Ottawa at the Ogilvie/Bathgate/City Park intersection. Detailed background traffic growth analysis is included as **Appendix E**.

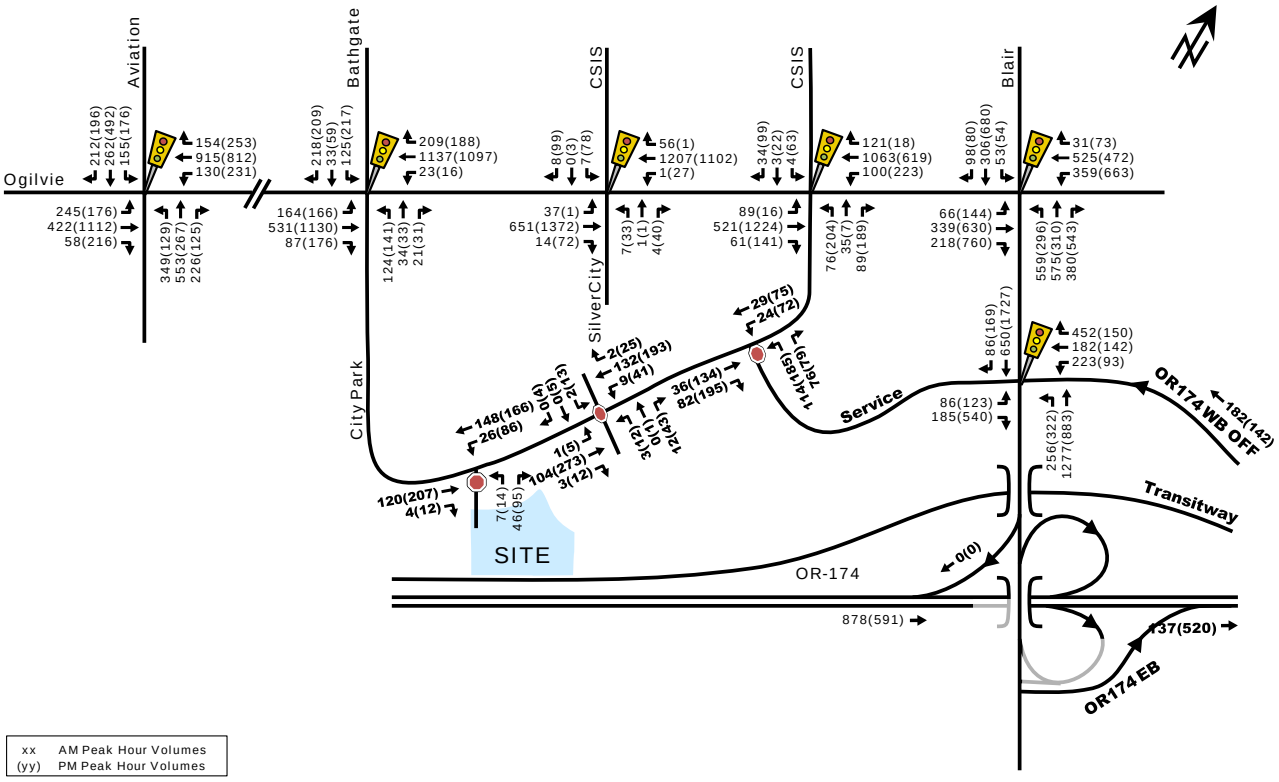
Table 14: Ogilvie/Bathgate/City Park Historical Background Growth (2006 – 2013)

Time Period	Percent Annual Change				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	4.21%	2.29%	5.42%	5.87%	**5.27%**
AM Peak	6.99%	2.02%	10.91%	4.82%	**7.25%**
PM Peak	-1.26%	0.25%	0.58%	0.89%	**0.48%**

As shown in Table 14, the intersection has experienced approximately 1% to 7% overall annual growth within recent years (calculated as a weighted average). Given that these are these growth rates are unlikely to continue, a 1% per annum traffic growth factor has been assumed along Ogilvie Road, for the 2030 horizon year.

The resulting future background peak hour traffic for the horizon year 2030 are depicted as Figure 11. These volumes include the projected traffic for the Phase 1 and 2 developments within City Park (approximately 428 units).

Figure 11 : Future Background 2030 Peak Hour Traffic Volumes



The following Table 15 summarizes the performance of key study area intersections for the 2030 background conditions. The study area intersections 'as a whole' are currently operating acceptably, at a LoS 'D' or better during the morning and afternoon peak hours. With regards to 'critical movements' at study area intersections, they are operating acceptably, at an LoS 'D' or better during peak hours with regard to City of Ottawa operating standards. The detailed 2030 future background SYNCHRO (V10) analysis reports are included in **Appendix F**.

Table 15: Future Background 2030 Performance at Study Area Intersections

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Aviation/Ogilvie (S)	E(F)	0.96(1.08)	NBL(WBL)	48.1(39.0)	D(C)	0.88(0.80)
City Park/Bathgate/Ogilvie (S)	C(C)	0.76(0.78)	NBL(NBL)	18.4(19.0)	B(B)	0.69(0.66)
Ogilvie/Silver City/CSIS (S)	A(A)	0.47(0.57)	WBT(EBT)	3.3(6.7)	A(A)	0.46(0.54)
City Park/CSIS/Ogilvie (S)	A(C)	0.48(0.79)	WBT(EBT)	10.5(20.0)	A(C)	0.46(0.75)
Blair/Ogilvie (S)	D(E)	0.83(0.93)	NBT(SBT)	42.9(41.1)	C(D)	0.74(0.86)
Blair/OR-174 OFF (S)	D(D)	0.84(0.83)	WBR(EBR)	25.7(28.0)	D(C)	0.81(0.73)
Blair/OR-174 EB On-Off Ramp (S)	C(F)	0.73(1.32)	WBL(WBL)	10.5(31.9)	A(D)	0.57(0.83)
City Park/Service Road (U)	B(C)	10.3(17.0)	NB(NB)	5.9(6.9)	A(A)	-
City Park/Silver City/Site (U)	A(B)	7.9(10.0)	WB(EB)	7.8(9.7)	A(A)	-
City Park/W Site Access (U)	A(B)	9.4(10.8)	NB(NB)	2.0(3.4)	A(A)	-

Notes:
- Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.
- (U) - Unsignalized Intersection
- (S) - Signalized Intersection

As shown in Table 15, all study area intersections are projected to operate overall, with acceptable level of service of LoS 'D' or better during peak hours. At the critical movements, the Aviation/Ogilvie, Blair/Ogilvie and Blair/OR-174 EB Ramp intersections have movements that are projected to operate at or above capacity during peak hours (LoS 'E' or 'F'). This is similar to existing conditions for these interactions.

10.3. OTHER AREA DEVELOPMENT

The City of Ottawa's Development Applications webtool has been used to determine if there are proposed developments within the area of influence of the proposed development. These developments have been discussed in greater detail in Section 3.2. If the second phase of redevelopment of Shoppers City East is a Costco, then its traffic generation will impact Blair Road operations. A related TIS has addressed its impacts and requirements. If it is not a Costco, then the traffic impacts along Blair Road will be less.

11. FUTURE TRAFFIC OPERATIONS

11.1. FUTURE 2021 PEAK HOUR

Figure 12 depicts the sum of the site-generated traffic and 2030 background traffic. The following, Table 16, is a summary of the relevant study area intersection performance.

Figure 12 : Future Projected 2030 Peak Hour Traffic Volumes

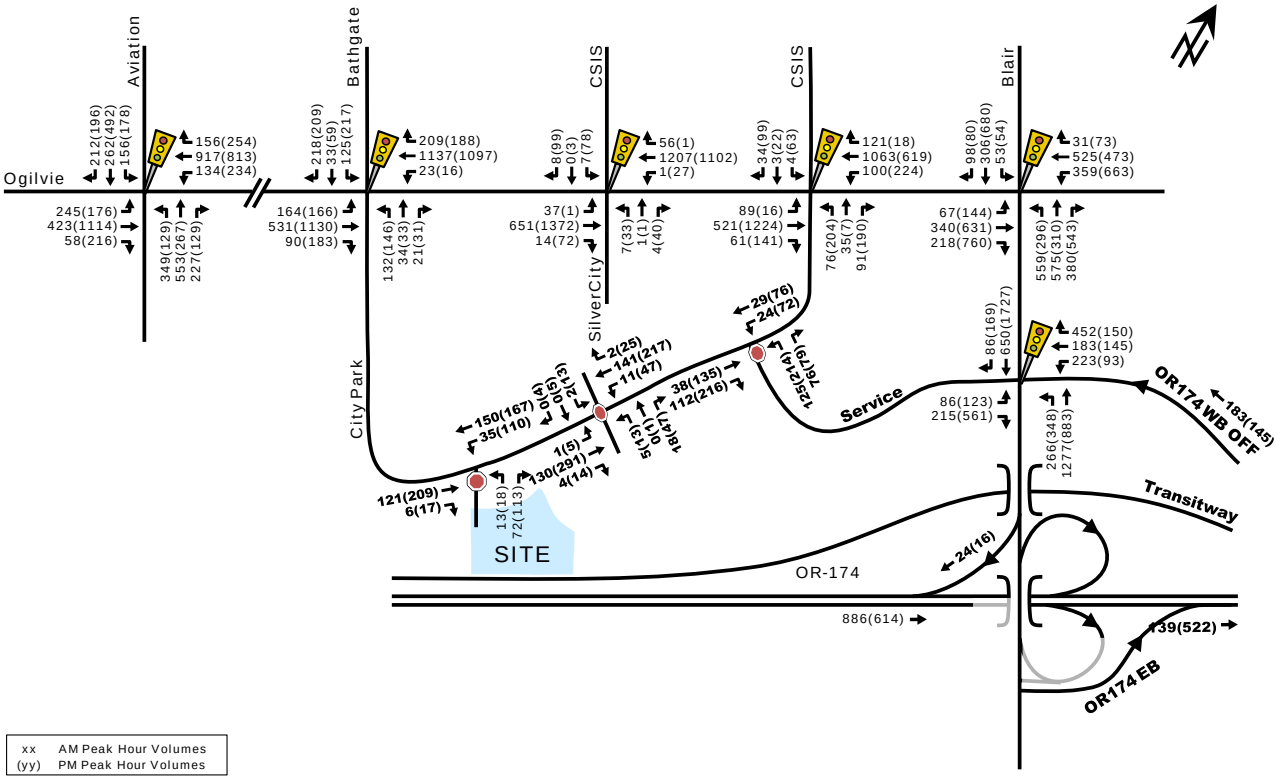


Table 16: Future Projected 2030 Performance at Study Area Intersections

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Aviation/Ogilvie (S)	E(F)	0.96(1.10)	NBL(WBL)	48.3(39.4)	D(C)	0.88(0.80)
City Park/Bathgate/Ogilvie (S)	C(D)	0.79(0.81)	NBL(NBL)	18.9(19.2)	B(B)	0.70(0.66)
Ogilvie/Silver City/CSIS (S)	A(A)	0.47(0.57)	WBT(EBT)	3.3(6.7)	A(A)	0.46(0.54)
City Park/CSIS/Ogilvie (S)	A(C)	0.48(0.79)	WBT(EBT)	10.6(20.1)	A(C)	0.46(0.75)
Blair/Ogilvie (S)	D(E)	0.83(0.93)	NBT(SBT)	43.0(41.1)	C(D)	0.75(0.86)
Blair/OR-174 OFF (S)	D(D)	0.84(0.85)	WBR(EBR)	25.7(28.8)	D(C)	0.81(0.74)
Blair/OR-174 EB On-Off Ramp (S)	C(F)	0.73(1.33)	WBL(SBTL)	10.5(32.5)	A(D)	0.57(0.84)
City Park/Service Road (U)	B(C)	10.6(19.1)	NB(NB)	5.8(7.9)	A(B)	-
City Park/Silver City/Site (U)	A(B)	8.1(10.5)	WB(EB)	8.0(10.1)	A(B)	-
City Park/W Site Access (U)	A(B)	9.7(11.3)	NB(NB)	2.8(3.9)	A(A)	-

Notes:
- Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.
- (U) - Unsignalized Intersection
- (S) - Signalized Intersection

As shown in Table 16, the study area intersections 'as a whole' are projected to operate acceptably, with a LoS 'D' or better during the morning and afternoon peak hours. As for 'critical movements' at study area intersections, they are operating acceptably, at a LoS 'D' or better during peak hours, with the exception of Aviation/Oglivie, Blair/Oglivie and Blair/OR-174 EB On-Off Ramp, which operate at, or above, capacity levels (LoS 'E' or 'F') with regards to City of Ottawa

operating standards. These values are very similar to existing conditions due to the low volumes of the site-generated traffic. The detailed Future Projected 2030 SYNCHRO (V10) analysis reports are included in **Appendix G**.

12. DEVELOPMENT DESIGN

12.1. DESIGN FOR SUSTAINABLE MODES

As previously discussed, this site is located in a major transit-oriented area and is within 400m of the new Blair LRT station, a shopping centre and Blair BRT. The ultimate plan will have a Multi-Use pathway that will extend along the southern property limit connecting the site to the LRT station and 1.8m on-street bike lanes on City Park Drive along the property frontage. In the interim pedestrians will use the sidewalk facilities and cyclists will use the local road network.

12.2. CIRCULATION AND ACCESS

The driveways to the site connect to City Park Drive and are being constructed as part of Phase 1. For this study it is assumed that the driveways are existing. The two driveways are stop-controlled intersections, with the west driveway being stop controlled on the minor road and the east driveway operates as a four-way stop control. Within the site, 6.0m wide driveways are provided for access to the parking areas, the parking garage and for site circulation.

12.3. PARKING

12.3.1. PARKING SUPPLY

Refer to Section 1, Table 1 for the proposed number of parking spaces in each phase of the development.

12.3.2. SPILLOVER PARKING

Exempt; see Section 7.

12.4. BOUNDARY STREET DESIGN

City Park Drive is identified as a Collector Road in the TMP. City Park Drive currently has sidewalks on both sides of the road. It is anticipated that 1.8m cycle lanes will be painted at the end of construction, upgrading the sites frontage along City Park Drive from the existing "mixed/shared" traffic conditions.

The Official Plan of the City of Ottawa currently identifies the area where the site is located as a "Mixes Use Centre". The target and operational MMLoS for the boundary streets are described in Table 17 below. The MMLoS analysis for road segments along City Park Drive can be found in **Appendix H**.

Table 17: MMLOS for Boundary Streets

OP Designation / Policy Area	Road Class	Pedestrian LOS	Bicycle LOS	Transit LOS	Truck LOS	Auto LOS
Mixed Use Centre (Target)	Collector	C	B	N/A	No Target	N/A
Condition/Time	**Roadway**	**Pedestrian LOS**	**Bicycle LOS**	**Transit LOS**	**Truck LOS**	**Auto LOS**
Existing	City Park Drive	B	D	D	B	N/A
Full build-out	City Park Drive	B	B	D	B	N/A

As can be seen in the table above, the target LoS for Transit is not applicable since the City Park Dr is not designated as a Rapid Transit Corridor or a Transit Priority Route. Similarly, the target LoS for Auto is not applicable for MMLOS analysis of road segments. Finally, City Park Dr is not a designated Truck Route and as such, has no set target for the Truck LoS.

With regards to meeting the target LoS, all results indicate that the City Park Dr road segment meets its minimum requirements, with the exception of the Bicycle LoS in the existing conditions. This is due to the lack of bike lanes on the existing road segment, which will be addressed with 1.8m bike lanes on City Park Dr along the property frontage.

12.5. ACCESS INTERSECTION DESIGN

Exempt; see Section 7.

12.6. INTERSECTION DESIGN

No modifications to existing accesses/intersections proposed.

12.7. TRANSPORTATION DEMAND MANAGEMENT

Exempt; Bicycle parking exceeds By-Law requirements, cyclists will use the local roadways (cycle lanes proposed for City Park Drive) to access adjacent facilities and the adjacent street has 2m wide sidewalk connections to the adjacent LRT station.

12.8. NEIGHBOURHOOD TRAFFIC MANAGEMENT

Exempt; see Section 7.

12.9. TRANSIT

As previously noted, the proposed residential apartment development is projected to generate between approximately 75 to 80 two-way transit riders during peak hours. Given the number of new transit riders compared to the existing and planned study area transit service summarized in Section 2.4, there will be no adverse impacts on transit facility capacity.

12.10. NETWORK CONCEPT REVIEW

Exempt; see Section 7.

12.11. INTERSECTION DESIGN

Exempt; see Section 7.

13. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this TIA are as follows:

Proposed Development:

- The proposed Phase 3, 4 & 5 development will consist of 505 high-rise apartment units and 296 vehicle parking spaces.
- The proposed Phase 3, 4 & 5 development is projected to generate approximately 54 and 64 two-way vehicle trips per hour and 225 to 273 transit riders during the weekday morning and afternoon peak hours respectively.
- Access to the site will be provided by two existing driveway connections to City Park Drive located south of the Silver City Theatre.
- Access to the boundary arterial roads will be via City Park's two signalized intersections with Ogilvie Road and via the shopping centre road that connects to Blair/OR 174 westbound off-ramp intersection.

Background Conditions:

- All study area intersections are projected to operate overall, with acceptable level of service of LoS 'D' or better during peak hours. At the critical movements, the Aviation/Ogilvie, Blair/Ogilvie and Blair/OR-174 EB Ramp intersections have movements that are projected to operate at or above capacity during peak hours (LoS 'E' or 'F'). This is similar to existing conditions for these interactions.

Projected Conditions:

- The study area intersections 'as a whole' are projected to operate acceptably, with a LoS 'D' or better during the morning and afternoon peak hours. As for 'critical movements' at study area intersections, they are operating acceptably, at a LoS 'D' or better during peak hours, with the exception of Aviation/Oglivie, Blair/Oglivie and Blair/OR-174 EB On-Off Ramp, which operate at, or above, capacity levels (LoS 'E' or 'F') with regards to City of Ottawa operating standards. These values are very similar to existing conditions due to the low volumes of the site-generated traffic.

In summary, the proposed Phase 3, 4 and 5 residential development is located adjacent to the LRT station and will have a very low peak hour vehicle trip generation. As such, its traffic impact on the study area intersections is minimal, if any, and no road or intersection modifications are required.

Based on foregoing, the proposed Plan of Subdivision is recommended to proceed from a transportation perspective.

Prepared By:	Reviewed By:
Matthew Mantle, P. Eng. Transportation Engineer	Ronald Jack, P. Eng. Senior Transportation Engineer Ottawa Operations

Appendix A

SCREENING FORM AND CORRESPONDENCE

PARSONS

1223 Michael Street, Suite 100 | Ottawa, Ontario K1J7T2
P: +1 613.738.4160 | www.parsons.com

Memorandum

To:	Mike Giampa, P.Eng.	Date:	24 January 2019
Copy:	Ron Jack, P.Eng., Mark Baker, P.Eng., Austin Shih, P.Eng.	Project:	476910-01000
From:	Matthew Mantle, P.Eng.		

Re: City Park Phase 3,4 & 5 - Plan of Subdivision
TIA Strategy Report - Response to Comments

INTRODUCTION

The following transportation-related City comments were received on January 4, 2019 in regard to the 2280 City Park Transportation Impact Assessment Forecasting Report submitted December 17, 2018. Responses to these comments have been provided herein in red.

CITY COMMENTS

1. Address the impacts to the traffic network in the event that a 65% transit modal split is not achieved.

   Parsons disagrees with this request. The 2030 build out is 11 years after Confederation Line will be operational to the Site, it is very appropriate to use the City's 65% transit ridership guideline for TOD's. Picking a different percentage would be arbitrary and would require additional analysis for 10 different intersections. Furthermore, this is a TIA for the full Plan of Subdivision. As each of the 5 stages of development requires its own TIA, they can include a lower transit ridership in their analysis if it make sense based on the horizon year of that specific stage. Based on the foregoing, we don't propose to do additional analysis for the 2030 buildout using a lower transit modal split.

2. The analysis is incomplete at the Intersections of Ogilvie Road and Matheson Road / Palmerston Drive, Ogilvie Road and Cadboro Road, Ogilvie Road and Blair Place, and Ogilvie Road 240m W of Blair Road have been omitted and should be included in the analysis.

   The inclusion of these intersections was not necessary. The expected trip generation and assignment showed that only a small number of vehicles would be travelling on Ogilvie Road; low enough to have little impact on existing local intersection operations. Furthermore, the majority of site generated trips are headed towards the 174, which further reduces the impacts to the noted intersections. That said, the analysis did include the three signalized intersections that provide direct access to Ogilvie Road from the subject site. It was shown that these intersections were able to accommodate site generated traffic through to the ultimate horizon.

3. Synchro models omit 174 wb on ramp. This should be revised.

   The 174 WB onramp from Blair Road is a free flow movement.

4. AM existing synchro file is incorrect. Traffic simulation shows multiple errors.

   This error should be corrected in the following submission.

5. Traffic Engineering reserves the right to comment further on any revisions or subsequent submissions.

   Acknowledged.

6. Provide more information on the type of retail proposed and provide justification for the 65% transit mode share for this part of the development.

Regarding the proposed retail, no further detail is available at this time, thus we used the ITE shopping center rate. However, in subsequent reports, we can reduce the transit modal split to a lesser value to be more reflective of anticipated retail use.

7. Phase 2 of the TIA assumed a 2% background growth. For consistency, apply a 2% background growth.

   The justification for the growth rate used in the TIA has been provided in the Strategy Report.

8. The boundary street design should be included in the TIA strategy submission.

   The boundary street design section has been provided in the TIA Strategy submission.

PARSONS

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City of Ottawa 2017 TIA Guidelines

TIA Screening Form

Date	11/2/2018
Project	2280 City Park Dr - Plan of Subdivision
Project Number	476910-01000

Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	Yes
Development Satisfies the Safety Trigger	No

Module 1.1 - Description of Proposed Development	
Municipal Address	2280 City Park Drive
Description of location	South side of City Park Drive, west of Blair Road and north of OR174
Land Use	Primarily residential apartments with a bit of retial
Development Size	933 units in five towers plus 1,520 sq. m of retail/commercial
Number of Accesses and Locations	Two driveway connections to City Park Drive
Development Phasing	Five phases
Buildout Year	2030
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger		
Land Use Type	Townhomes or Apartments	
Development Size	933	Units
Trip Generation Trigger Met?	Yes	

Module 1.3 - Location Triggers	
Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	No
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	Yes
Location Trigger Met?	Yes

Module 1.4 - Safety Triggers		
Posted Speed Limit on any boundary road	<80	km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	No	
A proposed driveway is within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions) or within auxiliary lanes of an intersection;	No	
A proposed driveway makes use of an existing median break that serves an existing site	No	
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	No	
The development includes a drive-thru facility	No	
Safety Trigger Met?	No	

Appendix B

TRAFFIC DATA

Transportation Services - Traffic Services

W.O. 37443

Turning Movement Count - 15 Minute Summary Report

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018

Total Observed U-Turns

Northbound: 2 Southbound: 1

Eastbound: 27 Westbound: 8

		AVIATION PKWY									OGILVIE 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	69	95	51	**215**	29	48	35	**112**	**327**	54	59	10	**123**	43	155	14	**212**	**335**	**662**
07:15	07:30	60	163	86	**309**	31	63	42	**136**	**445**	79	79	12	**170**	45	159	35	**239**	**409**	**854**
07:30	07:45	63	169	88	**320**	38	83	46	**167**	**487**	77	102	12	**191**	54	193	29	**276**	**467**	**954**
07:45	08:00	74	159	92	**325**	30	70	69	**169**	**494**	69	121	15	**205**	48	200	38	**286**	**491**	**985**
08:00	08:15	83	121	106	**310**	33	81	58	**172**	**482**	75	105	17	**197**	45	216	28	**289**	**486**	**968**
08:15	08:30	98	137	122	**357**	32	86	66	**184**	**541**	69	141	9	**220**	30	222	30	**282**	**502**	**1043**
08:30	08:45	96	145	95	**338**	38	92	45	**175**	**513**	88	137	8	**233**	30	214	25	**269**	**502**	**1015**
08:45	09:00	83	109	60	**252**	38	52	52	**142**	**394**	78	157	17	**252**	32	165	37	**234**	**486**	**880**
09:00	09:15	39	103	45	**187**	34	60	36	**130**	**317**	64	152	16	**233**	32	169	28	**231**	**464**	**781**
09:15	09:30	33	73	63	**169**	26	48	48	**122**	**291**	51	99	21	**171**	22	120	29	**172**	**343**	**634**
09:30	09:45	28	64	49	**141**	30	50	44	**124**	**265**	61	114	17	**194**	33	124	24	**181**	**375**	**640**
09:45	10:00	39	57	38	**134**	28	48	39	**115**	**249**	50	116	6	**173**	22	114	21	**157**	**330**	**579**
11:30	11:45	18	56	55	**129**	15	61	43	**119**	**248**	51	146	18	**215**	26	148	34	**209**	**424**	**672**
11:45	12:00	29	45	55	**129**	35	61	45	**141**	**270**	50	170	17	**237**	43	145	25	**213**	**450**	**720**
12:00	12:15	37	44	32	**113**	28	64	46	**138**	**251**	15	198	18	**231**	29	162	23	**214**	**445**	**696**
12:15	12:30	27	54	47	**128**	26	68	31	**125**	**253**	54	177	26	**258**	34	143	25	**203**	**461**	**714**
12:30	12:45	31	62	46	**139**	23	46	46	**115**	**254**	64	175	22	**262**	30	128	39	**197**	**459**	**713**
12:45	13:00	25	35	42	**102**	21	69	38	**128**	**230**	51	179	15	**246**	20	146	27	**193**	**439**	**669**
13:00	13:15	26	56	29	**111**	29	49	41	**119**	**230**	45	170	20	**237**	34	125	20	**179**	**416**	**646**
13:15	13:30	15	47	32	**94**	25	70	35	**131**	**225**	54	139	27	**222**	37	157	21	**215**	**437**	**662**
15:00	15:15	30	87	52	**169**	40	94	74	**208**	**377**	44	218	31	**293**	66	180	63	**309**	**602**	**979**
15:15	15:30	37	86	57	**180**	30	142	71	**243**	**423**	53	228	25	**308**	73	174	52	**299**	**607**	**1030**
15:30	15:45	23	95	59	**177**	26	133	68	**227**	**404**	44	245	50	**340**	71	164	54	**290**	**630**	**1034**
15:45	16:00	46	63	75	**184**	35	166	57	**258**	**442**	50	240	52	**344**	63	183	46	**293**	**637**	**1079**
16:00	16:15	37	91	51	**179**	36	146	64	**246**	**425**	46	282	46	**374**	73	179	57	**309**	**683**	**1108**
16:15	16:30	26	74	90	**190**	16	162	71	**249**	**439**	50	256	35	**342**	55	170	51	**276**	**618**	**1057**
16:30	16:45	27	73	73	**173**	37	110	65	**212**	**385**	55	295	34	**384**	59	172	43	**274**	**658**	**1043**
16:45	17:00	39	93	80	**212**	36	127	66	**229**	**441**	59	273	37	**370**	56	189	53	**298**	**668**	**1109**
17:00	17:15	28	79	55	**162**	41	114	56	**211**	**373**	51	300	39	**392**	57	156	53	**266**	**658**	**1031**
17:15	17:30	40	87	75	**202**	29	99	59	**187**	**389**	52	253	31	**338**	43	148	44	**236**	**574**	**963**
17:30	17:45	32	66	71	**169**	29	83	58	**170**	**339**	54	256	32	**343**	39	153	46	**238**	**581**	**920**
17:45	18:00	26	67	60	**153**	30	97	63	**190**	**343**	51	208	27	**289**	42	156	29	**227**	**516**	**859**
TOTAL:		1364	2755	2031	**6152**	974	2742	1677	**5394**	**11546**	1808	5790	762	**8387**	1386	5229	1143	**7766**	**16153**	**27699**

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
37443

AVIATION PKWY @ OGILVIE RD

Count Date: Thursday, January 25, 2018

Start Time: 07:00

	AVIATION PKWY			OGILVIE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	0	0	**0**	0	0	**0**	**0**
08:00 09:00	0	0	**0**	2	0	**2**	**2**
09:00 10:00	0	0	**0**	1	0	**1**	**1**
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	1	**1**	**1**
16:00 17:00	0	0	**0**	0	2	**2**	**2**
17:00 18:00	0	0	**0**	1	0	**1**	**1**
Total	0	0	**0**	4	3	**7**	**7**

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

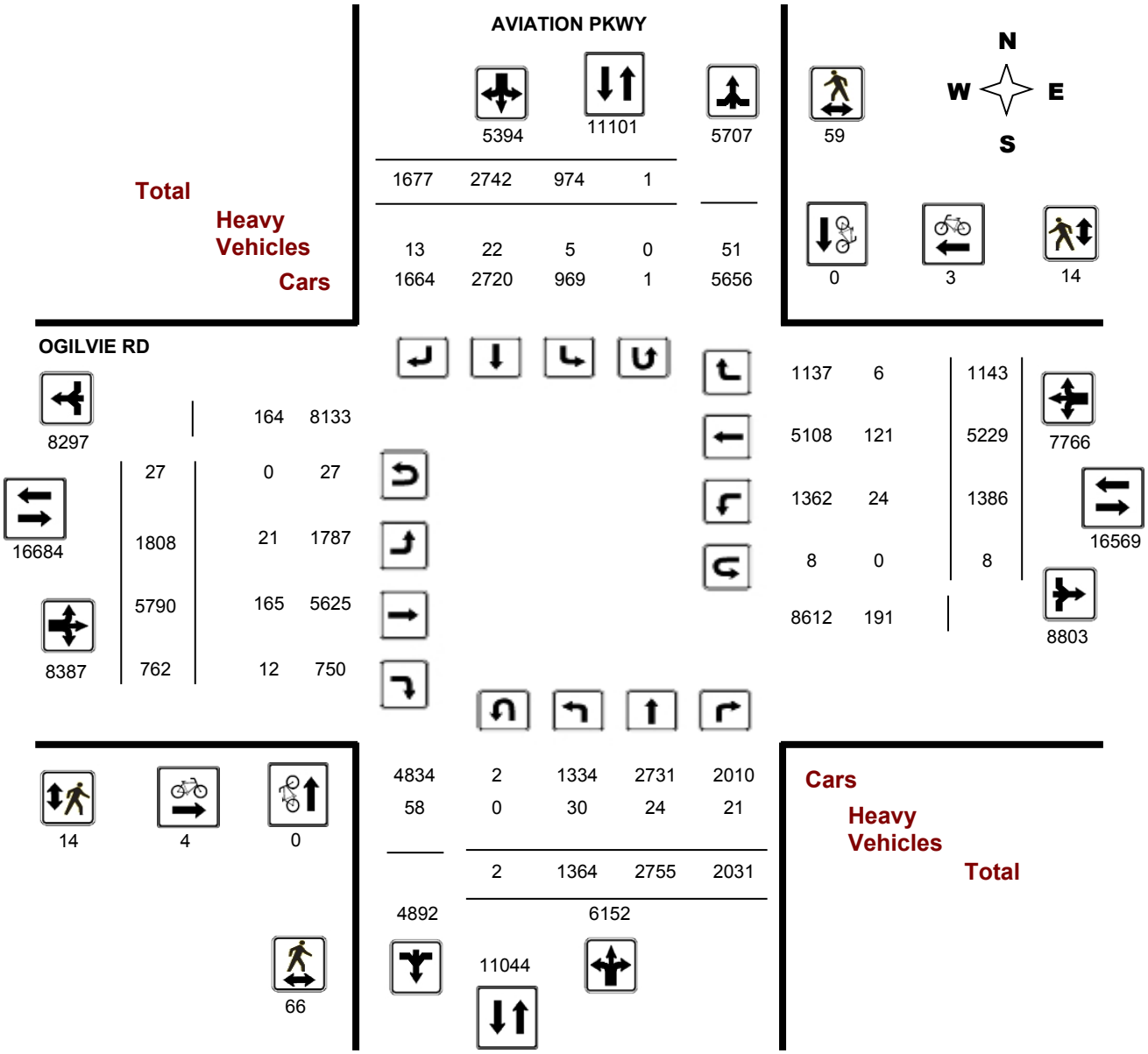
Turning Movement Count - Full Study Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018

WO#: 37443

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
37443

Turning Movement Count - Heavy Vehicle Report

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018

		AVIATION PKWY									OGILVIE 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	10	4	2	**16**	0	3	1	**4**	**20**	2	30	0	**32**	7	20	2	**29**	**61**	**81**
08:00	09:00	6	4	4	**14**	0	3	5	**8**	**22**	5	22	1	**28**	1	20	0	**21**	**49**	**71**
09:00	10:00	4	3	2	**9**	3	5	3	**11**	**20**	3	28	4	**35**	2	16	1	**19**	**54**	**74**
11:30	12:30	3	5	6	**14**	1	0	1	**2**	**16**	3	19	2	**24**	2	14	2	**18**	**42**	**58**
12:30	13:30	1	3	1	**5**	0	1	2	**3**	**8**	5	18	1	**24**	2	15	0	**17**	**41**	**49**
15:00	16:00	0	4	4	**8**	0	3	0	**3**	**11**	2	21	2	**25**	5	21	1	**27**	**52**	**63**
16:00	17:00	1	1	1	**3**	1	4	0	**5**	**8**	1	13	2	**16**	2	8	0	**10**	**26**	**34**
17:00	18:00	5	0	1	**6**	0	3	1	**4**	**10**	0	14	0	**14**	3	7	0	**10**	**24**	**34**
Sub Total		30	24	21	**75**	5	22	13	**40**	**115**	21	165	12	**198**	24	121	6	**151**	**349**	**464**
U-Turns (Heavy Vehicles)					**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total		30	24	21	**0**	5	22	13	**40**	**115**	21	165	12	**198**	24	121	6	**151**	**349**	**464**

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
37443

Turning Movement Count - Pedestrian Volume Report

AVIATION PKWY @ OGILVIE RD

Count Date: Thursday, January 25, 2018 **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	2	0	**2**	0	0	**0**	**2**
07:15 07:30	2	1	**3**	0	0	**0**	**3**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	1	2	**3**	1	0	**1**	**4**
07:00 08:00	5	3	**8**	1	0	**1**	**9**
08:00 08:15	1	0	**1**	1	0	**1**	**2**
08:15 08:30	3	0	**3**	0	0	**0**	**3**
08:30 08:45	6	1	**7**	0	1	**1**	**8**
08:45 09:00	3	0	**3**	0	0	**0**	**3**
08:00 09:00	13	1	**14**	1	1	**2**	**16**
09:00 09:15	2	6	**8**	1	0	**1**	**9**
09:15 09:30	1	9	**10**	1	0	**1**	**11**
09:30 09:45	2	0	**2**	0	0	**0**	**2**
09:45 10:00	0	2	**2**	1	0	**1**	**3**
09:00 10:00	5	17	**22**	3	0	**3**	**25**
11:30 11:45	0	0	**0**	0	2	**2**	**2**
11:45 12:00	4	5	**9**	0	0	**0**	**9**
12:00 12:15	2	8	**10**	0	0	**0**	**10**
12:15 12:30	2	0	**2**	0	0	**0**	**2**
11:30 12:30	8	13	**21**	0	2	**2**	**23**
12:30 12:45	1	0	**1**	0	0	**0**	**1**
12:45 13:00	3	4	**7**	1	3	**4**	**11**
13:00 13:15	1	4	**5**	1	0	**1**	**6**
13:15 13:30	1	1	**2**	0	1	**1**	**3**
12:30 13:30	6	9	**15**	2	4	**6**	**21**
15:00 15:15	2	0	**2**	0	2	**2**	**4**
15:15 15:30	3	2	**5**	0	2	**2**	**7**
15:30 15:45	3	0	**3**	0	0	**0**	**3**
15:45 16:00	0	1	**1**	1	0	**1**	**2**
15:00 16:00	8	3	**11**	1	4	**5**	**16**
16:00 16:15	4	2	**6**	0	0	**0**	**6**
16:15 16:30	2	2	**4**	0	0	**0**	**4**
16:30 16:45	4	1	**5**	2	0	**2**	**7**
16:45 17:00	3	3	**6**	3	1	**4**	**10**
16:00 17:00	13	8	**21**	5	1	**6**	**27**
17:00 17:15	2	0	**2**	0	1	**1**	**3**
17:15 17:30	1	3	**4**	0	0	**0**	**4**
17:30 17:45	2	2	**4**	1	0	**1**	**5**
17:45 18:00	3	0	**3**	0	1	**1**	**4**
17:00 18:00	8	5	**13**	1	2	**3**	**16**
Total	66	59	**125**	14	14	**28**	**153**

Comment:

Transportation Services - Traffic Services

Work Order
37443

Turning Movement Count - Full Study Summary Report

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018

Total Observed U-Turns

Northbound: 2 Southbound: 1
Eastbound: 27 Westbound: 8

AADT Factor

1.00

Full Study

	AVIATION PKWY									OGILVIE 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	266	586	317	**1169**	128	264	192	**584**	**1753**	279	361	49	**689**	190	707	116	**1013**	**1702**	**3455**
08:00 09:00	360	512	383	**1255**	141	311	221	**673**	**1928**	310	540	51	**901**	137	817	120	**1074**	**1975**	**3903**
09:00 10:00	139	297	195	**631**	118	206	167	**491**	**1122**	226	481	60	**767**	109	527	102	**738**	**1505**	**2627**
11:30 12:30	111	199	189	**499**	104	254	165	**523**	**1022**	170	691	79	**940**	132	598	107	**837**	**1777**	**2799**
12:30 13:30	97	200	149	**446**	98	234	160	**492**	**938**	214	663	84	**961**	121	556	107	**784**	**1745**	**2683**
15:00 16:00	136	331	243	**710**	131	535	270	**936**	**1646**	191	931	158	**1280**	273	701	215	**1189**	**2469**	**4115**
16:00 17:00	129	331	294	**754**	125	545	266	**936**	**1690**	210	1106	152	**1468**	243	710	204	**1157**	**2625**	**4315**
17:00 18:00	126	299	261	**686**	129	393	236	**758**	**1444**	208	1017	129	**1354**	181	613	172	**966**	**2320**	**3764**
Sub Total	1364	2755	2031	**6150**	974	2742	1677	**5393**	**11543**	1808	5790	762	**8360**	1386	5229	1143	**7758**	**16118**	**27661**
U Turns				**2**				**1**	**3**				**27**				**8**	**35**	**38**
Total	1364	2755	2031	**6152**	974	2742	1677	**5394**	**11546**	1808	5790	762	**8387**	1386	5229	1143	**7766**	**16153**	**27699**
EQ 12Hr	1896	3829	2823	**8551**	1354	3811	2331	**7498**	**16049**	2513	8048	1059	**11658**	1927	7268	1589	**10795**	**22453**	**38502**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr	1896	3829	2823	**8551**	1354	3811	2331	**7498**	**16049**	2513	8048	1059	**11658**	1927	7268	1589	**10795**	**22453**	**38502**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **1.00**

AVG 24Hr	2484	5017	3698	**11202**	1774	4993	3054	**9822**	**21024**	3292	10543	1388	**15272**	2524	9521	2081	**14141**	**29413**	**50437**

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.

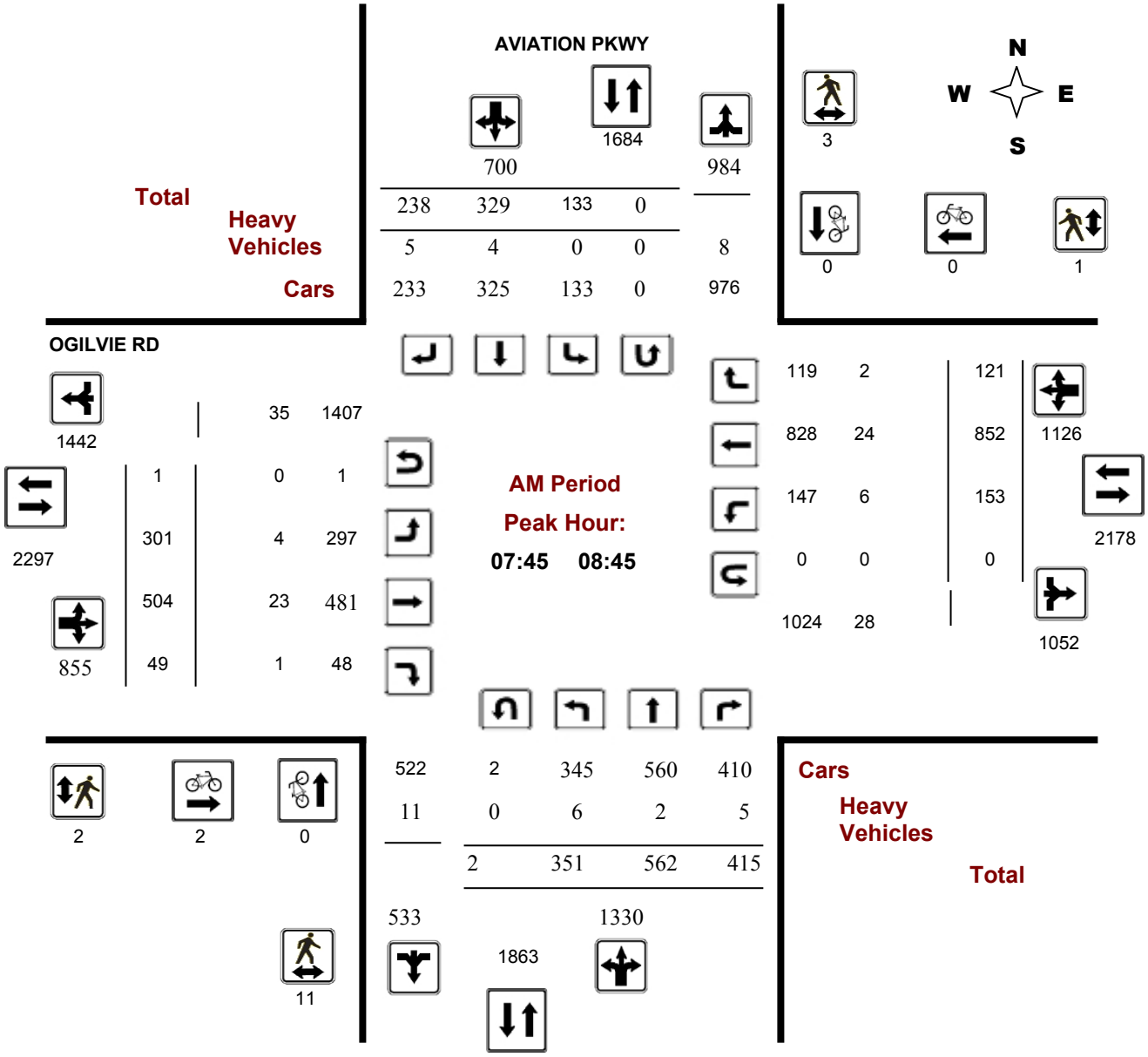
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018 **WO No:** 37443

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



Comments

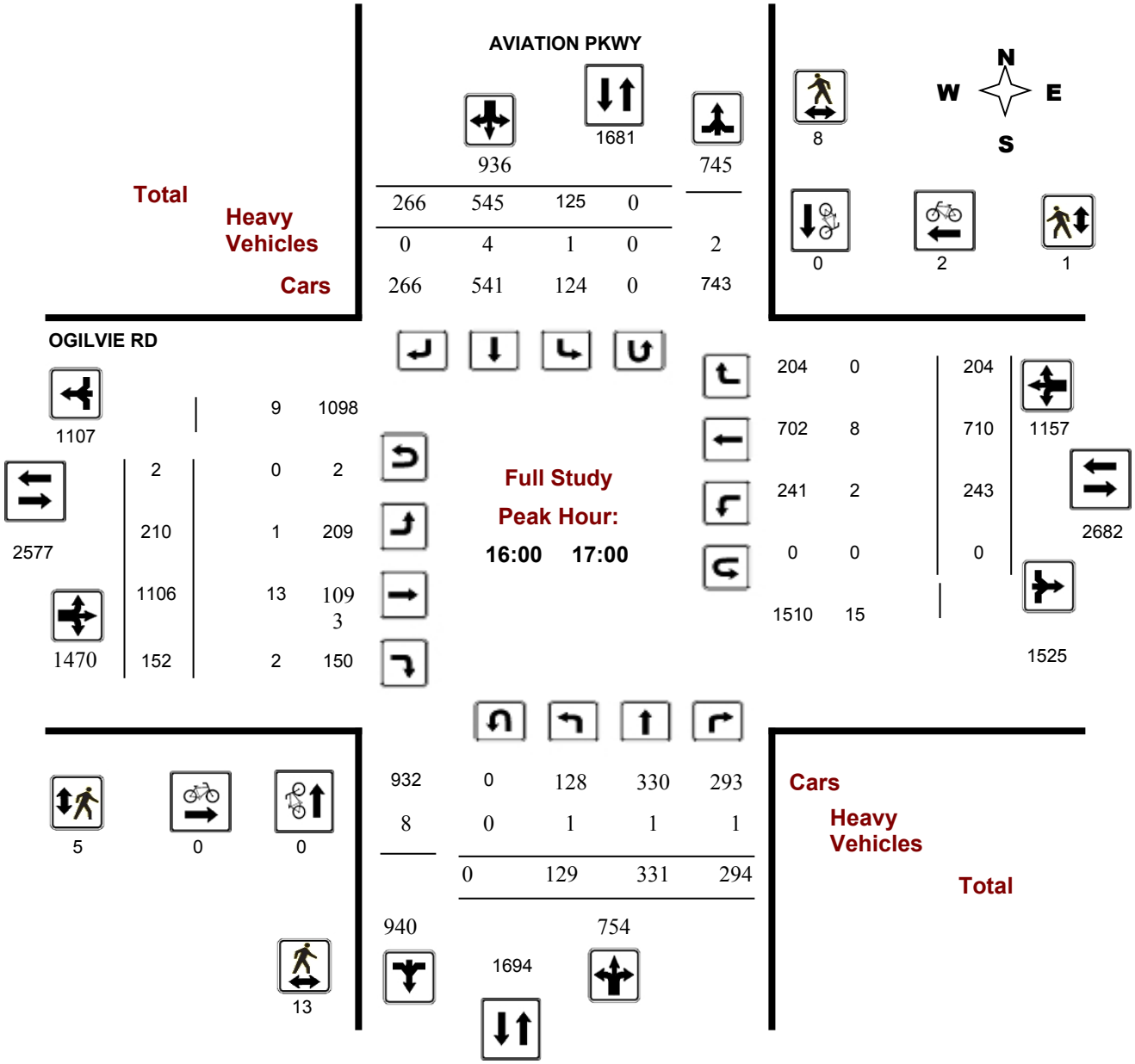
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018 **WO No:** 37443

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



Comments

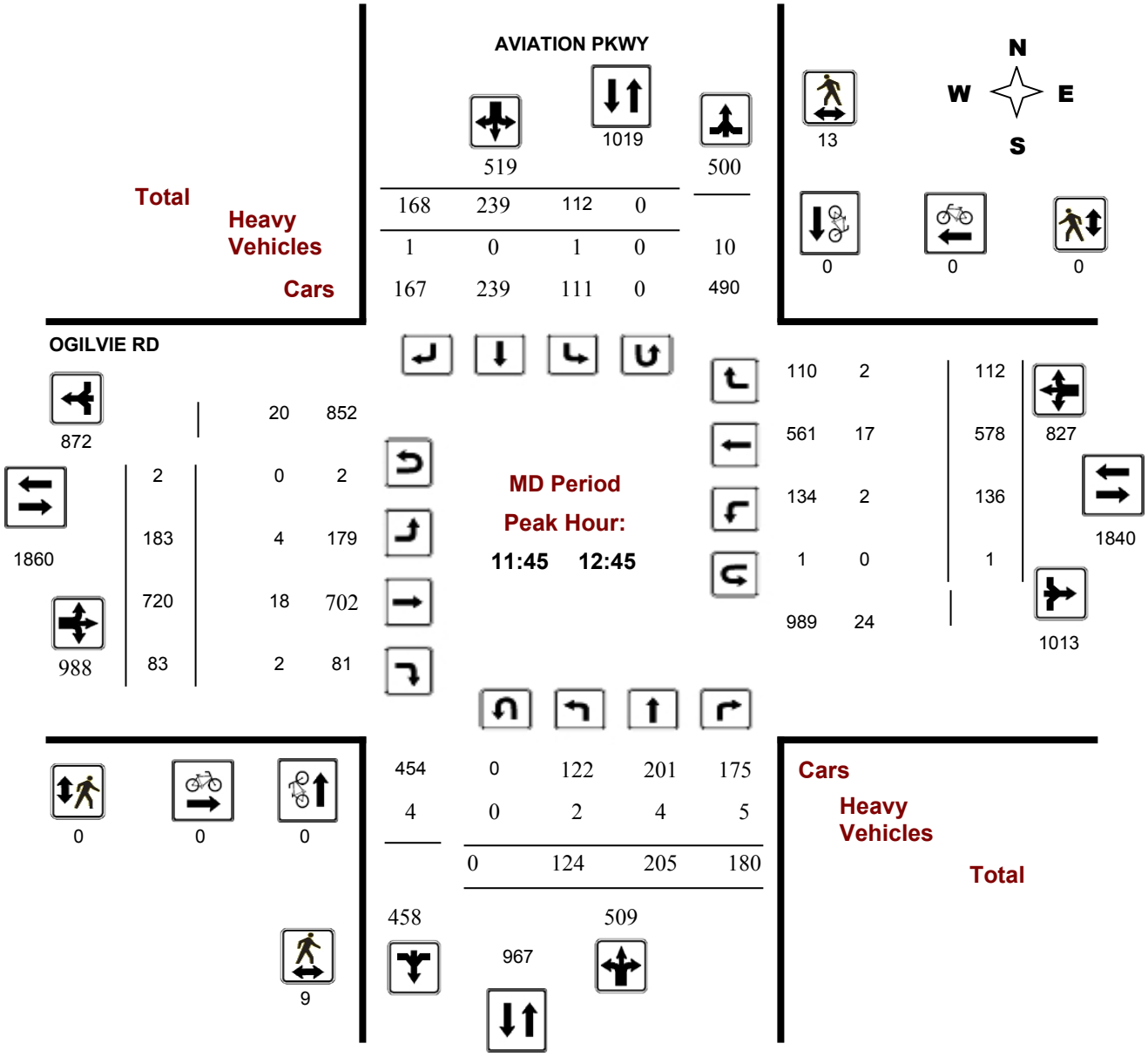
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018 **WO No:** 37443

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



Comments

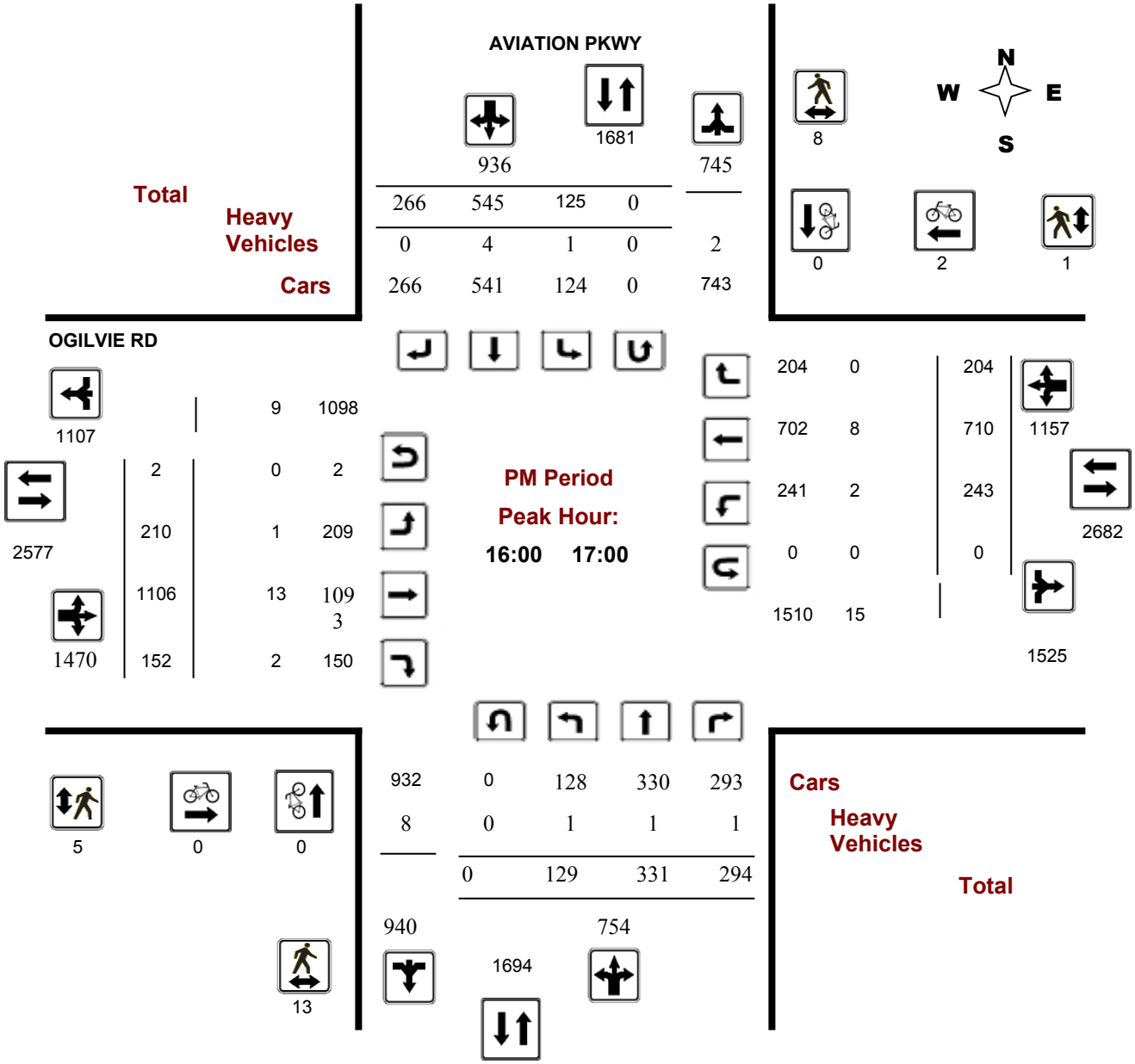
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018 **WO No:** 37443

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



Comments

Transportation Services - Traffic Services

Work Order
37443

Turning Movement Count - 15 Min U-Turn Total Report

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, January 25, 2018

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	0	1	0	1
08:30	08:45	2	0	0	0	2
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	1	2	3
09:15	09:30	0	0	0	1	1
09:30	09:45	0	0	2	0	2
09:45	10:00	0	0	1	0	1
11:30	11:45	0	0	0	1	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	1	1	2
12:30	12:45	0	0	1	0	1
12:45	13:00	0	0	1	0	1
13:00	13:15	0	0	2	0	2
13:15	13:30	0	1	2	0	3
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	2	0	2
15:30	15:45	0	0	1	1	2
15:45	16:00	0	0	2	1	3
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	1	0	1
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	1	0	1
17:00	17:15	0	0	2	0	2
17:15	17:30	0	0	2	1	3
17:30	17:45	0	0	1	0	1
17:45	18:00	0	0	3	0	3
Total		2	1	27	8	38

11-10-0008

Public Works and Services Department

Count ID 2949

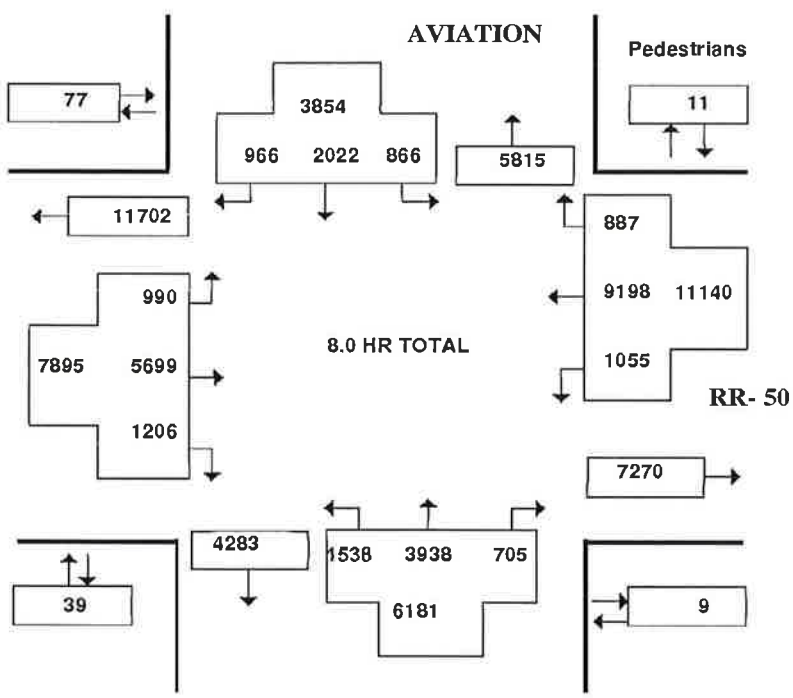
OGILVIE RD and AVIATION PKWY

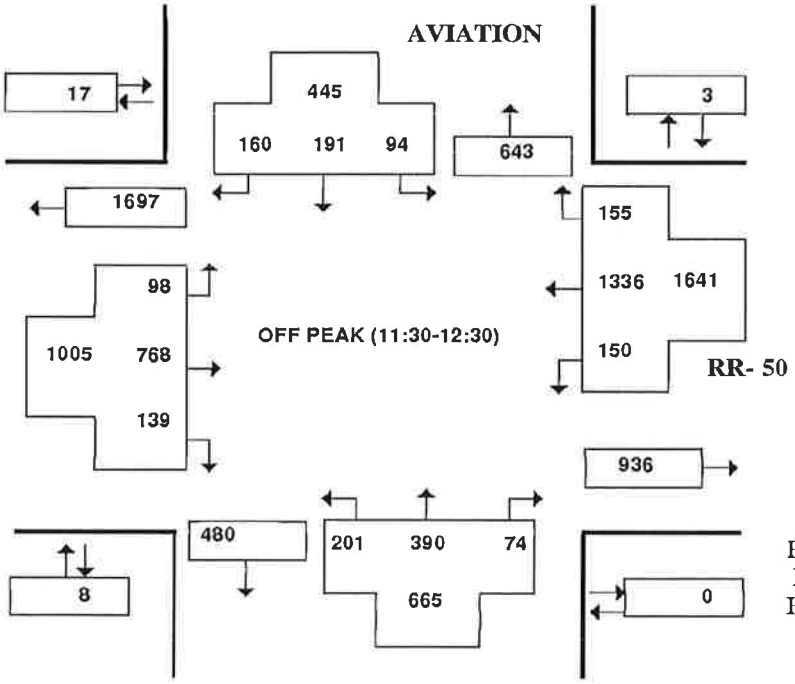
(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 2
Eastbound: 9 Westbound: 0

AADT Factor
Tuesday in August is 9





Refer to Summary Page for Survey Hours.

Approved by : JM

Printed on : 24/10/2011

Public Works and Services Department

Count ID 2949

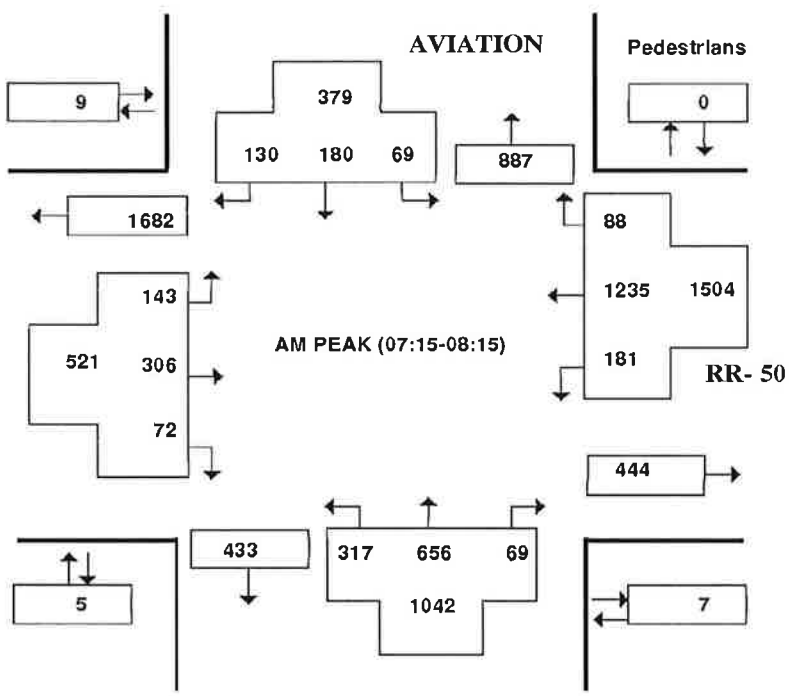
OGILVIE RD and AVIATION PKWY

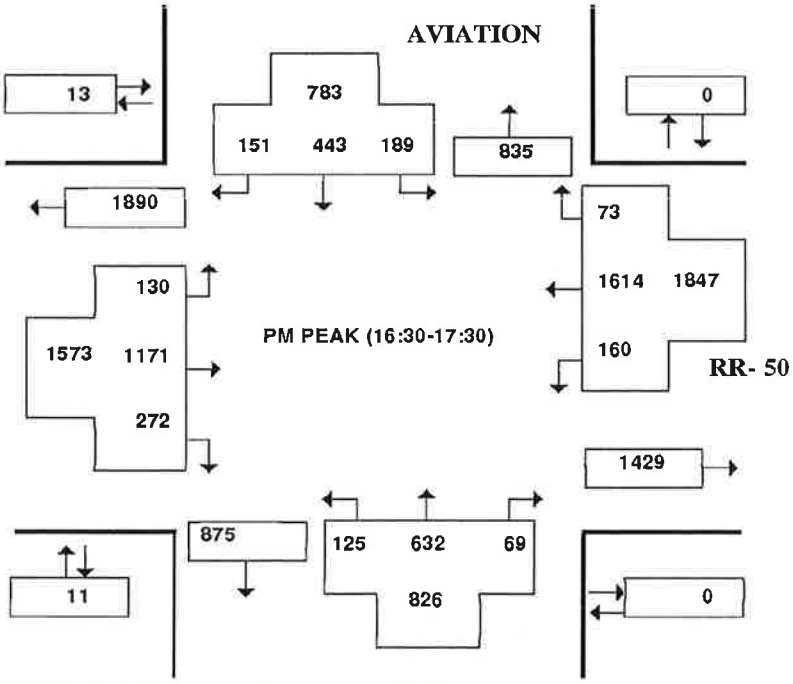
(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 2
Eastbound: 9 Westbound: 0

AADT Factor
Tuesday in August is 9





Approved by : JM

Printed on : 24/10/2011

Ottawa *Public Works and Services Department*

Count ID 29496

Vehicular Turning Movements - Summary

OGILVIE RD and AVIATION PKWY

(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 2
Eastbound: 9 Westbound: 0

AADT Factor
Tuesday in August is
9

	AVIATION									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	324	641	64	**1029**	57	194	119	**370**	**1399**	134	282	70	**486**	143	1215	71	**1429**	**1915**	**3314**
08:00-09:00	238	475	71	**784**	89	194	101	**384**	**1168**	166	334	76	**576**	163	1071	88	**1322**	**1898**	**3066**
09:00-10:00	186	570	78	**834**	66	196	105	**367**	**1201**	112	427	86	**625**	77	746	76	**899**	**1524**	**2725**
11:30-12:30	201	390	74	**665**	94	191	160	**445**	**1110**	98	768	139	**1005**	150	1336	155	**1641**	**2646**	**3756**
12:30-13:30	135	272	143	**550**	102	192	100	**394**	**944**	118	827	148	**1093**	112	984	95	**1191**	**2284**	**3228**
15:00-16:00	150	446	115	**711**	139	231	94	**464**	**1175**	102	771	181	**1054**	118	1108	157	**1383**	**2437**	**3612**
16:00-17:00	154	564	96	**814**	165	382	126	**673**	**1487**	114	1043	214	**1371**	250	1485	188	**1923**	**3294**	**4781**
17:00-18:00	150	580	64	**794**	154	442	161	**757**	**1551**	146	1247	292	**1685**	42	1253	57	**1352**	**3037**	**4588**
8.0 HR TOTAL	1538	3938	705	**6181**	866	2022	966	**3854**	**10035**	990	5699	1206	**7895**	1055	9198	887	**11140**	**19035**	**29070**
EQU. 12 HR TOTAL	2137	5473	979	**8589**	1203	2810	1342	**5355**	**13944**	1376	7921	1676	**10973**	1466	12785	1232	**15483**	**26456**	**40400**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																			
AVG. 12 HR TOTAL	1923	4925	881	**7729**	1082	2529	1207	**4818**	**12547**	1238	7128	1508	**9874**	1319	11506	1108	**13933**	**23807**	**36354**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.																			
AVG. 24 HR TOTAL	2519	6451	1154	**10124**	1417	3312	1581	**6310**	**16434**	1621	9337	1975	**12933**	1727	15072	1451	**18250**	**31183**	**47617**
Note: These volumes were calculated by multiplying the Average Daily 12 hr totals by 1.31.																			
AM TOTAL (0700-0900)	562	1116	135	**1813**	146	388	220	**754**	**2567**	300	616	146	**1062**	306	2286	159	**2751**	**3813**	**6380**
PM TOTAL (1530-1730)	285	1139	208	**1632**	337	724	265	**1326**	**2958**	244	2060	465	**2769**	343	2765	271	**3379**	**6148**	**9106**

Ottawa

Public Works and Services Department

Count ID 29496

Vehicular Turning Movements (15 Min. Volumes)

OGILVIE RD and AVIATION PKWY

(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011
Conditions: dry
Start Time: 07:00

Total Observed U-Turns
Northbound: 0 Southbound: 2
Eastbound: 9 Westbound: 0

AADT Factor
Tuesday in August is 9

	AVIATION									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	66	128	14	**208**	11	53	18	**82**	**290**	31	53	16	**100**	17	219	15	**251**	**351**	**641**
07:15-07:30	91	180	18	**289**	14	30	17	**61**	**350**	33	60	13	**106**	30	290	14	**334**	**440**	**790**
07:30-07:45	98	158	19	**275**	16	65	53	**134**	**409**	36	76	25	**137**	57	361	19	**437**	**574**	**983**
07:45-08:00	69	175	13	**257**	16	46	31	**93**	**350**	34	93	16	**143**	39	345	23	**407**	**550**	**900**
08:00-08:15	59	143	19	**221**	23	39	29	**91**	**312**	40	77	18	**135**	55	239	32	**326**	**461**	**773**
08:15-08:30	48	87	21	**156**	26	45	22	**93**	**249**	51	78	19	**148**	27	188	13	**228**	**376**	**625**
08:30-08:45	55	94	8	**157**	15	69	21	**105**	**262**	43	87	18	**148**	46	263	25	**334**	**482**	**744**
08:45-09:00	76	151	23	**250**	25	41	29	**95**	**345**	32	92	21	**145**	35	381	18	**434**	**579**	**924**
09:00-09:15	46	155	24	**225**	13	45	15	**73**	**298**	34	102	22	**158**	18	189	17	**224**	**382**	**680**
09:15-09:30	80	234	9	**323**	18	47	24	**89**	**412**	34	98	24	**156**	46	188	19	**253**	**409**	**821**
09:30-09:45	35	114	41	**190**	11	53	32	**96**	**286**	23	116	25	**164**	10	208	23	**241**	**405**	**691**
09:45-10:00	25	67	4	**96**	24	51	34	**109**	**205**	21	111	15	**147**	3	161	17	**181**	**328**	**533**
11:30-11:45	41	99	12	**152**	20	43	28	**91**	**243**	23	163	29	**215**	38	376	40	**454**	**669**	**912**
11:45-12:00	83	101	21	**205**	28	43	38	**109**	**314**	17	184	24	**225**	22	318	45	**385**	**610**	**924**
12:00-12:15	46	108	34	**188**	18	55	56	**129**	**317**	25	211	40	**276**	65	319	38	**422**	**698**	**1015**
12:15-12:30	31	82	7	**120**	28	50	38	**116**	**236**	33	210	46	**289**	25	323	32	**380**	**669**	**905**
12:30-12:45	27	32	9	**68**	24	51	31	**106**	**174**	32	201	42	**275**	12	184	13	**209**	**484**	**658**
12:45-13:00	40	87	77	**204**	20	40	24	**84**	**288**	37	213	34	**284**	49	269	24	**342**	**626**	**914**
13:00-13:15	25	59	35	**119**	34	52	18	**104**	**223**	25	201	41	**267**	26	243	28	**297**	**564**	**787**
13:15-13:30	43	94	22	**159**	24	49	27	**100**	**259**	24	212	31	**267**	25	288	30	**343**	**610**	**869**
15:00-15:15	52	68	15	**135**	31	65	15	**111**	**246**	28	182	44	**254**	18	261	41	**320**	**574**	**820**
15:15-15:30	22	101	18	**141**	32	51	28	**111**	**252**	19	188	37	**244**	32	285	33	**350**	**594**	**846**
15:30-15:45	45	113	26	**184**	39	52	28	**119**	**303**	28	204	46	**278**	27	309	38	**374**	**652**	**955**
15:45-16:00	31	164	56	**251**	37	63	23	**123**	**374**	27	197	54	**278**	41	253	45	**339**	**617**	**991**
16:00-16:15	45	108	26	**179**	34	71	36	**141**	**320**	34	234	54	**322**	46	255	61	**362**	**684**	**1004**
16:15-16:30	39	122	31	**192**	38	95	27	**160**	**352**	25	254	39	**318**	69	334	54	**457**	**775**	**1127**
16:30-16:45	38	172	37	**247**	45	100	35	**180**	**427**	32	288	57	**377**	117	456	60	**633**	**1010**	**1437**
16:45-17:00	32	162	2	**196**	48	116	28	**192**	**388**	23	267	64	**354**	18	440	13	**471**	**825**	**1213**
17:00-17:15	23	154	14	**191**	55	123	48	**226**	**417**	36	299	73	**408**	15	398	0	**413**	**821**	**1238**
17:15-17:30	32	144	16	**192**	41	104	40	**185**	**377**	39	317	78	**434**	10	320	0	**330**	**764**	**1141**
17:30-17:45	43	130	22	**195**	36	100	37	**173**	**368**	33	291	69	**393**	12	233	34	**279**	**672**	**1040**
17:45-18:00	52	152	12	**216**	22	115	36	**173**	**389**	38	340	72	**450**	5	302	23	**330**	**780**	**1169**

Approved by: JM

Printed on : 24/10/2011

Ottawa *Public Works and Services Department*

Count ID 29496

Pedestrian Volume Summary Sheet - Hourly Volumes

OGILVIE RD and AVIATION PKWY

(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011 **Conditions:** dry **Start Time:** 0700

Time Period	CROSSING AVIATION N/B APPROACH	CROSSING AVIATION S/B APPROACH	STREET TOTAL	CROSSING RR- 50 E/B APPROACH	CROSSING RR- 50 W/B APPROACH	STREET TOTAL	GRAND TOTAL
07:00-08:00	7	10	**17**	6	0	**6**	**23**
08:00-09:00	0	7	**7**	1	2	**3**	**10**
09:00-10:00	1	8	**9**	1	1	**2**	**11**
11:30-12:30	0	17	**17**	8	3	**11**	**28**
12:30-13:30	1	7	**8**	4	0	**4**	**12**
15:00-16:00	0	8	**8**	4	5	**9**	**17**
16:00-17:00	0	13	**13**	6	0	**6**	**19**
17:00-18:00	0	7	**7**	9	0	**9**	**16**
8.0 HR TOTAL	9	77	**86**	39	11	**50**	**136**
PEAK PERIOD SUMMARIES							
AM PEAK PERIOD (7:00-9:00)							
07:00-07:15	0	3	**3**	2	0	**2**	**5**
07:15-07:30	0	2	**2**	3	0	**3**	**5**
07:30-07:45	6	1	**7**	0	0	**0**	**7**
07:45-08:00	1	4	**5**	1	0	**1**	**6**
08:00-08:15	0	2	**2**	1	0	**1**	**3**
08:15-08:30	0	0	**0**	0	0	**0**	**0**
08:30-08:45	0	3	**3**	0	2	**2**	**5**
08:45-09:00	0	2	**2**	0	0	**0**	**2**
TOTALS	7	17	**24**	7	2	**9**	**33**
OFF PEAK PERIOD (11:30-13:30)							
11:30-11:45	0	4	**4**	3	0	**3**	**7**
11:45-12:00	0	5	**5**	1	1	**2**	**7**
12:00-12:15	0	4	**4**	3	0	**3**	**7**
12:15-12:30	0	4	**4**	1	2	**3**	**7**
12:30-12:45	0	3	**3**	1	0	**1**	**4**
12:45-13:00	0	3	**3**	2	0	**2**	**5**
13:00-13:15	1	1	**2**	0	0	**0**	**2**
13:15-13:30	0	0	**0**	1	0	**1**	**1**
TOTALS	1	24	**25**	12	3	**15**	**40**
PM PEAK PERIOD (15:30-17:30)							
15:30-15:45	0	1	**1**	1	1	**2**	**3**
15:45-16:00	0	1	**1**	1	4	**5**	**6**
16:00-16:15	0	5	**5**	0	0	**0**	**5**
16:15-16:30	0	0	**0**	1	0	**1**	**1**
16:30-16:45	0	6	**6**	3	0	**3**	**9**
16:45-17:00	0	2	**2**	2	0	**2**	**4**
17:00-17:15	0	2	**2**	6	0	**6**	**8**
17:15-17:30	0	3	**3**	0	0	**0**	**3**
TOTALS	0	20	**20**	14	5	**19**	**39**

Approved by: JM

Printed on : 24/10/2011

Ottawa

Public Works and Services Department

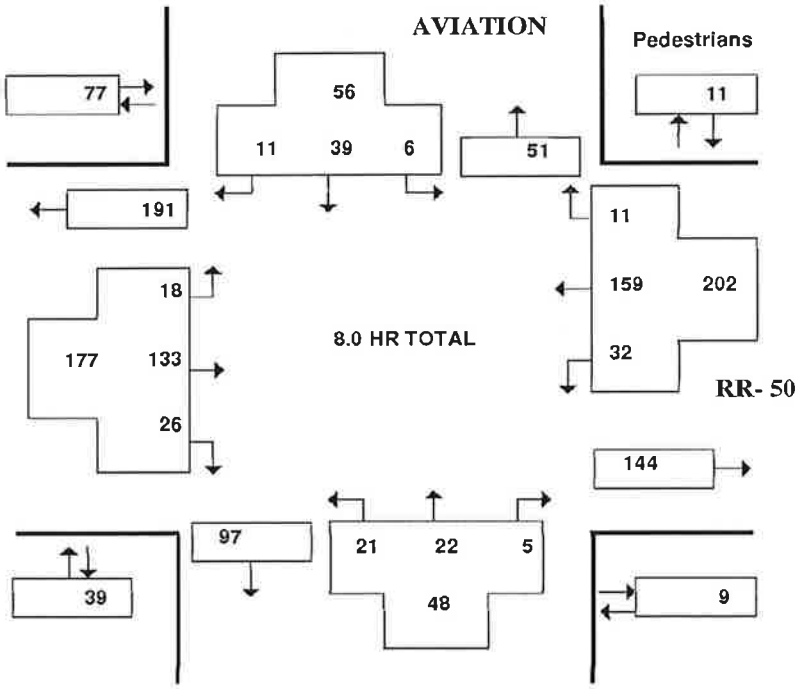
Count ID 29496

Heavy Vehicle Summary Sheet - Hourly Volumes

OGILVIE RD and AVIATION PKWY

(ULRS Listing RR- 50 & AVIATION)

Survey Date : Tuesday 2 August 2011 **Conditions : dry** **Start Time : 0700**



	AVIATION									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-08:00	2	3	0	**5**	1	4	1	**6**	**11**	2	21	3	**26**	6	15	2	**23**	**49**	**60**
08:00-09:00	2	2	0	**4**	1	1	1	**3**	**7**	1	16	1	**18**	5	29	2	**36**	**54**	**61**
09:00-10:00	3	2	0	**5**	0	3	4	**7**	**12**	1	24	3	**28**	2	12	1	**15**	**43**	**55**
11:30-12:30	4	7	2	**13**	0	4	0	**4**	**17**	1	21	3	**25**	5	21	0	**26**	**51**	**68**
12:30-13:30	4	4	0	**8**	0	7	0	**7**	**15**	3	21	4	**28**	2	22	1	**25**	**53**	**68**
15:00-16:00	3	2	1	**6**	0	7	2	**9**	**15**	3	14	7	**24**	4	22	2	**28**	**52**	**67**
16:00-17:00	1	2	2	**5**	2	3	2	**7**	**12**	4	8	4	**16**	6	28	3	**37**	**53**	**65**
17:00-18:00	2	0	0	**2**	2	10	1	**13**	**15**	3	8	1	**12**	2	10	0	**12**	**24**	**39**
8.0 HR TOTAL	21	22	5	**48**	6	39	11	**56**	**104**	18	133	26	**177**	32	159	11	**202**	**379**	**483**

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.

Approved by: JM

Printed on: 24/10/2011

Ottawa *Public Works and Services Department*

Count ID 29496

Bicycle Volume Summary Sheet - Hourly Volumes

OGILVIE RD and AVIATION PKWY

(ULRS Listing RR- 50 & AVIATION)

Survey Date: Tuesday 2 August 2011 **Conditions:** dry **Start Time:** 0700

Time Period	NORTHBOUND APPROACH ON AVIATION	SOUTHBOUND APPROACH ON AVIATION	STREET TOTAL	EASTBOUND APPROACH ON RR- 50	WESTBOUND APPROACH ON RR- 50	STREET TOTAL	GRAND TOTAL
07:00-08:00	0	9	**9**	21	15	**36**	**45**
08:00-09:00	0	4	**4**	19	12	**31**	**35**
09:00-10:00	0	2	**2**	9	0	**9**	**11**
11:30-12:30	1	6	**7**	12	1	**13**	**20**
12:30-13:30	0	2	**2**	1	1	**2**	**4**
15:00-16:00	1	4	**5**	11	2	**13**	**18**
16:00-17:00	1	2	**3**	15	4	**19**	**22**
17:00-18:00	0	3	**3**	42	0	**42**	**45**
8.0 HR TOTAL	3	32	**35**	130	35	**165**	**200**

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

Approved by: JM

Printed on: 24/10/2011

Public Works - Traffic Services

Turning Movement Count - Full Study Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: 28-Jan-15

WO#: 34325

Device: Miovision

AVIATION PKWY

	4965	10055		5090
1352	2514	1099	0	
7	29	6	0	40
1345	2485	1093	0	5050

Cars

OGILVIE RD

8242			168	8074			
16146	12		0	12			
	1414		15	1399			
7904	5604		139	5465			
	874		18	856			

1277	10	1287	8069			
5429	128	5557				
1186	26	1212	15723			
13	0	13				
7498	156		7654			

4534	7	1288	2374	927
73	0	33	15	11
	7	1321	2389	938
4607		4655		
	9262			

5

0

69

Cars

Heavy Vehicles

Tota

Comments

Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: 28-Jan-15 **WO No:** 34325

Start Time: 7:00 **Device:** Miovision

Cars

Heavy Vehicles

AVIATION PKWY

627 1576 949

212	262	153	0
1	2	0	0
211	260	153	0

4 945

OGILVIE RD

1470

2192

722

		38	1432
1		0	1
245		0	245
418		29	389
58		6	52

AM Period
Peak Hour
7:30 8:30

151	0		
879	29		
128	2		
0	0		
765	32		

151			
908			
130			
0			

1189 1986 797

441	1	341	549	223
10	0	8	4	3
	1	349	553	226

451 1129 1580

Cars

Heavy Vehicles

Tota

Comments

Cars

Heavy Vehicles

AVIATION PKWY

	490		932	442
142	221	127	0	
2	5	0	0	4
140	216	127	0	438

OGILVIE RD

913		22	891	
1898	0	0	0	
	138	1	137	
985	775	17	758	
	72	2	70	

MD Period
Peak Hour
12:00 13:00

127	2	129	
650	16	666	914
116	2	118	1899
1	0	1	
968	17		985

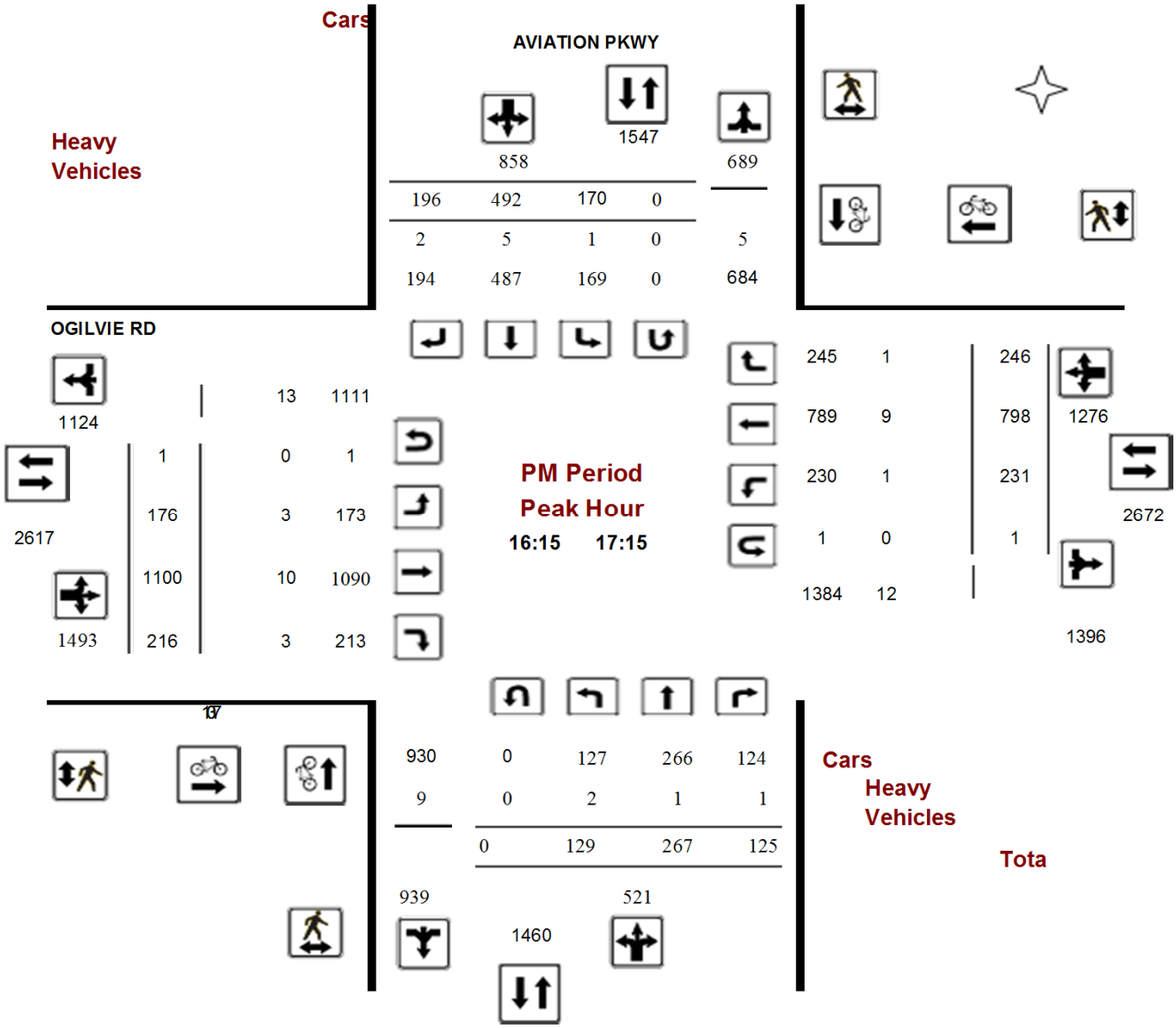
403	1	101	174	82
9	0	4	1	0
	1	105	175	82
412		775	363	

Cars

Heavy Vehicles

Tota

Comments


Cars
Heavy Vehicles
AVIATION PKWY
858
1547
689
196 492 170 0
2 5 1 0 5
194 487 169 0 684
OGILVIE RD
1124
13 1111
1 0 1
176 3 173
2617
1100 10 1090
1493
216 3 213
PM Period
Peak Hour
16:15 17:15
245 1
789 9
230 1
1 0
1384 12
246
798 1276
231
2672
1
1396
930 0 127 266 124
9 0 2 1 1
0 129 267 125
939
521
1460
Cars
Heavy Vehicles
Tota

Comments

Public Works - Traffic Services

Work Order
34325

Turning Movement Count - Full Study Summary Report

AVIATION PKWY @ OGILVIE RD

Survey Date: 28-Jan-15

Total Observed U-Turns				AADT Factor
Northbound:	7	Southbound:	0	1.00
Eastbound:	12	Westbound:	13	

Full Study

		AVIATION PKWY									OGILVIE 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 TO**	**STR TOT**	**Grand Total**
7:00	8:00	287	567	202	**1056**	139	236	167	**542**	**1598**	247	351	48	**646**	111	800	142	**1053**	**1699**	**3297**
8:00	9:00	328	475	163	**966**	154	238	206	**598**	**1564**	230	400	53	**683**	136	773	131	**1040**	**1723**	**3287**
9:00	10:00	133	216	90	**439**	96	192	115	**403**	**842**	143	431	43	**617**	90	528	116	**734**	**1351**	**2193**
11:30	12:30	118	165	68	**351**	115	221	155	**491**	**842**	147	704	66	**917**	125	669	115	**909**	**1826**	**2668**
12:30	13:30	96	147	90	**333**	128	200	116	**444**	**777**	146	777	92	**1015**	108	626	120	**854**	**1869**	**2646**
15:00	16:00	115	285	101	**501**	145	514	203	**862**	**1363**	156	904	182	**1242**	240	738	228	**1206**	**2448**	**3811**
16:00	17:00	125	268	130	**523**	178	515	202	**895**	**1418**	172	1073	221	**1466**	239	761	255	**1255**	**2721**	**4139**
17:00	18:00	119	266	94	**479**	144	398	188	**730**	**1209**	173	964	169	**1306**	163	662	180	**1005**	**2311**	**3520**
Total		1321	2389	938	**4648**	1099	2514	1352	**4965**	**9613**	1414	5604	874	**7892**	1212	5557	1287	**8056**	**15948**	**25561**
Equ 12Hr		1836	3320	1303	**6459**	1527	3494	1879	**6900**	**13359**	1965	7789	1214	**10968**	1684	7724	1788	**11196**	**22164**	**35523**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

Avg 12Hr	1836	3320	1303	**6459**	1527	3494	1879	**6900**	**13359**	1965	7789	1214	**10968**	1684	7724	1788	**11196**	**22164**	**35523**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **1.00**

Avg 24Hr	2405	4349	1706	**8461**	2000	4577	2461	**9039**	**17500**	2574	10203	1590	**14368**	2206	10118	2342	**14666**	**29034**	**46535**

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 are included in Totals.

Public Works - Traffic Services

W.O. **34325**

Turning Movement Count - 15 Minute Summary Report

AVIATION PKWY @ OGILVIE RD

Survey Date: 28-Jan-15

Total Observed U-Turns

Northbound: 7 Southbound: 0

Eastbound: 12 Westbound: 13

		AVIATION PKWY									OGILVIE 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**
7:00	7:15	44	99	26	**169**	36	45	36	**117**	**286**	49	48	10	**107**	23	136	33	**192**	**299**	**585**
7:15	7:30	69	144	46	**259**	29	62	33	**124**	**383**	71	82	8	**161**	27	186	29	**242**	**403**	**786**
7:30	7:45	84	155	63	**302**	39	70	48	**157**	**459**	61	113	17	**191**	34	226	39	**299**	**490**	**949**
7:45	8:00	90	169	67	**326**	35	59	50	**144**	**470**	66	108	13	**187**	27	252	41	**320**	**507**	**977**
8:00	8:15	83	103	56	**242**	43	62	45	**150**	**392**	57	108	19	**184**	44	240	37	**321**	**505**	**897**
8:15	8:30	92	126	40	**259**	36	71	69	**176**	**435**	61	89	9	**160**	25	190	34	**249**	**409**	**844**
8:30	8:45	105	124	35	**265**	36	45	48	**129**	**394**	64	98	14	**177**	30	176	38	**244**	**421**	**815**
8:45	9:00	48	122	32	**205**	39	60	44	**143**	**348**	48	105	11	**165**	37	167	22	**226**	**391**	**739**
9:00	9:15	46	64	23	**133**	36	51	24	**111**	**244**	46	99	8	**153**	23	134	32	**190**	**343**	**587**
9:15	9:30	26	66	26	**118**	14	44	30	**88**	**206**	37	102	11	**150**	24	154	25	**205**	**355**	**561**
9:30	9:45	32	44	20	**96**	21	50	34	**105**	**201**	32	96	14	**143**	24	115	35	**177**	**320**	**521**
9:45	10:00	29	42	21	**92**	25	47	27	**99**	**191**	28	134	10	**173**	19	125	24	**170**	**343**	**534**
11:30	11:45	35	46	20	**101**	32	57	40	**129**	**230**	45	161	13	**219**	30	166	24	**220**	**439**	**669**
11:45	12:00	30	32	20	**82**	26	60	44	**130**	**212**	32	167	21	**221**	32	165	27	**226**	**447**	**659**
12:00	12:15	28	40	12	**81**	28	53	30	**111**	**192**	46	199	16	**261**	36	161	28	**225**	**486**	**678**
12:15	12:30	25	47	16	**88**	29	51	41	**121**	**209**	24	177	16	**217**	27	177	36	**241**	**458**	**667**
12:30	12:45	21	41	34	**96**	31	70	38	**139**	**235**	43	209	19	**271**	20	171	36	**227**	**498**	**733**
12:45	13:00	31	47	20	**98**	39	47	33	**119**	**217**	25	190	21	**236**	35	157	29	**221**	**457**	**674**
13:00	13:15	25	33	19	**77**	25	38	27	**90**	**167**	37	196	25	**258**	36	137	24	**197**	**455**	**622**
13:15	13:30	19	26	17	**62**	33	45	18	**96**	**158**	41	182	27	**251**	17	161	31	**209**	**460**	**618**
15:00	15:15	32	81	30	**143**	32	110	52	**194**	**337**	33	208	32	**274**	60	178	74	**312**	**586**	**923**
15:15	15:30	24	58	22	**104**	35	120	49	**204**	**308**	40	213	49	**302**	53	215	58	**326**	**628**	**936**
15:30	15:45	36	85	16	**137**	33	145	45	**223**	**360**	44	224	51	**319**	70	154	47	**271**	**590**	**950**
15:45	16:00	23	61	33	**118**	45	139	57	**241**	**359**	39	259	50	**349**	57	191	49	**297**	**646**	**1005**
16:00	16:15	33	82	24	**139**	47	133	60	**240**	**379**	38	249	59	**347**	55	140	56	**251**	**598**	**977**
16:15	16:30	29	68	37	**134**	39	130	46	**215**	**349**	46	275	62	**383**	61	215	62	**338**	**721**	**1070**
16:30	16:45	23	68	34	**125**	54	153	51	**258**	**383**	35	268	44	**348**	63	192	81	**336**	**684**	**1067**
16:45	17:00	40	50	35	**125**	38	99	45	**182**	**307**	53	281	56	**390**	60	214	56	**331**	**721**	**1028**
17:00	17:15	37	81	19	**137**	39	110	54	**203**	**340**	42	276	54	**372**	47	177	47	**271**	**643**	**983**
17:15	17:30	35	56	30	**121**	39	116	44	**199**	**320**	40	253	44	**338**	50	182	62	**294**	**632**	**952**
17:30	17:45	24	77	24	**125**	36	104	42	**182**	**307**	49	217	33	**299**	37	146	38	**221**	**520**	**827**
17:45	18:00	23	52	21	**96**	30	68	48	**146**	**242**	42	218	38	**298**	29	157	33	**220**	**518**	**760**
TOTAL:		1321	2389	938	**4655**	1099	2514	1352	**4965**	**9620**	1414	5604	874	**7904**	1212	5557	1287	**8069**	**15973**	**25593**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

W.O.
34325

Turning Movement Count - Heavy Vehicle Report

AVIATION PKWY @ OGILVIE RD

Survey Date: 28-Jan-15

		AVIATION PKWY									OGILVIE 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**
7:00	8:00	9	4	4	**17**	0	3	0	**3**	**20**	0	22	5	**27**	3	20	1	**24**	**51**	**71**
8:00	9:00	7	3	1	**11**	0	2	1	**3**	**14**	2	21	4	**27**	0	28	0	**28**	**55**	**69**
9:00	10:00	6	1	1	**8**	3	1	1	**5**	**13**	4	26	0	**30**	8	17	2	**27**	**57**	**70**
11:30	12:30	2	3	1	**6**	0	3	1	**4**	**10**	2	12	3	**17**	4	15	2	**21**	**38**	**48**
12:30	13:30	2	0	2	**4**	1	4	1	**6**	**10**	1	22	0	**23**	4	16	1	**21**	**44**	**54**
15:00	16:00	5	1	1	**7**	1	3	0	**4**	**11**	1	18	2	**21**	4	16	2	**22**	**43**	**54**
16:00	17:00	2	2	1	**5**	1	6	0	**7**	**12**	4	10	3	**17**	1	11	2	**14**	**31**	**43**
17:00	18:00	0	1	0	**1**	0	7	3	**10**	**11**	1	8	1	**10**	2	5	0	**7**	**17**	**28**
Total	:	33	15	11	**59**	6	29	7	**42**	**101**	15	139	18	**172**	26	128	10	**164**	**336**	**437**

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
34325

AVIATION PKWY @ OGILVIE RD

Count Date: 28-Jan-15 **Start Time:** 7:00

		AVIATION PKWY			OGILVIE RD			
Time Period		Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
7:00	8:00	0	1	**1**	0	0	**0**	**1**
8:00	9:00	0	0	**0**	3	0	**3**	**3**
9:00	10:00	0	0	**0**	1	0	**1**	**1**
11:30	12:30	0	0	**0**	0	0	**0**	**0**
12:30	13:30	0	0	**0**	0	1	**1**	**1**
15:00	16:00	0	0	**0**	0	1	**1**	**1**
16:00	17:00	0	0	**0**	0	0	**0**	**0**
17:00	18:00	0	0	**0**	1	2	**3**	**3**
Total	.....	0	1	**1**	5	4	**9**	**10**

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
34325

Turning Movement Count - Pedestrian Volume Report

AVIATION PKWY @ OGILVIE RD

Count Date: 28-Jan-15 **Start Time:** 7:00

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**
7:00	7:15	1	2	**3**	1	0	**1**	**4**
7:15	7:30	1	1	**2**	1	0	**1**	**3**
7:30	7:45	1	2	**3**	1	0	**1**	**4**
7:45	8:00	1	1	**2**	1	0	**1**	**3**
7:00	8:00	4	6	**10**	4	0	**4**	**14**
8:00	8:15	0	2	**2**	0	0	**0**	**2**
8:15	8:30	2	0	**2**	1	0	**1**	**3**
8:30	8:45	1	1	**2**	0	0	**0**	**2**
8:45	9:00	1	1	**2**	0	0	**0**	**2**
8:00	9:00	4	4	**8**	1	0	**1**	**9**
9:00	9:15	1	1	**2**	0	0	**0**	**2**
9:15	9:30	0	1	**1**	0	0	**0**	**1**
9:30	9:45	0	1	**1**	1	0	**1**	**2**
9:45	10:00	0	1	**1**	0	0	**0**	**1**
9:00	10:00	1	4	**5**	1	0	**1**	**6**
11:30	11:45	1	3	**4**	0	0	**0**	**4**
11:45	12:00	0	1	**1**	1	0	**1**	**2**
12:00	12:15	5	3	**8**	1	0	**1**	**9**
12:15	12:30	7	1	**8**	0	0	**0**	**8**
11:30	12:30	13	8	**21**	2	0	**2**	**23**
12:30	12:45	5	0	**5**	0	0	**0**	**5**
12:45	13:00	4	2	**6**	0	3	**3**	**9**
13:00	13:15	1	0	**1**	0	0	**0**	**1**
13:15	13:30	5	0	**5**	2	0	**2**	**7**
12:30	13:30	15	2	**17**	2	3	**5**	**22**
15:00	15:15	0	2	**2**	0	1	**1**	**3**
15:15	15:30	3	3	**6**	1	2	**3**	**9**
15:30	15:45	1	3	**4**	0	0	**0**	**4**
15:45	16:00	3	1	**4**	1	2	**3**	**7**
15:00	16:00	7	9	**16**	2	5	**7**	**23**
16:00	16:15	3	1	**4**	1	1	**2**	**6**
16:15	16:30	5	0	**5**	0	1	**1**	**6**
16:30	16:45	4	1	**5**	0	0	**0**	**5**
16:45	17:00	5	1	**6**	1	0	**1**	**7**
16:00	17:00	17	3	**20**	2	2	**4**	**24**
17:00	17:15	3	5	**8**	2	0	**2**	**10**
17:15	17:30	1	0	**1**	0	0	**0**	**1**
17:30	17:45	2	1	**3**	1	2	**3**	**6**
17:45	18:00	2	1	**3**	0	1	**1**	**4**
17:00	18:00	8	7	**15**	3	3	**6**	**21**
Total	.....	69	43	**112**	17	13	**30**	**142**

Comment:

Public Works and Services Department

Count ID 2602

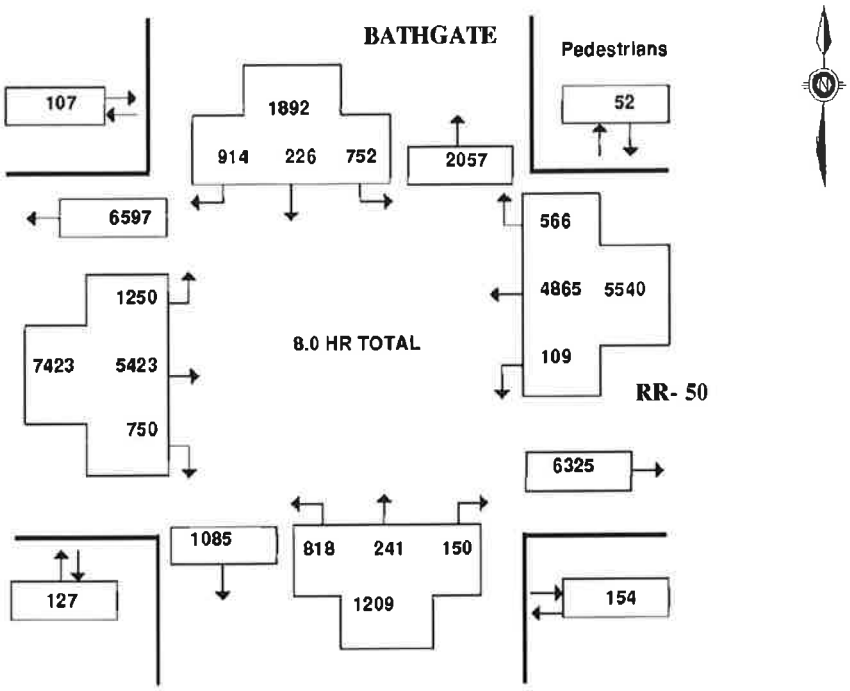
OGILVIE RD and BATHGATE DR

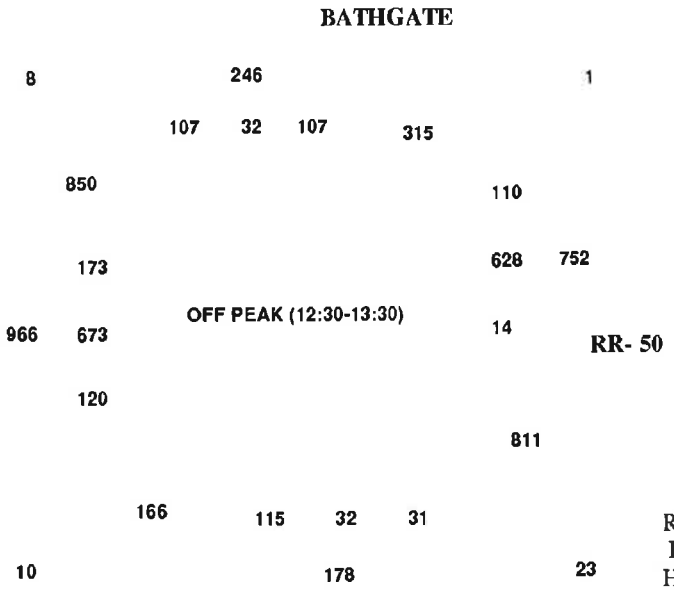
(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 387 Westbound: 0

AADT Factor
Thursday in August i
9





Refer to Summary Page for Survey Hours.

Ottawa

Public Works and Services Department

Count ID 2602

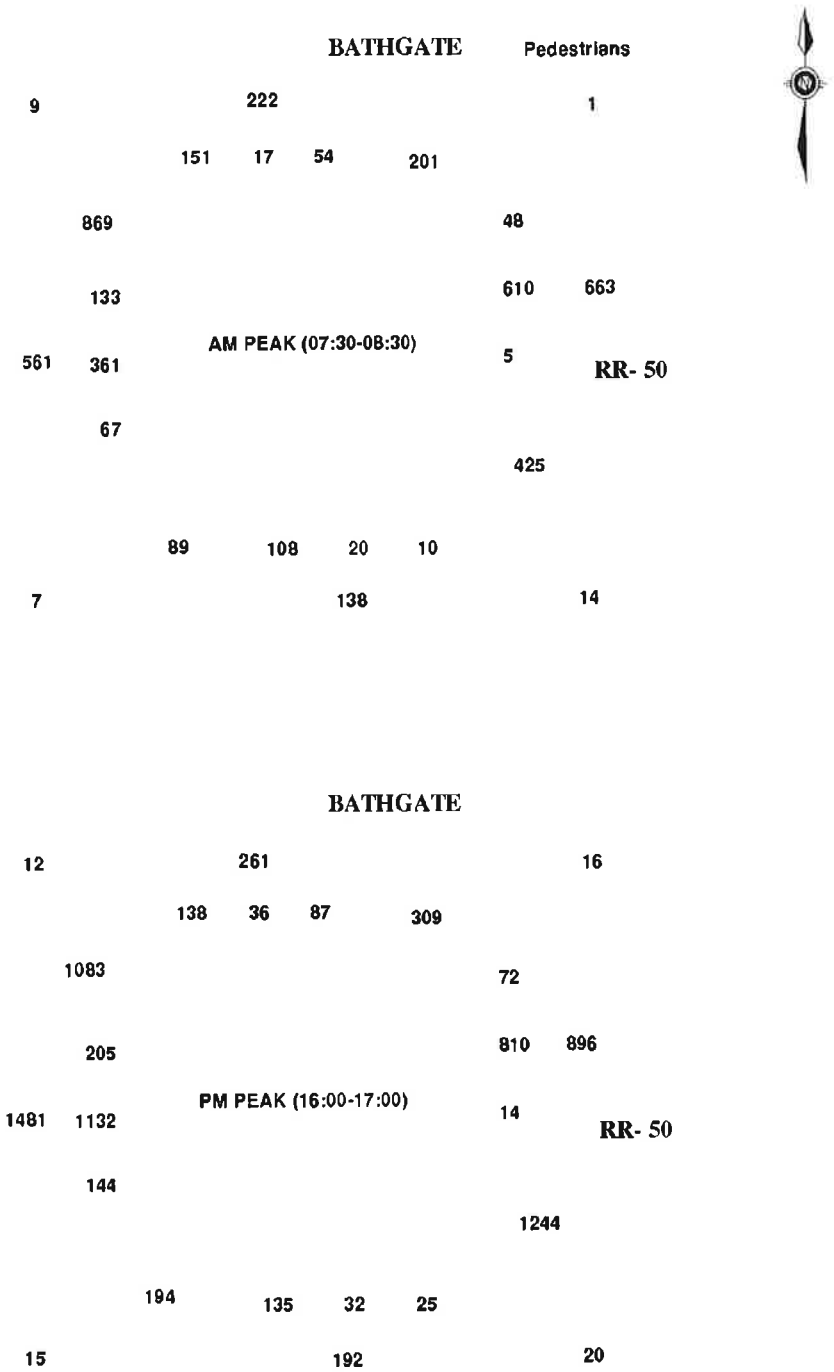
OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 387 Westbound: 0

AADT Factor
Thursday in August i
9



Ottawa *Public Works and Services Department*

Count ID 26028

Vehicular Turning Movements - Summary

OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 387 Westbound: 0

AADT Factor
Thursday in August is
9

	BATHGATE									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	100	21	7	**128**	44	19	134	**197**	**325**	105	298	45	**448**	2	566	43	**611**	**1059**	**1384**
08:00-09:00	92	19	12	**123**	69	15	123	**207**	**330**	144	409	76	**629**	6	553	47	**606**	**1235**	**1565**
09:00-10:00	54	18	13	**85**	97	15	89	**201**	**286**	112	273	58	**443**	16	379	60	**455**	**898**	**1184**
11:30-12:30	96	23	13	**132**	104	36	102	**242**	**374**	122	655	87	**864**	11	545	73	**629**	**1493**	**1867**
12:30-13:30	115	32	31	**178**	107	32	107	**246**	**424**	173	673	120	**966**	14	628	110	**752**	**1718**	**2142**
15:00-16:00	101	60	25	**186**	119	32	119	**270**	**456**	225	984	117	**1326**	18	666	79	**763**	**2089**	**2545**
16:00-17:00	135	32	25	**192**	87	36	138	**261**	**453**	205	1132	144	**1481**	14	810	72	**896**	**2377**	**2830**
17:00-18:00	125	36	24	**185**	125	41	102	**268**	**453**	164	999	103	**1266**	28	718	82	**828**	**2094**	**2547**
8.0 HR TOTAL	818	241	150	**1209**	752	226	914	**1892**	**3101**	1250	5423	750	**7423**	109	4865	566	**5540**	**12963**	**16064**
EQU. 12 HR TOTAL	1137	334	208	**1679**	1045	314	1270	**2629**	**4308**	1737	7537	1042	**10316**	151	6762	786	**7699**	**18015**	**22323**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

AVG. 12 HR TOTAL	1023	300	187	**1510**	940	282	1143	**2365**	**3875**	1563	6783	937	**9283**	135	6085	707	**6927**	**16210**	**20085**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

AVG. 24 HR TOTAL	1340	393	244	**1977**	1231	369	1497	**3097**	**5074**	2047	8885	1227	**12159**	176	7971	926	**9073**	**21232**	**26306**

Note: These volumes were calculated by multiplying the Average Daily 12 hr totals by 1.31.

AM TOTAL (0700-0900)	192	40	19	**251**	113	34	257	**404**	**655**	249	707	121	**1077**	8	1119	90	**1217**	**2294**	**2949**
PM TOTAL (1530-1730)	249	71	43	**363**	208	70	262	**540**	**903**	412	2157	253	**2822**	37	1494	149	**1680**	**4502**	**5405**

Ottawa

Public Works and Services Department

Count ID 26028

Vehicular Turning Movements (15 Min. Volumes)

OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009
Conditions: dry
Start Time: 07:00

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 387 Westbound: 0

AADT Factor
Thursday in August is
9

	BATHGATE									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	21	7	2	30	7	6	29	42	72	25	71	5	101	0	127	8	135	236	308
07:15-07:30	21	5	0	26	8	6	29	43	69	19	60	9	88	0	136	12	148	236	305
07:30-07:45	31	4	3	38	13	3	43	59	97	30	75	11	116	1	139	9	149	265	362
07:45-08:00	27	5	2	34	16	4	33	53	87	31	92	20	143	1	164	14	179	322	409
08:00-08:15	25	8	4	37	14	4	39	57	94	37	86	15	138	2	150	9	161	299	393
08:15-08:30	25	3	1	29	11	6	36	53	82	35	108	21	164	1	157	16	174	338	420
08:30-08:45	22	6	4	32	21	1	20	42	74	29	105	17	151	0	119	15	134	285	359
08:45-09:00	20	2	3	25	23	4	28	55	80	43	110	23	176	3	127	7	137	313	393
09:00-09:15	15	1	3	19	20	4	27	51	70	35	74	18	127	1	98	16	115	242	312
09:15-09:30	12	5	3	20	24	3	21	48	68	26	65	15	106	5	98	17	120	226	294
09:30-09:45	13	7	5	25	25	4	19	48	73	25	72	18	115	3	89	15	107	222	295
09:45-10:00	14	5	2	21	28	4	22	54	75	26	62	7	95	7	94	12	113	208	283
11:30-11:45	25	3	4	32	24	4	12	40	72	23	139	26	188	3	140	9	152	340	412
11:45-12:00	21	5	3	29	23	9	35	67	96	32	165	17	214	4	130	26	160	374	470
12:00-12:15	22	8	2	32	31	15	27	73	105	26	160	20	206	3	130	17	150	356	461
12:15-12:30	28	7	4	39	26	8	28	62	101	41	191	24	256	1	145	21	167	423	524
12:30-12:45	35	10	7	52	21	3	27	51	103	32	177	27	236	4	156	29	189	425	528
12:45-13:00	21	5	13	39	27	7	30	64	103	38	176	34	248	2	150	25	177	425	528
13:00-13:15	27	7	5	39	28	4	23	55	94	50	161	32	243	5	161	30	196	439	533
13:15-13:30	32	10	6	48	31	18	27	76	124	53	159	27	239	3	161	26	190	429	553
15:00-15:15	30	36	13	79	34	17	22	73	152	63	225	32	320	6	171	21	198	518	670
15:15-15:30	21	7	5	33	31	3	31	65	98	52	255	32	339	3	171	21	195	534	632
15:30-15:45	26	12	5	43	26	5	29	60	103	49	286	20	355	5	167	16	188	543	646
15:45-16:00	24	5	2	31	28	7	37	72	103	61	218	33	312	4	157	21	182	494	597
16:00-16:15	30	5	11	46	17	9	39	65	111	65	302	38	405	2	191	21	214	619	730
16:15-16:30	41	6	8	55	27	10	27	64	119	46	289	35	370	4	215	20	239	609	728
16:30-16:45	36	13	1	50	23	7	32	62	112	52	274	39	365	5	219	11	235	600	712
16:45-17:00	28	8	5	41	20	10	40	70	111	42	267	32	341	3	185	20	208	549	660
17:00-17:15	37	16	7	60	40	12	38	90	150	39	248	26	313	6	185	23	214	527	677
17:15-17:30	27	6	4	37	27	10	20	57	94	58	273	30	361	8	175	17	200	561	655
17:30-17:45	36	6	4	46	26	8	20	54	100	32	225	22	279	8	182	21	211	490	590
17:45-18:00	25	8	9	42	32	11	24	67	109	35	253	25	313	6	176	21	203	516	625

Approved by: MG

Printed on : 25/10/2012

Ottawa — *Public Works and Services Department*

Count ID 26028

Pedestrian Volume Summary Sheet - Hourly Volumes

OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009 **Conditions:** dry **Start Time:** 0700

Time Period	CROSSING BATHGATE N/B APPROACH	CROSSING BATHGATE S/B APPROACH	STREET TOTAL	CROSSING RR- 50 E/B APPROACH	CROSSING RR- 50 W/B APPROACH	STREET TOTAL	GRAND TOTAL
07:00-08:00	10	10	**20**	8	2	**10**	**30**
08:00-09:00	17	16	**33**	7	3	**10**	**43**
09:00-10:00	15	11	**26**	7	6	**13**	**39**
11:30-12:30	19	13	**32**	8	6	**14**	**46**
12:30-13:30	23	8	**31**	10	1	**11**	**42**
15:00-16:00	35	17	**52**	55	6	**61**	**113**
16:00-17:00	20	12	**32**	15	16	**31**	**63**
17:00-18:00	15	20	**35**	17	12	**29**	**64**
8.0 HR TOTAL	154	107	**261**	127	52	**179**	**440**

PEAK PERIOD SUMMARIES

AM PEAK PERIOD (7:00-9:00)							
07:00-07:15	0	1	**1**	2	0	**2**	**3**
07:15-07:30	5	6	**11**	4	2	**6**	**17**
07:30-07:45	4	1	**5**	2	0	**2**	**7**
07:45-08:00	1	2	**3**	0	0	**0**	**3**
08:00-08:15	3	4	**7**	4	1	**5**	**12**
08:15-08:30	6	2	**8**	1	0	**1**	**9**
08:30-08:45	2	4	**6**	0	2	**2**	**8**
08:45-09:00	6	6	**12**	2	0	**2**	**14**
TOTALS	27	26	**53**	15	5	**20**	**73**
OFF PEAK PERIOD (11:30-13:30)							
11:30-11:45	8	4	**12**	2	4	**6**	**18**
11:45-12:00	2	1	**3**	0	1	**1**	**4**
12:00-12:15	4	3	**7**	3	0	**3**	**10**
12:15-12:30	5	5	**10**	3	1	**4**	**14**
12:30-12:45	6	3	**9**	0	0	**0**	**9**
12:45-13:00	11	2	**13**	3	0	**3**	**16**
13:00-13:15	3	1	**4**	2	0	**2**	**6**
13:15-13:30	3	2	**5**	5	1	**6**	**11**
TOTALS	42	21	**63**	18	7	**25**	**88**
PM PEAK PERIOD (15:30-17:30)							
15:30-15:45	9	5	**14**	2	4	**6**	**20**
15:45-16:00	15	0	**15**	0	2	**2**	**17**
16:00-16:15	3	1	**4**	1	7	**8**	**12**
16:15-16:30	5	1	**6**	2	2	**4**	**10**
16:30-16:45	6	8	**14**	5	5	**10**	**24**
16:45-17:00	6	2	**8**	7	2	**9**	**17**
17:00-17:15	5	8	**13**	4	2	**6**	**19**
17:15-17:30	3	4	**7**	2	6	**8**	**15**
TOTALS	52	29	**81**	23	30	**53**	**134**

Approved by: MG

Printed on : 25/10/2012

Ottawa

Public Works and Services Department

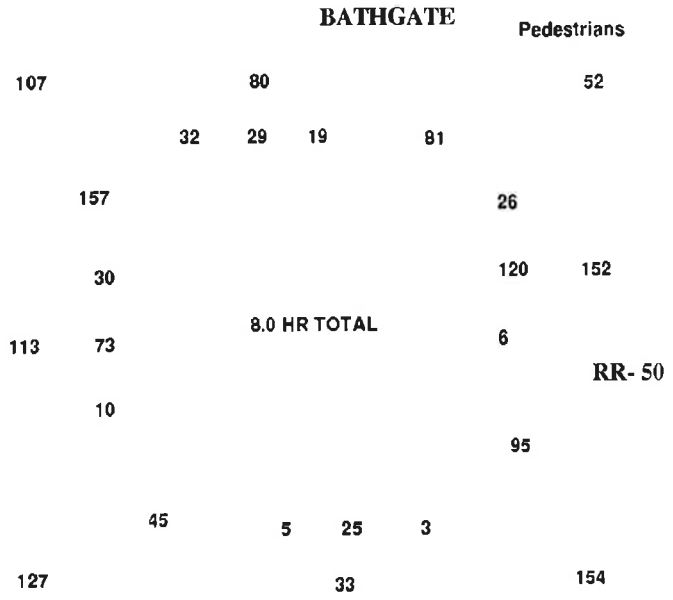
Count ID 26028

Heavy Vehicle Summary Sheet - Hourly Volumes

OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date : Thursday 6 August 2009 **Conditions : dry** **Start Time : 0700**



	BATHGATE									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	1	5	0	6	0	5	10	15	21	1	12	1	14	0	10	6	16	30	51
08:00-09:00	0	4	2	6	1	4	11	16	22	4	15	2	21	0	18	4	22	43	65
09:00-10:00	0	2	0	2	4	7	2	13	15	0	2	2	4	2	32	5	39	43	58
11:30-12:30	1	2	0	3	4	2	2	8	11	7	16	0	23	2	13	1	16	39	50
12:30-13:30	0	3	0	3	2	2	2	6	9	2	9	2	13	2	12	3	17	30	39
15:00-16:00	1	3	0	4	5	3	2	10	14	5	9	1	15	0	18	3	21	36	50
16:00-17:00	1	2	1	4	1	3	1	5	9	7	7	2	16	0	6	2	8	24	33
17:00-18:00	1	4	0	5	2	3	2	7	12	4	3	0	7	0	11	2	13	20	32
8.0 HR TOTAL	5	25	3	33	19	29	32	80	113	30	73	10	113	6	120	26	152	265	378

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.

Approved by: MG

Printed on: 25/10/2012

Ottawa *Public Works and Services Department*

Count ID 26028

Bicycle Volume Summary Sheet - Hourly Volumes

OGILVIE RD and BATHGATE DR

(ULRS Listing RR- 50 & BATHGATE)

Survey Date: Thursday 6 August 2009 **Conditions:** dry **Start Time:** 0700

Time Period	NORTHBOUND APPROACH ON BATHGATE	SOUTHBOUND APPROACH ON BATHGATE	STREET TOTAL	EASTBOUND APPROACH ON RR- 50	WESTBOUND APPROACH ON RR- 50	STREET TOTAL	GRAND TOTAL
07:00-08:00	2	2	4	15	13	28	32
08:00-09:00	1	0	1	14	5	19	20
09:00-10:00	1	0	1	4	1	5	6
11:30-12:30	1	0	1	2	2	4	5
12:30-13:30	2	0	2	5	0	5	7
15:00-16:00	0	0	0	7	3	10	10
16:00-17:00	0	2	2	16	13	29	31
17:00-18:00	3	6	9	10	13	23	32
8.0 HR TOTAL	10	10	20	73	50	123	143

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

Approved by: MG

Printed on: 25/10/2012

Public Works - Traffic Services

Turning Movement Count - Full Study Diagram

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Survey Date: 06-Nov-13

WO#: 951

Device: Miovision

Cars

	2801	5381		2580
1339	278	1184	0	
33	46	26	0	100
1306	232	1158	0	2480

OGILVIE RD

9115		192	8923	
17517	374	6	368	
	1122	29	1093	
8402	6043	124	5919	
	863	26	837	

1206	28	1234	8118
6586	133	6719	15513
161	2	163	
2	0	2	7395
7242	153		

1230	0	663	181	163
74	0	20	43	3
	0	683	224	166
1304	2377	1073		

42

3

178

Cars

Heavy Vehicles

Tota

Comments

Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Survey Date: 06-Nov-13 **WO No:** 951

Start Time: 7:00 **Device:** Miovision

Cars

Heavy Vehicles

674

324

350

188 28 108 0

10 4 7 0 19

178 24 101 0 331

OGILVIE RD

1325

35 1290

60 0 60

2053

141 8 133

457 18 439

728

70 8 62

AM Period
Peak Hour
7:30 8:30

176 4

956 23

20 0

1 0

559 25

180

979 1180

20

1764

1 584

106 0 96 22 18

12 0 2 7 0

0 98 29 18

118 145

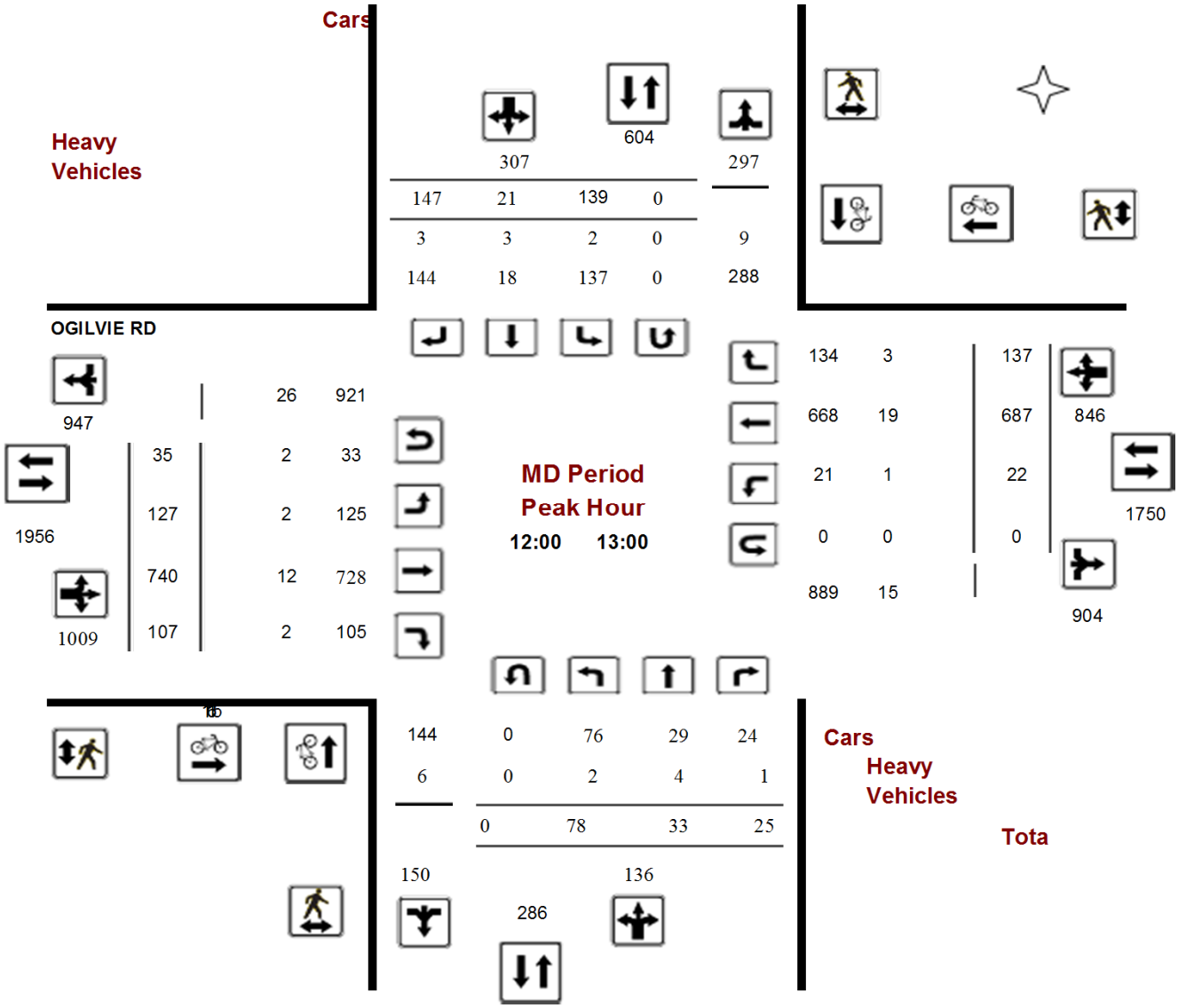
263

Cars

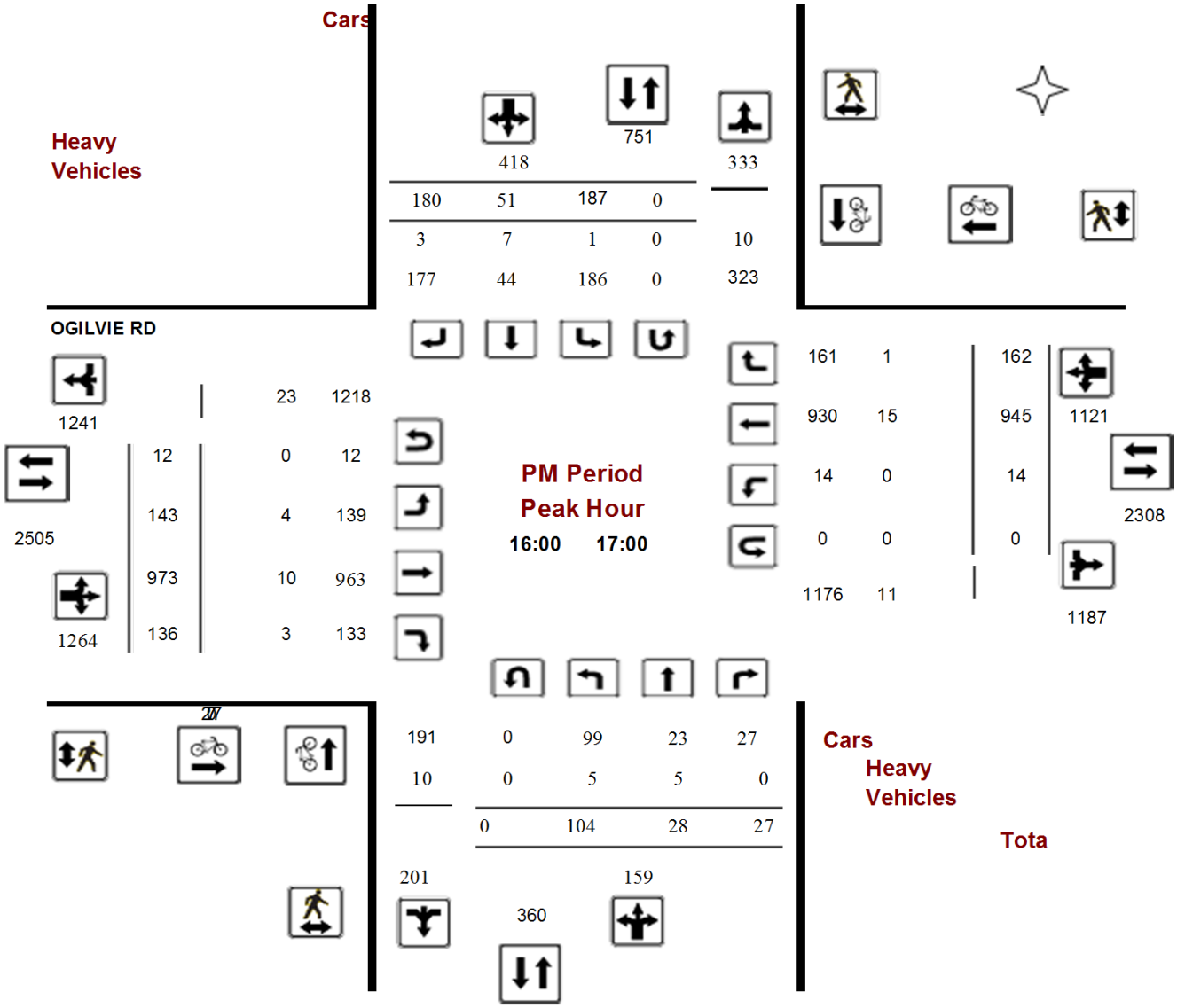
Heavy Vehicles

Tota

Comments


Cars
Heavy Vehicles
307
604
297
147 21 139 0
3 3 2 0 9
144 18 137 0 288
OGILVIE RD
947
26 921
35 2 33
127 2 125
740 12 728
107 2 105
1956
1009
134 3
668 19
21 1
0 0
889 15
137
687 846
22
0
1750
904
MD Period
Peak Hour
12:00 13:00
144 0 76 29 24
6 0 2 4 1
0 78 33 25
150
286
136
Cars
Heavy Vehicles
Tota

Comments


Cars
Heavy Vehicles
418
751
333
180 51 187 0
3 7 1 0 10
177 44 186 0 323
OGILVIE RD
1241
23 1218
12 0 12
143 4 139
973 10 963
136 3 133
2505
1264
161 1
930 15
14 0
0 0
1176 11
162
945
14
0
1121
2308
1187
PM Period
Peak Hour
16:00 17:00
207
191 0 99 23 27
10 0 5 5 0
0 104 28 27
201
360
159
Cars
Heavy Vehicles
Tota

Comments

Public Works - Traffic Services

Work Order
951

Turning Movement Count - Full Study Summary Report

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Survey Date: 06-Nov-13

Total Observed U-Turns				AADT Factor
Northbound:	0	Southbound:	0	0.49
Eastbound:	374	Westbound:	2	

Full Study

		OGILVIE 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 TO**	**STR TOT**	**Grand Total**
7:00	8:00	79	22	14	**115**	70	21	178	**269**	**384**	169	384	51	**604**	16	1007	186	**1209**	**1813**	**2197**
8:00	9:00	82	21	14	**117**	116	30	159	**305**	**422**	96	474	79	**649**	16	813	136	**965**	**1614**	**2036**
9:00	10:00	47	13	8	**68**	106	21	127	**254**	**322**	103	428	52	**583**	18	572	112	**702**	**1285**	**1607**
11:30	12:30	71	26	22	**119**	141	27	155	**323**	**442**	114	670	114	**898**	22	676	137	**835**	**1733**	**2175**
12:30	13:30	75	29	19	**123**	109	23	120	**252**	**375**	140	724	103	**967**	20	680	116	**816**	**1783**	**2158**
15:00	16:00	76	27	18	**121**	181	44	179	**404**	**525**	116	823	104	**1043**	14	883	163	**1060**	**2103**	**2628**
16:00	17:00	104	28	27	**159**	187	51	180	**418**	**577**	143	973	136	**1252**	14	945	162	**1121**	**2373**	**2950**
17:00	18:00	77	29	23	**129**	134	32	125	**291**	**420**	132	874	111	**1117**	25	645	119	**789**	**1906**	**2326**
18:00	19:00	72	29	21	**122**	140	29	116	**285**	**407**	109	693	113	**915**	18	498	103	**619**	**1534**	**1941**
Total		683	224	166	**1073**	1184	278	1339	**2801**	**3874**	1122	6043	863	**8028**	163	6719	1234	**8116**	**16144**	**20018**
Equ 12Hr		949	311	230	**1490**	1645	386	1861	**3892**	**5382**	1559	8399	1199	**11157**	226	9339	1715	**11280**	**22437**	**27819**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

Avg 12Hr	461	151	112	**724**	800	187	905	**1893**	**2616**	758	4085	583	**5427**	109	4543	834	**5487**	**10915**	**13533**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **0.49**

Avg 24Hr	603	197	146	**948**	1048	244	1185	**2479**	**3426**	992	5351	763	**7109**	142	5951	1092	**7187**	**14298**	**17728**

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 are included in Totals.

Public Works - Traffic Services

W.O. 951

Turning Movement Count - 15 Minute Summary Report

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Survey Date: 06-Nov-13

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 374 Westbound: 2

OGILVIE 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**
7:00	7:15	16	2	1	**19**	9	5	31	**45**	**64**	39	63	7	**124**	2	218	31	**251**	**375**	**439**
7:15	7:30	12	5	2	**19**	18	8	49	**75**	**94**	37	95	13	**158**	2	257	45	**304**	**462**	**556**
7:30	7:45	27	7	6	**40**	19	2	45	**66**	**106**	43	100	15	**173**	2	284	54	**341**	**514**	**620**
7:45	8:00	24	8	5	**37**	24	6	53	**83**	**120**	50	126	16	**211**	10	248	56	**314**	**525**	**645**
8:00	8:15	24	9	2	**35**	34	9	53	**96**	**131**	22	111	18	**162**	5	214	26	**245**	**407**	**538**
8:15	8:30	23	5	5	**33**	31	11	37	**79**	**112**	26	120	21	**182**	3	233	44	**280**	**462**	**574**
8:30	8:45	13	4	1	**18**	31	6	37	**74**	**92**	28	133	27	**200**	5	196	35	**236**	**436**	**528**
8:45	9:00	22	3	6	**31**	20	4	32	**56**	**87**	20	110	13	**156**	3	170	31	**204**	**360**	**447**
9:00	9:15	13	4	2	**19**	26	2	25	**53**	**72**	24	127	17	**181**	7	143	30	**180**	**361**	**433**
9:15	9:30	11	2	1	**14**	27	4	29	**60**	**74**	32	89	12	**151**	4	151	34	**189**	**340**	**414**
9:30	9:45	15	5	3	**23**	26	7	43	**76**	**99**	27	104	12	**157**	4	147	24	**175**	**332**	**431**
9:45	10:00	8	2	2	**12**	27	8	30	**65**	**77**	20	108	11	**149**	3	131	24	**158**	**307**	**384**
11:30	11:45	22	5	3	**30**	20	7	29	**56**	**86**	26	140	28	**200**	4	165	36	**205**	**405**	**491**
11:45	12:00	9	5	6	**20**	40	9	42	**91**	**111**	29	157	31	**233**	3	174	39	**216**	**449**	**560**
12:00	12:15	22	5	7	**34**	48	6	48	**102**	**136**	22	179	29	**237**	8	172	35	**215**	**452**	**588**
12:15	12:30	18	11	6	**35**	33	5	36	**74**	**109**	37	194	26	**266**	7	165	27	**199**	**465**	**574**
12:30	12:45	20	8	5	**33**	35	6	29	**70**	**103**	36	173	22	**241**	1	162	40	**203**	**444**	**547**
12:45	13:00	18	9	7	**34**	23	4	34	**61**	**95**	32	194	30	**265**	6	188	35	**229**	**494**	**589**
13:00	13:15	20	7	4	**31**	23	7	30	**60**	**91**	38	184	31	**266**	8	163	29	**200**	**466**	**557**
13:15	13:30	17	5	3	**25**	28	6	27	**61**	**86**	34	173	20	**236**	5	167	12	**184**	**420**	**506**
15:00	15:15	20	6	7	**33**	56	8	47	**111**	**144**	25	191	24	**252**	4	208	33	**245**	**497**	**641**
15:15	15:30	20	9	4	**33**	47	14	40	**101**	**134**	30	214	31	**284**	3	242	37	**282**	**566**	**700**
15:30	15:45	21	7	4	**32**	39	8	54	**101**	**133**	33	196	23	**263**	5	226	51	**282**	**545**	**678**
15:45	16:00	15	5	3	**23**	39	14	38	**91**	**114**	28	222	26	**290**	2	207	42	**252**	**542**	**656**
16:00	16:15	26	9	7	**42**	53	10	62	**125**	**167**	36	233	36	**307**	2	222	59	**283**	**590**	**757**
16:15	16:30	20	9	8	**37**	43	19	43	**105**	**142**	28	234	42	**308**	5	271	43	**319**	**627**	**769**
16:30	16:45	33	5	8	**46**	50	12	35	**97**	**143**	42	249	33	**324**	4	241	38	**283**	**607**	**750**
16:45	17:00	25	5	4	**34**	41	10	40	**91**	**125**	37	257	25	**325**	3	211	22	**236**	**561**	**686**
17:00	17:15	20	10	2	**32**	39	13	31	**83**	**115**	31	237	39	**321**	4	173	29	**206**	**527**	**642**
17:15	17:30	26	6	5	**37**	33	7	25	**65**	**102**	38	222	30	**300**	9	188	26	**223**	**523**	**625**
17:30	17:45	18	9	12	**39**	35	6	39	**80**	**119**	34	233	17	**292**	7	152	34	**193**	**485**	**604**
17:45	18:00	13	4	4	**21**	27	6	30	**63**	**84**	29	182	25	**240**	5	132	30	**167**	**407**	**491**
18:00	18:15	22	12	5	**39**	36	12	36	**84**	**123**	27	199	26	**263**	5	124	19	**148**	**411**	**534**
18:15	18:30	20	4	3	**27**	34	4	29	**67**	**94**	25	181	26	**239**	3	115	28	**146**	**385**	**479**
18:30	18:45	17	6	6	**29**	30	8	18	**56**	**85**	25	151	36	**220**	2	127	30	**159**	**379**	**464**
18:45	19:00	13	7	7	**27**	40	5	33	**78**	**105**	32	162	25	**226**	8	132	26	**166**	**392**	**497**
TOTAL:		683	224	166	**1073**	1184	278	1339	**2801**	**3874**	1122	6043	863	**8402**	163	6719	1234	**8118**	**16520**	**20394**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

W.O.
951

Turning Movement Count - Heavy Vehicle Report

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Survey Date: 06-Nov-13

		OGILVIE 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**
7:00	8:00	3	7	0	**10**	4	7	9	**20**	**30**	6	20	5	**31**	0	22	2	**24**	**55**	**85**
8:00	9:00	1	5	1	**7**	5	5	4	**14**	**21**	5	18	5	**29**	0	26	5	**31**	**60**	**81**
9:00	10:00	4	4	0	**8**	7	6	5	**18**	**26**	6	17	3	**28**	0	22	7	**29**	**57**	**83**
11:30	12:30	2	3	1	**6**	2	3	1	**6**	**12**	3	19	3	**26**	0	16	2	**18**	**44**	**56**
12:30	13:30	1	4	1	**6**	2	3	3	**8**	**14**	5	10	3	**20**	1	17	6	**24**	**44**	**58**
15:00	16:00	4	6	0	**10**	5	9	5	**19**	**29**	0	16	2	**18**	1	9	4	**14**	**32**	**61**
16:00	17:00	5	5	0	**10**	1	7	3	**11**	**21**	4	10	3	**17**	0	15	1	**16**	**33**	**54**
17:00	18:00	0	7	0	**7**	0	4	3	**7**	**14**	0	10	1	**11**	0	3	0	**3**	**14**	**28**
18:00	19:00	0	2	0	**2**	0	2	0	**2**	**4**	0	4	1	**5**	0	3	1	**4**	**9**	**13**
Total	:	20	43	3	**66**	26	46	33	**105**	**171**	29	124	26	**185**	2	133	28	**163**	**348**	**519**

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
951

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Count Date: 06-Nov-13 **Start Time:** 7:00

				OGILVIE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
7:00 8:00	1	0	**1**	10	2	**12**	**13**
8:00 9:00	0	2	**2**	12	3	**15**	**17**
9:00 10:00	0	1	**1**	2	1	**3**	**4**
11:30 12:30	1	0	**1**	6	0	**6**	**7**
12:30 13:30	0	0	**0**	1	3	**4**	**4**
15:00 16:00	1	0	**1**	2	8	**10**	**11**
16:00 17:00	0	3	**3**	7	7	**14**	**17**
17:00 18:00	0	0	**0**	0	3	**3**	**3**
18:00 19:00	0	2	**2**	2	1	**3**	**5**
Total	3	8	**11**	42	28	**70**	**81**

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
951

Turning Movement Count - Pedestrian Volume Report

OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Count Date: 06-Nov-13 **Start Time:** 7:00

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**
7:00	7:15	1	8	**9**	2	3	**5**	**14**
7:15	7:30	3	19	**22**	2	2	**4**	**26**
7:30	7:45	4	18	**22**	4	3	**7**	**29**
7:45	8:00	4	16	**20**	2	3	**5**	**25**
7:00	8:00	12	61	**73**	10	11	**21**	**94**
8:00	8:15	4	6	**10**	1	2	**3**	**13**
8:15	8:30	10	8	**18**	2	4	**6**	**24**
8:30	8:45	5	8	**13**	2	4	**6**	**19**
8:45	9:00	5	3	**8**	1	4	**5**	**13**
8:00	9:00	24	25	**49**	6	14	**20**	**69**
9:00	9:15	3	7	**10**	1	0	**1**	**11**
9:15	9:30	5	3	**8**	0	3	**3**	**11**
9:30	9:45	4	4	**8**	4	1	**5**	**13**
9:45	10:00	3	5	**8**	0	0	**0**	**8**
9:00	10:00	15	19	**34**	5	4	**9**	**43**
11:30	11:45	5	4	**9**	2	2	**4**	**13**
11:45	12:00	7	4	**11**	0	6	**6**	**17**
12:00	12:15	2	19	**21**	0	8	**8**	**29**
12:15	12:30	5	13	**18**	0	2	**2**	**20**
11:30	12:30	19	40	**59**	2	18	**20**	**79**
12:30	12:45	4	8	**12**	3	2	**5**	**17**
12:45	13:00	4	5	**9**	3	1	**4**	**13**
13:00	13:15	1	4	**5**	0	3	**3**	**8**
13:15	13:30	3	1	**4**	0	1	**1**	**5**
12:30	13:30	12	18	**30**	6	7	**13**	**43**
15:00	15:15	1	10	**11**	1	4	**5**	**16**
15:15	15:30	4	11	**15**	3	4	**7**	**22**
15:30	15:45	6	13	**19**	1	1	**2**	**21**
15:45	16:00	3	19	**22**	4	11	**15**	**37**
15:00	16:00	14	53	**67**	9	20	**29**	**96**
16:00	16:15	5	19	**24**	1	4	**5**	**29**
16:15	16:30	6	15	**21**	2	6	**8**	**29**
16:30	16:45	7	18	**25**	2	3	**5**	**30**
16:45	17:00	9	10	**19**	2	2	**4**	**23**
16:00	17:00	27	62	**89**	7	15	**22**	**111**
17:00	17:15	4	10	**14**	4	2	**6**	**20**
17:15	17:30	6	10	**16**	1	1	**2**	**18**
17:30	17:45	10	0	**10**	2	1	**3**	**13**
17:45	18:00	5	4	**9**	4	3	**7**	**16**
17:00	18:00	25	24	**49**	11	7	**18**	**67**
18:00	18:15	8	0	**8**	2	2	**4**	**12**
18:15	18:30	10	6	**16**	1	5	**6**	**22**
18:30	18:45	9	1	**10**	1	2	**3**	**13**
18:45	19:00	3	0	**3**	1	4	**5**	**8**
18:00	19:00	30	7	**37**	5	13	**18**	**55**
Total	.....	178	309	**487**	61	109	**170**	**657**

Comment:

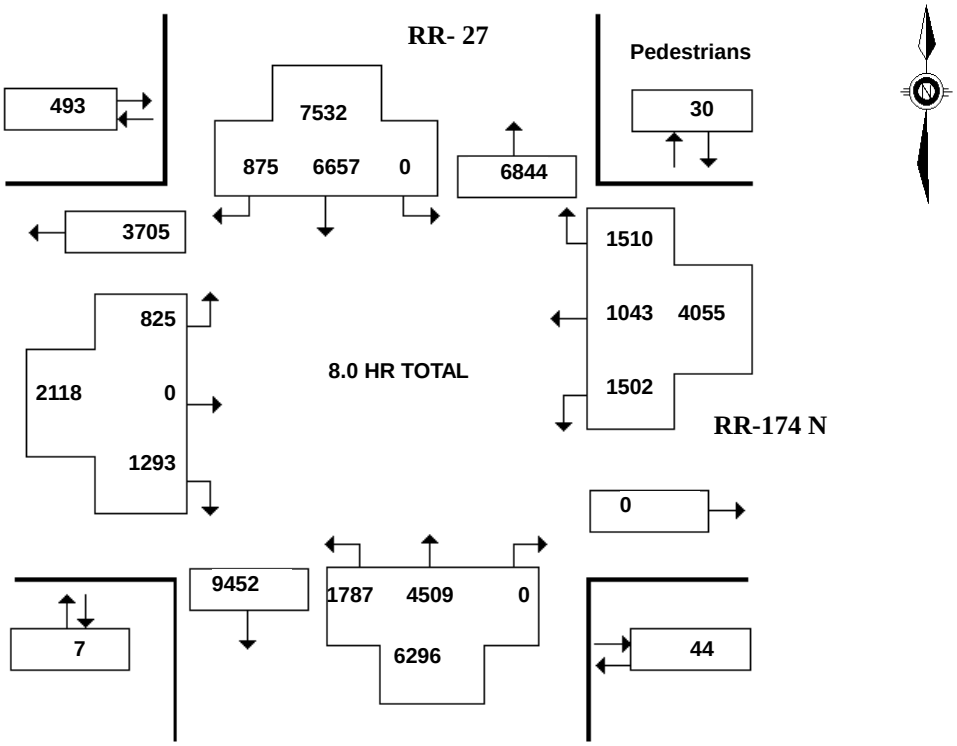
BLAIR RD and RR-174 N

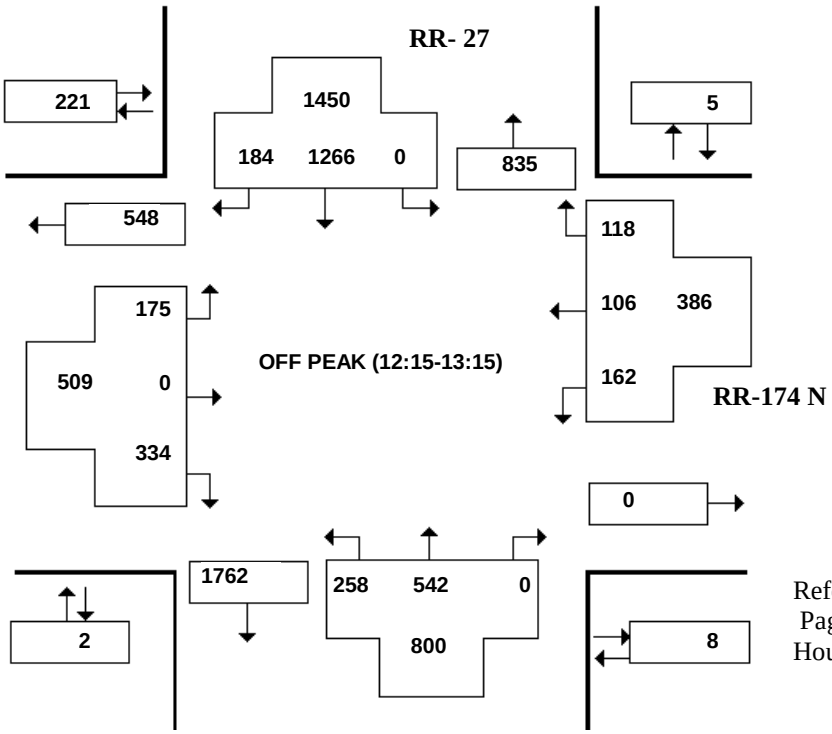
(ULRS Listing RR- 27 & RR-174 N)

Survey Date: Monday 24 June 2013
Conditions: DRY
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 0 Westbound: 0

AADT Factor
Monday in June is
0.9





Refer to Summary Page for Survey Hours.

BLAIR RD and RR-174 N

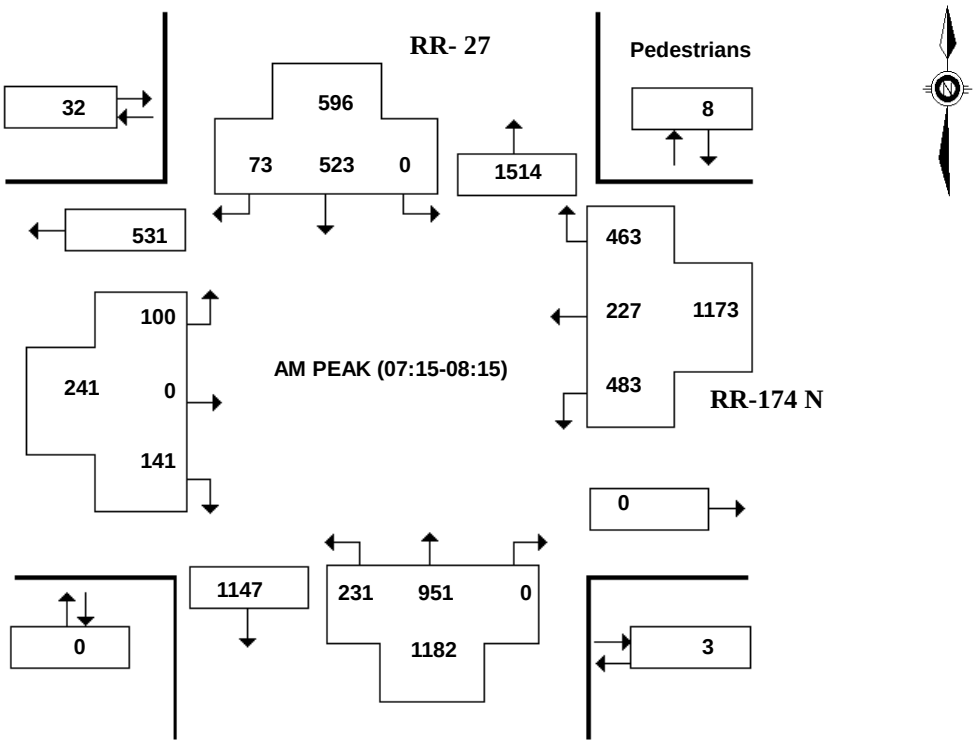
(ULRS Listing RR- 27 & RR-174 N)

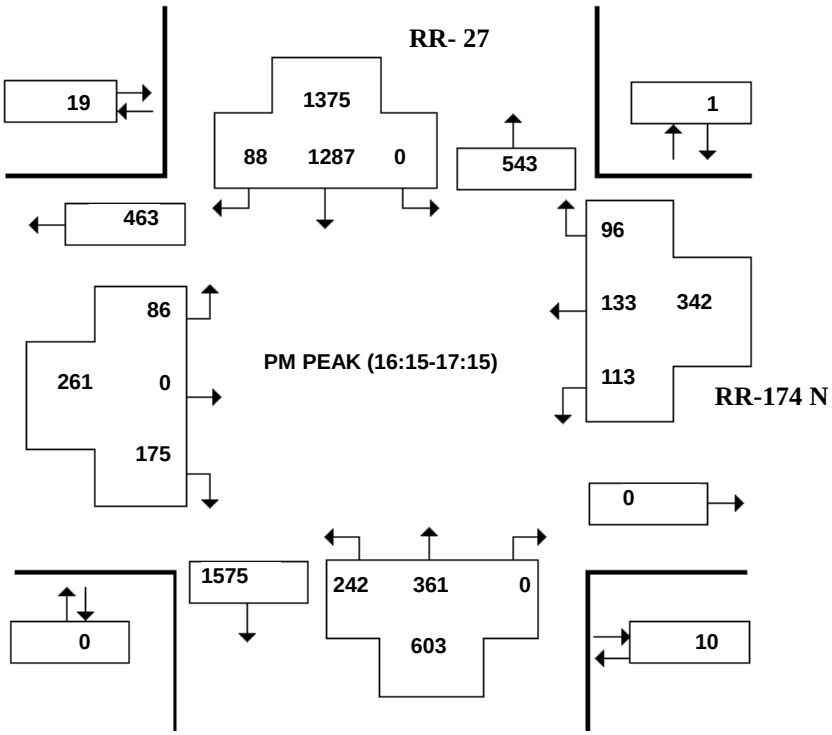
Survey Date: Monday 24 June 2013
Conditions: DRY
Start Time: 0700

Total Observed U-Turns

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

AADT Factor
Monday in June is
0.9





Ottawa

Public Works and Services Department

Count ID 31759

Vehicular Turning Movements - Summary

BLAIR RD and RR-174 N

(ULRS Listing RR- 27 & RR-174 N)

Survey Date: Monday 24 June 2013
Conditions: DRY
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 0 Westbound: 0

AADT Factor
Monday in June is
0.9

	RR- 27									RR-174 N									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	209	846	0	**1055**	0	481	64	**545**	**1600**	93	0	137	**230**	521	233	491	**1245**	**1475**	**3075**
08:00-09:00	225	977	0	**1202**	0	437	75	**512**	**1714**	60	0	91	**151**	263	188	306	**757**	**908**	**2622**
09:00-10:00	177	607	0	**784**	0	516	94	**610**	**1394**	58	0	105	**163**	125	100	216	**441**	**604**	**1998**
11:30-12:30	248	426	0	**674**	0	984	182	**1166**	**1840**	102	0	212	**314**	124	73	107	**304**	**618**	**2458**
12:30-13:30	248	563	0	**811**	0	1268	151	**1419**	**2230**	181	0	311	**492**	161	122	118	**401**	**893**	**3123**
15:00-16:00	228	494	0	**722**	0	905	124	**1029**	**1751**	126	0	163	**289**	102	83	91	**276**	**565**	**2316**
16:00-17:00	226	373	0	**599**	0	1140	75	**1215**	**1814**	55	0	175	**230**	111	125	78	**314**	**544**	**2358**
17:00-18:00	226	223	0	**449**	0	926	110	**1036**	**1485**	150	0	99	**249**	95	119	103	**317**	**566**	**2051**
8.0 HR TOTAL	1787	4509	0	**6296**	0	6657	875	**7532**	**13828**	825	0	1293	**2118**	1502	1043	1510	**4055**	**6173**	**20001**
EQU. 12 HR TOTAL	2483	6267	0	**8750**	0	9253	1216	**10469**	**19219**	1146	0	1797	**2943**	2087	1449	2098	**5634**	**8577**	**27796**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

AVG. 12 HR TOTAL	2234	5640	0	**7874**	0	8327	1094	**9421**	**17295**	1031	0	1617	**2648**	1878	1304	1888	**5070**	**7718**	**25013**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

AVG. 24 HR TOTAL	2926	7388	0	**10314**	0	10908	1433	**12341**	**22655**	1350	0	2118	**3468**	2460	1708	2473	**6641**	**10109**	**32764**

Note: These volumes were calculated by multiplying the Average Daily 12 hr totals by 1.31.

AM TOTAL (0700-0900)	434	1823	0	**2257**	0	918	139	**1057**	**3314**	153	0	228	**381**	784	421	797	**2002**	**2383**	**5697**
PM TOTAL (1530-1730)	497	736	0	**1233**	0	2120	197	**2317**	**3550**	175	0	313	**488**	207	232	178	**617**	**1105**	**4655**

Public Works and Services Department

Count ID 31759

Vehicular Turning Movements (15 Min. Volumes)

BLAIR RD and RR-174 N

(ULRS Listing RR- 27 & RR-174 N)

Survey Date: Monday 24 June 2013
Conditions: DRY
Start Time: 07:00

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 0 Westbound: 0

AADT Factor
Monday in June is 0.9

	RR- 27									RR-174 N									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	32	155	0	**187**	0	89	6	**95**	**282**	16	0	15	**31**	117	49	123	**289**	**320**	**602**
07:15-07:30	60	244	0	**304**	0	108	16	**124**	**428**	28	0	40	**68**	134	64	149	**347**	**415**	**843**
07:30-07:45	48	214	0	**262**	0	124	23	**147**	**409**	22	0	35	**57**	179	72	123	**374**	**431**	**840**
07:45-08:00	69	233	0	**302**	0	160	19	**179**	**481**	27	0	47	**74**	91	48	96	**235**	**309**	**790**
08:00-08:15	54	260	0	**314**	0	131	15	**146**	**460**	23	0	19	**42**	79	43	95	**217**	**259**	**719**
08:15-08:30	65	267	0	**332**	0	80	20	**100**	**432**	15	0	33	**48**	80	48	90	**218**	**266**	**698**
08:30-08:45	60	205	0	**265**	0	143	31	**174**	**439**	12	0	29	**41**	60	58	58	**176**	**217**	**656**
08:45-09:00	46	245	0	**291**	0	83	9	**92**	**383**	10	0	10	**20**	44	39	63	**146**	**166**	**549**
09:00-09:15	43	174	0	**217**	0	110	16	**126**	**343**	11	0	14	**25**	52	27	69	**148**	**173**	**516**
09:15-09:30	46	160	0	**206**	0	117	23	**140**	**346**	13	0	19	**32**	29	22	60	**111**	**143**	**489**
09:30-09:45	46	139	0	**185**	0	152	30	**182**	**367**	19	0	31	**50**	21	24	44	**89**	**139**	**506**
09:45-10:00	42	134	0	**176**	0	137	25	**162**	**338**	15	0	41	**56**	23	27	43	**93**	**149**	**487**
11:30-11:45	56	100	0	**156**	0	159	32	**191**	**347**	18	0	35	**53**	34	12	30	**76**	**129**	**476**
11:45-12:00	61	90	0	**151**	0	281	41	**322**	**473**	18	0	40	**58**	36	23	24	**83**	**141**	**614**
12:00-12:15	64	114	0	**178**	0	223	49	**272**	**450**	38	0	63	**101**	30	17	24	**71**	**172**	**622**
12:15-12:30	67	122	0	**189**	0	321	60	**381**	**570**	28	0	74	**102**	24	21	29	**74**	**176**	**746**
12:30-12:45	74	163	0	**237**	0	228	32	**260**	**497**	48	0	67	**115**	49	29	32	**110**	**225**	**722**
12:45-13:00	50	110	0	**160**	0	370	45	**415**	**575**	46	0	113	**159**	47	34	27	**108**	**267**	**842**
13:00-13:15	67	147	0	**214**	0	347	47	**394**	**608**	53	0	80	**133**	42	22	30	**94**	**227**	**835**
13:15-13:30	57	143	0	**200**	0	323	27	**350**	**550**	34	0	51	**85**	23	37	29	**89**	**174**	**724**
15:00-15:15	56	142	0	**198**	0	129	17	**146**	**344**	14	0	40	**54**	26	26	20	**72**	**126**	**470**
15:15-15:30	48	120	0	**168**	0	344	39	**383**	**551**	53	0	56	**109**	27	18	21	**66**	**175**	**726**
15:30-15:45	60	116	0	**176**	0	274	44	**318**	**494**	33	0	44	**77**	32	23	27	**82**	**159**	**653**
15:45-16:00	64	116	0	**180**	0	158	24	**182**	**362**	26	0	23	**49**	17	16	23	**56**	**105**	**467**
16:00-16:15	47	77	0	**124**	0	156	14	**170**	**294**	13	0	44	**57**	23	24	17	**64**	**121**	**415**
16:15-16:30	49	95	0	**144**	0	305	13	**318**	**462**	19	0	42	**61**	21	25	22	**68**	**129**	**591**
16:30-16:45	67	103	0	**170**	0	397	23	**420**	**590**	6	0	46	**52**	32	32	12	**76**	**128**	**718**
16:45-17:00	63	98	0	**161**	0	282	25	**307**	**468**	17	0	43	**60**	35	44	27	**106**	**166**	**634**
17:00-17:15	63	65	0	**128**	0	303	27	**330**	**458**	44	0	44	**88**	25	32	35	**92**	**180**	**638**
17:15-17:30	84	66	0	**150**	0	245	27	**272**	**422**	17	0	27	**44**	22	36	15	**73**	**117**	**539**
17:30-17:45	35	42	0	**77**	0	196	30	**226**	**303**	47	0	16	**63**	26	27	31	**84**	**147**	**450**
17:45-18:00	44	50	0	**94**	0	182	26	**208**	**302**	42	0	12	**54**	22	24	22	**68**	**122**	**424**

Approved by: KG

Printed on : 31/07/2014

Public Works and Services Department

Count ID 31759

Pedestrian Volume Summary Sheet - Hourly Volumes

BLAIR RD and RR-174 N

(ULRS Listing RR- 27 & RR-174 N)

Survey Date: Monday 24 June 2013 **Conditions:** DRY **Start Time:** 0700

Time Period	CROSSING RR- 27 N/B APPROACH	CROSSING RR- 27 S/B APPROACH	STREET TOTAL	CROSSING RR-174 N E/B APPROACH	CROSSING RR-174 N W/B APPROACH	STREET TOTAL	GRAND TOTAL
07:00-08:00	3	24	**27**	0	6	**6**	**33**
08:00-09:00	6	14	**20**	1	10	**11**	**31**
09:00-10:00	3	9	**12**	0	5	**5**	**17**
11:30-12:30	4	198	**202**	3	0	**3**	**205**
12:30-13:30	10	163	**173**	2	5	**7**	**180**
15:00-16:00	3	47	**50**	0	2	**2**	**52**
16:00-17:00	6	17	**23**	1	1	**2**	**25**
17:00-18:00	9	21	**30**	0	1	**1**	**31**
8.0 HR TOTAL	44	493	**537**	7	30	**37**	**574**

PEAK PERIOD SUMMARIES

AM PEAK PERIOD (7:00-9:00)							
07:00-07:15	2	0	**2**	0	4	**4**	**6**
07:15-07:30	0	8	**8**	0	1	**1**	**9**
07:30-07:45	1	9	**10**	0	0	**0**	**10**
07:45-08:00	0	7	**7**	0	1	**1**	**8**
08:00-08:15	2	8	**10**	0	6	**6**	**16**
08:15-08:30	1	4	**5**	0	4	**4**	**9**
08:30-08:45	0	0	**0**	0	0	**0**	**0**
08:45-09:00	3	2	**5**	1	0	**1**	**6**
TOTALS	9	38	**47**	1	16	**17**	**64**

OFF PEAK PERIOD (11:30-13:30)							
11:30-11:45	1	15	**16**	1	0	**1**	**17**
11:45-12:00	1	55	**56**	2	0	**2**	**58**
12:00-12:15	0	55	**55**	0	0	**0**	**55**
12:15-12:30	2	73	**75**	0	0	**0**	**75**
12:30-12:45	1	80	**81**	0	5	**5**	**86**
12:45-13:00	0	42	**42**	2	0	**2**	**44**
13:00-13:15	5	26	**31**	0	0	**0**	**31**
13:15-13:30	4	15	**19**	0	0	**0**	**19**
TOTALS	14	361	**375**	5	5	**10**	**385**

PM PEAK PERIOD (15:30-17:30)							
15:30-15:45	2	8	**10**	0	2	**2**	**12**
15:45-16:00	0	4	**4**	0	0	**0**	**4**
16:00-16:15	1	4	**5**	1	1	**2**	**7**
16:15-16:30	2	8	**10**	0	0	**0**	**10**
16:30-16:45	1	3	**4**	0	0	**0**	**4**
16:45-17:00	2	2	**4**	0	0	**0**	**4**
17:00-17:15	5	6	**11**	0	1	**1**	**12**
17:15-17:30	1	2	**3**	0	0	**0**	**3**
TOTALS	14	37	**51**	1	4	**5**	**56**

Approved by: KG

Printed on : 31/07/2014

Bicycle Volume Summary Sheet - Hourly Volumes

BLAIR RD and RR-174 N

(ULRS Listing RR- 27 & RR-174 N)

Survey Date: Monday 24 June 2013 **Conditions:** DRY **Start Time:** 0700

Time Period	NORTHBOUND APPROACH ON RR- 27	SOUTHBOUND APPROACH ON RR- 27	STREET TOTAL	EASTBOUND APPROACH ON RR-174 N	WESTBOUND APPROACH ON RR-174 N	STREET TOTAL	GRAND TOTAL
07:00-08:00	0	0	**0**	1	0	**1**	**1**
08:00-09:00	0	0	**0**	0	0	**0**	**0**
09:00-10:00	0	0	**0**	0	3	**3**	**3**
11:30-12:30	0	2	**2**	0	0	**0**	**2**
12:30-13:30	0	1	**1**	0	0	**0**	**1**
15:00-16:00	0	0	**0**	0	0	**0**	**0**
16:00-17:00	0	0	**0**	2	0	**2**	**2**
17:00-18:00	0	0	**0**	3	0	**3**	**3**
8.0 HR TOTAL	0	3	**3**	6	3	**9**	**12**

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

Public Works and Services Department

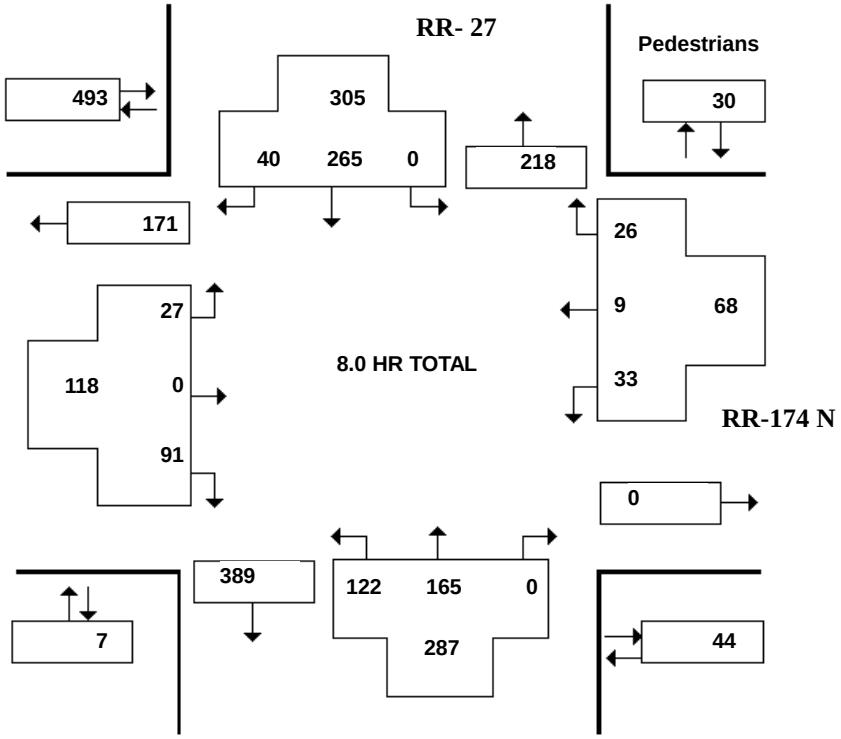
Count ID 31759

Heavy Vehicle Summary Sheet - Hourly Volumes

BLAIR RD and RR-174 N

(ULRS Listing RR- 27 & RR-174 N)

Survey Date :Monday 24 June 2013 **Conditions : DRY** **Start Time : 0700**



	RR- 27									RR-174 N									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	23	40	0	**63**	0	24	8	**32**	**95**	7	0	11	**18**	10	4	11	**25**	**43**	**138**
08:00-09:00	27	44	0	**71**	0	36	6	**42**	**113**	6	0	11	**17**	7	3	6	**16**	**33**	**146**
09:00-10:00	14	21	0	**35**	0	31	7	**38**	**73**	2	0	11	**13**	3	0	2	**5**	**18**	**91**
11:30-12:30	7	14	0	**21**	0	57	2	**59**	**80**	1	0	10	**11**	1	1	3	**5**	**16**	**96**
12:30-13:30	14	26	0	**40**	0	46	4	**50**	**90**	1	0	15	**16**	8	1	0	**9**	**25**	**115**
15:00-16:00	17	14	0	**31**	0	34	7	**41**	**72**	6	0	10	**16**	1	0	3	**4**	**20**	**92**
16:00-17:00	15	5	0	**20**	0	15	2	**17**	**37**	1	0	11	**12**	3	0	1	**4**	**16**	**53**
17:00-18:00	5	1	0	**6**	0	22	4	**26**	**32**	3	0	12	**15**	0	0	0	**0**	**15**	**47**
8.0 HR TOTAL	122	165	0	**287**	0	265	40	**305**	**592**	27	0	91	**118**	33	9	26	**68**	**186**	**778**

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.

Approved by: KG

Printed on: 31/07/2014

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Turning Movement Count (4 . BLAIR RD & HWY 174 (QUEENSWAY WB ON RAMPS) MioID: 226538

Start Time	N Approach BLAIR RD						E Approach BLAIR RD & HWY 174 (QUEENSWAY WB OFF RAMP						S Approach BLAIR RD						W Approach SIDE SERVICE ROAD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	14	112	0	0	6	126	83	32	21	0	3	136	0	235	45	2	0	282	31	0	9	0	0	40	584	
07:15:00	16	148	0	0	8	164	107	40	49	0	5	196	0	282	46	3	0	331	44	0	22	0	0	66	757	
07:30:00	20	151	0	0	10	171	111	44	49	0	15	204	0	319	68	1	0	388	41	0	16	0	1	57	820	
07:45:00	16	148	0	0	9	164	105	37	61	0	12	203	0	299	47	2	0	348	38	0	21	0	0	59	774	2935
08:00:00	25	175	0	0	13	200	120	48	59	0	11	227	0	362	55	3	0	420	33	0	29	0	0	62	909	3260
08:15:00	25	166	0	0	5	191	113	42	54	0	14	209	0	295	78	1	0	374	40	0	20	0	0	60	834	3337
08:30:00	21	182	0	0	10	203	95	38	49	0	8	182	0	266	59	0	0	325	33	0	17	0	1	50	760	3277
08:45:00	31	160	0	0	6	191	93	42	38	0	15	173	0	317	55	0	0	372	41	0	25	0	0	66	802	3305
09:00:00	22	143	0	0	4	165	69	23	38	0	13	130	0	221	53	1	0	275	39	0	19	0	0	58	628	3024
09:15:00	26	150	0	0	8	176	68	22	35	0	8	125	0	208	40	2	0	250	48	0	10	0	0	58	609	2799
BREAK																										
16:00:00	33	450	0	0	17	483	35	30	26	0	21	91	0	198	74	1	0	273	119	0	30	0	1	149	996	
16:15:00	45	423	0	0	13	468	44	29	22	0	12	95	0	230	68	0	0	298	120	0	24	0	0	144	1005	
16:30:00	44	436	0	0	8	480	29	27	23	0	11	79	0	212	69	1	0	282	143	0	36	0	0	179	1020	
16:45:00	47	398	0	1	8	446	30	19	22	0	17	71	0	237	86	0	0	323	90	0	33	0	0	123	963	3984
17:00:00	41	362	0	0	9	403	29	24	26	0	21	79	0	257	56	1	0	314	110	0	27	0	0	137	933	3921
17:15:00	38	344	0	0	10	382	36	28	18	0	5	82	0	245	58	0	0	303	128	0	31	0	0	159	926	3842
17:30:00	46	302	0	0	10	348	34	22	14	0	17	70	0	218	67	2	0	287	103	0	38	0	0	141	846	3668
17:45:00	31	251	0	0	9	282	52	27	17	0	7	96	0	246	75	0	0	321	88	0	28	0	0	116	815	3520
Grand Total	543	4504	0	1	163	5048	1255	574	621	0	215	2450	0	4657	1102	20	0	5779	1294	0	436	0	3	1730	**15007**	-
Approach%	10.8%	89.2%	0%	0%		-	51.2%	23.4%	25.3%	0%		-	0%	80.6%	19.1%	0.3%		-	74.8%	0%	25.2%	0%		-	-	-
Totals %	3.6%	30%	0%	0%		33.6%	8.4%	3.8%	4.1%	0%		16.3%	0%	31%	7.3%	0.1%		38.5%	8.6%	0%	2.9%	0%		11.5%	-	-
Heavy	17	91	0	0		-	13	1	16	0		-	0	95	94	0		-	79	0	23	0		-	-	-
Heavy %	3.1%	2%	0%	0%		-	1%	0.2%	2.6%	0%		-	0%	2%	8.5%	0%		-	6.1%	0%	5.3%	0%		-	-	-

Peak Hour: 07:30 AM - 08:30 AM

Start Time	N Approach BLAIR RD						E Approach BLAIR RD & HWY 174 (QUEENSWAY WB OFF RAMP						S Approach BLAIR RD						W Approach SIDE SERVICE ROAD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:30:00	20	151	0	0	10	171	111	44	49	0	15	204	0	319	68	1	0	388	41	0	16	0	1	57	820
07:45:00	16	148	0	0	9	164	105	37	61	0	12	203	0	299	47	2	0	348	38	0	21	0	0	59	774
08:00:00	25	175	0	0	13	200	120	48	59	0	11	227	0	362	55	3	0	420	33	0	29	0	0	62	909
08:15:00	25	166	0	0	5	191	113	42	54	0	14	209	0	295	78	1	0	374	40	0	20	0	0	60	834
Grand Total	86	640	0	0	37	726	449	171	223	0	52	843	0	1275	248	7	0	1530	152	0	86	0	1	238	**3337**
Approach%	11.8%	88.2%	0%	0%		-	53.3%	20.3%	26.5%	0%		-	0%	83.3%	16.2%	0.5%		-	63.9%	0%	36.1%	0%		-	-
Totals %	2.6%	19.2%	0%	0%		21.8%	13.5%	5.1%	6.7%	0%		25.3%	0%	38.2%	7.4%	0.2%		45.8%	4.6%	0%	2.6%	0%		7.1%	-
PHF	0.86	0.91	0	0		0.91	0.94	0.89	0.91	0		0.93	0	0.88	0.79	0.58		0.91	0.93	0	0.74	0		0.96	-
Heavy	3	26	0	0		29	5	0	6	0		11	0	31	28	0		59	20	0	6	0		26	-
Heavy %	3.5%	4.1%	0%	0%		4%	1.1%	0%	2.7%	0%		1.3%	0%	2.4%	11.3%	0%		3.9%	13.2%	0%	7%	0%		10.9%	-
Lights	83	614	0	0		697	444	171	217	0		832	0	1244	220	7		1471	132	0	80	0		212	-
Lights %	96.5%	95.9%	0%	0%		96%	98.9%	100%	97.3%	0%		98.7%	0%	97.6%	88.7%	100%		96.1%	86.8%	0%	93%	0%		89.1%	-
Single-Unit Trucks	1	13	0	0		14	2	0	6	0		8	0	16	5	0		21	2	0	0	0		2	-
Single-Unit Trucks %	1.2%	2%	0%	0%		1.9%	0.4%	0%	2.7%	0%		0.9%	0%	1.3%	2%	0%		1.4%	1.3%	0%	0%	0%		0.8%	-
Buses	2	11	0	0		13	2	0	0	0		2	0	11	23	0		34	17	0	6	0		23	-
Buses %	2.3%	1.7%	0%	0%		1.8%	0.4%	0%	0%	0%		0.2%	0%	0.9%	9.3%	0%		2.2%	11.2%	0%	7%	0%		9.7%	-
Articulated Trucks	0	2	0	0		2	1	0	0	0		1	0	4	0	0		4	1	0	0	0		1	-
Articulated Trucks %	0%	0.3%	0%	0%		0.3%	0.2%	0%	0%	0%		0.1%	0%	0.3%	0%	0%		0.3%	0.7%	0%	0%	0%		0.4%	-
Pedestrians	-	-	-	-	37	-	-	-	-	-	52	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	41.1%		-	-	-	-	57.8%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	1.1%		-
Bicycles on Road	0	0	0	0	0	-	0	0	1	0	0	-	0	3	0	0	0	-	1	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

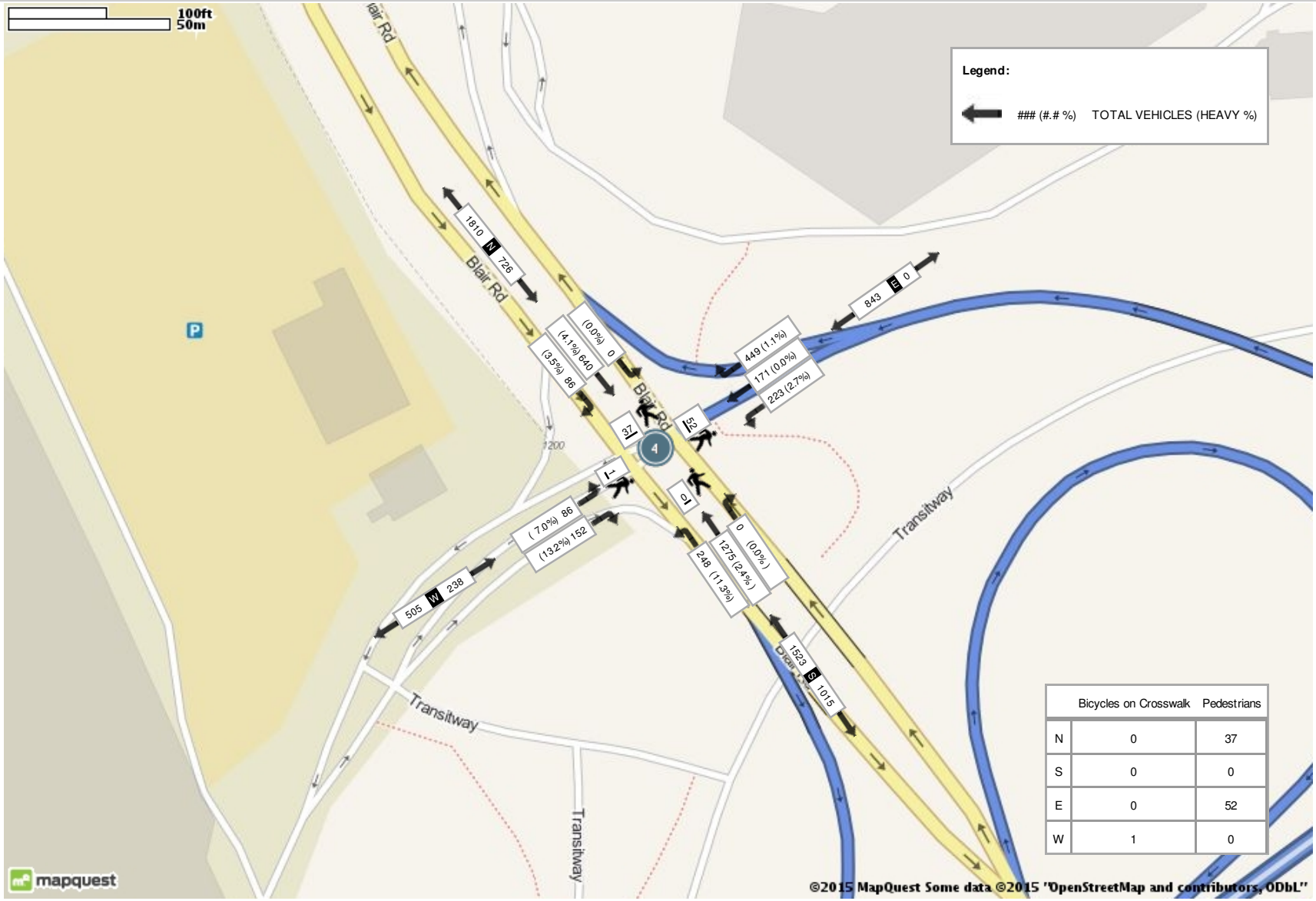
Turning Movement Count
Location Name: BLAIR RD & HWY 174 (QUEENSWAY WB ON RAMPS
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 04:00 PM - 05:00 PM

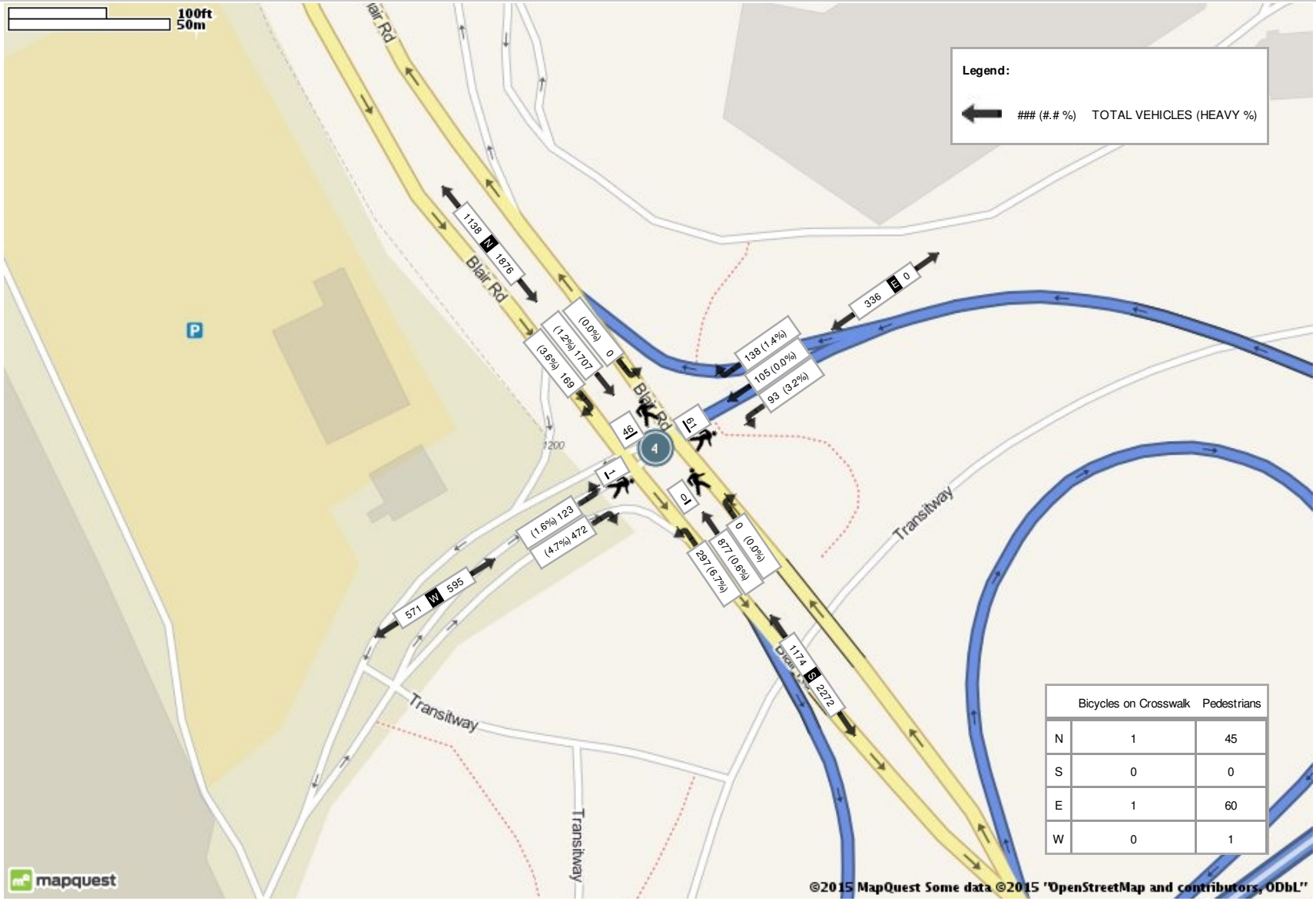
Start Time	N Approach BLAIR RD						E Approach BLAIR RD & HWY 174 (QUEENSWAY WB OFF RAMP						S Approach BLAIR RD						W Approach SIDE SERVICE ROAD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:00:00	33	450	0	0	17	483	35	30	26	0	21	91	0	198	74	1	0	273	119	0	30	0	1	149	996
16:15:00	45	423	0	0	13	468	44	29	22	0	12	95	0	230	68	0	0	298	120	0	24	0	0	144	1005
16:30:00	44	436	0	0	8	480	29	27	23	0	11	79	0	212	69	1	0	282	143	0	36	0	0	179	1020
16:45:00	47	398	0	1	8	446	30	19	22	0	17	71	0	237	86	0	0	323	90	0	33	0	0	123	963
Grand Total	169	1707	0	1	46	1877	138	105	93	0	61	336	0	877	297	2	0	1176	472	0	123	0	1	595	**3984**
Approach%	9%	90.9%	0%	0.1%		-	41.1%	31.3%	27.7%	0%		-	0%	74.6%	25.3%	0.2%		-	79.3%	0%	20.7%	0%		-	-
Totals %	4.2%	42.8%	0%	0%		47.1%	3.5%	2.6%	2.3%	0%		8.4%	0%	22%	7.5%	0.1%		29.5%	11.8%	0%	3.1%	0%		14.9%	-
PHF	0.9	0.95	0	0.25		0.97	0.78	0.88	0.89	0		0.88	0	0.93	0.86	0.5		0.91	0.83	0	0.85	0		0.83	-
Heavy	6	21	0	0		27	2	0	3	0		5	0	5	20	0		25	22	0	2	0		24	-
Heavy %	3.6%	1.2%	0%	0%		1.4%	1.4%	0%	3.2%	0%		1.5%	0%	0.6%	6.7%	0%		2.1%	4.7%	0%	1.6%	0%		4%	-
Lights	163	1686	0	1		1850	136	105	90	0		331	0	872	277	2		1151	450	0	121	0		571	-
Lights %	96.4%	98.8%	0%	100%		98.6%	98.6%	100%	96.8%	0%		98.5%	0%	99.4%	93.3%	100%		97.9%	95.3%	0%	98.4%	0%		96%	-
Single-Unit Trucks	1	13	0	0		14	1	0	2	0		3	0	3	0	0		3	2	0	0	0		2	-
Single-Unit Trucks %	0.6%	0.8%	0%	0%		0.7%	0.7%	0%	2.2%	0%		0.9%	0%	0.3%	0%	0%		0.3%	0.4%	0%	0%	0%		0.3%	-
Buses	5	7	0	0		12	1	0	0	0		1	0	1	20	0		21	20	0	2	0		22	-
Buses %	3%	0.4%	0%	0%		0.6%	0.7%	0%	0%	0%		0.3%	0%	0.1%	6.7%	0%		1.8%	4.2%	0%	1.6%	0%		3.7%	-
Articulated Trucks	0	1	0	0		1	0	0	1	0		1	0	1	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0.1%	0%	0%		0.1%	0%	0%	1.1%	0%		0.3%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	45	-	-	-	-	-	60	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Pedestrians%	-	-	-	-	41.7%		-	-	-	-	55.6%		-	-	-	-	0%		-	-	-	-	0.9%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0.9%		-	-	-	-	0.9%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	4	0	0	0	-	0	0	0	0	0	-	0	2	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 07:30 AM - 08:30 AM



	Bicycles on Crosswalk	Pedestrians
N	0	37
S	0	0
E	0	52
W	1	0

Peak Hour: 04:00 PM - 05:00 PM



	Bicycles on Crosswalk	Pedestrians
N	1	45
S	0	0
E	1	60
W	0	1

Public Works and Services Department

Count ID 2719

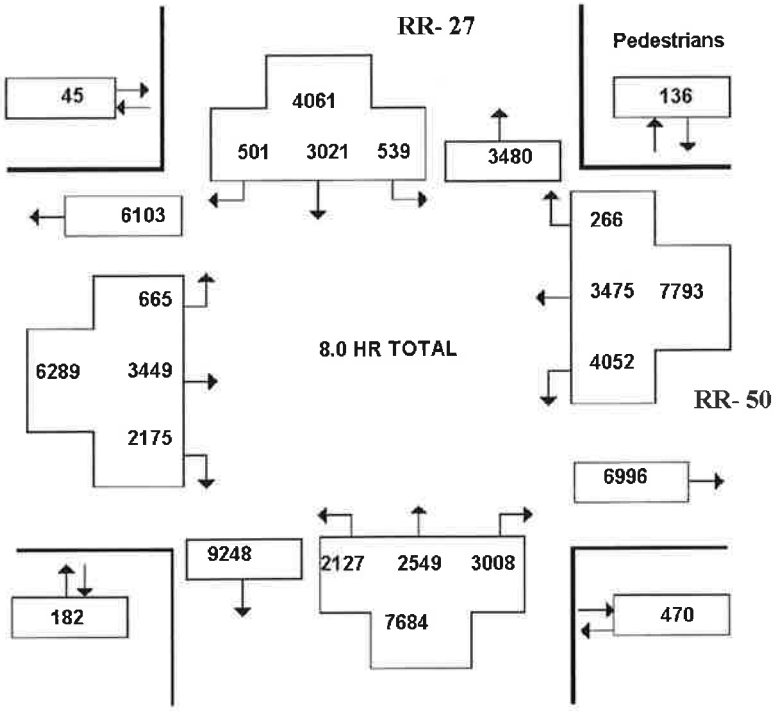
BLAIR RD and OGILVIE RD

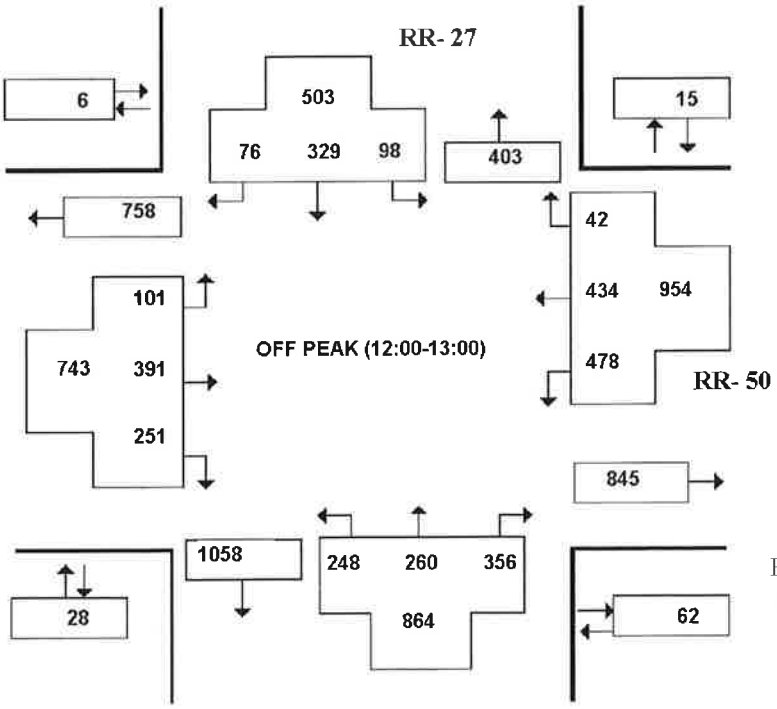
(ULRS Listing RR- 27 & RR- 50)

Survey Date: Monday 7 June 2010
Conditions: Dry
Start Time: 0700

Total Observed U-Turns
Northbound: 8 Southbound: 0
Eastbound: 0 Westbound: 4

AADT Factor
Monday in June is
9





Refer to Summary Page for Survey Hours.

Public Works and Services Department

Count ID 2719

BLAIR RD and OGILVIE RD

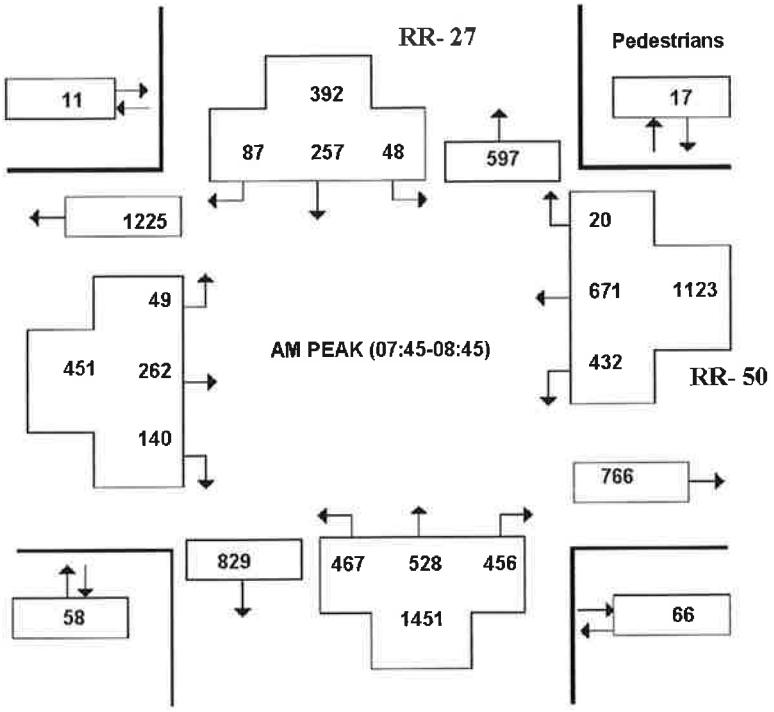
(ULRS Listing RR- 27 & RR- 50)

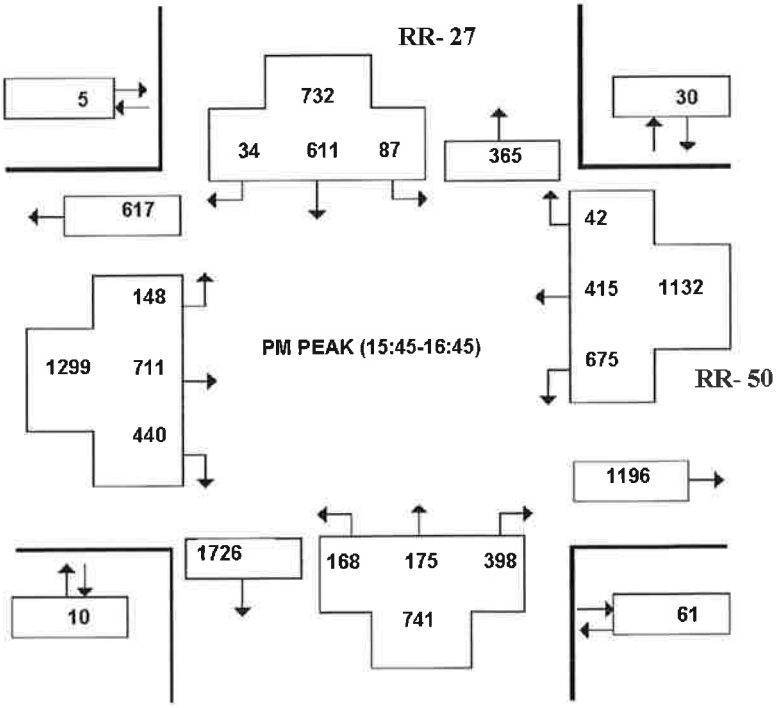
Survey Date: Monday 7 June 2010
Conditions: Dry
Start Time: 0700

Total Observed U-Turns

Northbound:	8	Southbound:	0
Eastbound:	0	Westbound:	4

AADT Factor
Monday in June is
9





Ottawa — *Public Works and Services Department*

Count ID 27196

Vehicular Turning Movements - Summary

BLAIR RD and OGILVIE RD

(ULRS Listing RR- 27 & RR- 50)

Survey Date: Monday 7 June 2010
Conditions: Dry
Start Time: 0700

Total Observed U-Turns
Northbound: 8 Southbound: 0
Eastbound: 0 Westbound: 4

AADT Factor
Monday in June is
9

	RR- 27									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	426	499	338	**1263**	33	228	78	**339**	**1602**	39	159	91	**289**	362	574	21	**957**	**1246**	**2848**
08:00-09:00	434	533	480	**1447**	52	240	91	**383**	**1830**	45	256	135	**436**	444	624	24	**1092**	**1528**	**3358**
09:00-10:00	211	345	345	**901**	40	274	72	**386**	**1287**	53	287	165	**505**	407	364	21	**792**	**1297**	**2584**
11:30-12:30	221	234	290	**745**	83	374	65	**522**	**1267**	83	396	261	**740**	483	386	37	**906**	**1646**	**2913**
12:30-13:30	257	275	348	**880**	78	278	59	**415**	**1295**	111	411	265	**787**	466	375	24	**865**	**1652**	**2947**
15:00-16:00	220	228	395	**843**	96	539	49	**684**	**1527**	83	520	405	**1008**	617	440	61	**1118**	**2126**	**3653**
16:00-17:00	154	180	395	**729**	67	602	27	**696**	**1425**	144	743	428	**1315**	641	341	34	**1016**	**2331**	**3756**
17:00-18:00	204	255	417	**876**	90	486	60	**636**	**1512**	107	677	425	**1209**	632	371	44	**1047**	**2256**	**3768**
8.0 HR TOTAL	2127	2549	3008	**7684**	539	3021	501	**4061**	**11745**	665	3449	2175	**6289**	4052	3475	266	**7793**	**14082**	**25827**
EQU. 12 HR TOTAL	2956	3543	4181	**10680**	749	4199	696	**5644**	**16324**	924	4794	3023	**8741**	5632	4830	369	**10831**	**19572**	**35896**
AVG. 12 HR TOTAL	2660	3188	3762	**9610**	674	3779	626	**5079**	**14689**	831	4314	2720	**7865**	5068	4347	332	**9747**	**17612**	**32301**
AVG. 24 HR TOTAL	3484	4176	4928	**12588**	882	495(	820	**6652**	**19240**	1088	5651	356	**10302**	6639	5694	434	**12767**	**23069**	**42309**
AM TOTAL (0700-0900)	860	1032	818	**271(**	85	468	169	**722**	**3432**	84	415	226	**725**	806	1198	45	**2049**	**2774**	**6206**
PM TOTAL (1530-1730)	378	397	814	**158!**	172	1110	83	**1365**	**2954**	244	1371	875	**2490**	1309	810	97	**2216**	**4706**	**7660**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

Note: These volumes were calculated by multiplying the Average Daily 12 hr totals by 1.31.

Ottawa

Public Works and Services Department

Count ID 27196

Vehicular Turning Movements (15 Min. Volumes)

BLAIR RD and OGILVIE RD

(ULRS Listing RR- 27 & RR- 50)

Survey Date: Monday 7 June 2010
Conditions: Dry
Start Time: 07:00

Total Observed U-Turns
Northbound: 8 Southbound: 0
Eastbound: 0 Westbound: 4

AADT Factor
Monday in June is 9

	RR- 27									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	95	107	52	**254**	1	30	10	**41**	**295**	7	17	12	**36**	70	108	9	**187**	**223**	**518**
07:15-07:30	87	142	92	**321**	11	60	22	**93**	**414**	6	23	18	**47**	83	128	3	**214**	**261**	**675**
07:30-07:45	128	128	82	**338**	11	61	28	**100**	**438**	11	46	28	**85**	106	173	7	**286**	**371**	**809**
07:45-08:00	116	122	112	**350**	10	77	18	**105**	**455**	15	73	33	**121**	103	165	2	**270**	**391**	**846**
08:00-08:15	112	143	102	**357**	15	66	16	**97**	**454**	12	60	30	**102**	111	149	5	**265**	**367**	**821**
08:15-08:30	126	121	118	**365**	14	67	30	**111**	**476**	11	63	30	**104**	109	180	6	**295**	**399**	**875**
08:30-08:45	113	142	124	**379**	9	47	23	**79**	**458**	11	66	47	**124**	109	177	7	**293**	**417**	**875**
08:45-09:00	83	127	136	**346**	14	60	22	**96**	**442**	11	67	28	**106**	115	118	6	**239**	**345**	**787**
09:00-09:15	61	103	87	**251**	14	69	15	**98**	**349**	9	97	30	**136**	116	135	5	**256**	**392**	**741**
09:15-09:30	46	95	106	**247**	8	68	22	**98**	**345**	14	67	47	**128**	103	89	3	**195**	**323**	**668**
09:30-09:45	54	76	76	**206**	12	68	20	**100**	**306**	15	64	34	**113**	94	68	2	**164**	**277**	**583**
09:45-10:00	50	71	76	**197**	6	69	15	**90**	**287**	15	59	54	**128**	94	72	11	**177**	**305**	**592**
11:30-11:45	47	49	68	**164**	8	95	17	**120**	**284**	21	97	58	**176**	114	90	6	**210**	**386**	**670**
11:45-12:00	56	53	55	**164**	16	93	11	**120**	**284**	22	100	74	**196**	111	75	5	**191**	**387**	**671**
12:00-12:15	39	65	90	**194**	36	117	24	**177**	**371**	16	99	68	**183**	144	116	10	**270**	**453**	**824**
12:15-12:30	79	67	77	**223**	23	69	13	**105**	**328**	24	100	61	**185**	114	105	16	**235**	**420**	**748**
12:30-12:45	70	71	93	**234**	17	73	20	**110**	**344**	25	92	69	**186**	99	112	8	**219**	**405**	**749**
12:45-13:00	60	57	96	**213**	22	70	19	**111**	**324**	36	100	53	**189**	121	101	8	**230**	**419**	**743**
13:00-13:15	63	65	96	**224**	21	63	8	**92**	**316**	27	109	81	**217**	125	75	5	**205**	**422**	**738**
13:15-13:30	64	82	63	**209**	18	72	12	**102**	**311**	23	110	62	**195**	121	87	3	**211**	**406**	**717**
15:00-15:15	59	71	94	**224**	17	137	16	**170**	**394**	21	112	83	**216**	126	79	14	**219**	**435**	**829**
15:15-15:30	46	65	97	**208**	28	155	9	**192**	**400**	22	120	96	**238**	155	86	12	**253**	**491**	**891**
15:30-15:45	63	53	113	**229**	21	132	12	**165**	**394**	17	131	110	**258**	156	133	20	**309**	**567**	**961**
15:45-16:00	52	39	91	**182**	30	115	12	**157**	**339**	23	157	116	**296**	180	142	15	**337**	**633**	**972**
16:00-16:15	41	45	108	**194**	19	184	8	**211**	**405**	37	152	98	**287**	151	67	7	**225**	**512**	**917**
16:15-16:30	24	37	84	**145**	15	156	5	**176**	**321**	62	213	111	**386**	176	90	8	**274**	**660**	**981**
16:30-16:45	51	54	115	**220**	23	156	9	**188**	**408**	26	189	115	**330**	168	116	12	**296**	**626**	**1034**
16:45-17:00	38	44	88	**170**	10	106	5	**121**	**291**	19	189	104	**312**	146	68	7	**221**	**533**	**824**
17:00-17:15	35	55	109	**199**	30	145	21	**196**	**395**	36	163	112	**311**	146	97	18	**261**	**572**	**967**
17:15-17:30	74	70	106	**250**	24	116	11	**151**	**401**	24	177	109	**310**	186	97	10	**293**	**603**	**1004**
17:30-17:45	52	74	115	**241**	17	105	11	**133**	**374**	33	189	93	**315**	157	93	9	**259**	**574**	**948**
17:45-18:00	43	56	87	**186**	19	120	17	**156**	**342**	14	148	111	**273**	143	84	7	**234**	**507**	**849**

Ottawa — *Public Works and Services Department*

Count ID 27196

Pedestrian Volume Summary Sheet - Hourly Volumes

BLAIR RD and OGILVIE RD

(ULRS Listing RR- 27 & RR- 50)

Survey Date: Monday 7 June 2010 **Conditions:** Dry **Start Time:** 0700

Time Period	CROSSING RR- 27 N/B APPROACH	CROSSING RR- 27 S/B APPROACH	STREET TOTAL	CROSSING RR- 50 E/B APPROACH	CROSSING RR- 50 W/B APPROACH	STREET TOTAL	GRAND TOTAL
07:00-08:00	68	8	**76**	52	19	**71**	**147**
08:00-09:00	52	11	**63**	42	10	**52**	**115**
09:00-10:00	46	3	**49**	11	4	**15**	**64**
11:30-12:30	52	3	**55**	12	17	**29**	**84**
12:30-13:30	56	7	**63**	30	5	**35**	**98**
15:00-16:00	78	4	**82**	16	32	**48**	**130**
16:00-17:00	59	3	**62**	8	30	**38**	**100**
17:00-18:00	59	6	**65**	11	19	**30**	**95**
8.0 HR TOTAL	470	45	**515**	182	136	**318**	**833**

PEAK PERIOD SUMMARIES

AM PEAK PERIOD (7:00-9:00)							
07:00-07:15	18	1	**19**	8	5	**13**	**32**
07:15-07:30	11	3	**14**	12	0	**12**	**26**
07:30-07:45	14	1	**15**	9	6	**15**	**30**
07:45-08:00	25	3	**28**	23	8	**31**	**59**
08:00-08:15	18	1	**19**	17	1	**18**	**37**
08:15-08:30	12	2	**14**	12	7	**19**	**33**
08:30-08:45	11	5	**16**	6	1	**7**	**23**
08:45-09:00	11	3	**14**	7	1	**8**	**22**
TOTALS	120	19	**139**	94	29	**123**	**262**

OFF PEAK PERIOD (11:30-13:30)							
11:30-11:45	12	1	**13**	2	4	**6**	**19**
11:45-12:00	7	0	**7**	1	1	**2**	**9**
12:00-12:15	17	1	**18**	5	8	**13**	**31**
12:15-12:30	16	1	**17**	4	4	**8**	**25**
12:30-12:45	14	4	**18**	16	2	**18**	**36**
12:45-13:00	15	0	**15**	3	1	**4**	**19**
13:00-13:15	16	1	**17**	8	1	**9**	**26**
13:15-13:30	11	2	**13**	3	1	**4**	**17**
TOTALS	108	10	**118**	42	22	**64**	**182**

PM PEAK PERIOD (15:30-17:30)							
15:30-15:45	24	2	**26**	4	10	**14**	**40**
15:45-16:00	25	2	**27**	4	7	**11**	**38**
16:00-16:15	9	2	**11**	1	8	**9**	**20**
16:15-16:30	10	0	**10**	5	6	**11**	**21**
16:30-16:45	17	1	**18**	0	9	**9**	**27**
16:45-17:00	23	0	**23**	2	7	**9**	**32**
17:00-17:15	19	2	**21**	7	6	**13**	**34**
17:15-17:30	13	0	**13**	3	4	**7**	**20**
TOTALS	140	9	**149**	26	57	**83**	**232**

Approved by: DT

Printed on : 18/09/2012

Public Works and Services Department

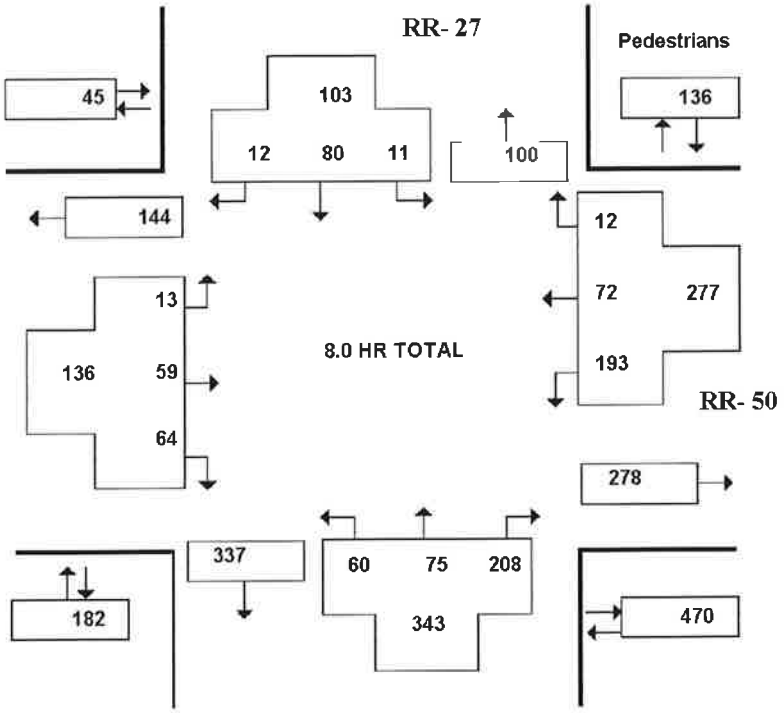
Count ID 27196

Heavy Vehicle Summary Sheet - Hourly Volumes

BLAIR RD and OGILVIE RD

(ULRS Listing RR- 27 & RR- 50)

Survey Date :Monday 7 June 2010 **Conditions : Dry** **Start Time : 0700**



	RR- 27									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	10	17	43	**70**	0	8	1	**9**	**79**	5	10	2	**17**	15	7	3	**25**	**42**	**121**
08:00-09:00	12	17	51	**80**	4	9	4	**17**	**97**	3	7	9	**19**	29	13	1	**43**	**62**	**159**
09:00-10:00	12	4	21	**37**	2	11	3	**16**	**53**	2	15	11	**28**	23	12	1	**36**	**64**	**117**
11:30-12:30	11	13	13	**37**	1	9	0	**10**	**47**	1	5	12	**18**	19	11	0	**30**	**48**	**95**
12:30-13:30	9	6	21	**36**	2	12	3	**17**	**53**	1	7	9	**17**	18	7	0	**25**	**42**	**95**
15:00-16:00	5	10	25	**40**	1	16	1	**18**	**58**	1	8	11	**20**	32	15	4	**51**	**71**	**129**
16:00-17:00	0	4	17	**21**	1	7	0	**8**	**29**	0	6	5	**11**	31	2	1	**34**	**45**	**74**
17:00-18:00	1	4	17	**22**	0	8	0	**8**	**30**	0	1	5	**6**	26	5	2	**33**	**39**	**69**
8.0 HR TOTAL	60	75	208	**343**	11	80	12	**103**	**446**	13	59	64	**136**	193	72	12	**277**	**413**	**859**

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.

Approved by: DT

Printed on: 18/09/2012

Bicycle Volume Summary Sheet - Hourly Volumes

BLAIR RD and OGILVIE RD

(ULRS Listing RR- 27 & RR- 50)

Survey Date: Monday 7 June 2010 **Conditions:** Dry **Start Time:** 0700

Time Period	NORTHBOUND APPROACH ON RR- 27	SOUTHBOUND APPROACH ON RR- 27	STREET TOTAL	EASTBOUND APPROACH ON RR- 50	WESTBOUND APPROACH ON RR- 50	STREET TOTAL	GRAND TOTAL
07:00-08:00	8	5	**13**	3	12	**15**	**28**
08:00-09:00	1	2	**3**	3	3	**6**	**9**
09:00-10:00	1	1	**2**	3	2	**5**	**7**
11:30-12:30	1	0	**1**	5	1	**6**	**7**
12:30-13:30	1	0	**1**	5	3	**8**	**9**
15:00-16:00	1	2	**3**	9	5	**14**	**17**
16:00-17:00	4	6	**10**	15	5	**20**	**30**
17:00-18:00	7	1	**8**	12	5	**17**	**25**
8.0 HR TOTAL	24	17	**41**	55	36	**91**	**132**

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

W.O. 36893

Turning Movement Count - 15 Minute Summary Report

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

		BLAIR RD									REGIONAL RD 174 S/OR174 IC112 RAMP15									
		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	122	72	**194**	15	73	0	**88**	**282**	0	0	0	**0**	29	0	99	**128**	**128**	**410**
07:15	07:30	0	157	78	**235**	24	102	0	**126**	**361**	0	0	0	**0**	36	0	164	**200**	**200**	**561**
07:30	07:45	0	216	94	**310**	23	127	0	**150**	**460**	0	0	0	**0**	41	0	138	**179**	**179**	**639**
07:45	08:00	0	189	107	**296**	30	159	0	**189**	**485**	0	0	0	**0**	64	0	164	**228**	**228**	**713**
08:00	08:15	0	180	108	**288**	25	138	0	**163**	**451**	0	0	0	**0**	55	0	190	**245**	**245**	**696**
08:15	08:30	0	187	89	**276**	33	159	0	**192**	**468**	0	0	0	**0**	70	0	167	**237**	**237**	**705**
08:30	08:45	0	172	113	**285**	28	140	0	**168**	**453**	0	0	0	**0**	56	0	172	**228**	**228**	**681**
08:45	09:00	0	184	119	**303**	43	135	0	**178**	**481**	0	0	0	**0**	45	0	155	**200**	**200**	**681**
09:00	09:15	0	160	107	**267**	24	95	0	**119**	**386**	0	0	0	**0**	44	0	125	**169**	**169**	**555**
09:15	09:30	0	130	92	**222**	37	102	0	**139**	**361**	0	0	0	**0**	41	0	84	**125**	**125**	**486**
09:30	09:45	0	109	96	**205**	42	109	0	**151**	**356**	0	0	0	**0**	18	0	21	**39**	**39**	**395**
09:45	10:00	0	115	100	**215**	29	104	0	**133**	**348**	0	0	0	**0**	29	0	92	**121**	**121**	**469**
11:30	11:45	0	133	108	**241**	41	140	0	**181**	**422**	0	0	0	**0**	38	0	86	**124**	**124**	**546**
11:45	12:00	0	137	110	**247**	52	172	0	**224**	**471**	0	0	0	**0**	35	0	100	**135**	**135**	**606**
12:00	12:15	0	176	97	**273**	60	124	0	**184**	**457**	0	0	0	**0**	21	0	72	**93**	**93**	**550**
12:15	12:30	0	154	104	**258**	59	147	0	**206**	**464**	0	0	0	**0**	30	0	104	**134**	**134**	**598**
12:30	12:45	0	145	104	**249**	54	154	0	**208**	**457**	0	0	0	**0**	36	0	86	**122**	**122**	**579**
12:45	13:00	0	161	103	**264**	45	133	0	**178**	**442**	0	0	0	**0**	41	0	96	**137**	**137**	**579**
13:00	13:15	0	142	119	**261**	67	135	0	**202**	**463**	0	0	0	**0**	27	0	86	**113**	**113**	**576**
13:15	13:30	0	158	105	**263**	59	136	0	**195**	**458**	0	0	0	**0**	33	0	77	**110**	**110**	**568**
15:00	15:15	0	172	154	**326**	114	182	0	**296**	**622**	0	0	0	**0**	47	0	98	**145**	**145**	**767**
15:15	15:30	0	160	178	**338**	99	190	0	**289**	**627**	0	0	0	**0**	37	0	108	**145**	**145**	**772**
15:30	15:45	0	168	164	**332**	112	225	0	**337**	**669**	0	0	0	**0**	37	0	99	**136**	**136**	**805**
15:45	16:00	0	166	168	**334**	87	197	0	**284**	**618**	0	0	0	**0**	63	0	105	**168**	**168**	**786**
16:00	16:15	0	214	146	**360**	84	231	0	**315**	**675**	0	0	0	**0**	48	0	118	**166**	**166**	**841**
16:15	16:30	0	176	165	**341**	95	232	0	**327**	**668**	0	0	0	**0**	45	0	107	**152**	**152**	**820**
16:30	16:45	0	213	160	**373**	99	238	0	**337**	**710**	0	0	0	**0**	30	0	124	**154**	**154**	**864**
16:45	17:00	0	180	173	**353**	98	216	0	**314**	**667**	0	0	0	**0**	30	0	133	**163**	**163**	**830**
17:00	17:15	0	179	168	**347**	96	209	0	**305**	**652**	0	0	0	**0**	34	0	142	**176**	**176**	**828**
17:15	17:30	0	163	137	**300**	98	198	0	**296**	**596**	0	0	0	**0**	48	0	125	**173**	**173**	**769**
17:30	17:45	0	147	117	**264**	75	208	0	**283**	**547**	0	0	0	**0**	50	0	110	**160**	**160**	**707**
17:45	18:00	0	143	130	**273**	80	140	0	**220**	**493**	0	0	0	**0**	39	0	103	**142**	**142**	**635**
TOTAL:		0	5208	3885	**9093**	1927	5050	0	**6977**	**16070**	0	0	0	**0**	1297	0	3650	**4947**	**4947**	**21017**

Note: U-Turns are included in Totals.

Comment:

Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
36893

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Count Date: Tuesday, April 11, 2017 **Start Time:** 07:00

	BLAIR RD			REGIONAL RD 174 S/OR174 IC112 RAMP15			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	0	0	**0**	0	3	**3**	**3**
08:00 09:00	3	0	**3**	0	0	**0**	**3**
09:00 10:00	2	0	**2**	0	0	**0**	**2**
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	1	2	**3**	0	0	**0**	**3**
16:00 17:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	1	**1**	0	0	**0**	**1**
Total	6	3	**9**	0	3	**3**	**12**

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

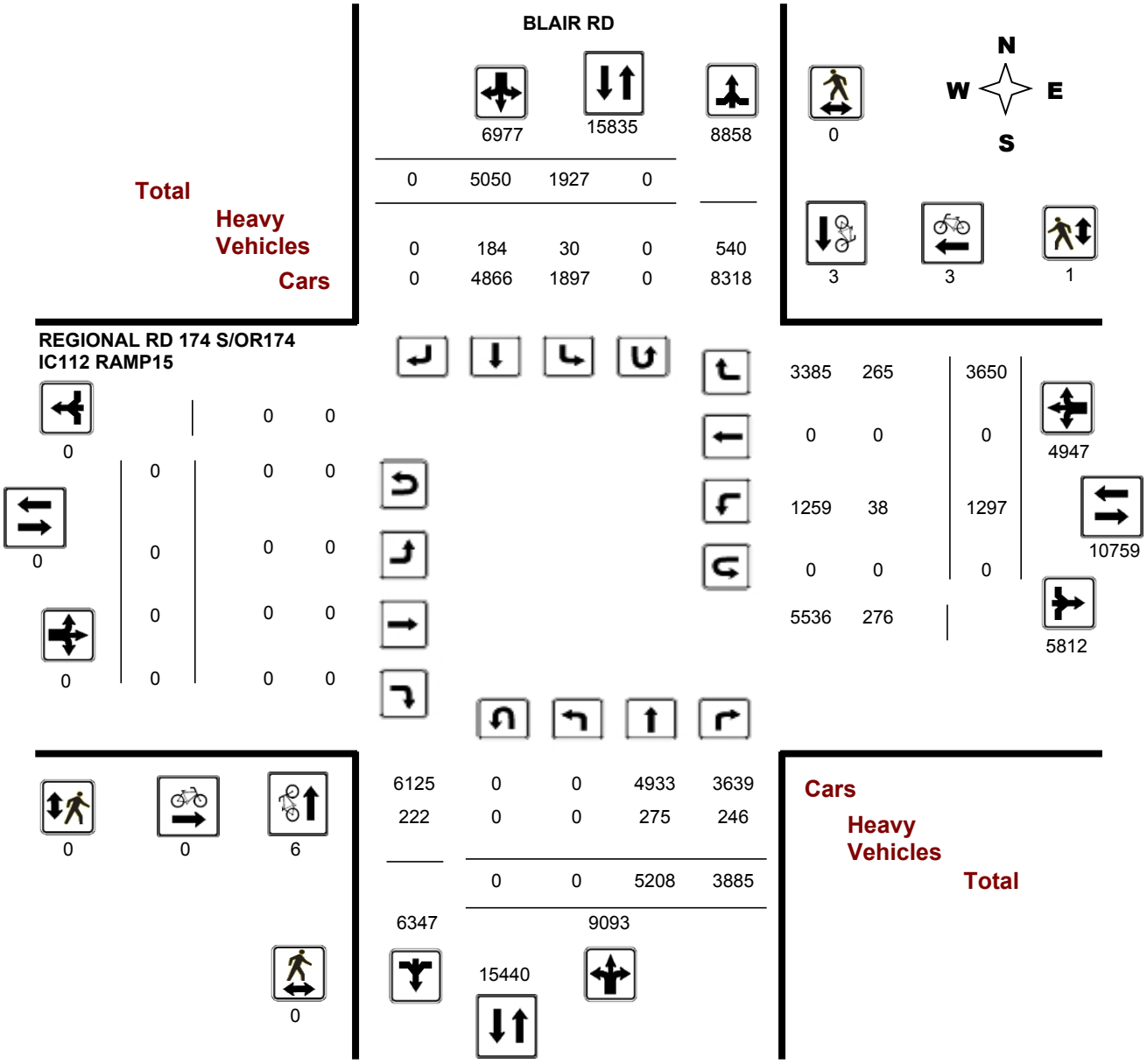
Turning Movement Count - Full Study Diagram

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017

WO#: 36893

Device: Miovision



Comments

Transportation Services - Traffic Services

W.O.
36893

Turning Movement Count - Heavy Vehicle Report

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017

		BLAIR RD									REGIONAL RD 174 S/OR174 IC112 RAMP15									
		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	52	38	**90**	3	20	0	**23**	**113**	0	0	0	**0**	11	0	25	**36**	**36**	**149**
08:00	09:00	0	48	42	**90**	7	19	0	**26**	**116**	0	0	0	**0**	5	0	37	**42**	**42**	**158**
09:00	10:00	0	41	46	**87**	7	14	0	**21**	**108**	0	0	0	**0**	7	0	31	**38**	**38**	**146**
11:30	12:30	0	24	27	**51**	5	18	0	**23**	**74**	0	0	0	**0**	1	0	32	**33**	**33**	**107**
12:30	13:30	0	36	39	**75**	5	28	0	**33**	**108**	0	0	0	**0**	7	0	13	**20**	**20**	**128**
15:00	16:00	0	31	27	**58**	3	37	0	**40**	**98**	0	0	0	**0**	2	0	18	**20**	**20**	**118**
16:00	17:00	0	26	14	**40**	0	28	0	**28**	**68**	0	0	0	**0**	4	0	55	**59**	**59**	**127**
17:00	18:00	0	17	13	**30**	0	20	0	**20**	**50**	0	0	0	**0**	1	0	54	**55**	**55**	**105**
Sub Total		0	275	246	**521**	30	184	0	**214**	**735**	0	0	0	**0**	38	0	265	**303**	**303**	**1038**
U-Turns (Heavy Vehicles)					**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total		0	275	246	**0**	30	184	0	**214**	**735**	0	0	0	**0**	38	0	265	**303**	**303**	**1038**

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
36893

Turning Movement Count - Pedestrian Volume Report

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Count Date: Tuesday, April 11, 2017 **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	0	0	**0**	0	0	**0**	**0**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	0	0	**0**	0	0	**0**	**0**
07:00 08:00	0	0	**0**	0	0	**0**	**0**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	0	**0**	0	0	**0**	**0**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	0	**0**	0	0	**0**	**0**
08:00 09:00	0	0	**0**	0	0	**0**	**0**
09:00 09:15	0	0	**0**	0	0	**0**	**0**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	0	0	**0**	0	0	**0**	**0**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
09:00 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	0	0	**0**	0	0	**0**	**0**
12:00 12:15	0	0	**0**	0	0	**0**	**0**
12:15 12:30	0	0	**0**	0	0	**0**	**0**
11:30 12:30	0	0	**0**	0	0	**0**	**0**
12:30 12:45	0	0	**0**	0	0	**0**	**0**
12:45 13:00	0	0	**0**	0	0	**0**	**0**
13:00 13:15	0	0	**0**	0	1	**1**	**1**
13:15 13:30	0	0	**0**	0	0	**0**	**0**
12:30 13:30	0	0	**0**	0	1	**1**	**1**
15:00 15:15	0	0	**0**	0	0	**0**	**0**
15:15 15:30	0	0	**0**	0	0	**0**	**0**
15:30 15:45	0	0	**0**	0	0	**0**	**0**
15:45 16:00	0	0	**0**	0	0	**0**	**0**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
16:00 16:15	0	0	**0**	0	0	**0**	**0**
16:15 16:30	0	0	**0**	0	0	**0**	**0**
16:30 16:45	0	0	**0**	0	0	**0**	**0**
16:45 17:00	0	0	**0**	0	0	**0**	**0**
16:00 17:00	0	0	**0**	0	0	**0**	**0**
17:00 17:15	0	0	**0**	0	0	**0**	**0**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	0	**0**	0	0	**0**	**0**
Total	0	0	**0**	0	1	**1**	**1**

Comment:

Transportation Services - Traffic Services

Work Order
36893

Turning Movement Count - Full Study Summary Report

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017

Total Observed U-Turns

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

AADT Factor

.90

Full Study

	BLAIR RD									REGIONAL RD 174 S/OR174 IC112 RAMP15									
	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	684	351	**1035**	92	461	0	**553**	**1588**	0	0	0	**0**	170	0	565	**735**	**735**	**2323**
08:00 09:00	0	723	429	**1152**	129	572	0	**701**	**1853**	0	0	0	**0**	226	0	684	**910**	**910**	**2763**
09:00 10:00	0	514	395	**909**	132	410	0	**542**	**1451**	0	0	0	**0**	132	0	322	**454**	**454**	**1905**
11:30 12:30	0	600	419	**1019**	212	583	0	**795**	**1814**	0	0	0	**0**	124	0	362	**486**	**486**	**2300**
12:30 13:30	0	606	431	**1037**	225	558	0	**783**	**1820**	0	0	0	**0**	137	0	345	**482**	**482**	**2302**
15:00 16:00	0	666	664	**1330**	412	794	0	**1206**	**2536**	0	0	0	**0**	184	0	410	**594**	**594**	**3130**
16:00 17:00	0	783	644	**1427**	376	917	0	**1293**	**2720**	0	0	0	**0**	153	0	482	**635**	**635**	**3355**
17:00 18:00	0	632	552	**1184**	349	755	0	**1104**	**2288**	0	0	0	**0**	171	0	480	**651**	**651**	**2939**
Sub Total	0	5208	3885	**9093**	1927	5050	0	**6977**	**16070**	0	0	0	**0**	1297	0	3650	**4947**	**4947**	**21017**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	5208	3885	**9093**	1927	5050	0	**6977**	**16070**	0	0	0	**0**	1297	0	3650	**4947**	**4947**	**21017**
EQ 12Hr	0	7239	5400	**12639**	2679	7019	0	**9698**	**22337**	0	0	0	**0**	1803	0	5074	**6876**	**6876**	**29213**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	6515	4860	**11375**	2411	6318	0	**8728**	**20103**	0	0	0	**0**	1623	0	4566	**6189**	**6189**	**26292**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	0	8535	6367	**14902**	3158	8276	0	**11434**	**26336**	0	0	0	**0**	2126	0	5982	**8107**	**8107**	**34443**
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.

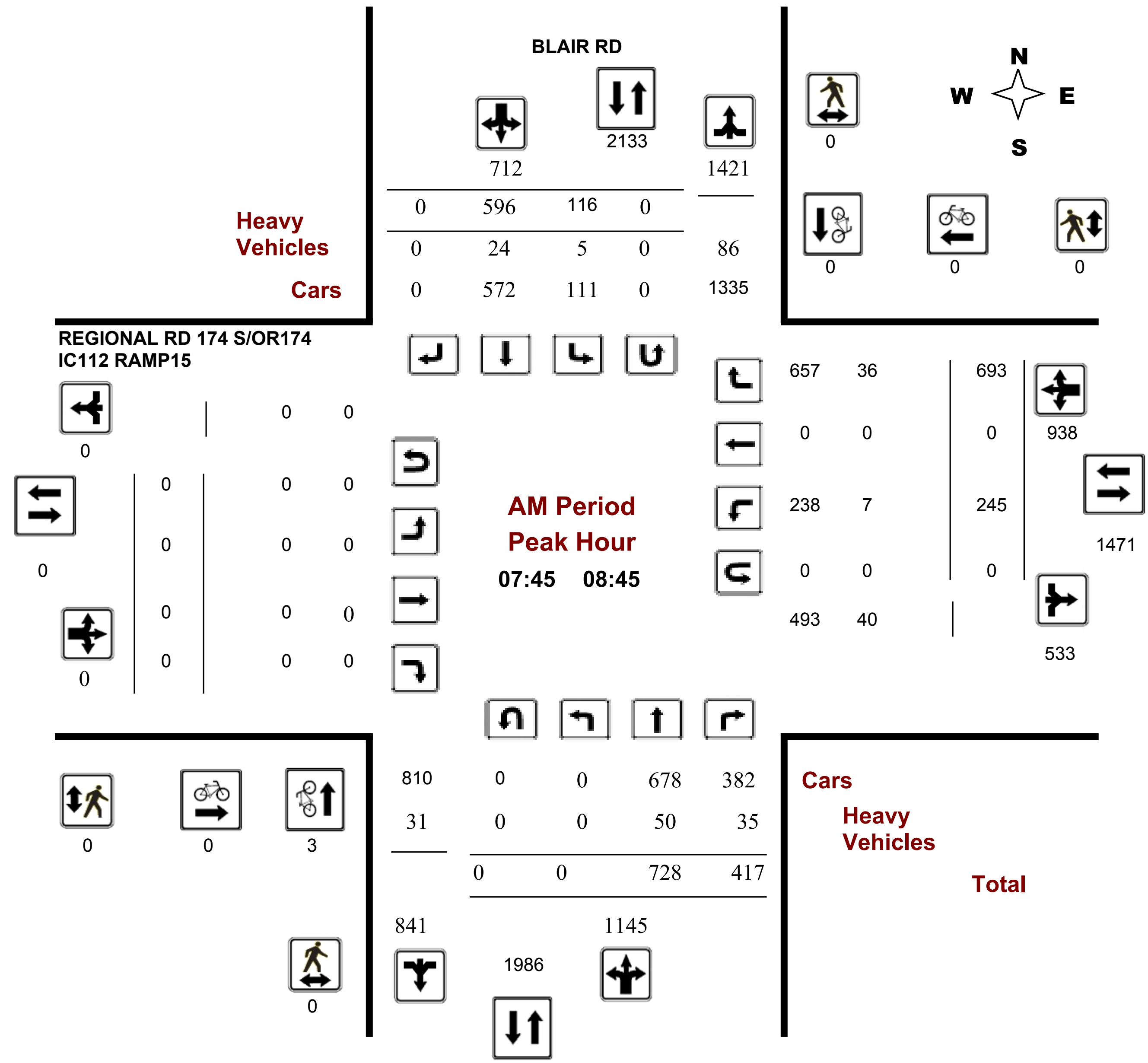
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017 **WO No:** 36893

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



Comments

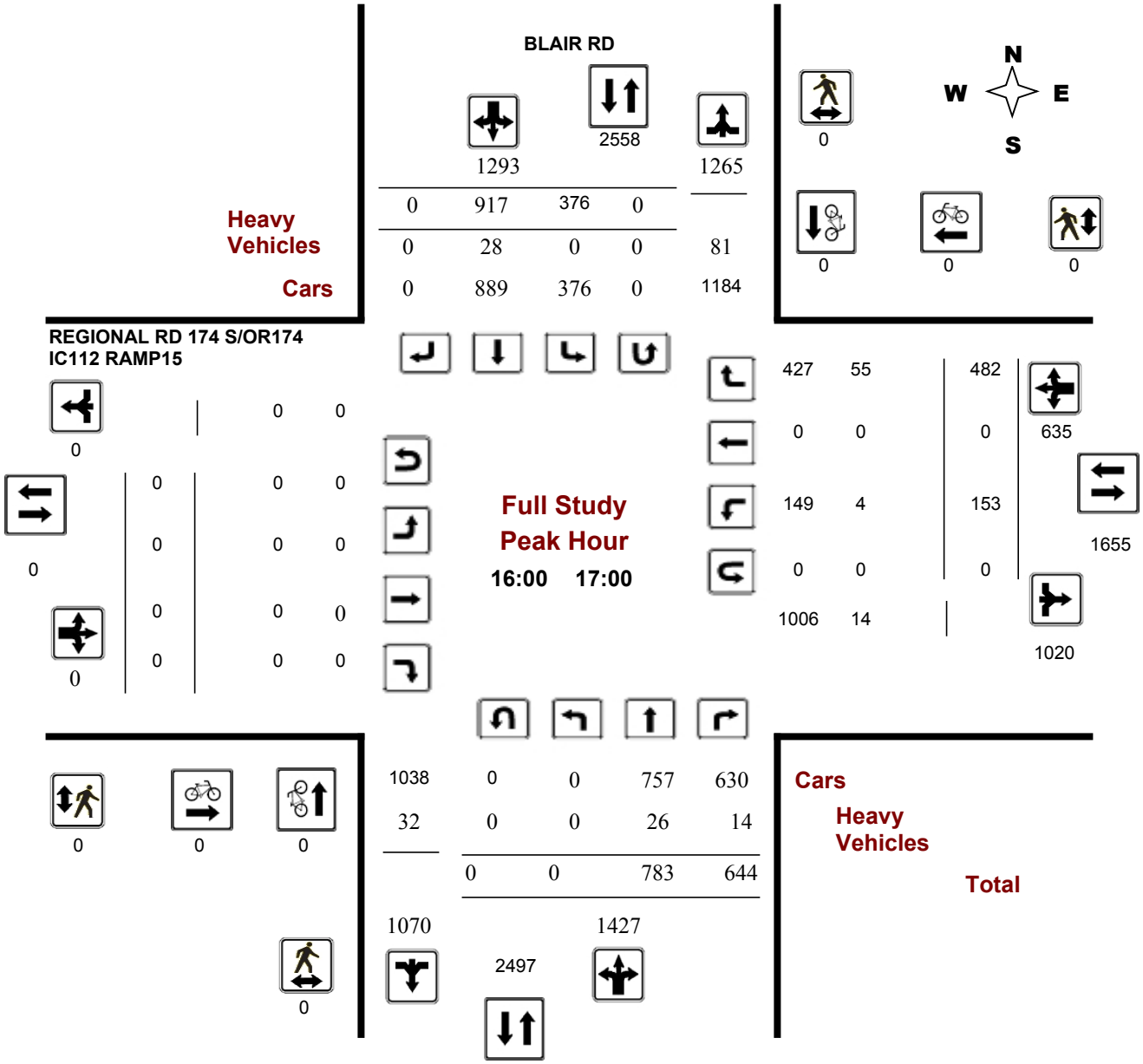
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017 **WO No:** 36893

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



Comments

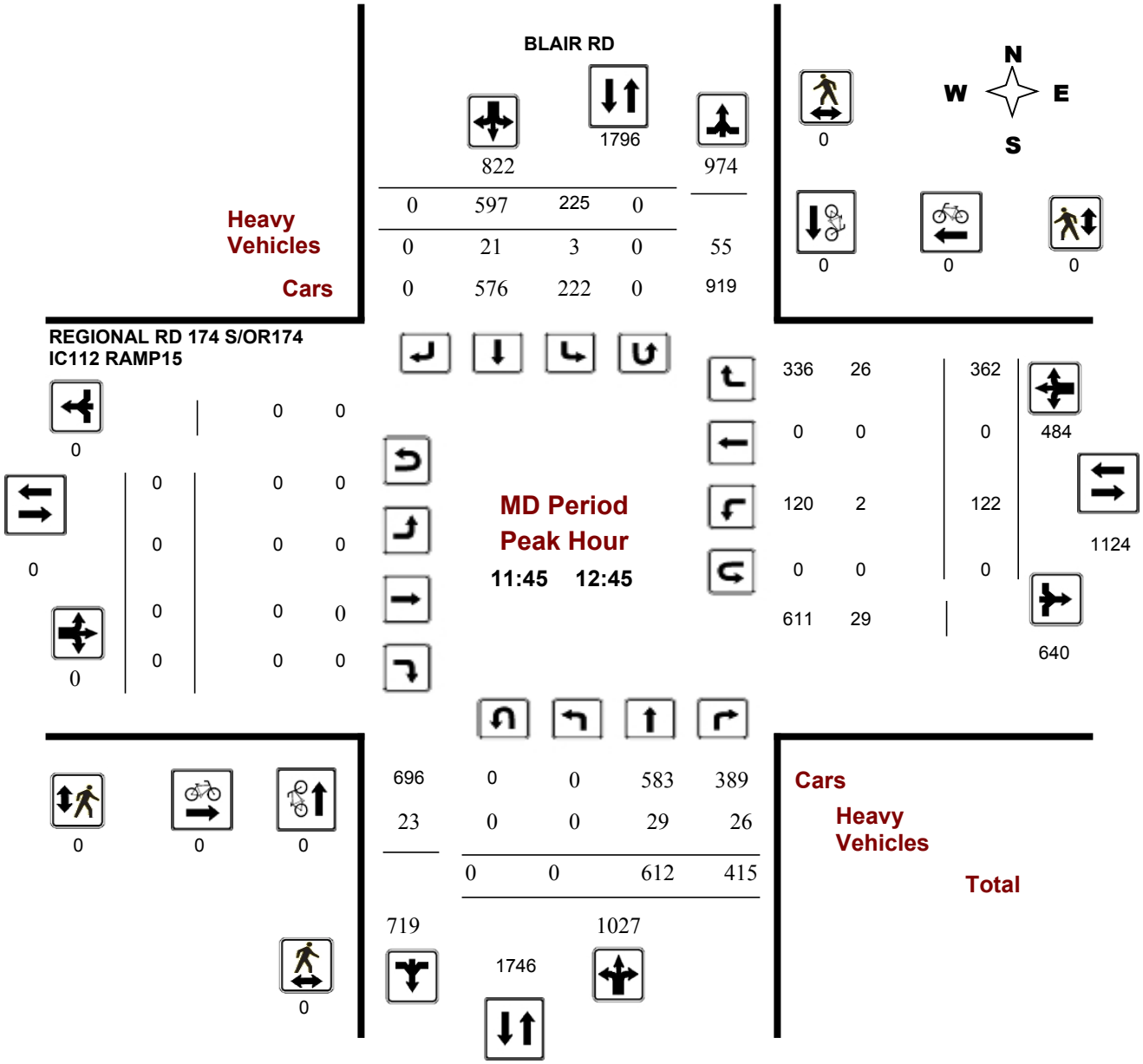
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017 **WO No:** 36893

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



Comments

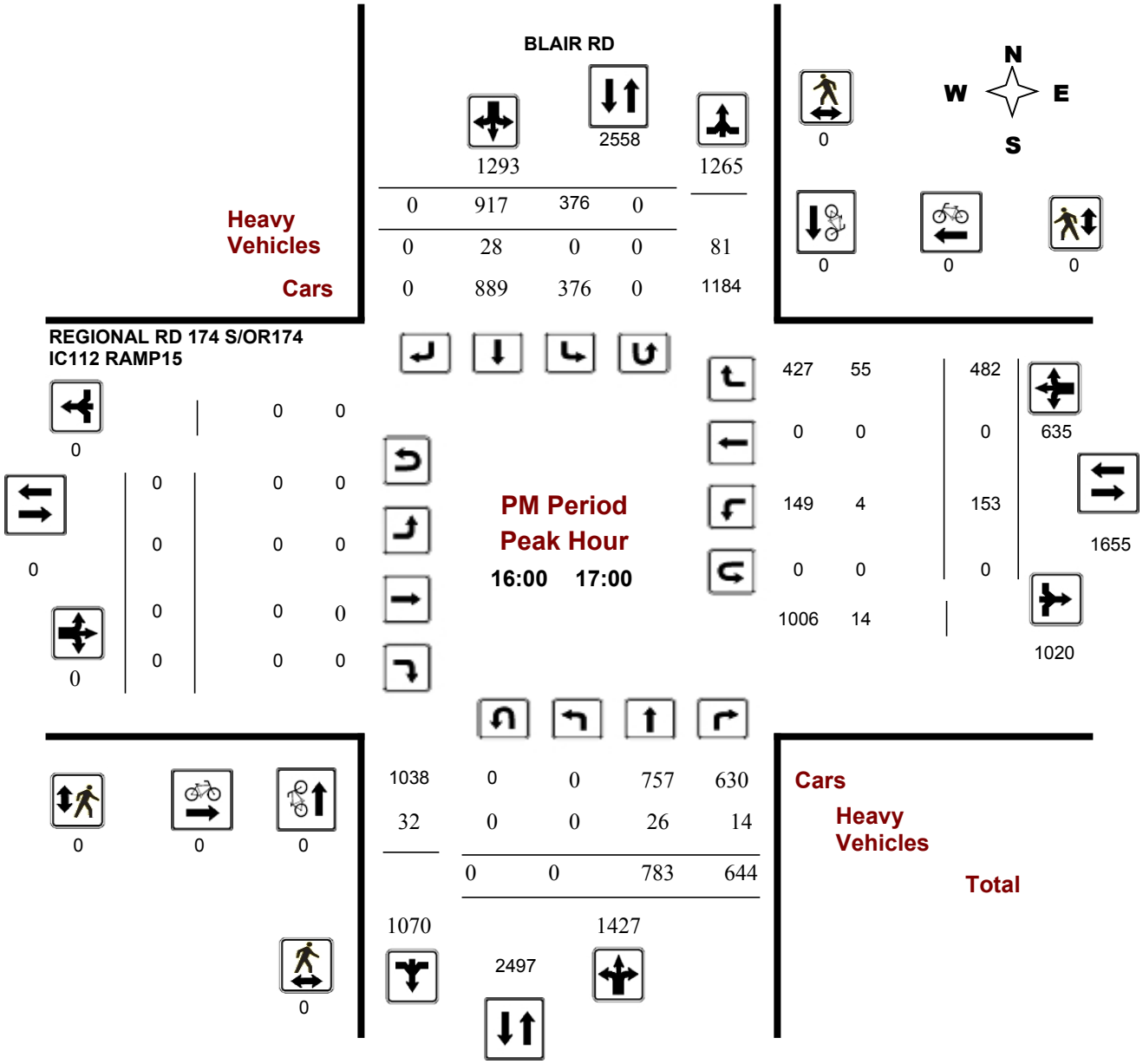
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017 **WO No:** 36893

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



Comments

Transportation Services - Traffic Services

Work Order
36893

Turning Movement Count - 15 Min U-Turn Total Report

BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Survey Date: Tuesday, April 11, 2017

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	0	0	0	0
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	0	0	0	0
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	0	0	0	0
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	0	0	0	0

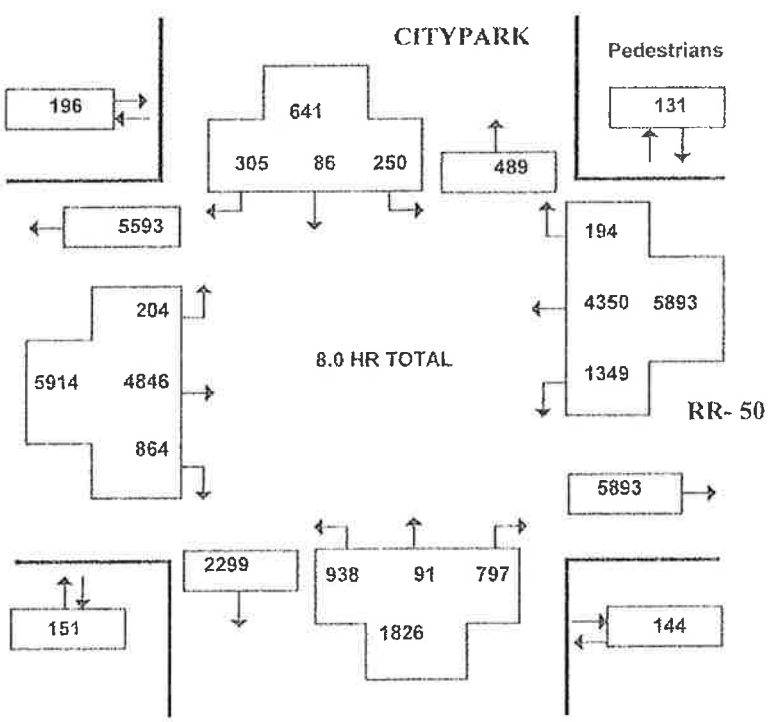
OGILVIE RD and CITYPARK DR

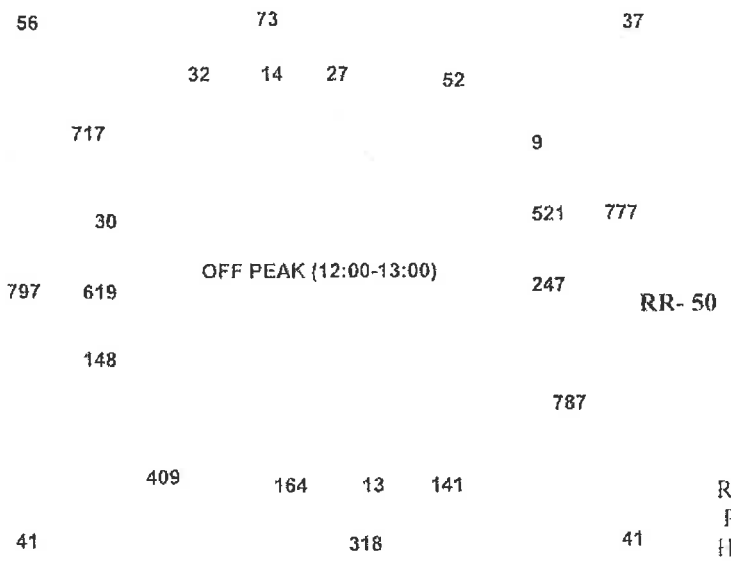
(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 4 Westbound: 21

AADT Factor
Thursday in August i
9





Refer to Summary Page for Survey Hours.

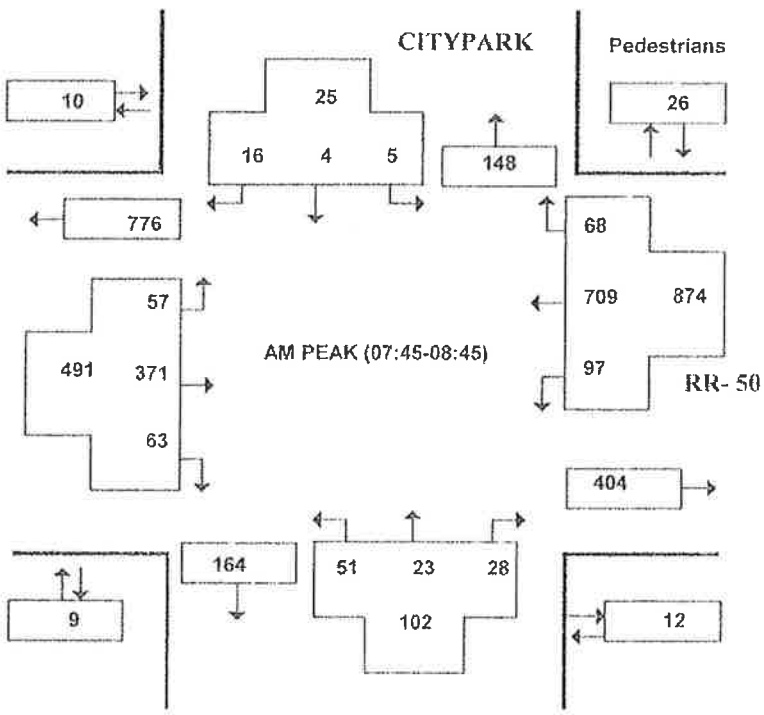
OGILVIE RD and CITYPARK DR

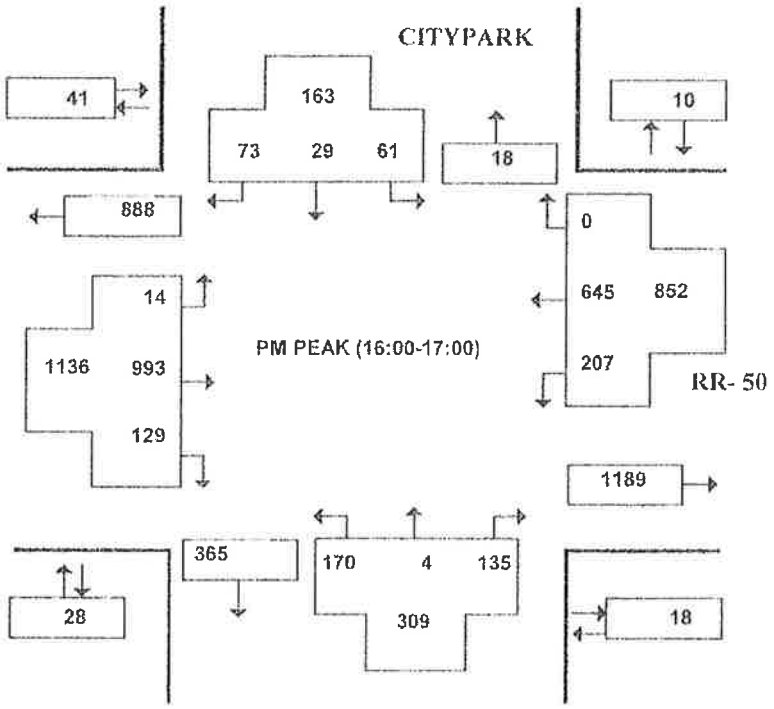
(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 4 Westbound: 21

AADT Factor
Thursday in August i
9





Ottawa — *Public Works and Services Department*

Count ID 26138

Vehicular Turning Movements - Summary

OGILVIE RD and CITYPARK DR

(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 4 Westbound: 21

AADT Factor
Thursday in August is
9

	CITYPARK									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	45	19	21	85	6	1	10	17	102	50	270	31	351	84	663	73	820	1171	1273
08:00-09:00	62	20	34	116	6	4	16	26	142	56	389	72	517	92	647	58	797	1314	1456
09:00-10:00	72	11	34	117	3	2	9	14	131	14	380	71	465	102	373	36	511	976	1107
11:30-12:30	122	7	130	259	36	15	54	105	364	19	538	130	687	254	518	9	781	1468	1832
12:30-13:30	189	23	149	361	17	7	17	41	402	34	608	170	812	225	473	12	710	1522	1924
15:00-16:00	125	1	127	253	89	17	93	199	452	6	749	120	875	191	499	6	696	1571	2023
16:00-17:00	170	4	135	309	61	29	73	163	472	14	993	129	1136	207	645	0	852	1988	2460
17:00-18:00	153	6	167	326	32	11	33	76	402	11	919	141	1071	194	532	0	726	1797	2199
8.0 HR TOTAL	938	91	797	1826	250	86	305	641	2467	204	4846	864	5914	1349	4350	194	5893	11807	14274
EQU. 12 HR TOTAL	1303	126	1107	2536	347	119	423	889	3425	283	6735	1200	8218	1875	6046	269	8190	16408	19833
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																			
AVG. 12 HR TOTAL	1172	113	996	2281	312	107	380	799	3080	254	6061	1080	7395	1687	5441	242	7370	14765	17845
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.																			
AVG. 24 HR TOTAL	1535	148	1304	2987	408	140	497	1045	4032	332	7939	1414	9685	2209	7127	317	9653	19338	23370
Note: These volumes were calculated by multiplying the Average Daily 12 hr totals by 1.31.																			
AM TOTAL (0700-0900)	107	39	55	201	12	5	26	43	244	106	659	103	868	176	1310	131	1617	2485	2729
PM TOTAL (1530-1730)	312	10	280	602	132	47	140	319	921	23	1864	259	2146	395	1165	1	1561	3707	4628

Ottawa

Public Works and Services Department

Count ID 26138

Vehicular Turning Movements (15 Min. Volumes)

OGILVIE RD and CITYPARK DR

(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009
Conditions: dry
Start Time: 07:00

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 4 Westbound: 21

AADT Factor
Thursday in August is 9

	CITYPARK									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	12	4	3	19	1	0	2	3	22	14	62	6	82	14	141	15	170	252	274
07:15-07:30	14	4	7	25	0	0	1	1	26	12	51	7	70	16	170	15	201	271	297
07:30-07:45	11	3	5	19	3	0	3	6	25	11	64	7	82	24	159	27	210	292	317
07:45-08:00	8	8	6	22	2	1	4	7	29	13	93	11	117	30	193	16	239	356	385
08:00-08:15	16	7	7	30	1	2	2	5	35	10	81	14	105	25	184	16	226	330	365
08:15-08:30	12	3	9	24	0	1	4	5	29	18	115	16	149	17	187	25	229	378	407
08:30-08:45	15	5	6	26	2	0	6	8	34	16	82	22	120	25	145	11	181	301	335
08:45-09:00	19	5	12	36	3	1	4	8	44	12	111	20	143	25	131	6	162	305	349
09:00-09:15	15	5	8	28	3	1	3	7	35	8	112	10	130	31	122	21	174	304	339
09:15-09:30	16	3	9	28	0	1	4	5	33	3	77	14	94	17	84	5	106	200	233
09:30-09:45	18	2	10	30	0	0	1	1	31	2	93	23	118	28	85	4	117	235	266
09:45-10:00	23	1	7	31	0	0	1	1	32	1	98	24	123	26	82	6	114	237	269
11:30-11:45	36	0	27	63	9	3	19	31	94	3	121	22	146	45	117	0	162	308	402
11:45-12:00	22	1	33	56	8	3	15	26	82	5	120	27	152	63	125	4	192	344	426
12:00-12:15	28	1	33	62	13	7	10	30	92	3	152	49	204	86	140	1	227	431	523
12:15-12:30	36	5	37	78	6	2	10	18	96	8	145	32	185	60	136	4	200	385	481
12:30-12:45	47	3	30	80	5	5	10	20	100	10	169	29	208	51	113	2	166	374	474
12:45-13:00	53	4	41	98	3	0	2	5	103	9	153	38	200	50	132	2	184	384	487
13:00-13:15	43	9	37	89	3	1	2	6	95	11	140	48	199	58	112	2	172	371	466
13:15-13:30	46	7	41	94	6	1	3	10	104	4	146	55	205	66	116	6	188	393	497
15:00-15:15	44	0	26	70	19	2	18	39	109	1	164	27	192	47	124	3	174	366	475
15:15-15:30	23	0	33	56	24	4	28	56	112	2	185	29	216	52	121	2	175	391	503
15:30-15:45	19	0	36	55	30	4	25	59	114	3	193	34	230	46	130	1	177	407	521
15:45-16:00	39	1	32	72	16	7	22	45	117	0	207	30	237	46	124	0	170	407	524
16:00-16:15	45	2	30	77	19	11	27	57	134	6	237	26	269	53	168	0	221	490	624
16:15-16:30	52	0	33	85	20	9	11	40	125	4	269	37	310	48	192	0	240	550	675
16:30-16:45	39	0	45	84	10	6	19	35	119	2	236	39	277	57	146	0	203	480	599
16:45-17:00	34	2	27	63	12	3	16	31	94	2	251	27	280	49	139	0	188	468	562
17:00-17:15	51	3	40	94	14	4	13	31	125	3	248	32	283	48	146	0	194	477	602
17:15-17:30	33	2	37	72	11	3	7	21	93	3	223	34	260	48	120	0	168	428	521
17:30-17:45	35	0	44	79	3	2	4	9	88	2	228	35	265	48	133	0	181	446	534
17:45-18:00	34	1	46	81	4	2	9	15	96	3	220	40	263	50	133	0	183	446	542

Approved by: MG

Printed on : 27/08/2013

Ottawa — *Public Works and Services Department*

Count ID 26138

Pedestrian Volume Summary Sheet - Hourly Volumes

OGILVIE RD and CITYPARK DR

(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009 **Conditions:** dry **Start Time:** 0700

Time Period	CROSSING CITYPARK N/B APPROACH	CROSSING CITYPARK S/B APPROACH	STREET TOTAL	CROSSING RR- 50 E/B APPROACH	CROSSING RR- 50 W/B APPROACH	STREET TOTAL	GRAND TOTAL
07:00-08:00	14	15	29	7	22	29	58
08:00-09:00	14	7	21	11	22	33	54
09:00-10:00	12	12	24	8	9	17	41
11:30-12:30	23	53	76	37	22	59	135
12:30-13:30	31	39	70	43	35	78	148
15:00-16:00	13	14	27	12	5	17	44
16:00-17:00	18	41	59	28	10	38	97
17:00-18:00	19	15	34	5	6	11	45
8.0 HR TOTAL	144	196	340	151	131	282	622

PEAK PERIOD SUMMARIES

AM PEAK PERIOD (7:00-9:00)							
07:00-07:15	2	2	4	0	2	2	6
07:15-07:30	6	4	10	1	7	8	18
07:30-07:45	2	4	6	3	6	9	15
07:45-08:00	4	5	9	3	7	10	19
08:00-08:15	1	2	3	4	3	7	10
08:15-08:30	6	1	7	2	9	11	18
08:30-08:45	1	2	3	0	7	7	10
08:45-09:00	6	2	8	5	3	8	16
TOTALS	28	22	50	18	44	62	112
OFF PEAK PERIOD (11:30-13:30)							
11:30-11:45	2	10	12	8	2	10	22
11:45-12:00	3	9	12	9	4	13	25
12:00-12:15	6	18	24	8	8	16	40
12:15-12:30	12	16	28	12	8	20	48
12:30-12:45	10	11	21	9	9	18	39
12:45-13:00	13	11	24	12	12	24	48
13:00-13:15	6	9	15	10	9	19	34
13:15-13:30	2	8	10	12	5	17	27
TOTALS	54	92	146	80	57	137	283
PM PEAK PERIOD (15:30-17:30)							
15:30-15:45	3	4	7	5	5	10	17
15:45-16:00	3	6	9	6	0	6	15
16:00-16:15	5	11	16	5	1	6	22
16:15-16:30	8	5	13	4	3	7	20
16:30-16:45	0	13	13	11	5	16	29
16:45-17:00	5	12	17	8	1	9	26
17:00-17:15	4	5	9	1	3	4	13
17:15-17:30	9	1	10	1	0	1	11
TOTALS	37	57	94	41	18	59	153

Approved by: MG

Printed on : 27/08/2013

Public Works and Services Department

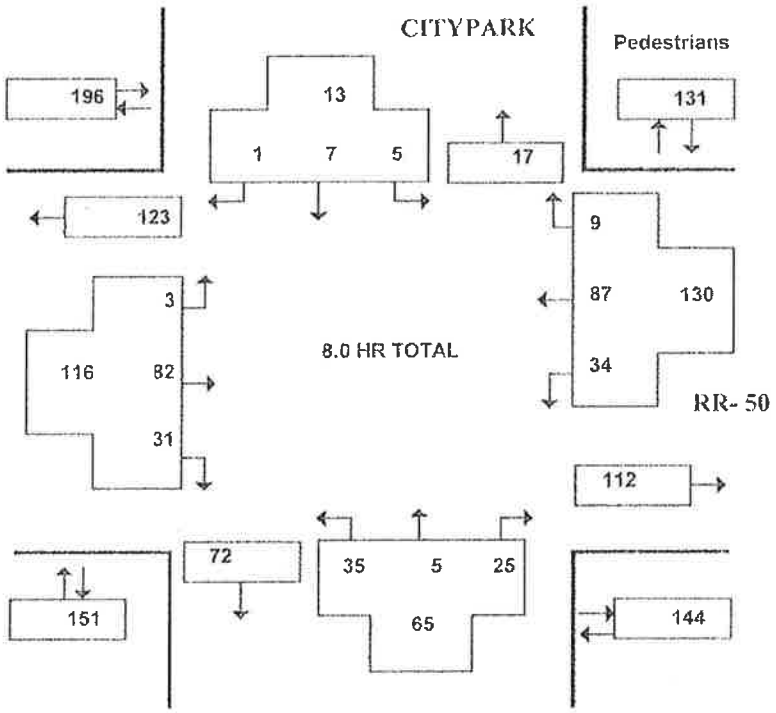
Count ID 26138

Heavy Vehicle Summary Sheet - Hourly Volumes

OGILVIE RD and CITYPARK DR

(ULRS Listing RR- 50 & CITYPARK)

Survey Date :Thursday 13 August 2009 **Conditions : dry** **Start Time : 0700**



	CITYPARK									RR- 50									
	Northbound			SUB	Southbound			SUB	STR	Eastbound			SUB	Westbound			SUB	STR	GRAND
Time Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	TOT
07:00-08:00	3	3	0	6	0	0	0	0	6	0	11	5	16	4	10	3	17	33	39
08:00-09:00	4	2	2	8	2	0	1	3	11	2	16	3	21	7	22	2	31	52	63
09:00-10:00	6	0	3	9	1	0	0	1	10	0	17	3	20	8	12	2	22	42	52
11:30-12:30	3	0	7	10	2	0	0	2	12	0	6	4	10	5	11	0	16	26	38
12:30-13:30	7	0	7	14	0	2	0	2	16	1	8	8	17	4	13	1	18	35	51
15:00-16:00	6	0	1	7	0	2	0	2	9	0	11	4	15	2	8	1	11	26	35
16:00-17:00	2	0	2	4	0	2	0	2	6	0	9	2	11	2	3	0	5	16	22
17:00-18:00	4	0	3	7	0	1	0	1	8	0	4	2	6	2	8	0	10	16	24
8.0 HR TOTAL	35	5	25	65	5	7	1	13	78	3	82	31	116	34	87	9	130	246	324

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.

Approved by: MG

Printed on: 27/08/2013

Bicycle Volume Summary Sheet - Hourly Volumes

OGILVIE RD and CITYPARK DR

(ULRS Listing RR- 50 & CITYPARK)

Survey Date: Thursday 13 August 2009 **Conditions:** dry **Start Time:** 0700

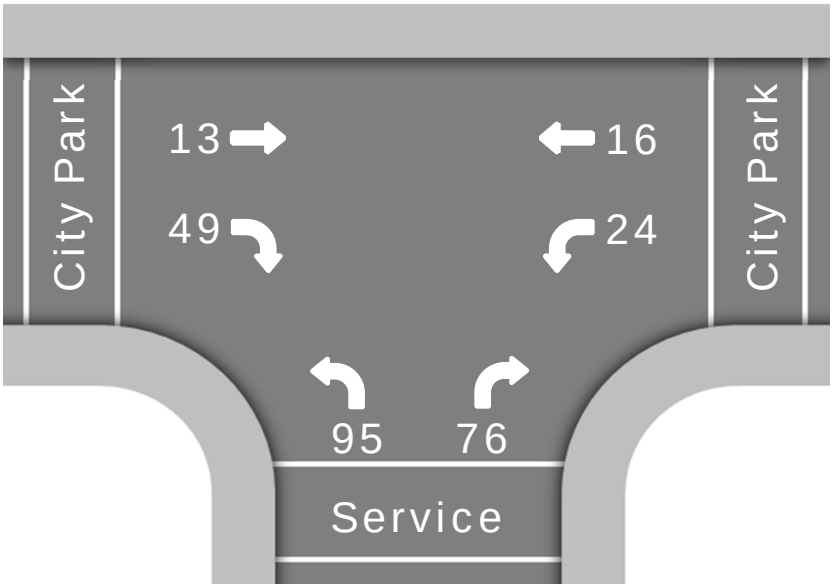
Time Period	NORTHBOUND APPROACH ON CITYPARK	SOUTHBOUND APPROACH ON CITYPARK	STREET TOTAL	EASTBOUND APPROACH ON RR- 50	WESTBOUND APPROACH ON RR- 50	STREET TOTAL	GRAND TOTAL
07:00-08:00	2	1	3	16	14	30	33
08:00-09:00	0	1	1	17	9	26	27
09:00-10:00	1	0	1	8	3	11	12
11:30-12:30	1	2	3	9	4	13	16
12:30-13:30	0	2	2	3	2	5	7
15:00-16:00	0	2	2	10	8	18	20
16:00-17:00	2	13	15	10	10	20	35
17:00-18:00	1	13	14	17	10	27	41
8.0 HR TOTAL	7	34	41	90	60	150	191

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

PARSONS

1223 Michael Street, Suite 100 • Ottawa, Ontario K1J 7T2 • (613) 738-4160 • Fax: (613) 739-7105 • www.parsons.com

Intersection: City Park Dr & Service Rd
Date: July 9, 2015
Observer: Alex Buck
Weather: Cloudy
Time: 7:30 AM - 8:30 AM



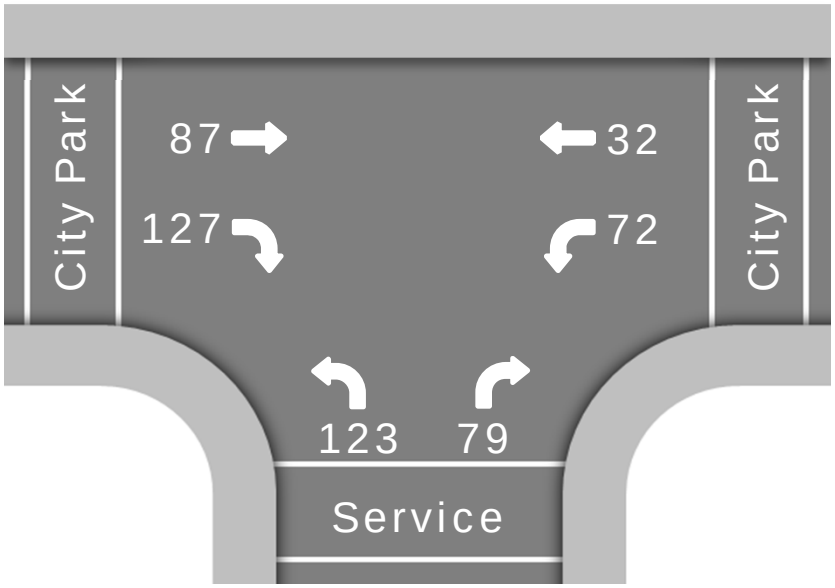
TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
7:30 AM	23	0	16	0	0	0	0	2	7	7	4	0
7:45 AM	21	0	17	0	0	0	0	6	15	5	4	0
8:00 AM	19	0	20	0	0	0	0	2	16	9	3	0
8:15 AM	32	0	23	0	0	0	0	3	11	3	5	0
TOTAL	**95**		**76**					**13**	**49**	**24**	**16**	

Notes:

PARSONS

1223 Michael Street, Suite 100 • Ottawa, Ontario K1J 7T2 • (613) 738-4160 • Fax: (613) 739-7105 • www.parsons.com

Intersection: City Park Dr & Service Rd
Date: July 8, 2015
Observer: Alex Buck
Weather: Sunny, Clear
Time: 4:00 PM - 5:00 PM



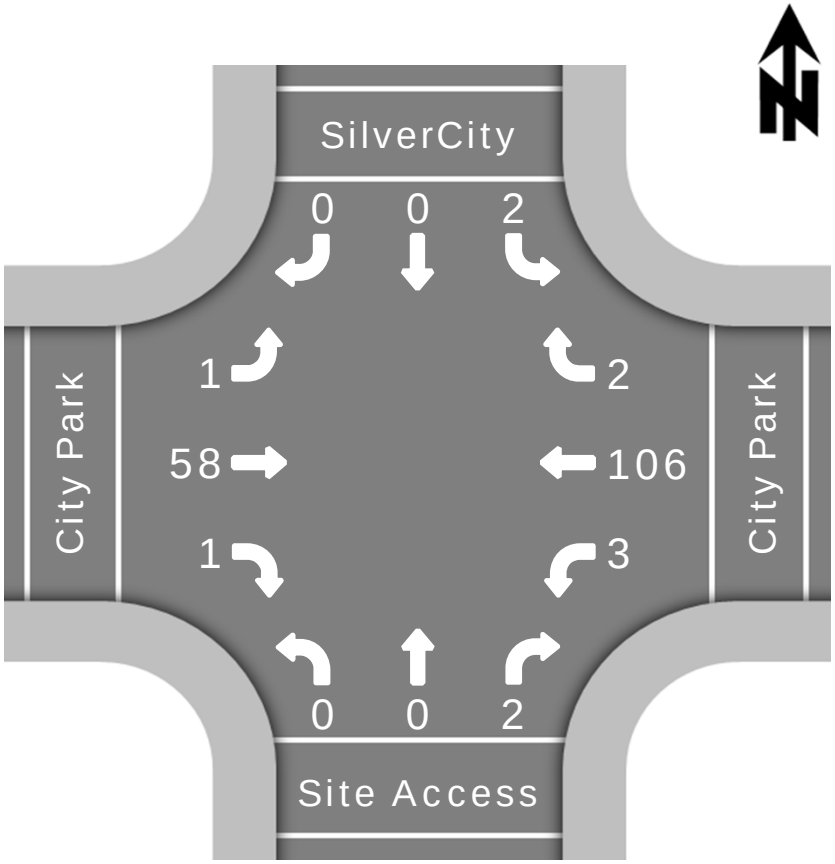
TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
4:00 PM	28	0	12	0	0	0	0	20	31	16	9	0
4:15 PM	31	0	26	0	0	0	0	21	35	19	8	0
4:30 PM	30	0	29	0	0	0	0	26	40	21	10	0
4:45 PM	34	0	12	0	0	0	0	20	21	16	5	0
TOTAL	**123**		**79**					**87**	**127**	**72**	**32**	

Notes:

PARSONS

1223 Michael Street, Suite 100 • Ottawa, Ontario K1J 7T2 • (613) 738-4160 • Fax: (613) 739-7105 • www.parsons.com

Intersection: City Park Dr & Site Access
Date: July 9, 2015
Observer: Alex Buck
Weather: Cloudy
Time: 7:30 AM - 8:30 AM



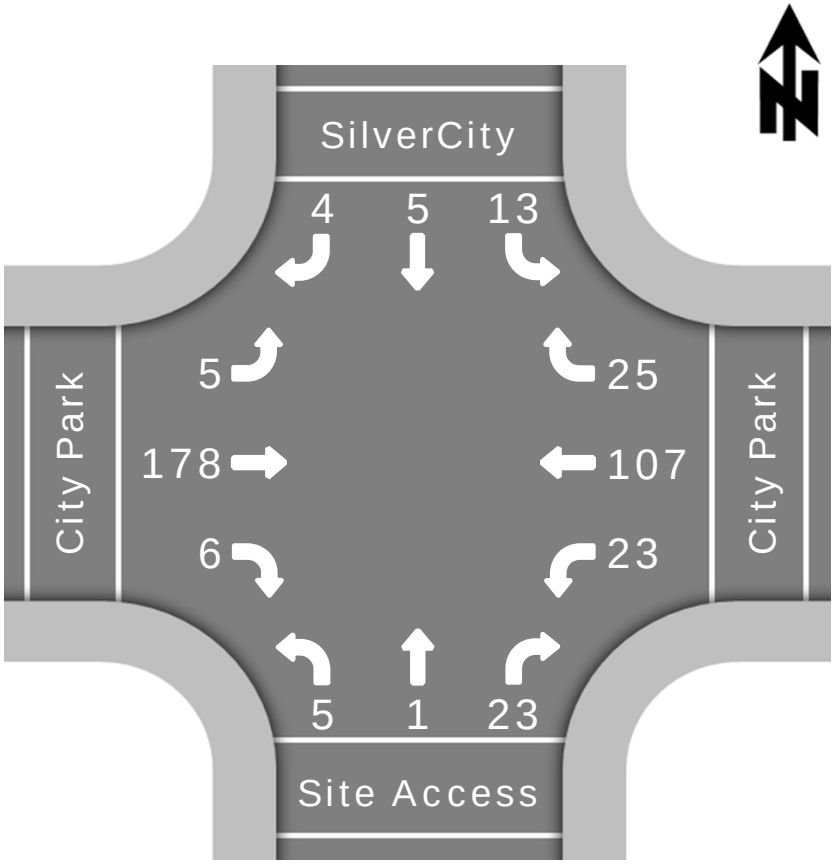
TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
7:30 AM	0	0	1	0	0	0	1	8	0	0	27	0
7:45 AM	0	0	1	0	0	0	0	20	1	0	24	1
8:00 AM	0	0	0	2	0	0	0	16	0	2	20	0
8:15 AM	0	0	0	0	0	0	0	14	0	1	35	1
TOTAL	**0**	**0**	**2**	**2**	**0**	**0**	**1**	**58**	**1**	**3**	**106**	**2**

Notes:

PARSONS

1223 Michael Street, Suite 100 • Ottawa, Ontario K1J 7T2 • (613) 738-4160 • Fax: (613) 739-7105 • www.parsons.com

Intersection: City Park Dr & Site Access
Date: July 8, 2015
Observer: Alex Buck
Weather: Sunny, Clear
Time: 4:00 PM - 5:00 PM



TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
4:00 PM	2	0	5	2	2	0	1	44	2	9	25	3
4:15 PM	0	1	6	4	0	0	0	46	1	6	27	6
4:30 PM	1	0	9	4	2	1	4	53	1	4	29	7
4:45 PM	2	0	3	3	1	3	0	35	2	4	26	9
TOTAL	**5**	**1**	**23**	**13**	**5**	**4**	**5**	**178**	**6**	**23**	**107**	**25**

Notes:

Ottawa

Public Works and Services Department

Count ID 23156

Vehicular Turning Movements (15 Min. Volumes)

OGILVIE RD and 185 E OF BATHGATE DR

(ULRS Listing RR- 50 - 185 E OF - BATHGAT)

Survey Date: Friday 17 August 2007
Conditions: wet
Start Time: 07:00

Total Observed U-Turns
Northbound: 0 Southbound: 0
Eastbound: 1 Westbound: 1

AADT Factor
Friday in August is 0.9

	185 E OF									RR- 50									
	Northbound				Southbound					Eastbound				Westbound					
Time Period	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	LT	ST	RT	SUB TOT	LT	ST	RT	SUB TOT	STR TOT	GRAND TOT
07:00-07:15	1	0	1	2	0	0	0	0	2	0	49	9	58	1	106	0	107	165	167
07:15-07:30	4	0	1	5	0	0	0	0	5	0	65	5	70	0	165	0	165	235	240
07:30-07:45	3	0	1	4	0	0	0	0	4	0	105	5	110	1	198	0	199	309	313
07:45-08:00	6	0	0	6	0	0	0	0	6	0	93	3	96	4	317	0	321	417	423
08:00-08:15	4	0	2	6	0	0	0	0	6	0	114	6	120	0	248	0	248	368	374
08:15-08:30	5	0	1	6	0	0	0	0	6	0	114	10	124	0	256	0	256	380	386
08:30-08:45	3	0	2	5	0	0	0	0	5	0	112	11	123	1	258	0	259	382	387
08:45-09:00	5	0	2	7	0	0	0	0	7	0	111	10	121	1	241	0	242	363	370
09:00-09:15	1	0	1	2	0	0	0	0	2	0	108	9	117	1	192	0	193	310	312
09:15-09:30	7	0	3	10	0	0	0	0	10	0	114	4	118	3	114	0	117	235	245
09:30-09:45	5	0	1	6	0	0	0	0	6	0	126	7	133	0	111	0	111	244	250
09:45-10:00	3	0	0	3	0	0	0	0	3	0	117	7	124	1	126	0	127	251	254
11:30-11:45	3	0	8	11	0	0	0	0	11	0	176	7	183	4	154	0	158	341	352
11:45-12:00	8	0	6	14	0	0	0	0	14	0	202	35	237	10	156	0	166	403	417
12:00-12:15	12	0	10	22	0	0	0	0	22	0	229	36	265	14	175	0	189	454	476
12:15-12:30	9	0	12	21	0	0	0	0	21	0	250	32	282	14	188	0	202	484	505
12:30-12:45	14	0	9	23	0	0	0	0	23	0	214	20	234	10	200	0	210	444	467
12:45-13:00	8	0	13	21	0	0	0	0	21	0	201	19	220	11	193	0	204	424	445
13:00-13:15	11	0	17	28	0	0	0	0	28	0	247	24	271	6	176	0	182	453	481
13:15-13:30	17	0	14	31	0	0	0	0	31	0	233	22	255	8	186	0	194	449	480
15:00-15:15	21	0	8	29	0	0	0	0	29	0	212	19	231	5	188	0	193	424	453
15:15-15:30	16	0	7	23	0	0	0	0	23	0	218	33	251	11	164	0	175	426	449
15:30-15:45	18	0	7	25	0	0	0	0	25	0	285	40	325	4	183	0	187	512	537
15:45-16:00	13	0	14	27	0	0	0	0	27	0	309	23	332	4	189	0	193	525	552
16:00-16:15	12	0	9	21	0	0	0	0	21	0	288	22	310	6	209	0	215	525	546
16:15-16:30	9	0	8	17	0	0	0	0	17	0	321	30	351	5	206	0	211	562	579
16:30-16:45	9	0	12	21	0	0	0	0	21	0	315	24	339	2	180	0	182	521	542
16:45-17:00	18	0	15	33	0	0	0	0	33	0	277	30	307	9	189	0	198	505	538
17:00-17:15	13	0	12	25	0	0	0	0	25	0	325	40	365	7	206	0	213	578	603
17:15-17:30	9	0	16	25	0	0	0	0	25	0	258	35	293	11	204	0	215	508	533
17:30-17:45	14	0	13	27	0	0	0	0	27	0	229	30	259	9	180	0	189	448	475
17:45-18:00	11	0	7	18	0	0	0	0	18	0	243	23	266	2	164	0	166	432	450

Approved by: KC

Printed on : 20/10/2008

Public Works - Traffic Services

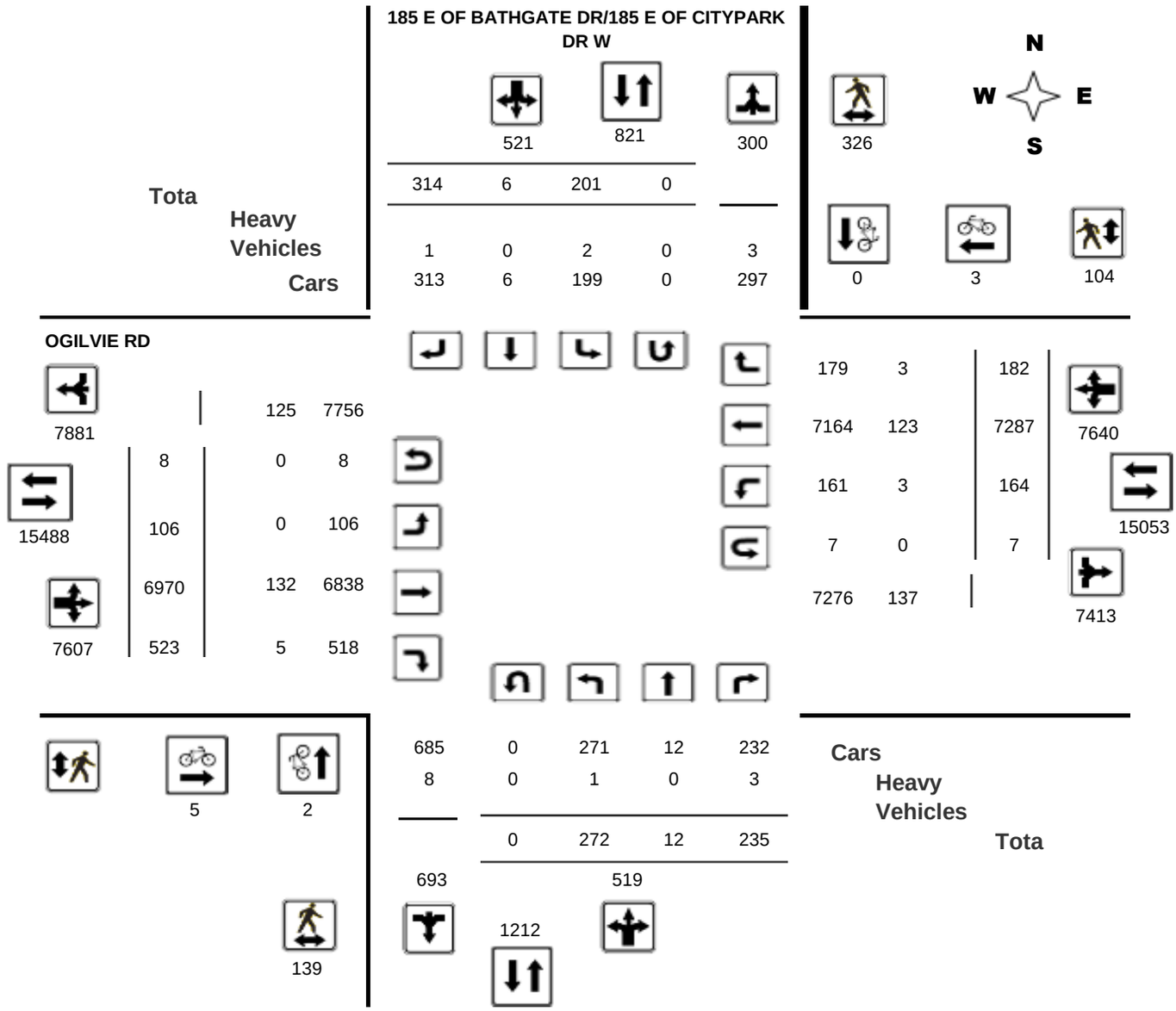
Turning Movement Count - Full Study Diagram

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Survey Date: 04-Dec-13

WO#: 525

Device: Miovision



Comments

Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Survey Date: 04-Dec-13 **WO No:** 525

Start Time: 7:00 **Device:** Miovision

185 E OF BATHGATE DR/185 E OF CITYPARK DR W

	15		109	94
Heavy Vehicles	8	0	7	0
	0	0	1	0
Cars	8	0	6	0

80 0 1 11

N W E S

OGILVIE RD

1055		20	1035	
1667	0	0	0	
	37	0	37	
612	561	21	540	
	14	0	14	

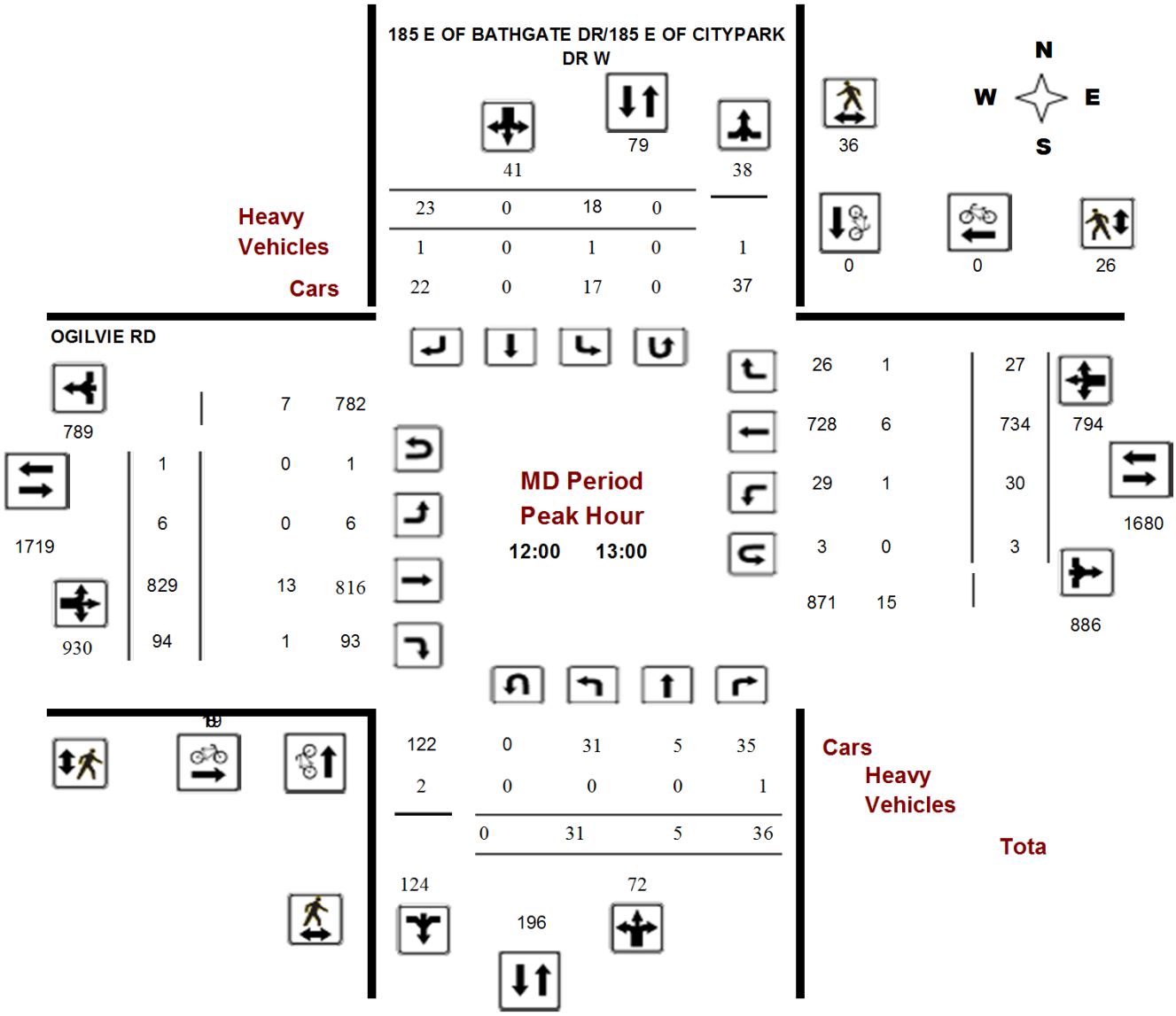
	56	0	56	
	1020	20	1040	1097
	0	1	1	1669
	0	0	0	
	550	22		572

AM Period
Peak Hour
7:30 8:30

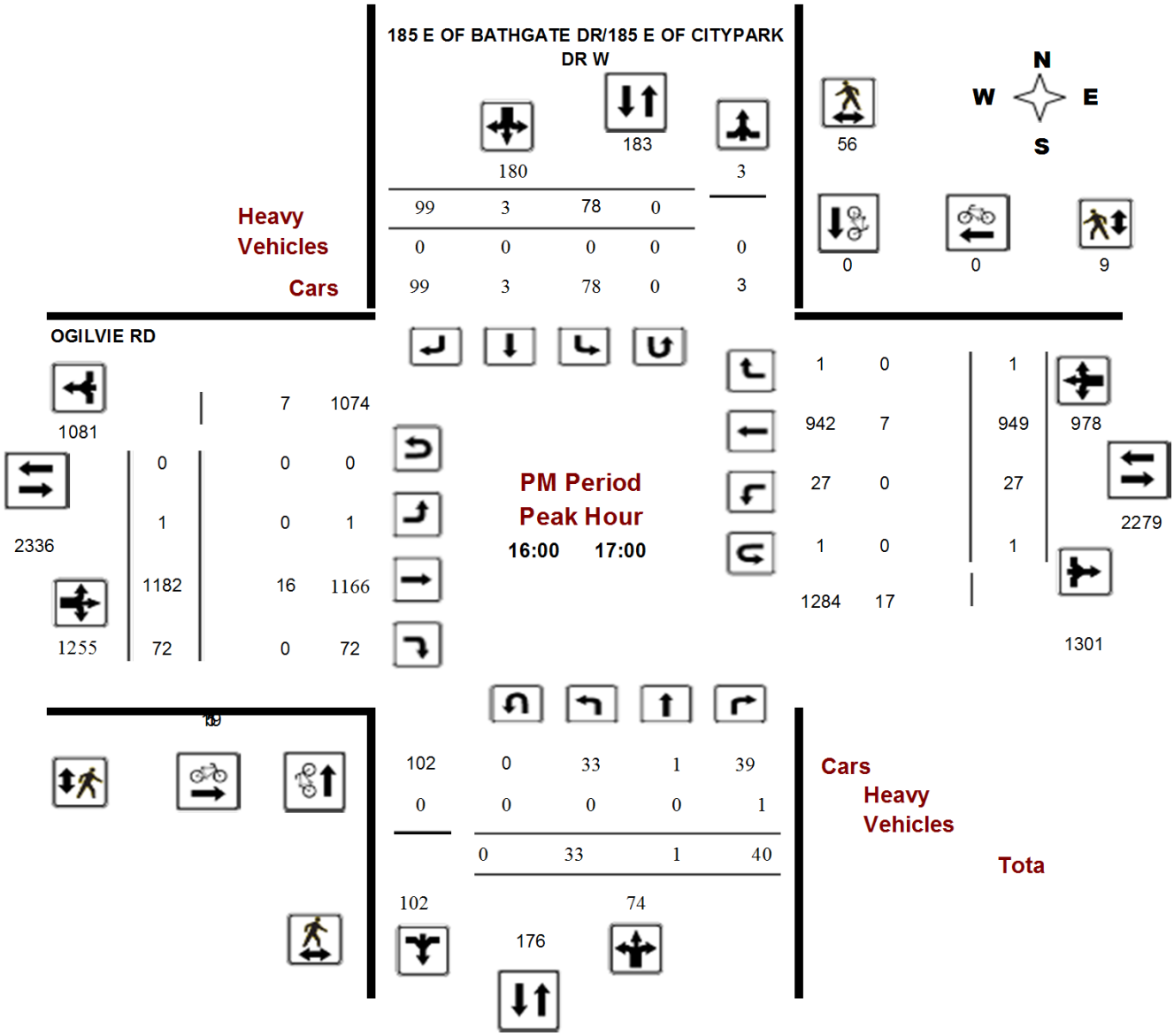
	14	0	7	1	4
	1	0	0	0	0
Cars		0	7	1	4
Heavy Vehicles					
Tota					

14 1 15 27 12

Comments


185 E OF BATHGATE DR/185 E OF CITYPARK DR W
N
W
E
S
36
41
79
38
Heavy Vehicles
Cars
23 0 18 0
1 0 1 0 1
22 0 17 0 37
0
0
26
OGILVIE RD
789
7 782
1 0 1
6 0 6
1719
829 13 816
930
94 1 93
MD Period
Peak Hour
12:00 13:00
26 1
728 6
29 1
3 0
871 15
27
734
30
3
794
1680
886
122 0 31 5 35
2 0 0 0 1
0 31 5 36
124
196
72
Cars
Heavy Vehicles
Tota

Comments


185 E OF BATHGATE DR/185 E OF CITYPARK DR W
N
W
E
S
180
183
3
56
99 3 78 0
0 0 0 0 0
99 3 78 0 3
0
0
9
Heavy Vehicles
Cars
OGILVIE RD
1081
7 1074
0 0 0
1 0 1
2336
1182 16 1166
1255
72 0 72
PM Period
Peak Hour
16:00 17:00
1 0
942 7
27 0
1 0
1284 17
1 949 978
27
1
2279
1301
102 0 33 1 39
0 0 0 0 1
0 33 1 40
102
176
74
Cars
Heavy Vehicles
Tota

Comments

Public Works - Traffic Services

Work Order
525

Turning Movement Count - Full Study Summary Report

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Survey Date: 04-Dec-13

Total Observed U-Turns				AADT Factor
Northbound:	0	Southbound:	0	0.54
Eastbound:	8	Westbound:	7	

Full Study

		185 E OF BATHGATE DR/185 E OF CITYPARK DR W									OGILVIE 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 TO**	**STR TOT**	**Grand Total**
7:00	8:00	5	2	3	**10**	7	0	6	**13**	**23**	33	422	14	**469**	1	1018	73	**1092**	**1561**	**1584**
8:00	9:00	6	3	5	**14**	5	0	9	**14**	**28**	29	580	13	**622**	2	928	39	**969**	**1591**	**1619**
9:00	10:00	10	0	2	**12**	8	0	12	**20**	**32**	15	505	24	**544**	11	699	21	**731**	**1275**	**1307**
11:30	12:30	19	2	28	**49**	20	2	22	**44**	**93**	6	796	90	**892**	29	775	16	**820**	**1712**	**1805**
12:30	13:30	51	3	42	**96**	11	0	15	**26**	**122**	14	782	68	**864**	25	672	22	**719**	**1583**	**1705**
15:00	16:00	52	0	46	**98**	52	0	96	**148**	**246**	3	941	64	**1008**	18	835	8	**861**	**1869**	**2115**
16:00	17:00	33	1	40	**74**	78	3	99	**180**	**254**	1	1182	72	**1255**	27	949	1	**977**	**2232**	**2486**
17:00	18:00	35	0	33	**68**	14	0	38	**52**	**120**	3	1058	91	**1152**	26	807	2	**835**	**1987**	**2107**
18:00	19:00	61	1	36	**98**	6	1	17	**24**	**122**	2	704	87	**793**	25	604	0	**629**	**1422**	**1544**
Total		272	12	235	**519**	201	6	314	**521**	**1040**	106	6970	523	**7599**	164	7287	182	**7633**	**15232**	**16272**
Equ 12Hr		378	16	326	**720**	279	8	436	**723**	**1443**	147	9688	726	**10561**	227	10128	252	**10607**	**21168**	**22611**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

Avg 12Hr	204	9	176	**389**	150	4	235	**390**	**779**	79	5236	392	**5708**	122	5474	136	**5733**	**11442**	**12222**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **0.54**

Avg 24Hr	267	11	230	**509**	196	5	307	**510**	**1020**	103	6859	513	**7477**	159	7170	178	**7510**	**14989**	**16010**

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 are included in Totals.

Public Works - Traffic Services

W.O. 525

Turning Movement Count - 15 Minute Summary Report

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Survey Date: 04-Dec-13

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 8 Westbound: 7

		185 E OF BATHGATE DR/185 E OF CITYPARK DR W									OGILVIE 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**
7:00	7:15	0	0	0	**0**	2	0	1	**3**	**3**	8	62	2	**72**	0	201	25	**226**	**298**	**301**
7:15	7:30	1	1	1	**3**	1	0	1	**2**	**5**	7	93	1	**102**	0	255	18	**273**	**375**	**380**
7:30	7:45	3	1	2	**6**	0	0	1	**1**	**7**	9	115	5	**129**	1	277	16	**294**	**423**	**430**
7:45	8:00	1	0	0	**1**	4	0	3	**7**	**8**	9	152	6	**167**	0	285	14	**299**	**466**	**474**
8:00	8:15	1	0	1	**2**	2	0	2	**4**	**6**	9	133	1	**143**	0	222	13	**235**	**378**	**384**
8:15	8:30	2	0	1	**3**	1	0	2	**3**	**6**	10	161	2	**173**	0	256	13	**269**	**442**	**448**
8:30	8:45	1	0	0	**1**	1	0	3	**4**	**5**	7	164	7	**179**	1	230	8	**239**	**418**	**423**
8:45	9:00	2	3	3	**8**	1	0	2	**3**	**11**	3	122	3	**128**	1	220	5	**226**	**354**	**365**
9:00	9:15	0	0	0	**0**	6	0	4	**10**	**10**	7	143	3	**153**	1	200	7	**208**	**361**	**371**
9:15	9:30	1	0	2	**3**	1	0	4	**5**	**8**	3	107	5	**115**	3	175	6	**184**	**299**	**307**
9:30	9:45	2	0	0	**2**	1	0	3	**4**	**6**	4	128	8	**140**	2	151	5	**158**	**298**	**304**
9:45	10:00	7	0	0	**7**	0	0	1	**1**	**8**	1	127	8	**136**	5	173	3	**181**	**317**	**325**
11:30	11:45	5	0	6	**11**	3	0	3	**6**	**17**	3	164	20	**187**	7	205	5	**217**	**404**	**421**
11:45	12:00	5	0	4	**9**	6	2	6	**14**	**23**	3	186	17	**206**	8	192	1	**201**	**407**	**430**
12:00	12:15	5	0	11	**16**	11	0	11	**22**	**38**	0	223	20	**243**	8	200	4	**213**	**456**	**494**
12:15	12:30	4	2	7	**13**	0	0	2	**2**	**15**	0	223	33	**256**	6	178	6	**190**	**446**	**461**
12:30	12:45	13	0	7	**20**	3	0	3	**6**	**26**	3	186	22	**211**	11	161	7	**180**	**391**	**417**
12:45	13:00	9	3	11	**23**	4	0	7	**11**	**34**	3	197	19	**220**	5	195	10	**211**	**431**	**465**
13:00	13:15	19	0	10	**29**	3	0	3	**6**	**35**	3	206	16	**225**	3	166	2	**171**	**396**	**431**
13:15	13:30	10	0	14	**24**	1	0	2	**3**	**27**	5	193	11	**209**	6	150	3	**159**	**368**	**395**
15:00	15:15	11	0	11	**22**	10	0	23	**33**	**55**	1	192	14	**207**	2	194	2	**198**	**405**	**460**
15:15	15:30	19	0	10	**29**	23	0	38	**61**	**90**	0	245	15	**261**	5	182	3	**190**	**451**	**541**
15:30	15:45	11	0	14	**25**	11	0	20	**31**	**56**	0	232	16	**249**	6	242	3	**251**	**500**	**556**
15:45	16:00	11	0	11	**22**	8	0	15	**23**	**45**	2	272	19	**294**	5	217	0	**222**	**516**	**561**
16:00	16:15	9	0	13	**22**	12	0	20	**32**	**54**	1	297	19	**317**	2	256	0	**258**	**575**	**629**
16:15	16:30	10	0	12	**22**	13	3	20	**36**	**58**	0	284	21	**305**	6	227	0	**234**	**539**	**597**
16:30	16:45	5	1	6	**12**	46	0	49	**95**	**107**	0	295	11	**306**	9	249	1	**259**	**565**	**672**
16:45	17:00	9	0	9	**18**	7	0	10	**17**	**35**	0	306	21	**327**	10	217	0	**227**	**554**	**589**
17:00	17:15	11	0	9	**20**	5	0	13	**18**	**38**	2	274	21	**297**	8	227	0	**237**	**534**	**572**
17:15	17:30	6	0	6	**12**	4	0	11	**15**	**27**	0	314	20	**334**	10	211	0	**222**	**556**	**583**
17:30	17:45	10	0	10	**20**	1	0	4	**5**	**25**	1	234	23	**258**	1	216	2	**219**	**477**	**502**
17:45	18:00	8	0	8	**16**	4	0	10	**14**	**30**	0	236	27	**264**	7	153	0	**160**	**424**	**454**
18:00	18:15	17	0	8	**25**	2	0	7	**9**	**34**	0	227	18	**245**	7	191	0	**198**	**443**	**477**
18:15	18:30	12	1	10	**23**	2	1	7	**10**	**33**	1	184	15	**201**	4	136	0	**140**	**341**	**374**
18:30	18:45	14	0	8	**22**	0	0	2	**2**	**24**	1	157	22	**180**	9	145	0	**154**	**334**	**358**
18:45	19:00	18	0	10	**28**	2	0	1	**3**	**31**	0	136	32	**168**	5	132	0	**137**	**305**	**336**
TOTAL:		272	12	235	**519**	201	6	314	**521**	**1040**	106	6970	523	**7607**	164	7287	182	**7640**	**15247**	**16287**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

W.O.
525

Turning Movement Count - Heavy Vehicle Report

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Survey Date: 04-Dec-13

		185 E OF BATHGATE DR/185 E OF CITYPARK DR W									OGILVIE 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**
7:00	8:00	0	0	1	**1**	1	0	0	**1**	**2**	0	23	1	**24**	1	22	1	**24**	**48**	**50**
8:00	9:00	0	0	0	**0**	0	0	0	**0**	**0**	0	20	1	**21**	0	22	0	**22**	**43**	**43**
9:00	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	19	1	**20**	1	20	1	**22**	**42**	**42**
11:30	12:30	0	0	0	**0**	1	0	0	**1**	**1**	0	12	1	**13**	0	9	1	**10**	**23**	**24**
12:30	13:30	0	0	1	**1**	0	0	1	**1**	**2**	0	12	1	**13**	1	10	0	**11**	**24**	**26**
15:00	16:00	1	0	0	**1**	0	0	0	**0**	**1**	0	18	0	**18**	0	25	0	**25**	**43**	**44**
16:00	17:00	0	0	1	**1**	0	0	0	**0**	**1**	0	16	0	**16**	0	7	0	**7**	**23**	**24**
17:00	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	8	0	**8**	0	3	0	**3**	**11**	**11**
18:00	19:00	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	5	0	**5**	**9**	**9**
Total	:	1	0	3	**4**	2	0	1	**3**	**7**	0	132	5	**137**	3	123	3	**129**	**266**	**273**

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
525

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Count Date: 04-Dec-13

Start Time: 7:00

	185 E OF BATHGATE DR/185 E OF CITYPARK DR W			OGILVIE RD			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
7:00 8:00	0	0	**0**	1	1	**2**	**2**
8:00 9:00	0	0	**0**	2	0	**2**	**2**
9:00 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	2	**2**	**2**
15:00 16:00	0	0	**0**	0	0	**0**	**0**
16:00 17:00	1	0	**1**	1	0	**1**	**2**
17:00 18:00	1	0	**1**	0	0	**0**	**1**
18:00 19:00	0	0	**0**	1	0	**1**	**1**
Total	2	0	**2**	5	3	**8**	**10**

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
525

Turning Movement Count - Pedestrian Volume Report

OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Count Date: 04-Dec-13 **Start Time:** 7:00

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**
7:00	7:15	3	14	**17**	2	1	**3**	**20**
7:15	7:30	2	14	**16**	1	1	**2**	**18**
7:30	7:45	1	15	**16**	0	3	**3**	**19**
7:45	8:00	6	18	**24**	2	2	**4**	**28**
7:00	8:00	12	61	**73**	5	7	**12**	**85**
8:00	8:15	4	28	**32**	0	5	**5**	**37**
8:15	8:30	3	19	**22**	0	1	**1**	**23**
8:30	8:45	7	16	**23**	2	6	**8**	**31**
8:45	9:00	1	14	**15**	0	2	**2**	**17**
8:00	9:00	15	77	**92**	2	14	**16**	**108**
9:00	9:15	1	11	**12**	0	2	**2**	**14**
9:15	9:30	0	3	**3**	1	0	**1**	**4**
9:30	9:45	4	5	**9**	0	2	**2**	**11**
9:45	10:00	1	3	**4**	0	0	**0**	**4**
9:00	10:00	6	22	**28**	1	4	**5**	**33**
11:30	11:45	3	8	**11**	1	7	**8**	**19**
11:45	12:00	4	1	**5**	0	4	**4**	**9**
12:00	12:15	6	9	**15**	1	10	**11**	**26**
12:15	12:30	5	6	**11**	1	4	**5**	**16**
11:30	12:30	18	24	**42**	3	25	**28**	**70**
12:30	12:45	4	11	**15**	6	8	**14**	**29**
12:45	13:00	4	10	**14**	0	4	**4**	**18**
13:00	13:15	1	7	**8**	1	7	**8**	**16**
13:15	13:30	8	5	**13**	1	6	**7**	**20**
12:30	13:30	17	33	**50**	8	25	**33**	**83**
15:00	15:15	1	8	**9**	0	1	**1**	**10**
15:15	15:30	3	3	**6**	1	3	**4**	**10**
15:30	15:45	6	6	**12**	2	2	**4**	**16**
15:45	16:00	4	11	**15**	1	3	**4**	**19**
15:00	16:00	14	28	**42**	4	9	**13**	**55**
16:00	16:15	5	22	**27**	1	4	**5**	**32**
16:15	16:30	4	18	**22**	2	4	**6**	**28**
16:30	16:45	6	4	**10**	1	0	**1**	**11**
16:45	17:00	4	12	**16**	1	1	**2**	**18**
16:00	17:00	19	56	**75**	5	9	**14**	**89**
17:00	17:15	9	7	**16**	1	2	**3**	**19**
17:15	17:30	4	6	**10**	0	1	**1**	**11**
17:30	17:45	3	5	**8**	0	1	**1**	**9**
17:45	18:00	3	4	**7**	0	2	**2**	**9**
17:00	18:00	19	22	**41**	1	6	**7**	**48**
18:00	18:15	3	2	**5**	2	4	**6**	**11**
18:15	18:30	9	1	**10**	0	0	**0**	**10**
18:30	18:45	5	0	**5**	0	0	**0**	**5**
18:45	19:00	2	0	**2**	0	1	**1**	**3**
18:00	19:00	19	3	**22**	2	5	**7**	**29**
Total	.....	139	326	**465**	31	104	**135**	**600**

Comment:

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & BLAIR RD
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Turning Movement Count (2 . OGILVIE RD & BLAIR RD) MioID: 226517

Start Time	N Approach BLAIR RD						E Approach OGILVIE RD						S Approach BLAIR RD						W Approach OGILVIE RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	10	44	4	0	10	58	4	66	40	0	11	110	65	91	122	0	9	278	25	31	2	0	4	58	504	
07:15:00	17	65	7	0	11	89	4	77	67	0	5	148	72	139	148	0	16	359	35	43	13	0	9	91	687	
07:30:00	26	67	16	0	28	109	7	105	73	0	17	185	86	136	136	0	25	358	32	63	14	0	22	109	761	
07:45:00	29	56	20	0	9	105	7	109	51	1	9	168	99	140	137	0	28	376	45	61	9	0	13	115	764	2716
08:00:00	21	80	15	0	9	116	9	129	79	0	7	217	93	163	181	0	19	437	48	60	9	0	13	117	887	3099
08:15:00	21	75	16	0	16	112	6	111	77	0	8	194	109	137	129	0	21	375	44	75	13	0	14	132	813	3225
08:30:00	24	80	11	0	15	115	5	111	74	0	10	190	86	133	116	0	17	335	45	73	15	0	12	133	773	3237
08:45:00	29	71	11	0	14	111	7	98	79	0	9	184	92	142	127	0	20	361	42	78	14	0	6	134	790	3263
09:00:00	16	49	15	0	8	80	12	104	53	0	6	169	98	104	102	0	11	304	40	83	11	1	5	135	688	3064
09:15:00	20	68	6	0	2	94	9	93	79	0	3	181	69	91	87	1	6	248	40	57	9	1	4	107	630	2881
BREAK																										
16:00:00	20	197	16	0	37	233	16	103	151	1	33	271	107	72	68	0	30	247	136	116	27	0	9	279	1030	
16:15:00	20	172	12	0	14	204	17	102	144	0	14	263	140	92	62	0	27	294	164	133	25	0	12	322	1083	
16:30:00	14	151	14	0	24	179	15	101	154	0	17	270	145	73	74	0	16	292	186	140	34	0	8	360	1101	
16:45:00	14	160	12	0	11	186	15	90	122	0	9	227	151	73	74	0	21	298	151	142	27	2	10	322	1033	4247
17:00:00	18	137	9	0	18	164	7	80	140	0	13	227	165	68	82	0	20	315	126	146	24	0	9	296	1002	4219
17:15:00	15	110	12	0	11	137	12	85	119	0	11	216	172	67	74	0	17	313	134	136	37	1	12	308	974	4110
17:30:00	15	95	2	0	12	112	9	66	105	3	9	183	154	71	58	1	11	284	126	162	30	0	9	318	897	3906
17:45:00	10	71	3	0	5	84	14	71	94	0	5	179	133	96	92	1	16	322	105	140	26	1	8	272	857	3730
Grand Total	339	1748	201	0	254	2288	175	1701	1701	5	196	3582	2036	1888	1869	3	330	5796	1524	1739	339	6	179	3608	**15274**	-
Approach%	14.8%	76.4%	8.8%	0%		-	4.9%	47.5%	47.5%	0.1%		-	35.1%	32.6%	32.2%	0.1%		-	42.2%	48.2%	9.4%	0.2%		-	-	-
Totals %	2.2%	11.4%	1.3%	0%		15%	1.1%	11.1%	11.1%	0%		23.5%	13.3%	12.4%	12.2%	0%		37.9%	10%	11.4%	2.2%	0%		23.6%	-	-
Heavy	8	45	1	0		-	5	74	23	0		-	53	43	30	0		-	30	65	8	0		-	-	-
Heavy %	2.4%	2.6%	0.5%	0%		-	2.9%	4.4%	1.4%	0%		-	2.6%	2.3%	1.6%	0%		-	2%	3.7%	2.4%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & BLAIR RD
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 08:00 AM - 09:00 AM

Start Time	N Approach BLAIR RD						E Approach OGILVIE RD						S Approach BLAIR RD						W Approach OGILVIE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	21	80	15	0	9	116	9	129	79	0	7	217	93	163	181	0	19	437	48	60	9	0	13	117	887
08:15:00	21	75	16	0	16	112	6	111	77	0	8	194	109	137	129	0	21	375	44	75	13	0	14	132	813
08:30:00	24	80	11	0	15	115	5	111	74	0	10	190	86	133	116	0	17	335	45	73	15	0	12	133	773
08:45:00	29	71	11	0	14	111	7	98	79	0	9	184	92	142	127	0	20	361	42	78	14	0	6	134	790
Grand Total	95	306	53	0	54	454	27	449	309	0	34	785	380	575	553	0	77	1508	179	286	51	0	45	516	**3263**
Approach%	20.9%	67.4%	11.7%	0%		-	3.4%	57.2%	39.4%	0%		-	25.2%	38.1%	36.7%	0%		-	34.7%	55.4%	9.9%	0%		-	-
Totals %	2.9%	9.4%	1.6%	0%		13.9%	0.8%	13.8%	9.5%	0%		24.1%	11.6%	17.6%	16.9%	0%		46.2%	5.5%	8.8%	1.6%	0%		15.8%	-
PHF	0.82	0.96	0.83	0		0.98	0.75	0.87	0.98	0		0.9	0.87	0.88	0.76	0		0.86	0.93	0.92	0.85	0		0.96	-
Heavy	4	14	1	0		19	1	23	10	0		34	20	16	11	0		47	8	18	3	0		29	-
Heavy %	4.2%	4.6%	1.9%	0%		4.2%	3.7%	5.1%	3.2%	0%		4.3%	5.3%	2.8%	2%	0%		3.1%	4.5%	6.3%	5.9%	0%		5.6%	-
Lights	91	292	52	0		435	26	426	299	0		751	360	559	542	0		1461	171	268	48	0		487	-
Lights %	95.8%	95.4%	98.1%	0%		95.8%	96.3%	94.9%	96.8%	0%		95.7%	94.7%	97.2%	98%	0%		96.9%	95.5%	93.7%	94.1%	0%		94.4%	-
Single-Unit Trucks	0	11	1	0		12	0	9	5	0		14	6	10	8	0		24	5	3	1	0		9	-
Single-Unit Trucks %	0%	3.6%	1.9%	0%		2.6%	0%	2%	1.6%	0%		1.8%	1.6%	1.7%	1.4%	0%		1.6%	2.8%	1%	2%	0%		1.7%	-
Buses	4	3	0	0		7	1	13	3	0		17	13	6	2	0		21	3	15	2	0		20	-
Buses %	4.2%	1%	0%	0%		1.5%	3.7%	2.9%	1%	0%		2.2%	3.4%	1%	0.4%	0%		1.4%	1.7%	5.2%	3.9%	0%		3.9%	-
Articulated Trucks	0	0	0	0		0	0	1	2	0		3	1	0	1	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0.6%	0%		0.4%	0.3%	0%	0.2%	0%		0.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	53	-	-	-	-	-	34	-	-	-	-	-	77	-	-	-	-	-	45	-	-
Pedestrians%	-	-	-	-	25.2%		-	-	-	-	16.2%		-	-	-	-	36.7%		-	-	-	-	21.4%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0.5%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	0	2	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & BLAIR RD
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 04:00 PM - 05:00 PM

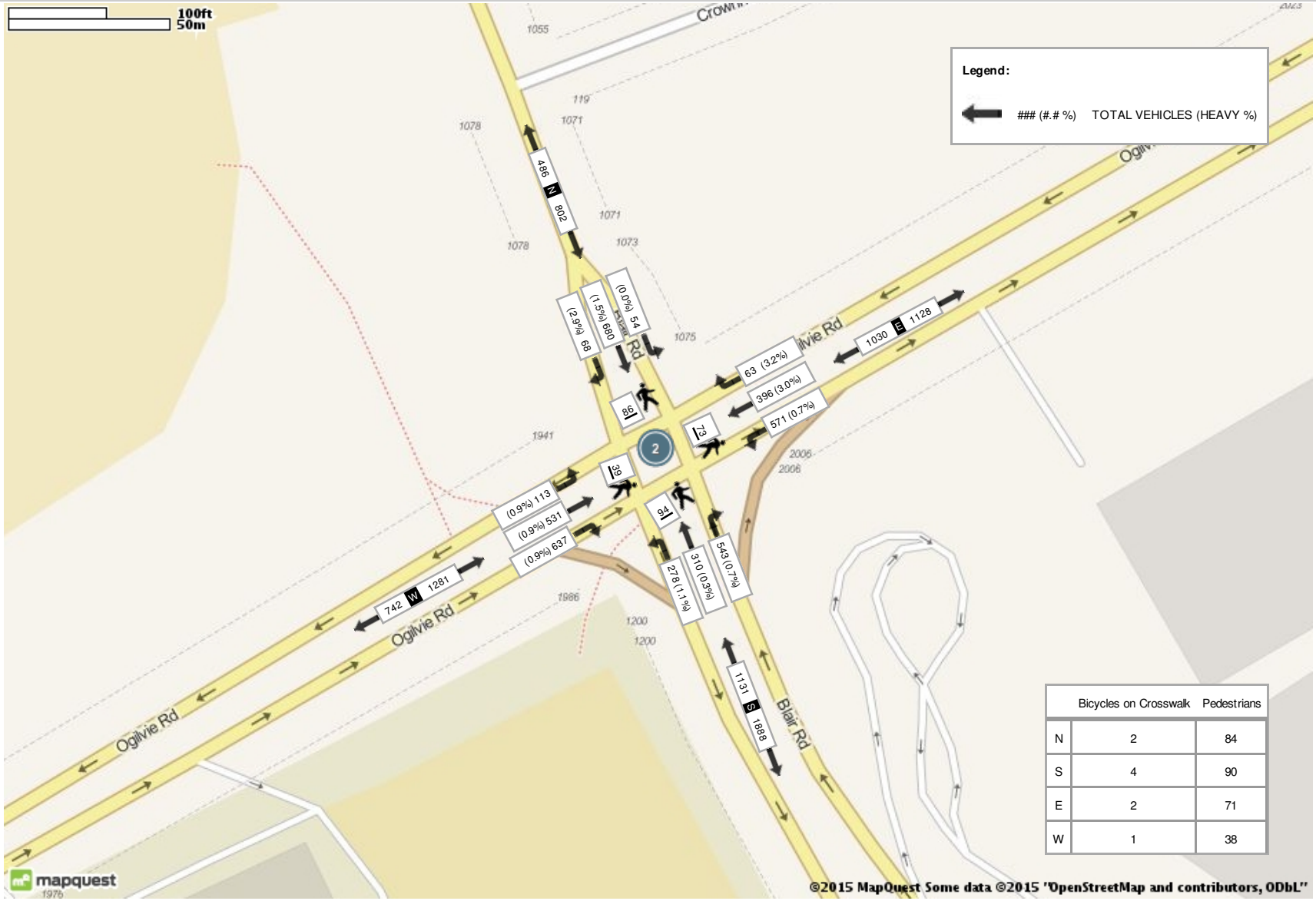
Start Time	N Approach BLAIR RD						E Approach OGILVIE RD						S Approach BLAIR RD						W Approach OGILVIE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:00:00	20	197	16	0	37	233	16	103	151	1	33	271	107	72	68	0	30	247	136	116	27	0	9	279	1030
16:15:00	20	172	12	0	14	204	17	102	144	0	14	263	140	92	62	0	27	294	164	133	25	0	12	322	1083
16:30:00	14	151	14	0	24	179	15	101	154	0	17	270	145	73	74	0	16	292	186	140	34	0	8	360	1101
16:45:00	14	160	12	0	11	186	15	90	122	0	9	227	151	73	74	0	21	298	151	142	27	2	10	322	1033
Grand Total	68	680	54	0	86	802	63	396	571	1	73	1031	543	310	278	0	94	1131	637	531	113	2	39	1283	**4247**
Approach%	8.5%	84.8%	6.7%	0%		-	6.1%	38.4%	55.4%	0.1%		-	48%	27.4%	24.6%	0%		-	49.6%	41.4%	8.8%	0.2%		-	-
Totals %	1.6%	16%	1.3%	0%		18.9%	1.5%	9.3%	13.4%	0%		24.3%	12.8%	7.3%	6.5%	0%		26.6%	15%	12.5%	2.7%	0%		30.2%	-
PHF	0.85	0.86	0.84	0		0.86	0.93	0.96	0.93	0.25		0.95	0.9	0.84	0.94	0		0.95	0.86	0.93	0.83	0.25		0.89	-
Heavy	2	10	0	0		12	2	12	4	0		18	4	1	3	0		8	6	5	1	0		12	-
Heavy %	2.9%	1.5%	0%	0%		1.5%	3.2%	3%	0.7%	0%		1.7%	0.7%	0.3%	1.1%	0%		0.7%	0.9%	0.9%	0.9%	0%		0.9%	-
Lights	66	670	54	0		790	61	384	567	1		1013	539	309	275	0		1123	631	526	112	2		1271	-
Lights %	97.1%	98.5%	100%	0%		98.5%	96.8%	97%	99.3%	100%		98.3%	99.3%	99.7%	98.9%	0%		99.3%	99.1%	99.1%	99.1%	100%		99.1%	-
Single-Unit Trucks	1	7	0	0		8	1	1	1	0		3	3	0	1	0		4	0	0	1	0		1	-
Single-Unit Trucks %	1.5%	1%	0%	0%		1%	1.6%	0.3%	0.2%	0%		0.3%	0.6%	0%	0.4%	0%		0.4%	0%	0%	0.9%	0%		0.1%	-
Buses	1	3	0	0		4	0	11	3	0		14	1	1	1	0		3	5	5	0	0		10	-
Buses %	1.5%	0.4%	0%	0%		0.5%	0%	2.8%	0.5%	0%		1.4%	0.2%	0.3%	0.4%	0%		0.3%	0.8%	0.9%	0%	0%		0.8%	-
Articulated Trucks	0	0	0	0		0	1	0	0	0		1	0	0	1	0		1	1	0	0	0		1	-
Articulated Trucks %	0%	0%	0%	0%		0%	1.6%	0%	0%	0%		0.1%	0%	0%	0.4%	0%		0.1%	0.2%	0%	0%	0%		0.1%	-
Pedestrians	-	-	-	-	84	-	-	-	-	-	71	-	-	-	-	-	90	-	-	-	-	-	38	-	-
Pedestrians%	-	-	-	-	28.8%		-	-	-	-	24.3%		-	-	-	-	30.8%		-	-	-	-	13%		-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0.7%		-	-	-	-	0.7%		-	-	-	-	1.4%		-	-	-	-	0.3%		-
Bicycles on Road	0	0	0	0	0	-	0	2	0	0	0	-	0	0	2	0	0	-	1	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM

	Bicycles on Crosswalk	Pedestrians
N	1	53
S	0	77
E	0	34
W	0	45

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 04:00 PM - 05:00 PM



	Bicycles on Crosswalk	Pedestrians
N	2	84
S	4	90
E	2	71
W	1	38

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & CITY PARK DR
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Turning Movement Count (1 . OGILVIE RD & CITY PARK DR) MioID: 226507

Start Time	N Approach CITY PARK DR						E Approach OGILVIE RD						S Approach CITY PARK DR						W Approach OGILVIE RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	4	0	1	0	22	5	21	154	9	0	7	184	6	5	11	0	4	22	10	52	18	0	13	80	291	
07:15:00	7	0	0	0	18	7	32	198	16	1	11	247	7	6	14	0	12	27	7	78	12	0	10	97	378	
07:30:00	13	0	0	0	26	13	20	226	17	0	6	263	20	11	17	0	17	48	21	108	19	0	24	148	472	
07:45:00	7	0	1	0	22	8	35	213	25	0	15	273	17	9	20	0	25	46	9	113	35	0	25	157	484	1625
08:00:00	4	1	0	0	12	5	38	267	25	0	7	330	13	8	19	0	18	40	15	116	20	0	21	151	526	1860
08:15:00	10	2	3	0	19	15	28	210	20	4	10	262	16	7	20	0	19	43	16	112	15	1	19	144	464	1946
08:30:00	8	0	2	0	13	10	21	197	23	0	7	241	17	2	16	0	17	35	16	114	18	0	23	148	434	1908
08:45:00	6	2	3	0	17	11	33	193	29	0	8	255	13	4	13	0	15	30	28	106	7	0	18	141	437	1861
09:00:00	7	0	3	0	13	10	21	172	26	3	8	222	14	1	16	0	15	31	15	109	17	0	11	141	404	1739
09:15:00	1	0	1	0	14	2	15	152	33	0	5	200	16	1	17	0	5	34	24	98	11	0	11	133	369	1644
BREAK																										
16:00:00	35	6	21	0	31	62	6	137	37	3	23	183	33	3	45	0	19	81	36	253	5	0	23	294	620	
16:15:00	27	7	15	0	33	49	2	136	45	2	19	185	34	1	41	0	17	76	42	275	4	0	16	321	631	
16:30:00	21	8	15	0	36	44	6	130	59	1	21	196	38	1	59	0	4	98	29	269	5	0	8	303	641	
16:45:00	16	1	12	0	19	29	4	130	39	1	14	174	37	2	59	0	13	98	34	257	2	1	11	294	595	2487
17:00:00	19	3	13	0	24	35	4	148	40	1	13	193	33	1	45	0	5	79	40	222	3	0	10	265	572	2439
17:15:00	21	5	8	0	20	34	7	129	46	1	15	183	33	1	31	0	6	65	46	254	3	0	5	303	585	2393
17:30:00	11	3	10	0	18	24	3	97	41	2	15	143	42	1	39	0	6	82	40	253	3	0	8	296	545	2297
17:45:00	9	1	7	0	23	17	4	124	55	0	10	183	32	2	51	0	7	85	38	205	1	0	8	244	529	2231
Grand Total	226	39	115	0	380	380	300	3013	585	19	214	3917	421	66	533	0	224	1020	466	2994	198	2	264	3660	**8977**	-
Approach%	59.5%	10.3%	30.3%	0%		-	7.7%	76.9%	14.9%	0.5%		-	41.3%	6.5%	52.3%	0%		-	12.7%	81.8%	5.4%	0.1%		-	-	-
Totals %	2.5%	0.4%	1.3%	0%		4.2%	3.3%	33.6%	6.5%	0.2%		43.6%	4.7%	0.7%	5.9%	0%		11.4%	5.2%	33.4%	2.2%	0%		40.8%	-	-
Heavy	2	0	1	0		-	1	51	59	0		-	58	0	15	0		-	17	57	2	0		-	-	-
Heavy %	0.9%	0%	0.9%	0%		-	0.3%	1.7%	10.1%	0%		-	13.8%	0%	2.8%	0%		-	3.6%	1.9%	1%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & CITY PARK DR
Date: Thu, Apr 23, 2015

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 07:30 AM - 08:30 AM

Start Time	N Approach CITY PARK DR						E Approach OGILVIE RD						S Approach CITY PARK DR						W Approach OGILVIE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:30:00	13	0	0	0	26	13	20	226	17	0	6	263	20	11	17	0	17	48	21	108	19	0	24	148	472
07:45:00	7	0	1	0	22	8	35	213	25	0	15	273	17	9	20	0	25	46	9	113	35	0	25	157	484
08:00:00	4	1	0	0	12	5	38	267	25	0	7	330	13	8	19	0	18	40	15	116	20	0	21	151	526
08:15:00	10	2	3	0	19	15	28	210	20	4	10	262	16	7	20	0	19	43	16	112	15	1	19	144	464
Grand Total	34	3	4	0	79	41	121	916	87	4	38	1128	66	35	76	0	79	177	61	449	89	1	89	600	**1946**
Approach%	82.9%	7.3%	9.8%	0%		-	10.7%	81.2%	7.7%	0.4%		-	37.3%	19.8%	42.9%	0%		-	10.2%	74.8%	14.8%	0.2%		-	-
Totals %	1.7%	0.2%	0.2%	0%		2.1%	6.2%	47.1%	4.5%	0.2%		58%	3.4%	1.8%	3.9%	0%		9.1%	3.1%	23.1%	4.6%	0.1%		30.8%	-
PHF	0.65	0.38	0.33	0		0.68	0.8	0.86	0.87	0.25		0.85	0.83	0.8	0.95	0		0.92	0.73	0.97	0.64	0.25		0.96	-
Heavy	0	0	0	0		0	0	21	13	0		34	22	0	5	0		27	3	23	0	0		26	-
Heavy %	0%	0%	0%	0%		0%	0%	2.3%	14.9%	0%		3%	33.3%	0%	6.6%	0%		15.3%	4.9%	5.1%	0%	0%		4.3%	-
Lights	34	3	4	0		41	121	895	74	4		1094	44	35	71	0		150	58	426	89	1		574	-
Lights %	100%	100%	100%	0%		100%	100%	97.7%	85.1%	100%		97%	66.7%	100%	93.4%	0%		84.7%	95.1%	94.9%	100%	100%		95.7%	-
Single-Unit Trucks	0	0	0	0		0	0	9	4	0		13	3	0	0	0		3	1	11	0	0		12	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	1%	4.6%	0%		1.2%	4.5%	0%	0%	0%		1.7%	1.6%	2.4%	0%	0%		2%	-
Buses	0	0	0	0		0	0	10	9	0		19	19	0	5	0		24	2	11	0	0		13	-
Buses %	0%	0%	0%	0%		0%	0%	1.1%	10.3%	0%		1.7%	28.8%	0%	6.6%	0%		13.6%	3.3%	2.4%	0%	0%		2.2%	-
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	1	0	0		1	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	-
Pedestrians	-	-	-	-	79	-	-	-	-	-	38	-	-	-	-	-	79	-	-	-	-	-	89	-	-
Pedestrians%	-	-	-	-	27.7%		-	-	-	-	13.3%		-	-	-	-	27.7%		-	-	-	-	31.2%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	1	1	0	0	0	-	0	0	0	0	0	-	0	5	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: OGILVIE RD & CITY PARK DR
Date: Thu, Apr 23, 2015

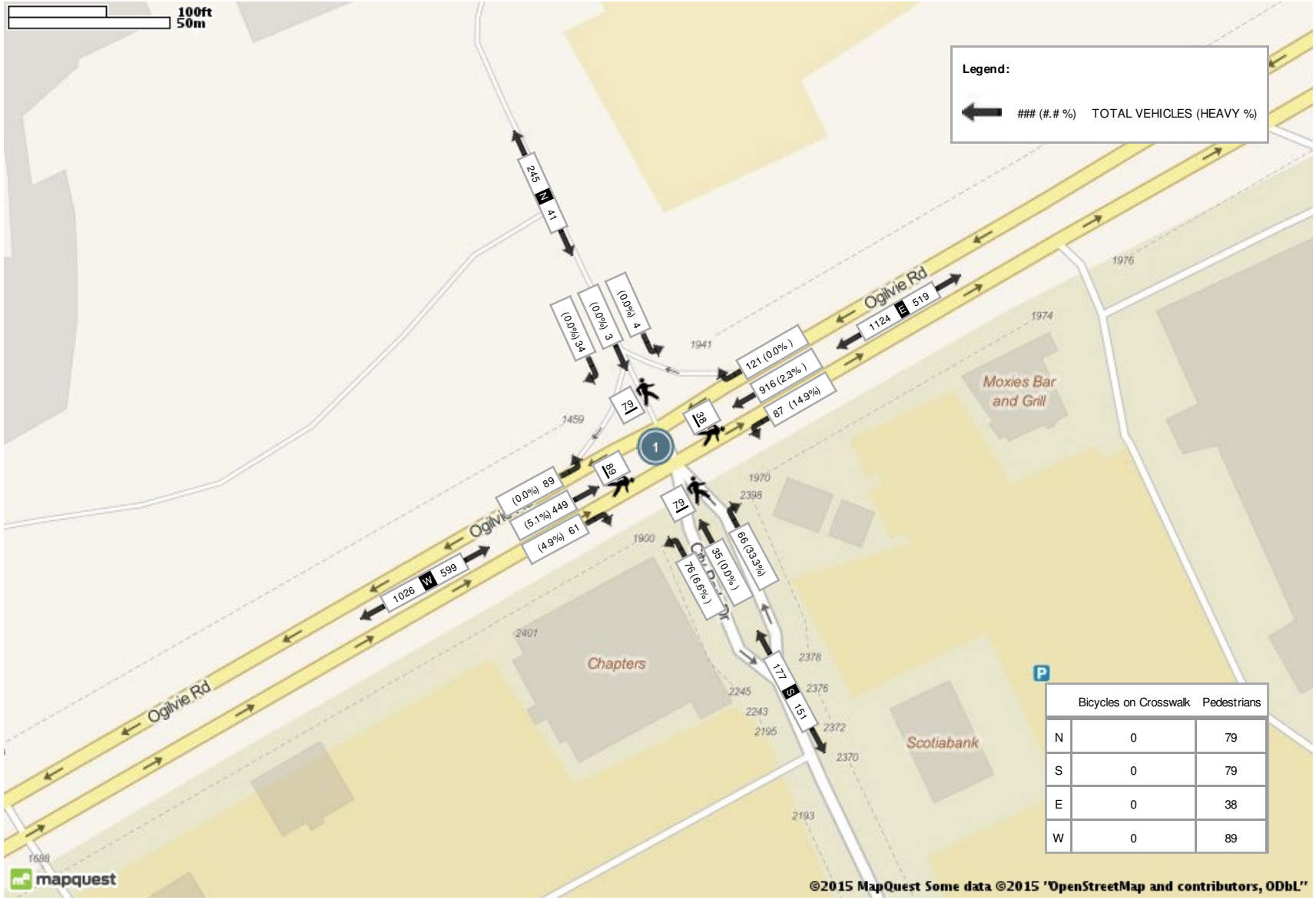
BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 04:00 PM - 05:00 PM

Start Time	N Approach CITY PARK DR						E Approach OGILVIE RD						S Approach CITY PARK DR						W Approach OGILVIE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:00:00	35	6	21	0	31	62	6	137	37	3	23	183	33	3	45	0	19	81	36	253	5	0	23	294	620
16:15:00	27	7	15	0	33	49	2	136	45	2	19	185	34	1	41	0	17	76	42	275	4	0	16	321	631
16:30:00	21	8	15	0	36	44	6	130	59	1	21	196	38	1	59	0	4	98	29	269	5	0	8	303	641
16:45:00	16	1	12	0	19	29	4	130	39	1	14	174	37	2	59	0	13	98	34	257	2	1	11	294	595
Grand Total	99	22	63	0	119	184	18	533	180	7	77	738	142	7	204	0	53	353	141	1054	16	1	58	1212	**2487**
Approach%	53.8%	12%	34.2%	0%		-	2.4%	72.2%	24.4%	0.9%		-	40.2%	2%	57.8%	0%		-	11.6%	87%	1.3%	0.1%		-	-
Totals %	4%	0.9%	2.5%	0%		7.4%	0.7%	21.4%	7.2%	0.3%		29.7%	5.7%	0.3%	8.2%	0%		14.2%	5.7%	42.4%	0.6%	0%		48.7%	-
PHF	0.71	0.69	0.75	0		0.74	0.75	0.97	0.76	0.58		0.94	0.93	0.58	0.86	0		0.9	0.84	0.96	0.8	0.25		0.94	-
Heavy	0	0	0	0		0	0	3	12	0		15	12	0	2	0		14	4	11	1	0		16	-
Heavy %	0%	0%	0%	0%		0%	0%	0.6%	6.7%	0%		2%	8.5%	0%	1%	0%		4%	2.8%	1%	6.3%	0%		1.3%	-
Lights	99	22	63	0		184	18	530	168	7		723	130	7	202	0		339	137	1043	15	1		1196	-
Lights %	100%	100%	100%	0%		100%	100%	99.4%	93.3%	100%		98%	91.5%	100%	99%	0%		96%	97.2%	99%	93.8%	100%		98.7%	-
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	1	0	0	0		1	0	6	1	0		7	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0.7%	0%	0%	0%		0.3%	0%	0.6%	6.3%	0%		0.6%	-
Buses	0	0	0	0		0	0	2	11	0		13	10	0	2	0		12	4	4	0	0		8	-
Buses %	0%	0%	0%	0%		0%	0%	0.4%	6.1%	0%		1.8%	7%	0%	1%	0%		3.4%	2.8%	0.4%	0%	0%		0.7%	-
Articulated Trucks	0	0	0	0		0	0	0	1	0		1	1	0	0	0		1	0	1	0	0		1	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0.6%	0%		0.1%	0.7%	0%	0%	0%		0.3%	0%	0.1%	0%	0%		0.1%	-
Pedestrians	-	-	-	-	118	-	-	-	-	-	77	-	-	-	-	-	52	-	-	-	-	-	58	-	-
Pedestrians%	-	-	-	-	38.4%		-	-	-	-	25.1%		-	-	-	-	16.9%		-	-	-	-	18.9%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0.3%		-	-	-	-	0%		-	-	-	-	0.3%		-	-	-	-	0%		-
Bicycles on Road	0	0	3	0	0	-	0	3	0	0	0	-	0	0	0	0	0	-	0	5	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

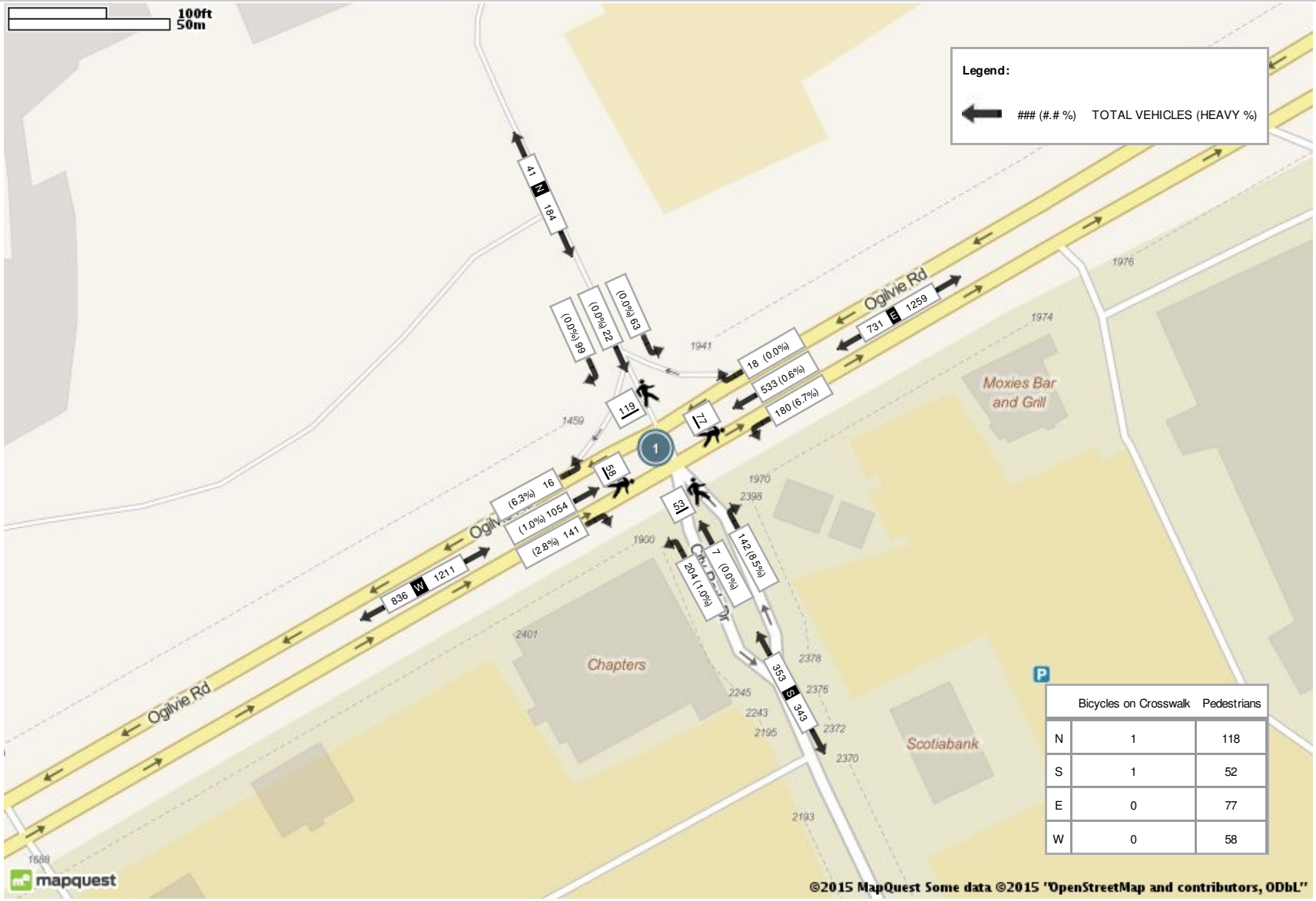
Peak Hour: 07:30 AM - 08:30 AM



	Bicycles on Crosswalk	Pedestrians
N	0	79
S	0	79
E	0	38
W	0	89

BA Group
45 St. Clair Avenue West, Suite 300
Toronto ON, CANADA, M4V 1K9

Peak Hour: 04:00 PM - 05:00 PM



	Bicycles on Crosswalk	Pedestrians
N	1	118
S	1	52
E	0	77
W	0	58

Appendix C

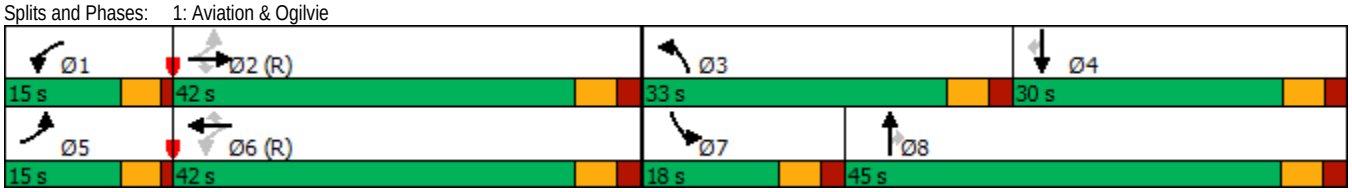
SYNCHRO EXISTING TRAFFIC ANALYSIS

Existing AM
1: Aviation & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	431	60	134	936	156	360	570	233	158	270	218
Future Volume (vph)	252	431	60	134	936	156	360	570	233	158	270	218
Adj. Flow (vph)	265	454	63	141	985	164	379	600	245	166	284	229
Lane Group Flow (vph)	265	454	63	141	985	164	379	600	245	166	284	229
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	29.9	29.9
Total Split (s)	15.0	42.0	42.0	15.0	42.0	42.0	33.0	45.0	45.0	18.0	30.0	30.0
Total Split (%)	12.5%	35.0%	35.0%	12.5%	35.0%	35.0%	27.5%	37.5%	37.5%	15.0%	25.0%	25.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	6.1	6.1	4.7	6.1	6.1	5.9	6.1	6.1	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	58.9	43.8	43.8	47.4	35.9	35.9	27.1	31.2	31.2	12.1	16.4	16.4
Actuated g/C Ratio	0.49	0.36	0.36	0.40	0.30	0.30	0.23	0.26	0.26	0.10	0.14	0.14
v/c Ratio	0.85	0.37	0.10	0.34	0.97	0.29	0.99	0.68	0.51	0.98	0.61	0.65
Control Delay	55.0	30.2	0.3	20.6	64.0	5.0	90.9	43.7	21.2	117.4	54.0	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	30.2	0.3	20.6	64.0	5.0	90.9	43.7	21.2	117.4	54.0	21.0
LOS	D	C	A	C	E	A	F	D	C	F	D	C
Approach Delay		36.2			51.8			53.8			58.3	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	44.5	40.6	0.0	17.2	120.5	0.0	89.6	67.9	23.6	39.6	34.0	11.0
Queue Length 95th (m)	#120.0	60.8	0.0	33.4	#163.4	12.7	#150.7	79.0	44.0	#82.6	44.3	34.1
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	313	1237	652	423	1014	567	382	1098	562	170	680	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.37	0.10	0.33	0.97	0.29	0.99	0.55	0.44	0.98	0.42	0.52

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 72 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	
Description: Signal Timing Plan: May 3rd, 2016	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: Aviation & Ogilvie



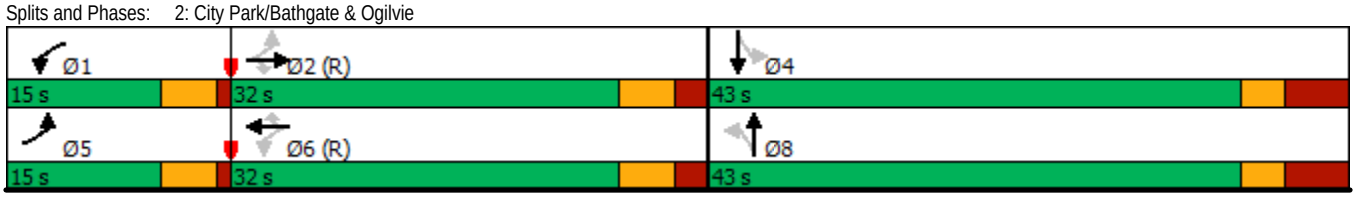
Existing AM
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	471	72	21	1009	185	101	30	19	111	29	194
Future Volume (vph)	145	471	72	21	1009	185	101	30	19	111	29	194
Adj. Flow (vph)	153	496	76	22	1062	195	106	32	20	117	31	204
Lane Group Flow (vph)	153	496	76	22	1062	195	106	52	0	117	235	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0	30.0	42.4	42.4		42.4	42.4	
Total Split (s)	15.0	32.0	32.0	15.0	32.0	32.0	43.0	43.0		43.0	43.0	
Total Split (%)	16.7%	35.6%	35.6%	16.7%	35.6%	35.6%	47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	7.4	7.4		7.4	7.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	59.8	54.4	54.4	53.3	46.0	46.0	17.6	17.6		17.6	17.6	
Actuated g/C Ratio	0.66	0.60	0.60	0.59	0.51	0.51	0.20	0.20		0.20	0.20	
v/c Ratio	0.46	0.24	0.08	0.04	0.61	0.23	0.62	0.15		0.47	0.51	
Control Delay	12.3	11.9	2.2	6.7	16.3	1.7	46.7	18.3		35.7	9.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	12.3	11.9	2.2	6.7	16.3	1.7	46.7	18.3		35.7	9.5	
LOS	B	B	A	A	B	A	D	B		D	A	
Approach Delay		11.0			13.9			37.3			18.2	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	7.3	14.1	0.0	0.7	50.9	0.0	17.7	4.8		18.9	4.7	
Queue Length 95th (m)	26.0	49.0	4.7	m2.5	#142.6	6.9	25.5	10.3		25.6	17.3	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	363	2050	925	630	1732	840	345	671		506	726	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.42	0.24	0.08	0.03	0.61	0.23	0.31	0.08		0.23	0.32	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 86.6% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: City Park/Bathgate & Ogilvie

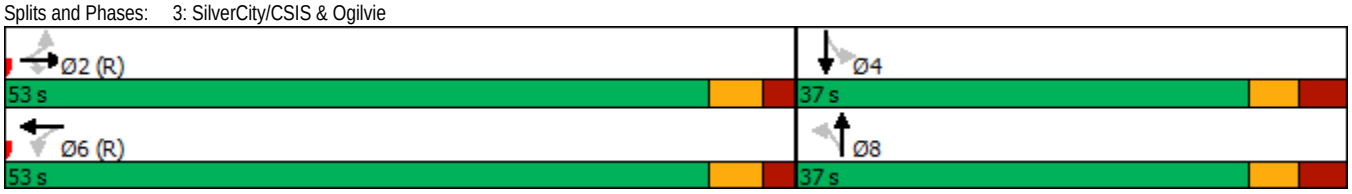


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	578	14	1	1072	58	7	1	4	7	0	8
Future Volume (vph)	38	578	14	1	1072	58	7	1	4	7	0	8
Adj. Flow (vph)	40	608	15	1	1128	61	7	1	4	7	0	8
Lane Group Flow (vph)	40	608	15	1	1189	0	7	5	0	7	8	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.9	29.9	29.9	29.9	29.9		36.7	36.7		36.7	36.7	
Total Split (s)	53.0	53.0	53.0	53.0	53.0		37.0	37.0		37.0	37.0	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9		6.7	6.7		6.7	6.7	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	77.0	77.0	77.0	77.0	77.0		14.0	14.0		14.0	14.0	
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.86		0.16	0.16		0.16	0.16	
v/c Ratio	0.12	0.21	0.01	0.00	0.42		0.03	0.02		0.03	0.03	
Control Delay	4.8	2.8	0.2	3.0	2.8		27.7	17.8		27.7	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.8	2.8	0.2	3.0	2.8		27.7	17.8		27.7	0.2	
LOS	A	A	A	A	A		C	B		C	A	
Approach Delay		2.8			2.8			23.6			13.1	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	0.0	0.0	0.0	0.0	1.0		1.1	0.2		1.1	0.0	
Queue Length 95th (m)	4.7	20.2	0.3	m0.0	16.7		3.7	2.4		3.7	0.0	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	329	2899	1230	634	2852		447	522		448	526	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.12	0.21	0.01	0.00	0.42		0.02	0.01		0.02	0.02	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 3.0 — Intersection LOS: A
Intersection Capacity Utilization 57.5% — ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	463	63	90	944	125	78	36	68	4	3	35
Future Volume (vph)	92	463	63	90	944	125	78	36	68	4	3	35
Adj. Flow (vph)	97	487	66	95	994	132	82	38	72	4	3	37
Lane Group Flow (vph)	97	487	66	95	994	132	0	120	72	4	40	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	NA	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	35.1	35.1	35.1	35.1	35.1	35.1	33.5	33.5		33.5	33.5	
Total Split (s)	51.0	51.0	51.0	51.0	51.0	51.0	34.0	34.0		34.0	34.0	
Total Split (%)	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	37.8%	37.8%		37.8%	37.8%	
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)	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.5		6.5	6.5	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	60.8	60.8	60.8	60.8	60.8	60.8		15.6	0.0	15.6	15.6	
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68		0.17	0.00	0.17	0.17	
v/c Ratio	0.32	0.21	0.07	0.18	0.43	0.14		0.54	0.51	0.02	0.15	
Control Delay	16.8	9.7	7.3	8.8	8.9	2.3		41.2	12.6	26.2	11.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	16.8	9.7	7.3	8.8	8.9	2.3		41.2	12.6	26.2	11.0	
LOS	B	A	A	A	A	A		D	B	C	B	
Approach Delay		10.5			8.1			30.5			12.4	
Approach LOS		B			A			C			B	
Queue Length 50th (m)	4.1	10.0	0.0	4.6	31.6	0.0		19.7	0.0	0.6	0.4	
Queue Length 95th (m)	24.7	46.2	14.1	18.4	78.7	8.4		30.3	#1.1	2.8	7.3	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0				30.0		
Base Capacity (vph)	302	2291	903	538	2291	924		396	141	358	451	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.32	0.21	0.07	0.18	0.43	0.14		0.30	0.51	0.01	0.09	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 88 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 11.0 — Intersection LOS: B
Intersection Capacity Utilization 73.2% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: City Park/CSIS & Ogilvie

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

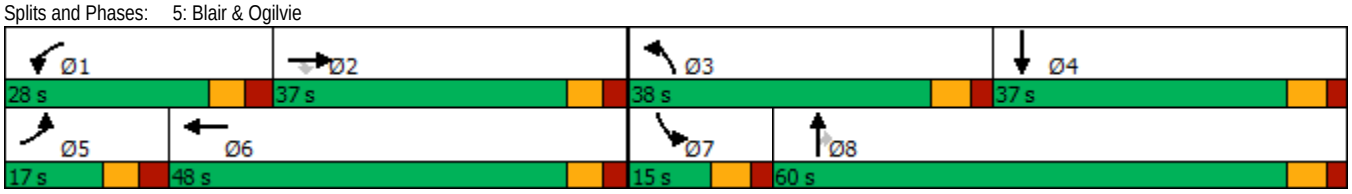
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	295	184	318	463	28	570	592	392	55	315	98
Future Volume (vph)	53	295	184	318	463	28	570	592	392	55	315	98
Adj. Flow (vph)	56	311	194	335	487	29	600	623	413	58	332	103
Lane Group Flow (vph)	56	311	194	335	516	0	600	623	413	58	435	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	34.4	34.4	11.8	34.4		11.5	33.5	33.5	11.5	33.5	
Total Split (s)	17.0	37.0	37.0	28.0	48.0		38.0	60.0	60.0	15.0	37.0	
Total Split (%)	12.1%	26.4%	26.4%	20.0%	34.3%		27.1%	42.9%	42.9%	10.7%	26.4%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	3.1	2.7	2.7	3.1	2.7		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.4	6.4	6.8	6.4		6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	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	None	None	None	None	
Act Effct Green (s)	8.7	17.5	17.5	17.0	29.5		26.0	48.3	48.3	8.0	26.6	
Actuated g/C Ratio	0.08	0.15	0.15	0.15	0.26		0.23	0.42	0.42	0.07	0.23	
v/c Ratio	0.44	0.60	0.48	0.69	0.60		0.80	0.83	0.53	0.49	0.57	
Control Delay	67.7	52.2	6.6	56.6	43.2		52.7	42.5	10.3	72.1	40.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.7	52.2	6.6	56.6	43.2		52.7	42.5	10.3	72.1	40.8	
LOS	E	D	A	E	D		D	D	B	E	D	
Approach Delay		37.9			48.5			38.1			44.5	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	12.9	37.4	0.0	39.5	60.7		70.2	127.1	15.9	13.5	42.5	
Queue Length 95th (m)	29.2	54.0	10.2	60.9	80.1		101.1	#226.9	52.2	#32.4	70.5	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	157	944	539	634	1265		942	869	847	130	927	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.36	0.33	0.36	0.53	0.41		0.64	0.72	0.49	0.45	0.47	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 114.4
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 41.5 — Intersection LOS: D
Intersection Capacity Utilization 91.2% — ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie

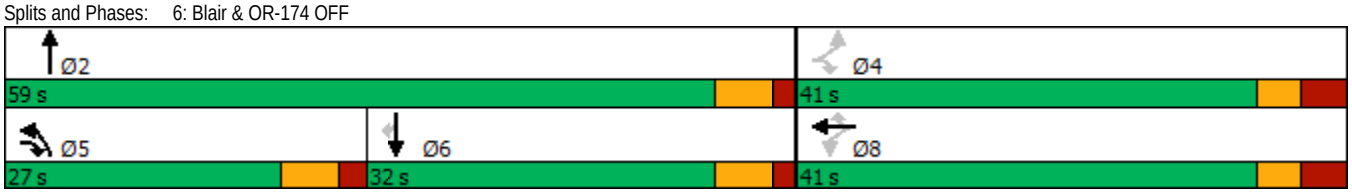


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	0	157	230	176	463	256	1314	0	0	659	89
Future Volume (vph)	89	0	157	230	176	463	256	1314	0	0	659	89
Adj. Flow (vph)	94	0	165	242	185	487	269	1383	0	0	694	94
Lane Group Flow (vph)	94	0	165	242	185	487	269	1383	0	0	694	94
Turn Type	Perm		pm+ov	Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		8						6
Detector Phase	4		5	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0	10.0	5.0	10.0			10.0	10.0
Minimum Split (s)	36.8		11.4	36.8	36.8	36.8	11.4	30.1			30.1	30.1
Total Split (s)	41.0		27.0	41.0	41.0	41.0	27.0	59.0			32.0	32.0
Total Split (%)	41.0%		27.0%	41.0%	41.0%	41.0%	27.0%	59.0%			32.0%	32.0%
Yellow Time (s)	3.3		4.2	3.3	3.3	3.3	4.2	4.2			4.2	4.2
All-Red Time (s)	3.5		2.2	3.5	3.5	3.5	2.2	1.9			1.9	1.9
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	6.8		6.4	6.8	6.8	6.8	6.4	6.1			6.1	6.1
Lead/Lag			Lead				Lead				Lag	Lag
Lead-Lag Optimize?			Yes				Yes				Yes	Yes
Recall Mode	None		None	None	None	None	None	Min			Min	Min
Act Effct Green (s)	29.6		49.4	29.6	29.6	29.6	12.7	43.3			23.9	23.9
Actuated g/C Ratio	0.34		0.57	0.34	0.34	0.34	0.15	0.50			0.28	0.28
v/c Ratio	0.25		0.19	0.42	0.30	0.86	0.56	0.81			0.51	0.19
Control Delay	24.7		8.2	25.9	24.0	38.9	41.0	23.0			28.2	5.0
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	24.7		8.2	25.9	24.0	38.9	41.0	23.0			28.2	5.0
LOS	C		A	C	C	D	D	C			C	A
Approach Delay		14.2			32.4			25.9			25.5	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	11.6		10.2	31.9	23.3	63.2	23.8	106.7			37.8	0.0
Queue Length 95th (m)	25.5		20.5	56.9	43.2	#129.2	36.7	134.4			52.1	8.5
Internal Link Dist (m)		137.2			105.9			166.4			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	459		1033	700	737	660	818	2167			1626	573
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.20		0.16	0.35	0.25	0.74	0.33	0.64			0.43	0.16

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 86.3
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 26.6 — Intersection LOS: C
Intersection Capacity Utilization 91.1% — ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 5, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Blair & OR-174 OFF



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	13	50	25	16	98	78
Future Volume (vph)	13	50	25	16	98	78
Adj. Flow (vph)	14	53	26	17	103	82
Lane Group Flow (vph)	67	0	0	43	185	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 26.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	13	50	25	16	98	78
Future Volume (Veh/h)	13	50	25	16	98	78
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)	14	53	26	17	103	82
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				287		
pX, platoon unblocked						
vC, conflicting volume			67		110	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			67		110	40
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		88	92
cM capacity (veh/h)			1535		873	1031

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	67	43	185
Volume Left	0	26	103
Volume Right	53	0	82
cSH	1700	1535	936
Volume to Capacity	0.04	0.02	0.20
Queue Length 95th (m)	0.0	0.4	5.6
Control Delay (s)	0.0	4.5	9.8
Lane LOS		A	A
Approach Delay (s)	0.0	4.5	9.8
Approach LOS			A

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	60	1	3	109	2	0	0	2	2	0	0
Future Volume (vph)	1	60	1	3	109	2	0	0	2	2	0	0
Adj. Flow (vph)	1	63	1	3	115	2	0	0	2	2	0	0
Lane Group Flow (vph)	0	65	0	0	120	0	0	2	0	0	2	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 17.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	1	60	1	3	109	2	0	0	2	2	0	0
Future Volume (vph)	1	60	1	3	109	2	0	0	2	2	0	0
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
Hourly flow rate (vph)	1	63	1	3	115	2	0	0	2	2	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	65	120	2	2
Volume Left (vph)	1	3	0	2
Volume Right (vph)	1	2	2	0
Hadj (s)	0.03	0.03	-0.57	0.23
Departure Headway (s)	4.0	4.0	3.7	4.5
Degree Utilization, x	0.07	0.13	0.00	0.00
Capacity (veh/h)	878	893	910	759
Control Delay (s)	7.4	7.6	6.7	7.5
Approach Delay (s)	7.4	7.6	6.7	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	122	0	0	149	0	0
Future Volume (vph)	122	0	0	149	0	0
Adj. Flow (vph)	128	0	0	157	0	0
Lane Group Flow (vph)	128	0	0	157	0	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 11.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	122	0	0	149	0	0
Future Volume (Veh/h)	122	0	0	149	0	0
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)	128	0	0	157	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			128		285	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			128		285	128
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1458		705	922

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	128	157	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1458	1700
Volume to Capacity	0.08	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

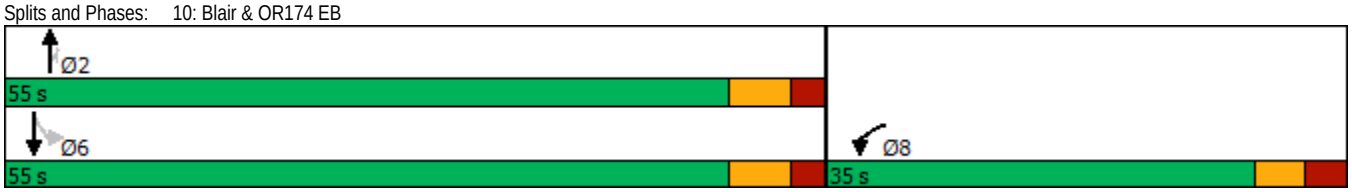
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	11.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	283	900	718	109	134	574
Future Volume (vph)	283	900	718	109	134	574
Adj. Flow (vph)	298	947	756	115	141	604
Lane Group Flow (vph)	298	947	756	115	0	745
Turn Type	Prot	Free	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	30.5	30.5
Total Split (s)	35.0		55.0	55.0	55.0	55.0
Total Split (%)	38.9%		61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.3		6.5	6.5		6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	19.2	80.7	48.7	48.7		48.7
Actuated g/C Ratio	0.24	1.00	0.60	0.60		0.60
v/c Ratio	0.74	0.63	0.37	0.12		0.56
Control Delay	40.0	2.0	9.6	2.3		12.6
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	40.0	2.0	9.6	2.3		12.6
LOS	D	A	A	A		B
Approach Delay	11.1		8.6			12.6
Approach LOS	B		A			B
Queue Length 50th (m)	42.2	0.0	28.0	0.0		32.3
Queue Length 95th (m)	67.6	0.0	49.8	6.9		61.2
Internal Link Dist (m)	139.6		109.0			143.1
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	605	1498	2045	960		1337
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.49	0.63	0.37	0.12		0.56

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.7
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 10.8 — Intersection LOS: B
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2015

Splits and Phases: 10: Blair & OR174 EB



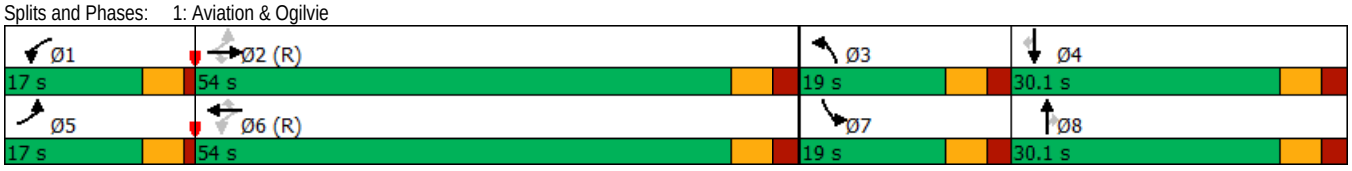
Existing PM
1: Aviation & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	1133	223	238	822	253	133	275	129	175	507	202
Future Volume (vph)	181	1133	223	238	822	253	133	275	129	175	507	202
Adj. Flow (vph)	191	1193	235	251	865	266	140	289	136	184	534	213
Lane Group Flow (vph)	191	1193	235	251	865	266	140	289	136	184	534	213
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	30.1	30.1
Total Split (s)	17.0	54.0	54.0	17.0	54.0	54.0	19.0	30.1	30.1	19.0	30.1	30.1
Total Split (%)	14.2%	45.0%	45.0%	14.2%	45.0%	45.0%	15.8%	25.1%	25.1%	15.8%	25.1%	25.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.4	2.4
Lost Time Adjust (s)	0.7	-2.1	-2.1	0.7	-2.1	-2.1	-1.9	-2.1	-2.1	-1.9	-2.1	-2.1
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Ped	Ped	None	Ped	Ped
Act Effct Green (s)	59.2	50.0	50.0	61.2	51.0	51.0	14.3	26.1	26.1	15.0	26.8	26.8
Actuated g/C Ratio	0.49	0.42	0.42	0.51	0.42	0.42	0.12	0.22	0.22	0.12	0.22	0.22
v/c Ratio	0.65	0.85	0.33	1.12	0.60	0.34	0.70	0.39	0.33	0.87	0.71	0.50
Control Delay	25.4	38.5	7.2	126.4	29.0	3.9	69.3	42.1	10.8	88.1	49.1	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	38.5	7.2	126.4	29.0	3.9	69.3	42.1	10.8	88.1	49.1	21.8
LOS	C	D	A	F	C	A	E	D	B	F	D	C
Approach Delay		32.4			41.9			41.3			50.6	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	22.1	131.1	7.2	~53.3	82.7	0.0	31.9	30.8	2.3	43.2	62.0	17.6
Queue Length 95th (m)	34.9	160.5	23.6	#105.2	103.5	15.5	#57.0	44.1	18.4	#83.0	81.3	41.7
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	307	1411	723	224	1440	781	211	736	417	211	756	425
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.85	0.33	1.12	0.60	0.34	0.66	0.39	0.33	0.87	0.71	0.50

Intersection Summary

Cycle Length: 120.1
Actuated Cycle Length: 120.1
Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 91.7% ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 3rd, 2016
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aviation & Ogilvie



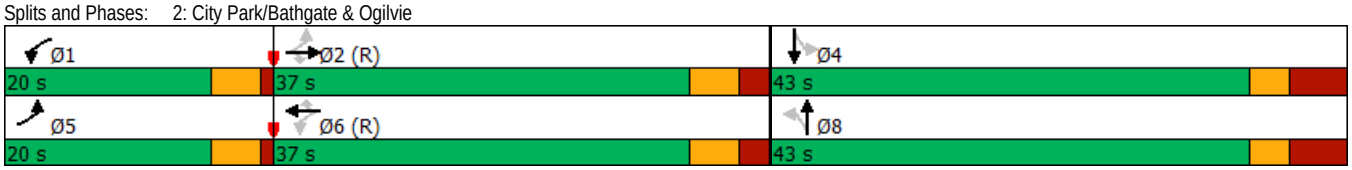
Existing PM
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	1002	140	14	974	167	107	29	28	193	53	185
Future Volume (vph)	147	1002	140	14	974	167	107	29	28	193	53	185
Adj. Flow (vph)	155	1055	147	15	1025	176	113	31	29	203	56	195
Lane Group Flow (vph)	155	1055	147	15	1025	176	113	60	0	203	251	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	29.0	29.0	11.0	29.0	29.0	42.4	42.4		42.4	42.4	
Total Split (s)	20.0	37.0	37.0	20.0	37.0	37.0	43.0	43.0		43.0	43.0	
Total Split (%)	20.0%	37.0%	37.0%	20.0%	37.0%	37.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.7	-2.0	-2.0	0.7	-2.0	-2.0	-3.4	-3.4		-3.4	-3.4	
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	64.4	61.6	61.6	55.6	51.8	51.8	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.64	0.62	0.62	0.56	0.52	0.52	0.26	0.26		0.26	0.26	
v/c Ratio	0.49	0.51	0.16	0.05	0.58	0.21	0.59	0.13		0.62	0.46	
Control Delay	14.2	14.7	5.3	7.9	14.1	1.2	43.0	15.2		39.4	9.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	14.2	14.7	5.3	7.9	14.1	1.2	43.0	15.2		39.4	9.6	
LOS	B	B	A	A	B	A	D	B		D	A	
Approach Delay		13.6			12.1			33.4			22.9	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	10.2	45.7	2.3	0.7	55.0	0.0	19.4	4.6		35.2	8.5	
Queue Length 95th (m)	25.9	112.5	15.9	m2.0	#100.2	0.9	31.3	11.6		48.1	23.1	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	396	2086	936	448	1756	838	289	656		495	723	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.51	0.16	0.03	0.58	0.21	0.39	0.09		0.41	0.35	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: City Park/Bathgate & Ogilvie



Existing PM
3: SilverCity/CSIS & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1218	74	28	978	1	34	1	41	80	3	102
Future Volume (vph)	1	1218	74	28	978	1	34	1	41	80	3	102
Adj. Flow (vph)	1	1282	78	29	1029	1	36	1	43	84	3	107
Lane Group Flow (vph)	1	1282	78	29	1030	0	36	44	0	84	110	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (%)	63.0%	63.0%	63.0%	63.0%	63.0%		37.0%	37.0%		37.0%	37.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	-1.9	-1.9	-1.9	-1.9	-1.9		-2.7	-2.7		-2.7	-2.7	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	74.1	74.1	74.1	74.1	74.1		17.9	17.9		17.9	17.9	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74		0.18	0.18		0.18	0.18	
v/c Ratio	0.00	0.51	0.07	0.12	0.41		0.18	0.15		0.37	0.33	
Control Delay	4.0	4.2	0.5	5.4	4.5		33.6	10.0		38.4	13.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.0	4.3	0.5	5.4	4.5		33.6	10.0		38.4	13.2	
LOS	A	A	A	A	A		C	A		D	B	
Approach Delay		4.0			4.5			20.6			24.1	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.0	28.0	0.2	0.8	19.3		6.2	0.2		15.1	4.6	
Queue Length 95th (m)	m0.1	36.5	1.0	m4.1	49.4		12.1	7.4		23.2	15.4	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	326	2512	1075	240	2512		370	520		425	547	
Starvation Cap Reductn	0	79	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.00	0.53	0.07	0.12	0.41		0.10	0.08		0.20	0.20	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 6.2 Intersection LOS: A
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie

Existing PM
4: City Park/CSIS & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	1086	145	185	549	19	210	7	146	65	23	102
Future Volume (vph)	16	1086	145	185	549	19	210	7	146	65	23	102
Adj. Flow (vph)	17	1143	153	195	578	20	221	7	154	68	24	107
Lane Group Flow (vph)	17	1143	153	195	578	20	0	228	154	68	131	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	29.1	29.1	29.1	10.9	29.1	29.1	27.5	27.5	27.5	27.5	27.5	
Total Split (s)	46.0	46.0	46.0	15.0	61.0	61.0	34.0	34.0	34.0	34.0	34.0	
Total Split (%)	46.0%	46.0%	46.0%	15.0%	61.0%	61.0%	34.0%	34.0%	34.0%	34.0%	34.0%	
Yellow Time (s)	3.7	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.4	2.4	2.4	1.0	2.4	2.4	3.2	3.2	3.2	3.2	3.2	
Lost Time Adjust (s)	-2.1	-2.1	-2.1	0.0	-2.1	-2.1		-2.5	-2.5	-2.5	-2.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	48.5	48.5	48.5	62.8	62.8	62.8		28.2	28.2	28.2	28.2	
Actuated g/C Ratio	0.48	0.48	0.48	0.63	0.63	0.63		0.28	0.28	0.28	0.28	
v/c Ratio	0.05	0.70	0.21	0.70	0.27	0.03		0.81	0.32	0.30	0.27	
Control Delay	9.5	18.0	2.9	27.7	9.6	0.1		54.7	6.1	30.8	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	9.5	18.0	2.9	27.7	9.6	0.1		54.7	6.1	30.8	8.9	
LOS	A	B	A	C	A	A		D	A	C	A	
Approach Delay		16.2			13.8			35.1			16.3	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	2.1	102.8	6.2	15.1	25.1	0.0		39.6	0.0	10.0	3.3	
Queue Length 95th (m)	m2.2	57.2	4.6	#45.6	38.5	0.0		#76.3	13.7	21.8	16.6	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0				30.0		
Base Capacity (vph)	336	1644	716	295	2128	713		312	521	245	523	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.05	0.70	0.21	0.66	0.27	0.03		0.73	0.30	0.28	0.25	

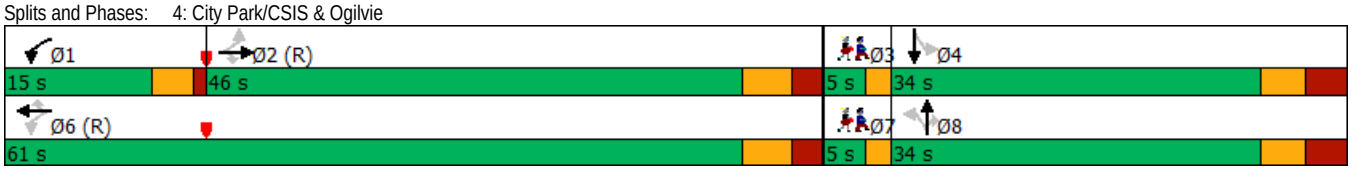
Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 18.2 Intersection LOS: B
Intersection Capacity Utilization 89.6% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th 2016

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: City Park/CSIS & Ogilvie



Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	5.0	5.0
Total Split (%)	5%	5%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

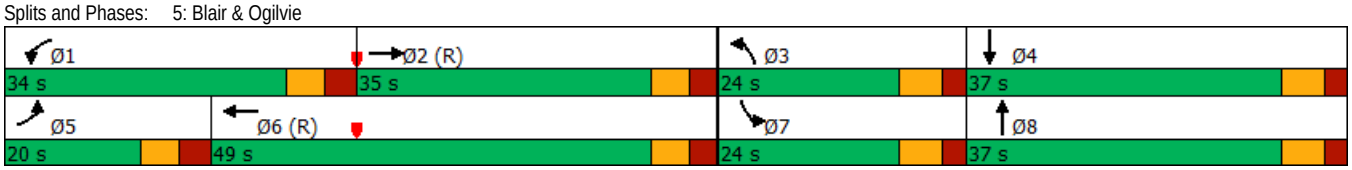
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	547	656	588	408	65	286	319	559	56	701	70
Future Volume (vph)	116	547	656	588	408	65	286	319	559	56	701	70
Adj. Flow (vph)	122	576	691	619	429	68	301	336	588	59	738	74
Lane Group Flow (vph)	122	576	691	619	497	0	301	336	588	59	812	0
Turn Type	Prot	NA	Free	Prot	NA		Prot	NA	Free	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			Free						Free			
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.8	34.4		11.8	34.4		11.5	33.5		11.5	33.5	
Total Split (s)	20.0	35.0		34.0	49.0		24.0	37.0		24.0	37.0	
Total Split (%)	15.4%	26.9%		26.2%	37.7%		18.5%	28.5%		18.5%	28.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		4.2	4.2		4.2	4.2	
All-Red Time (s)	3.1	2.7		3.1	2.7		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	-2.8	-2.4		-2.8	-2.4		-2.5	-2.5		-2.5	-2.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	15.0	32.4	130.0	29.2	46.6		18.5	42.6	130.0	12.4	34.0	
Actuated g/C Ratio	0.12	0.25	1.00	0.22	0.36		0.14	0.33	1.00	0.10	0.26	
v/c Ratio	0.63	0.68	0.47	0.84	0.43		0.64	0.58	0.40	0.37	0.93	
Control Delay	69.4	49.4	1.1	59.4	32.4		59.3	42.5	0.8	60.6	64.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	69.4	49.4	1.1	59.4	32.4		59.3	42.5	0.8	60.6	64.1	
LOS	E	D	A	E	C		E	D	A	E	E	
Approach Delay		27.1			47.4			26.6			63.9	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	30.0	71.7	0.0	77.9	49.8		37.6	72.9	0.0	14.4	107.1	
Queue Length 95th (m)	50.5	92.1	0.0	99.5	65.8		52.4	109.6	0.0	27.6	#147.5	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	208	843	1457	758	1162		505	584	1466	260	874	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.59	0.68	0.47	0.82	0.43		0.60	0.58	0.40	0.23	0.93	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 38.9 Intersection LOS: D
Intersection Capacity Utilization 86.1% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie



Existing PM
6: Blair & OR174 WB Off

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	0	486	96	108	142	306	904	0	0	1759	174
Future Volume (vph)	127	0	486	96	108	142	306	904	0	0	1759	174
Adj. Flow (vph)	134	0	512	101	114	149	322	952	0	0	1852	183
Lane Group Flow (vph)	134	0	512	101	114	149	322	952	0	0	1852	183
Turn Type	Perm		pm+ov	Perm	NA	Free	Prot	NA			NA	Free
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		Free						Free
Detector Phase	4		5	8	8		5	2			6	
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)	36.8		11.4	36.8	36.8		11.4	30.1			30.1	
Total Split (s)	36.8		31.0	36.8	36.8		31.0	94.0			63.0	
Total Split (%)	28.1%		23.7%	28.1%	28.1%		23.7%	71.9%			48.2%	
Yellow Time (s)	3.3		4.2	3.3	3.3		4.2	4.2			4.2	
All-Red Time (s)	3.5		1.9	3.5	3.5		1.9	1.9			1.9	
Lost Time Adjust (s)	-2.8		-2.1	-2.8	-2.8		-2.1	-2.1			-2.1	
Total Lost Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag			Lead				Lead				Lag	
Lead-Lag Optimize?			Yes				Yes				Yes	
Recall Mode	None		None	None	None		None	C-Max			C-Max	
Act Effct Green (s)	25.5		54.4	25.5	25.5	130.8	24.9	97.3			68.4	130.8
Actuated g/C Ratio	0.19		0.42	0.19	0.19	1.00	0.19	0.74			0.52	1.00
v/c Ratio	0.68		0.79	0.31	0.33	0.10	0.51	0.38			0.73	0.12
Control Delay	64.7		40.4	45.8	46.2	0.1	50.4	7.1			27.5	0.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	64.7		40.4	45.8	46.2	0.1	50.4	7.1			27.5	0.2
LOS	E		D	D	D	A	D	A			C	A
Approach Delay		45.5			27.2			18.0			25.1	
Approach LOS		D			C			B			C	
Queue Length 50th (m)	32.1		106.9	22.3	25.3	0.0	38.7	41.6			132.8	0.0
Queue Length 95th (m)	51.7		134.7	36.5	40.1	0.0	52.5	62.6			172.9	0.0
Internal Link Dist (m)		137.2			105.9			129.2			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	256		669	425	447	1478	678	2522			2547	1498
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.52		0.77	0.24	0.26	0.10	0.47	0.38			0.73	0.12

Intersection Summary

Cycle Length: 130.8
Actuated Cycle Length: 130.8
Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 86.0% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016

Splits and Phases: 6: Blair & OR174 WB Off

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	90	131	74	33	127	81
Future Volume (vph)	90	131	74	33	127	81
Adj. Flow (vph)	95	138	78	35	134	85
Lane Group Flow (vph)	233	0	0	113	219	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 42.3%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	90	131	74	33	127	81
Future Volume (Veh/h)	90	131	74	33	127	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)	95	138	78	35	134	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)				287		
pX, platoon unblocked						
vC, conflicting volume			233		355	164
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			233		355	164
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		78	90
cM capacity (veh/h)			1335		605	881

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	233	113	219
Volume Left	0	78	134
Volume Right	138	0	85
cSH	1700	1335	689
Volume to Capacity	0.14	0.06	0.32
Queue Length 95th (m)	0.0	1.4	10.4
Control Delay (s)	0.0	5.6	12.6
Lane LOS		A	B
Approach Delay (s)	0.0	5.6	12.6
Approach LOS			B

Intersection Summary			
Average Delay		6.0	
Intersection Capacity Utilization		42.3%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	183	6	24	110	26	5	1	24	13	5	4
Future Volume (vph)	5	183	6	24	110	26	5	1	24	13	5	4
Adj. Flow (vph)	5	193	6	25	116	27	5	1	25	14	5	4
Lane Group Flow (vph)	0	204	0	0	168	0	0	31	0	0	23	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 31.2%	ICU Level of Service A
Analysis Period (min) 15	

Existing PM
8: City Park & SilverCity

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	183	6	24	110	26	5	1	24	13	5	4
Future Volume (vph)	5	183	6	24	110	26	5	1	24	13	5	4
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
Hourly flow rate (vph)	5	193	6	25	116	27	5	1	25	14	5	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	204	168	31	23
Volume Left (vph)	5	25	5	14
Volume Right (vph)	6	27	25	4
Hadj (s)	0.02	-0.03	-0.42	0.05
Departure Headway (s)	4.2	4.2	4.3	4.8
Degree Utilization, x	0.24	0.20	0.04	0.03
Capacity (veh/h)	835	838	761	684
Control Delay (s)	8.5	8.2	7.5	8.0
Approach Delay (s)	8.5	8.2	7.5	8.0
Approach LOS	A	A	A	A

Intersection Summary				
Delay		8.3		
Level of Service		A		
Intersection Capacity Utilization	31.2%		ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	207	0	0	164	0	0
Future Volume (vph)	207	0	0	164	0	0
Adj. Flow (vph)	218	0	0	173	0	0
Lane Group Flow (vph)	218	0	0	173	0	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 14.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	0	0	164	0	0
Future Volume (Veh/h)	207	0	0	164	0	0
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)	218	0	0	173	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			218		391	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			218		391	218
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1352		613	822

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	218	173	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1352	1700
Volume to Capacity	0.13	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	204	597	800	320	521	922
Future Volume (vph)	204	597	800	320	521	922
Adj. Flow (vph)	215	628	842	337	548	971
Lane Group Flow (vph)	215	628	842	337	0	1519
Turn Type	Prot	Free	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	16.0	30.5
Total Split (s)	30.0		52.0	52.0	28.0	80.0
Total Split (%)	27.3%		47.3%	47.3%	25.5%	72.7%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	1.8	2.3
Lost Time Adjust (s)	-2.3		-2.5	-2.5		-2.5
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effct Green (s)	21.0	110.0	81.0	81.0		81.0
Actuated g/C Ratio	0.19	1.00	0.74	0.74		0.74
v/c Ratio	0.67	0.41	0.34	0.29		1.33dl
Control Delay	51.2	0.8	5.9	1.2		67.9
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	51.2	0.8	5.9	1.2		67.9
LOS	D	A	A	A		E
Approach Delay	13.7		4.6			67.9
Approach LOS	B		A			E
Queue Length 50th (m)	42.9	0.0	29.1	0.0		~193.7
Queue Length 95th (m)	64.4	0.0	44.4	7.9		#245.1
Internal Link Dist (m)	176.5		168.4			103.4
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	400	1517	2497	1181		1401
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.54	0.41	0.34	0.29		1.08

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 33.9 Intersection LOS: C
Intersection Capacity Utilization 88.2% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 10: Blair & OR174 EB

Appendix D

COLLISION DATA

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	181	40	39	19	0	12	0	4	295	76%
Non-fatal injury	48	22	3	10	1	9	0	1	94	24%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**229**	**62**	**42**	**29**	**1**	**21**	**0**	**5**	**389**	100%
	#1 or 59%	#2 or 16%	#3 or 11%	#4 or 7%	#7 or 0%	#5 or 5%	#8 or 0%	#6 or 1%		

BLAIR RD / OGILVIE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	97	42,308	1826	**1.26**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	57	5	12	2	0	1	0	1	78	80%
Non-fatal injury	14	2	1	0	0	2	0	0	19	20%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**71**	**7**	**13**	**2**	**0**	**3**	**0**	**1**	**97**	100%
	73%	7%	13%	2%	0%	3%	0%	1%		

BLAIR RD / OR174 IC112 RAMP25

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	5	34,443	1826	**0.08**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	0	0	0	0	2	0	0	3	60%
Non-fatal injury	2	0	0	0	0	0	0	0	2	40%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**3**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	100%
	60%	0%	0%	0%	0%	40%	0%	0%		

BLAIR RD / REGIONAL RD 174 N / OR174 IC112 RAMP61

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	100	34,443	1826	**1.59**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	46	13	7	5	0	1	0	1	73	73%
Non-fatal injury	14	4	1	7	0	0	0	1	27	27%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**60**	**17**	**8**	**12**	**0**	**1**	**0**	**2**	**100**	100%
	60%	17%	8%	12%	0%	1%	0%	2%		

BLAIR RD / REGIONAL RD 174 S / OR174 IC112 RAMP15

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	70	34,443	1826	**1.11**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	35	11	5	1	0	3	0	1	56	80%
Non-fatal injury	5	8	0	0	1	0	0	0	14	20%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**40**	**19**	**5**	**1**	**1**	**3**	**0**	**1**	**70**	100%
	57%	27%	7%	1%	1%	4%	0%	1%		

BLAIR RD, OGILVIE RD to OR174 IC112 RAMP36

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	9	34,443	1826	**0.14**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	4	0	3	0	0	1	0	0	8	89%
Non-fatal injury	1	0	0	0	0	0	0	0	1	11%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**5**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**9**	100%
	56%	0%	33%	0%	0%	11%	0%	0%		

BLAIR RD, OR174 IC112 RAMP26 to OR174 IC112 RAMP36

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	8	n/a	1826	**n/a**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	3	0	4	0	0	0	0	0	7	88%
Non-fatal injury	1	0	0	0	0	0	0	0	1	13%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**4**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**8**	100%
	50%	0%	50%	0%	0%	0%	0%	0%		

OGILVIE RD / 85 E OF BATHGATE DR / 185 E OF CIT

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	4	16,010	1826	**0.14**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	2	1	0	0	0	0	0	0	3	75%
Non-fatal injury	0	0	1	0	0	0	0	0	1	25%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	100%
	50%	25%	25%	0%	0%	0%	0%	0%		

OGILVIE RD / BATHGATE DR / CITYPARK DR W

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	36	17,728	1826	**1.11**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	8	4	3	7	0	1	0	1	24	67%
Non-fatal injury	3	3	0	3	0	3	0	0	12	33%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**11**	**7**	**3**	**10**	**0**	**4**	**0**	**1**	**36**	100%
	31%	19%	8%	28%	0%	11%	0%	3%		

OGILVIE RD / CITY PARK DR E / CSIS HQ ACCESS

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	40	17,728	1826	**1.24**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	19	6	0	2	0	0	0	0	27	68%
Non-fatal injury	4	5	0	0	0	4	0	0	13	33%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**23**	**11**	**0**	**2**	**0**	**4**	**0**	**0**	**40**	100%
	58%	28%	0%	5%	0%	10%	0%	0%		

OGILVIE RD, BATHGATE DR to CITY PARK DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	7	n/a	1826	**n/a**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	2	0	1	0	0	0	0	0	3	43%
Non-fatal injury	4	0	0	0	0	0	0	0	4	57%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**7**	100%
	86%	0%	14%	0%	0%	0%	0%	0%		

OGILVIE RD, CITY PARK DR to BLAIR RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2013-2017	13	n/a	1826	**n/a**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	4	0	4	2	0	3	0	0	13	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**4**	**0**	**4**	**2**	**0**	**3**	**0**	**0**	**13**	100%
	31%	0%	31%	15%	0%	23%	0%	0%		

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2013 **To:** December 31, 2017

Location: BLAIR RD @ OGILVIE RD

Traffic Control: Traffic signal **Total Collisions:** 97

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jan-06, Sun,09:19	Snow	Sideswipe	P.D. only	Packed snow	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	
2013-Jan-06, Sun,11:09	Snow	Rear end	Non-fatal injury	Slush	West	Turning left	Pick-up truck	Other motor vehicle	
					West	Turning left	Pick-up truck	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Jan-10, Thu,17:20	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	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Passenger van	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Jan-15, Tue,11:54	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	

2013-Jan-22, Tue,09:00	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Jan-28, Mon,14:03	Snow	SMV other	Non-fatal injury	Wet	West	Turning left	Passenger van	Pedestrian	1
2013-Feb-05, Tue,20:32	Snow	Turning movement	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Pick-up truck	Other motor vehicle	
2013-Feb-17, Sun,09:05	Clear	Rear end	P.D. only	Dry	North	Turning left	Passenger van	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Feb-26, Tue,17:15	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Mar-21, Thu,08:00	Clear	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Passenger van	Other motor vehicle	
2013-May-23, Thu,17:29	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	
					North	Stopped	Passenger van	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	

2013-Jun-01, Sat,10:12	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
2013-Jun-06, Thu,12:15	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
2013-Jun-27, Thu,18:00	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2013-Jun-28, Fri,09:09	Rain	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2013-Jun-28, Fri,17:15	Rain	Rear end	P.D. only	Wet	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2013-Jul-24, Wed,17:58	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2013-Jul-25, Thu,12:35	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

2013-Sep-06, Fri,17:04	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2013-Sep-09, Mon,10:05	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Pick-up truck	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2013-Oct-03, Thu,13:00	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2013-Nov-04, Mon,14:25	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2013-Dec-04, Wed,15:45	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2013-Dec-09, Mon,02:55	Snow	Turning movement	Non-fatal injury	Wet	North	Turning left	Police vehicle	Other motor vehicle
					North	Going ahead	Police vehicle	Other motor vehicle
2013-Dec-14, Sat,21:24	Snow	Angle	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle

2013-Dec-16, Mon,11:43	Clear	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Dec-18, Wed,08:35	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
2013-Dec-23, Mon,10:49	Clear	Sideswipe	P.D. only	Wet	West	Overtaking	Automobile, station wagon	Other motor vehicle
					West	Turning left	Truck - tractor	Other motor vehicle
2014-Feb-26, Wed,17:00	Clear	Turning movement	P.D. only	Dry	West	Turning left	Passenger van	Other motor vehicle
					West	Turning left	Pick-up truck	Other motor vehicle
2014-Mar-09, Sun,17:34	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Mar-26, Wed,15:53	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2014-May-03, Sat,14:20	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

2014-May-13, Tue,12:40	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Passenger van	Other motor vehicle
2014-May-21, Wed,13:10	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jun-17, Tue,14:39	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Moped	Other motor vehicle
2014-Jul-25, Fri,21:02	Clear	Rear end	Non-fatal injury	Dry	East	Changing lanes	Pick-up truck	Cyclist
					East	Going ahead	Bicycle	Other motor vehicle
2014-Aug-02, Sat,18:12	Clear	SMV other	P.D. only	Dry	East	Turning left	Automobile, station wagon	Curb
2014-Sep-02, Tue,17:00	Rain	Rear end	P.D. only	Wet	North	Turning right	Pick-up truck	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2014-Dec-13, Sat,18:35	Clear	Rear end	Non-fatal injury	Wet	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-06, Tue,18:29	Rain	Rear end	P.D. only	Slush	East	Turning right	Passenger van	Other motor vehicle

					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jan-20, Tue,15:50	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Unknown	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jan-23, Fri,00:50	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jan-28, Wed,14:30	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-Feb-13, Fri,08:42	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Feb-22, Sun,14:44	Clear	Rear end	P.D. only	Ice	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Feb-26, Thu,19:05	Clear	Rear end	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-20, Fri,14:22	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle

					South	Turning right	Pick-up truck	Other motor vehicle
2015-Apr-03, Fri,18:16	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2015-Apr-06, Mon,20:19	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Apr-21, Tue,08:43	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-May-08, Fri,17:30	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Unknown	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2015-May-13, Wed,13:41	Clear	Rear end	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2015-Jun-11, Thu,15:15	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2015-Jun-11, Thu,16:09	Clear	Turning movement	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Cyclist

					East	Going ahead	Bicycle	Other motor vehicle
2015-Jul-06, Mon,15:55	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Aug-26, Wed,19:29	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-Sep-15, Tue,16:41	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2015-Sep-23, Wed,08:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Unknown	Unknown	Other motor vehicle
2015-Sep-25, Fri,09:32	Clear	Rear end	P.D. only	Dry	West	Going ahead	Delivery van	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Oct-08, Thu,15:40	Clear	Sideswipe	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Truck and trailer	Other motor vehicle
2015-Oct-23, Fri,13:55	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-Nov-05, Thu,16:31	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Nov-02, Mon,11:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Nov-26, Thu,13:52	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2015-Dec-10, Thu,11:28	Clear	Rear end	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Dec-15, Tue,06:15	Rain	Turning movement	P.D. only	Wet	West	Going ahead	Passenger van	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2015-Dec-31, Thu,17:45	Clear	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Municipal transit bus	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2016-Jan-12, Tue,18:26	Clear	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle

					East	Stopped	Pick-up truck	Other motor vehicle
2016-Feb-07, Sun,13:34	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Passenger van	Other motor vehicle
2016-Feb-12, Fri,17:15	Snow	Rear end	P.D. only	Loose snow	South	Unknown	Unknown	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2016-May-03, Tue,08:59	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-May-12, Thu,16:34	Clear	Sideswipe	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2016-Jun-09, Thu,06:35	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Motorcycle	Skidding/sliding
2016-Jul-22, Fri,14:29	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2016-Aug-02, Tue,21:37	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2016-Aug-12, Fri,16:16	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Sep-10, Sat,17:02	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
2016-Sep-19, Mon,07:32	Clear	Rear end	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Dec-14, Wed,14:25	Clear	Rear end	P.D. only	Slush	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2017-Jan-06, Fri,15:05	Clear	Sideswipe	P.D. only	Loose snow	South	Overtaking	Delivery van	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2017-Jan-19, Thu,17:36	Clear	Rear end	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2017-Feb-02, Thu,17:08	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

2017-Apr-04, Tue,11:34	Rain	Sideswipe	P.D. only	Wet	West	Overtaking	Automobile, station wagon	Other motor vehicle
					West	Turning left	Pick-up truck	Other motor vehicle
2017-May-23, Tue,09:02	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Municipal transit bus	Other motor vehicle
2017-Aug-17, Thu,21:39	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-04, Mon,15:05	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Sep-06, Wed,11:09	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-17, Sun,11:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-04, Wed,13:16	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle

					East	Turning left	Automobile, station wagon	Other motor vehicle
2017-Oct-27, Fri,11:57	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-30, Mon,09:29	Rain	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Tow truck	Other motor vehicle
2017-Nov-21, Tue,15:59	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Passenger van	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2017-Nov-29, Wed,08:56	Clear	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-Dec-05, Tue,20:15	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-14, Thu,02:40	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2017-Dec-23, Sat,14:16	Snow	Rear end	P.D. only	Loose snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-31, Sun,12:59	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

Location: BLAIR RD @ OR174 IC112 RAMP26

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Aug-28, Thu,17:21	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Cyclist	
					North	Going ahead	Bicycle	Other motor vehicle	
2015-Nov-01, Sun,01:42	Rain	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Ran off road	
2016-Nov-26, Sat,11:07	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Steel guide rail	
2017-Aug-03, Thu,08:15	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Location: BLAIR RD @ OR174 IC112 RAMP52

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped

2016-Dec-08, Thu,17:12	Snow	Rear end	Non-fatal injury	Loose snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	

Location: BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Traffic Control: Traffic signal **Total Collisions:** 100

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jan-01, Tue,10:07	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Pick-up truck	Other motor vehicle	
2013-Jan-23, Wed,08:20	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2013-Jan-23, Wed,13:38	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Passenger van	Other motor vehicle	
2013-Jan-29, Tue,17:25	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	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Feb-08, Fri,15:06	Snow	Angle	P.D. only	Loose snow	West	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Municipal transit bus	Other motor vehicle	

2013-Feb-22, Fri,11:30	Clear	Other	P.D. only	Dry	North	Reversing	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Mar-20, Wed,19:13	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Apr-11, Thu,14:21	Clear	Turning movement	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Passenger van	Other motor vehicle
2013-May-06, Mon,07:43	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2013-May-13, Mon,16:10	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2013-Jun-14, Fri,09:32	Clear	Angle	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2013-Jun-21, Fri,16:10	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2013-Jun-24, Mon,06:30	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2013-Jul-07, Sun,16:17	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Passenger van	Other motor vehicle
					North	Changing lanes	Passenger van	Other motor vehicle
2013-Sep-25, Wed,07:05	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
2013-Sep-30, Mon,09:57	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2013-Oct-17, Thu,00:26	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Oct-17, Thu,07:30	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2013-Oct-21, Mon,15:29	Clear	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle

2013-Oct-28, Mon,08:00	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2013-Oct-31, Thu,19:26	Rain	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Passenger van	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2013-Nov-21, Thu,14:49	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2013-Nov-26, Tue,21:56	Snow	Turning movement	P.D. only	Loose snow	East	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2013-Nov-30, Sat,09:45	Clear	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2013-Dec-14, Sat,21:50	Snow	SMV other	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Skidding/sliding
2013-Dec-18, Wed,19:21	Snow	Rear end	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle

2013-Dec-20, Fri,10:08	Snow	Turning movement	P.D. only	Slush	East	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2013-Dec-20, Fri,15:44	Snow	Turning movement	P.D. only	Loose snow	East	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2014-Jan-20, Mon,08:30	Clear	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Feb-14, Fri,12:47	Snow	Rear end	Non-fatal injury	Loose snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Feb-25, Tue,10:04	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
2014-Jun-15, Sun,13:42	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-02, Wed,10:11	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Passenger van	Other motor vehicle

2014-Aug-30, Sat,12:35	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Passenger van	Other motor vehicle
2014-Sep-10, Wed,14:52	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2014-Sep-20, Sat,08:54	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Oct-14, Tue,06:53	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
2014-Oct-15, Wed,19:09	Rain	Turning movement	P.D. only	Wet	East	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Nov-14, Fri,13:08	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
2014-Dec-03, Wed,18:27	Snow	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Passenger van	Other motor vehicle

2014-Dec-18, Thu,08:30	Snow	Rear end	Non-fatal injury	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Dec-29, Mon,16:00	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jan-05, Mon,16:46	Clear	Rear end	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-06, Tue,15:40	Clear	Rear end	P.D. only	Ice	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Stopped	Delivery van	Other motor vehicle
2015-Jan-19, Mon,14:56	Clear	Rear end	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Police vehicle	Other motor vehicle
2015-Feb-09, Mon,08:05	Clear	Rear end	Non-fatal injury	Loose snow	West	Slowing or stopping	Pick-up truck	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Feb-14, Sat,11:47	Drifting Snow	Rear end	P.D. only	Packed snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2015-Feb-14, Sat,21:06	Snow	Angle	P.D. only	Loose snow	East	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Feb-17, Tue,11:12	Clear	Sideswipe	Non-fatal injury	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Truck - dump	Other motor vehicle
2015-Feb-17, Tue,18:50	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Feb-21, Sat,18:31	Snow	Rear end	P.D. only	Loose snow	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-03, Tue,07:20	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-18, Wed,08:35	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-20, Fri,14:14	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2015-Mar-21, Sat,10:37	Rain	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2015-Apr-20, Mon,08:36	Rain	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2015-Jun-23, Tue,19:46	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-Jun-29, Mon,12:52	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-08, Wed,20:25	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-15, Wed,12:15	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Sep-21, Mon,22:10	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2015-Sep-28, Mon,18:21	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-Oct-13, Tue,09:49	Rain	Other	Non-fatal injury	Wet	West	Turning left	Pick-up truck	Curb
					North	Turning left	Municipal transit bus	Other motor vehicle
2015-Oct-19, Mon,18:59	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2015-Oct-23, Fri,15:41	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-Oct-26, Mon,09:15	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Nov-10, Tue,18:00	Clear	Turning movement	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Nov-25, Wed,06:55	Fog, mist, smoke, dust	Rear end	Non-fatal injury	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2015-Dec-15, Tue,13:20	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle
					West	Turning left	Pick-up truck	Other motor vehicle
2016-Feb-09, Tue,15:48	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Apr-01, Fri,16:00	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-May-17, Tue,10:47	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2016-Jun-29, Wed,08:52	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Passenger van	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Sep-10, Sat,23:18	Rain	Turning movement	P.D. only	Wet	South	Going ahead	Passenger van	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Sep-19, Mon,19:42	Clear	Sideswipe	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle

2016-Sep-23, Fri,07:30	Rain	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-Oct-22, Sat,00:33	Rain	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Nov-14, Mon,14:08	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2016-Nov-21, Mon,09:10	Snow	Rear end	P.D. only	Slush	West	Slowing or stopping	Pick-up truck	Other motor vehicle
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Jan-06, Fri,14:40	Clear	Turning movement	P.D. only	Wet	East	Turning left	Passenger van	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jan-19, Thu,14:56	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2017-Jan-21, Sat,18:24	Clear	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
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

2017-Feb-04, Sat,18:10	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Mar-18, Sat,10:00	Clear	Rear end	Non-fatal injury	Dry	South	Turning right	Pick-up truck	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2017-Mar-18, Sat,21:47	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
2017-Apr-03, Mon,07:46	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Apr-15, Sat,17:08	Rain	Turning movement	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Municipal transit bus	Other motor vehicle
2017-May-04, Thu,21:21	Rain	Turning movement	P.D. only	Wet	East	Turning left	Unknown	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2017-May-14, Sun,11:00	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Unknown	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2017-May-18, Thu,07:40	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2017-May-24, Wed,10:30	Clear	Turning movement	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Passenger van	Other motor vehicle
2017-May-24, Wed,21:22	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jun-07, Wed,20:01	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jun-14, Wed,13:58	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
2017-Jul-18, Tue,08:08	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Aug-04, Fri,15:48	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2017-Aug-11, Fri,00:40	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Oct-04, Wed,12:26	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Oct-16, Mon,08:26	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	
2017-Nov-07, Tue,07:45	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Passenger van	Other motor vehicle	

Location: BLAIR RD @ REGIONAL RD 174 S/OR174 IC112 RAMP15

Traffic Control: Traffic signal **Total Collisions:** 70

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Mar-13, Wed,15:30	Clear	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Mar-22, Fri,09:15	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Mar-22, Fri,09:29	Clear	Rear end	P.D. only	Wet	South	Going ahead	Tow truck	Other motor vehicle	

					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Apr-24, Wed,16:03	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Truck - closed	Other motor vehicle
2013-Jun-07, Fri,12:15	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Jun-11, Tue,19:24	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Jun-22, Sat,12:49	Rain	SMV other	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Skidding/sliding
2013-Jul-12, Fri,10:16	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Delivery van	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2013-Jul-27, Sat,10:43	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Skidding/sliding
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2013-Jul-27, Sat,14:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2013-Aug-01, Thu,12:56	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2013-Sep-12, Thu,17:23	Rain	Turning movement	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2013-Oct-26, Sat,13:49	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Passenger van	Other motor vehicle
2014-Jan-03, Fri,12:40	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2014-Feb-18, Tue,08:30	Snow	Rear end	P.D. only	Loose snow	North	Slowing or stopping	Pick-up truck	Skidding/sliding
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Apr-29, Tue,21:15	Rain	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2014-Jun-03, Tue,12:18	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle

					South	Stopped	Automobile, station wagon	Other motor vehicle
2014-Jun-21, Sat,13:05	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2014-Jul-08, Tue,17:15	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Jul-31, Thu,12:21	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2014-Oct-04, Sat,14:57	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Oct-04, Sat,13:00	Rain	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2014-Oct-06, Mon,17:32	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-03, Sat,17:44	Snow	Turning movement	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle

					North	Going ahead	Pick-up truck	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jan-31, Sat,05:40	Clear	Sideswipe	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Feb-12, Thu,18:18	Clear	Rear end	Non-fatal injury	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Mar-31, Tue,14:14	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2015-Jun-05, Fri,16:49	Rain	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Passenger van	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jul-07, Tue,16:03	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jul-11, Sat,11:47	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2015-Sep-28, Mon,14:42	Rain	Rear end	Non-fatal injury	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2015-Sep-28, Mon,15:20	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Oct-26, Mon,08:12	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2015-Oct-28, Wed,21:07	Rain	Rear end	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2015-Oct-30, Fri,14:40	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Nov-13, Fri,12:06	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Dec-21, Mon,17:00	Freezing Rain	Turning movement	P.D. only	Ice	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

2016-Jan-15, Fri,18:30	Clear	Turning movement	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Jan-17, Sun,11:32	Clear	Turning movement	Non-fatal injury	Wet	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Feb-06, Sat,13:10	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Automobile, station wagon	Other motor vehicle
					West	Stopped	Passenger van	Other motor vehicle
2016-Feb-21, Sun,10:17	Clear	Turning movement	Non-fatal injury	Wet	North	Making "U" turn	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2016-Feb-27, Sat,21:55	Clear	Turning movement	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2016-Aug-03, Wed,23:01	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Motorcycle	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2016-Sep-07, Wed,21:59	Rain	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2016-Nov-02, Wed,15:30	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Nov-26, Sat,15:25	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Nov-30, Wed,19:50	Rain	Turning movement	Non-fatal injury	Wet	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Passenger van	Skidding/sliding
					South	Stopped	Pick-up truck	Other motor vehicle
2017-Jan-09, Mon,13:30	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jan-10, Tue,08:30	Snow	SMV other	P.D. only	Slush	East	Going ahead	Automobile, station wagon	Cable guide rail
2017-Feb-11, Sat,11:51	Clear	Other	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Debris falling off vehicle
					East	Going ahead	Automobile, station wagon	Other
2017-Feb-12, Sun,02:45	Snow	Rear end	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

2017-Mar-02, Thu,16:09	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
2017-Mar-08, Wed,15:18	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2017-Jun-07, Wed,09:00	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
2017-Jun-29, Thu,12:08	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Aug-10, Thu,09:01	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Aug-18, Fri,17:56	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-12, Tue,17:08	Clear	Sideswipe	P.D. only	Dry	East	Merging	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle

2017-Sep-29, Fri,22:20	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-12, Thu,07:35	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2017-Nov-01, Wed,17:09	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Nov-02, Thu,13:43	Rain	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-05, Tue,11:37	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-11, Mon,12:23	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Truck - dump	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Dec-23, Sat,11:59	Snow	Turning movement	Non-fatal injury	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

2017-Dec-27, Wed,13:15	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Dec-28, Thu,07:00	Clear	SMV other	P.D. only	Ice	East	Merging	Automobile, station wagon	Snowbank/drift	
2017-Dec-28, Thu,17:45	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-29, Fri,16:16	Clear	Turning movement	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Dec-29, Fri,18:14	Clear	Approaching	Non-fatal injury	Other	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Location: BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36

Traffic Control: No control

Total Collisions: 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Apr-05, Fri,16:46	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2013-Jul-19, Fri,16:30	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	

					North	Stopped	Automobile, station wagon	Other motor vehicle
2013-Jul-31, Wed,18:45	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Curb
2013-Sep-26, Thu,16:08	Clear	Rear end	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle
					South	Merging	Pick-up truck	Other motor vehicle
2015-Jan-23, Fri,15:09	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Oct-05, Mon,15:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Oct-27, Thu,21:54	Snow	Rear end	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Nov-14, Mon,18:02	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Aug-10, Thu,20:00	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

Location: BLAIR RD btwn OR174 IC112 RAMP26 & OR174 IC112 RAMP52

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Mar-01, Fri,16:35	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
2013-May-24, Fri,13:38	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2014-Jul-08, Tue,16:24	Rain	Rear end	P.D. only	Wet	South	Changing lanes	Pick-up truck	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Oct-21, Fri,18:27	Rain	Rear end	Non-fatal injury	Wet	North	Changing lanes	Automobile, station wagon	Cyclist	
					North	Going ahead	Bicycle	Other motor vehicle	

Location: BLAIR RD btwn OR174 IC112 RAMP36 & OR174 IC112 RAMP26

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Mar-12, Tue,16:06	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Passenger van	Other motor vehicle	
2013-Nov-01, Fri,18:15	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	

					North	Turning left	Municipal transit bus	Other motor vehicle	
2016-Oct-31, Mon,14:50	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: BLAIR RD btwn OR174 IC112 RAMP52 & OR174 IC112 RAMP53

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Oct-16, Fri,20:55	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	

Location: OGILVIE RD @ 185 E OF BATHGATE DR/185 E OF CIT

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jan-08, Tue,00:00	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-Jan-10, Sat,14:33	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Pick-up truck	Other motor vehicle	
2015-Apr-02, Thu,20:29	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	

					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Oct-16, Fri,16:44	Clear	Sideswipe	Non-fatal injury	Dry	East	Going ahead	Truck - dump	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: OGILVIE RD @ 240 W OF BLAIR RD

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jun-24, Tue,15:34	Rain	Rear end	Non-fatal injury	Wet	West	Going ahead	Tow truck	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Feb-12, Thu,08:30	Clear	Rear end	P.D. only	Slush	North	Slowing or stopping	Pick-up truck	Skidding/sliding	
					North	Stopped	Delivery van	Other motor vehicle	
2016-Jan-12, Tue,14:33	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	
2016-Oct-17, Mon,15:40	Clear	Rear end	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	
					South	Turning right	Automobile, station wagon	Other motor vehicle	

Location: OGILVIE RD @ BATHGATE DR/CITYPARK DR W

Traffic Control: Traffic signal **Total Collisions:** 36

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped

2013-May-29, Wed,13:24	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Pick-up truck	Other motor vehicle	
2013-Jun-07, Fri,21:30	Rain	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Aug-23, Fri,07:45	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2013-Oct-11, Fri,14:00	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Dec-12, Thu,17:00	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-06, Thu,13:00	Clear	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-26, Wed,16:41	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Pick-up truck	Pedestrian	1

2014-Mar-03, Mon,13:35	Clear	Angle	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Mar-13, Thu,17:22	Clear	Rear end	P.D. only	Dry	East	Changing lanes	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2014-Sep-04, Thu,18:07	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Sep-08, Mon,17:33	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2014-Sep-11, Thu,14:28	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Nov-21, Fri,19:54	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Passenger van	Other motor vehicle
2014-Dec-02, Tue,18:04	Clear	Angle	P.D. only	Dry	South	Turning right	Unknown	Cyclist
					West	Going ahead	Bicycle	Other motor vehicle

2015-Apr-20, Mon,17:13	Clear	Turning movement	Non-fatal injury	Wet	West	Turning left	Passenger van	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	
2015-Nov-04, Wed,16:18	Clear	Turning movement	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Nov-27, Fri,13:31	Rain	SMV other	Non-fatal injury	Wet	South	Turning left	Pick-up truck	Pedestrian	1
2016-Jan-05, Tue,08:46	Clear	Turning movement	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jan-05, Tue,08:40	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Municipal transit bus	Other motor vehicle	
2016-Jan-09, Sat,18:15	Clear	Other	P.D. only	Wet	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	
					South	Turning right	Pick-up truck	Other motor vehicle	
2016-Mar-12, Sat,13:43	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Pick-up truck	Other motor vehicle	
					West	Changing lanes	Automobile, station wagon	Other motor vehicle	
2016-Jun-01, Wed,10:10	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	

					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-11, Sat,15:14	Clear	Rear end	P.D. only	Dry	South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Aug-13, Sat,10:27	Rain	Angle	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Nov-06, Sun,15:45	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Passenger van	Pedestrian	1
2017-Jan-09, Mon,18:30	Clear	Sideswipe	P.D. only	Slush	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jan-20, Fri,14:48	Freezing Rain	Rear end	Non-fatal injury	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2017-Feb-18, Sat,12:10	Clear	Angle	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Mar-04, Sat,00:30	Snow	SMV other	P.D. only	Ice	West	Turning left	Automobile, station wagon	Skidding/sliding	

2017-Mar-12, Sun,14:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Apr-09, Sun,22:06	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Unknown	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jun-20, Tue,08:06	Rain	Sideswipe	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jul-21, Fri,16:02	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Municipal transit bus	Other motor vehicle
2017-Oct-11, Wed,15:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Nov-27, Mon,12:14	Clear	Angle	P.D. only	Ice	South	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-29, Fri,10:41	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle

Location: OGILVIE RD @ CITY PARK DR E/CSIS HQ ACCESS

Traffic Control: Traffic signal

Total Collisions: 41

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jun-02, Sun,10:53	Clear	Turning movement	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2013-Sep-22, Sun,15:49	Clear	SMV other	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Pedestrian	2
2014-Jan-14, Tue,11:57	Clear	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Passenger van	Other motor vehicle	
2014-Jan-21, Tue,15:49	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Unknown	Automobile, station wagon	Other motor vehicle	
2014-Jul-19, Sat,14:48	Clear	Turning movement	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Dec-09, Tue,18:30	Clear	Rear end	P.D. only	Packed snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	

2014-Dec-10, Wed,17:24	Snow	Turning movement	P.D. only	Loose snow	West	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Dec-10, Wed,16:40	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	
2014-Dec-30, Tue,13:13	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
2015-Jan-02, Fri,15:00	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Jan-14, Wed,22:05	Strong wind	Rear end	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jan-28, Wed,16:51	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Pedestrian	1
2015-Feb-17, Tue,17:37	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
2015-Feb-17, Tue,08:00	Snow	Rear end	P.D. only	Loose snow	West	Slowing or stopping	Passenger van	Other motor vehicle	

					West	Stopped	Delivery van	Other motor vehicle	
2015-Feb-27, Fri,07:40	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Mar-02, Mon,13:42	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Passenger van	Other motor vehicle	
2015-Apr-06, Mon,17:10	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-Apr-10, Fri,16:15	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2015-Apr-14, Tue,16:15	Clear	SMV other	Fatal injury	Dry	North	Turning left	Pick-up truck	Pedestrian	1
2015-Apr-20, Mon,13:42	Rain	Rear end	P.D. only	Wet	Unknown	Going ahead	Pick-up truck	Other motor vehicle	
					Unknown	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2015-May-19, Tue,16:51	Clear	Turning movement	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	

2015-Jul-03, Fri,18:16	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jul-25, Sat,18:20	Rain	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	
2015-Aug-11, Tue,18:57	Clear	Angle	P.D. only	Wet	North	Turning right	Automobile, station wagon	Cyclist	
					West	Unknown	Bicycle	Other motor vehicle	
2015-Sep-10, Thu,16:20	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Oct-26, Mon,13:13	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pedestrian	1
2015-Nov-02, Mon,15:15	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Dec-17, Thu,16:11	Rain	Rear end	P.D. only	Wet	East	Unknown	Unknown	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	

2016-Jan-29, Fri,12:48	Snow	Rear end	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2016-Jun-02, Thu,18:47	Clear	Turning movement	Non-fatal injury	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Jun-03, Fri,14:10	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2016-Jun-21, Tue,05:38	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle
2016-Sep-06, Tue,19:27	Clear	Turning movement	P.D. only	Dry	West	Making "U" turn	Pick-up truck	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Sep-08, Thu,13:51	Rain	Turning movement	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Oct-20, Thu,08:38	Fog, mist, smoke, dust	Turning movement	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle

2016-Dec-30, Fri,13:03	Clear	Rear end	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-17, Fri,18:51	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2017-May-18, Thu,19:13	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-May-23, Tue,12:53	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-03, Sun,17:40	Rain	SMV other	Non-fatal injury	Wet	East	Turning right	Automobile, station wagon	Curb
2017-Oct-13, Fri,11:42	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Making "U" turn	Automobile, station wagon	Other motor vehicle

Location: OGILVIE RD btwn BATHGATE DR & CITY PARK DR (1)

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped

2015-Nov-09, Mon,16:20	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2016-Jul-04, Mon,16:27	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Slowing or stopping	Pick-up truck	Other motor vehicle
2016-Aug-13, Sat,17:08	Snow	Rear end	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Slowing or stopping	Pick-up truck	Other motor vehicle
2017-Feb-15, Wed,09:37	Snow	Rear end	Non-fatal injury	Packed snow	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Municipal transit bus	Other motor vehicle

Location: OGILVIE RD btwn BATHGATE DR & CITY PARK DR (2)

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Nov-29, Fri,17:00	Clear	Sideswipe	P.D. only	Ice	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Municipal transit bus	Other motor vehicle	
2014-Oct-24, Fri,14:45	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	

					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2016-Nov-01, Tue,11:14	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Passenger van	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: OGILVIE RD btwn CITY PARK DR & BLAIR RD (1)

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Nov-12, Tue,18:16	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Passenger van	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-28, Fri,08:05	Clear	Sideswipe	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Changing lanes	Pick-up truck	Other motor vehicle	
2015-Jun-21, Sun,03:24	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Curb	
2015-Nov-28, Sat,15:57	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Dec-29, Tue,10:37	Rain	SMV other	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Skidding/sliding	

2016-Sep-30, Fri,13:01	Clear	Angle	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Pick-up truck	Other motor vehicle	

Location: OGILVIE RD btwn CITY PARK DR & BLAIR RD (2)

Traffic Control: No control

Total Collisions: 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jan-05, Sat,20:35	Clear	Sideswipe	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	
2014-Jan-07, Tue,17:20	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Nov-17, Mon,00:01	Snow	Rear end	P.D. only	Wet	East	Slowing or stopping	Passenger van	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Dec-13, Sun,17:16	Rain	Angle	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-May-18, Thu,16:42	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-01, Fri,19:44	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	

					East	Stopped	Pick-up truck	Other motor vehicle
2017-Dec-08, Fri,10:43	Clear	SMV other	P.D. only	Dry	South	Reversing	Pick-up truck	Pole (utility, power)

Appendix E

BACKGROUND GROWTH ANALYSIS

Time Period	Percent Annual Change - Blair at 174N OR/Shopping Centre				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	-6.53%	-7.17%	-4.08%	-5.61%	**-6.40%**
AM Peak	-3.18%	-6.41%	-2.29%	-6.51%	**-4.59%**
PM Peak	-6.67%	-6.39%	3.98%	-5.45%	**-5.67%**

Time Period	Percent Annual Change - Ogilvie at Bathgate/City Park				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	4.21%	2.29%	5.42%	5.87%	**5.27%**
AM Peak	6.99%	2.02%	10.91%	4.82%	**7.25%**
PM Peak	-1.26%	0.25%	0.58%	0.89%	**0.48%**

Appendix F

SYNCHRO 2030 BACKGROUND TRAFFIC ANALYSIS

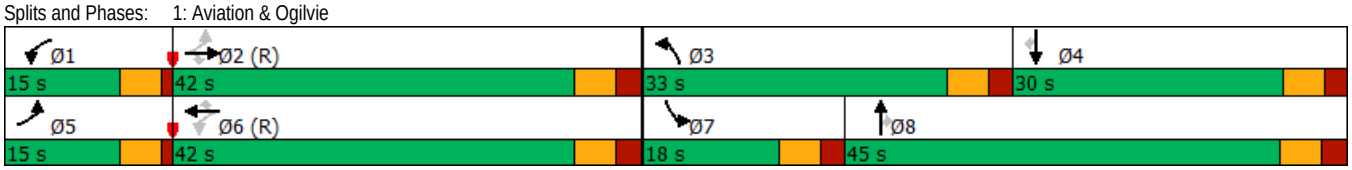
Future Background AM
1: Aviation & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	422	58	130	915	154	349	553	226	155	262	212
Future Volume (vph)	245	422	58	130	915	154	349	553	226	155	262	212
Adj. Flow (vph)	258	444	61	137	963	162	367	582	238	163	276	223
Lane Group Flow (vph)	258	444	61	137	963	162	367	582	238	163	276	223
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	29.9	29.9
Total Split (s)	15.0	42.0	42.0	15.0	42.0	42.0	33.0	45.0	45.0	18.0	30.0	30.0
Total Split (%)	12.5%	35.0%	35.0%	12.5%	35.0%	35.0%	27.5%	37.5%	37.5%	15.0%	25.0%	25.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	6.1	6.1	4.7	6.1	6.1	5.9	6.1	6.1	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	59.3	44.2	44.2	47.2	35.9	35.9	27.0	30.9	30.9	12.1	16.2	16.2
Actuated g/C Ratio	0.49	0.37	0.37	0.39	0.30	0.30	0.22	0.26	0.26	0.10	0.14	0.14
v/c Ratio	0.81	0.36	0.09	0.33	0.95	0.29	0.96	0.67	0.50	0.96	0.60	0.63
Control Delay	50.6	29.8	0.3	20.4	60.0	4.9	84.1	43.4	20.5	113.1	53.9	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	29.8	0.3	20.4	60.0	4.9	84.1	43.4	20.5	113.1	53.9	19.9
LOS	D	C	A	C	E	A	F	D	C	F	D	B
Approach Delay		34.5			48.6			51.4			57.0	
Approach LOS		C			D			D			E	
Queue Length 50th (m)	42.4	39.3	0.0	16.6	116.6	0.0	86.0	65.7	22.1	38.8	33.0	9.7
Queue Length 95th (m)	#116.0	59.6	0.0	32.5	#157.7	12.3	#144.4	76.2	42.0	#80.6	43.1	32.1
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	318	1249	657	425	1014	567	382	1098	562	170	680	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.36	0.09	0.32	0.95	0.29	0.96	0.53	0.42	0.96	0.41	0.51

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 48.1 Intersection LOS: D
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 3rd, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aviation & Ogilvie



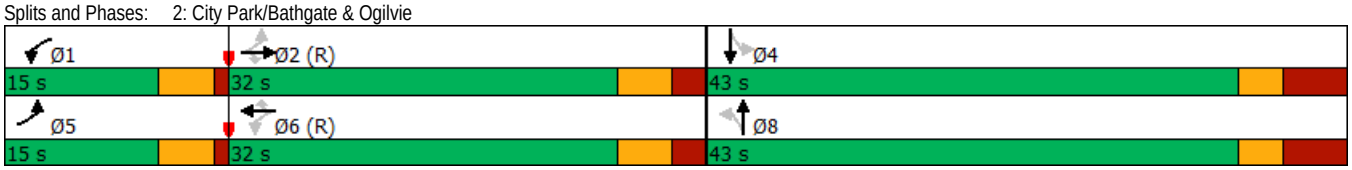
Future Background AM
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	531	87	23	1137	209	124	34	21	125	33	218
Future Volume (vph)	164	531	87	23	1137	209	124	34	21	125	33	218
Adj. Flow (vph)	173	559	92	24	1197	220	131	36	22	132	35	229
Lane Group Flow (vph)	173	559	92	24	1197	220	131	58	0	132	264	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0	30.0	42.4	42.4		42.4	42.4	
Total Split (s)	15.0	32.0	32.0	15.0	32.0	32.0	43.0	43.0		43.0	43.0	
Total Split (%)	16.7%	35.6%	35.6%	16.7%	35.6%	35.6%	47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	7.4	7.4		7.4	7.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	58.2	52.6	52.6	51.1	43.7	43.7	19.4	19.4		19.4	19.4	
Actuated g/C Ratio	0.65	0.58	0.58	0.57	0.49	0.49	0.22	0.22		0.22	0.22	
v/c Ratio	0.61	0.28	0.10	0.05	0.73	0.27	0.76	0.15		0.48	0.52	
Control Delay	20.5	13.0	3.3	8.4	21.0	2.6	57.8	17.4		34.5	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	20.5	13.0	3.3	8.4	21.0	2.6	57.8	17.4		34.5	8.9	
LOS	C	B	A	A	C	A	E	B		C	A	
Approach Delay		13.5			18.0			45.4			17.5	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	9.5	18.3	0.0	0.9	81.8	0.1	22.1	5.2		20.8	5.0	
Queue Length 95th (m)	#35.0	55.7	7.6	m3.2	#170.3	11.5	32.4	11.1		28.6	18.6	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	309	1982	898	585	1646	821	316	673		503	742	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.56	0.28	0.10	0.04	0.73	0.27	0.41	0.09		0.26	0.36	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 92.7% ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: City Park/Bathgate & Ogilvie



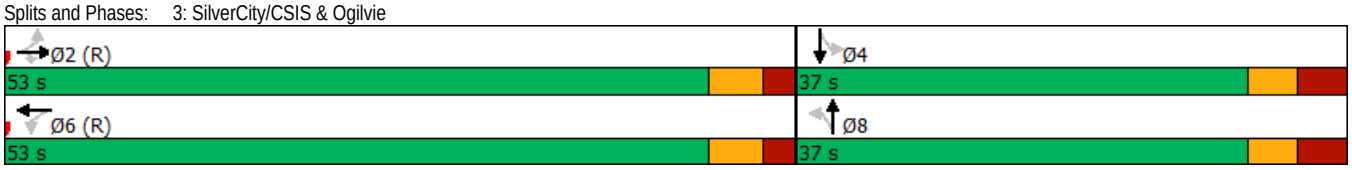
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	651	14	1	1207	56	7	1	4	7	0	8
Future Volume (vph)	37	651	14	1	1207	56	7	1	4	7	0	8
Adj. Flow (vph)	39	685	15	1	1271	59	7	1	4	7	0	8
Lane Group Flow (vph)	39	685	15	1	1330	0	7	5	0	7	8	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.9	29.9	29.9	29.9	29.9		36.7	36.7		36.7	36.7	
Total Split (s)	53.0	53.0	53.0	53.0	53.0		37.0	37.0		37.0	37.0	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9		6.7	6.7		6.7	6.7	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	77.0	77.0	77.0	77.0	77.0		14.0	14.0		14.0	14.0	
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.86		0.16	0.16		0.16	0.16	
v/c Ratio	0.14	0.24	0.01	0.00	0.47		0.03	0.02		0.03	0.03	
Control Delay	5.1	2.7	0.1	3.0	3.2		27.7	17.8		27.7	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.1	2.7	0.1	3.0	3.2		27.7	17.8		27.7	0.2	
LOS	A	A	A	A	A		C	B		C	A	
Approach Delay		2.8			3.2			23.6			13.1	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	0.0	0.0	0.0	0.0	1.2		1.1	0.2		1.1	0.0	
Queue Length 95th (m)	4.7	22.4	0.3	m0.0	17.3		3.7	2.4		3.7	0.0	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	279	2899	1230	589	2859		447	522		448	523	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.24	0.01	0.00	0.47		0.02	0.01		0.02	0.02	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 3.3 Intersection LOS: A
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie

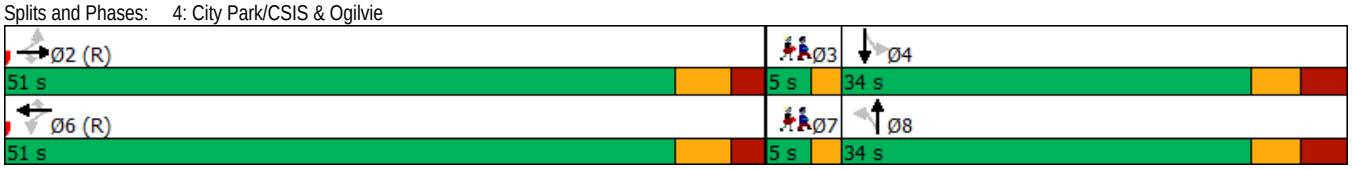


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	521	61	100	1063	121	76	35	89	4	3	34
Future Volume (vph)	89	521	61	100	1063	121	76	35	89	4	3	34
Adj. Flow (vph)	94	548	64	105	1119	127	80	37	94	4	3	36
Lane Group Flow (vph)	94	548	64	105	1119	127	80	131	0	4	39	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	35.1	35.1	35.1	35.1	35.1	35.1	33.5	33.5		33.5	33.5	
Total Split (s)	51.0	51.0	51.0	51.0	51.0	51.0	34.0	34.0		34.0	34.0	
Total Split (%)	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	37.8%	37.8%		37.8%	37.8%	
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)	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2		3.2	3.2	
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.5	6.5		6.5	6.5	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	62.0	62.0	62.0	62.0	62.0	62.0	14.4	14.4		14.4	14.4	
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16		0.16	0.16	
v/c Ratio	0.35	0.23	0.07	0.20	0.48	0.14	0.42	0.40		0.02	0.15	
Control Delay	19.3	9.7	7.5	8.7	8.9	2.2	38.8	14.4		27.2	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.3	9.7	7.5	8.7	8.9	2.2	38.8	14.4		27.2	11.6	
LOS	B	A	A	A	A	A	D	B		C	B	
Approach Delay		10.7			8.3			23.6			13.1	
Approach LOS		B			A			C			B	
Queue Length 50th (m)	3.6	10.2	0.0	4.7	33.5	0.0	13.2	5.8		0.6	0.5	
Queue Length 95th (m)	33.1	51.4	14.3	20.9	92.7	8.2	21.6	17.2		2.8	7.3	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0	50.0			30.0		
Base Capacity (vph)	265	2335	919	519	2335	937	365	534		355	451	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.35	0.23	0.07	0.20	0.48	0.14	0.22	0.25		0.01	0.09	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 88 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 10.5 Intersection LOS: B
Intersection Capacity Utilization 76.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: City Park/CSIS & Ogilvie



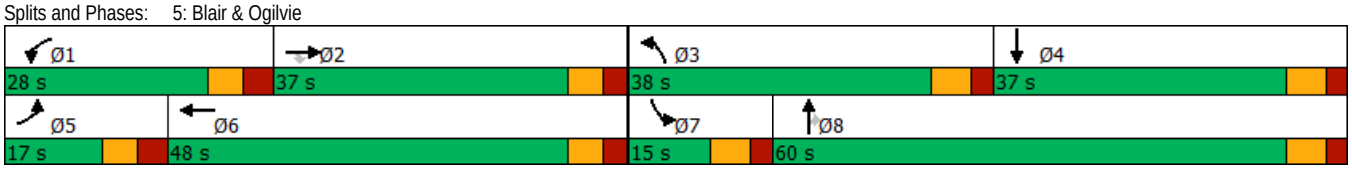
Future Background AM
5: Blair & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	339	218	359	525	31	559	575	380	53	306	98
Future Volume (vph)	66	339	218	359	525	31	559	575	380	53	306	98
Adj. Flow (vph)	69	357	229	378	553	33	588	605	400	56	322	103
Lane Group Flow (vph)	69	357	229	378	586	0	588	605	400	56	425	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	34.4	34.4	11.8	34.4		11.5	33.5	33.5	11.5	33.5	
Total Split (s)	17.0	37.0	37.0	28.0	48.0		38.0	60.0	60.0	15.0	37.0	
Total Split (%)	12.1%	26.4%	26.4%	20.0%	34.3%		27.1%	42.9%	42.9%	10.7%	26.4%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	3.1	2.7	2.7	3.1	2.7		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.4	6.4	6.8	6.4		6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	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	None	None	None	None	
Act Effct Green (s)	9.1	19.0	19.0	18.2	32.0		25.9	47.6	47.6	8.0	26.0	
Actuated g/C Ratio	0.08	0.16	0.16	0.16	0.27		0.22	0.41	0.41	0.07	0.22	
v/c Ratio	0.52	0.64	0.55	0.74	0.64		0.81	0.83	0.53	0.49	0.58	
Control Delay	72.4	53.1	10.8	58.5	43.5		54.0	44.3	10.0	73.3	42.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	72.4	53.1	10.8	58.5	43.5		54.0	44.3	10.0	73.3	42.1	
LOS	E	D	B	E	D		D	D	B	E	D	
Approach Delay		40.3			49.4			39.3			45.8	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	16.6	44.3	0.0	46.3	70.7		71.6	131.8	15.0	13.6	44.2	
Queue Length 95th (m)	34.5	61.7	20.5	68.7	92.2		99.0	#216.2	47.5	#30.3	68.6	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	154	927	533	623	1242		925	853	837	128	906	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.45	0.39	0.43	0.61	0.47		0.64	0.71	0.48	0.44	0.47	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 116.4
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 42.9 — Intersection LOS: D
Intersection Capacity Utilization 92.2% — ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie

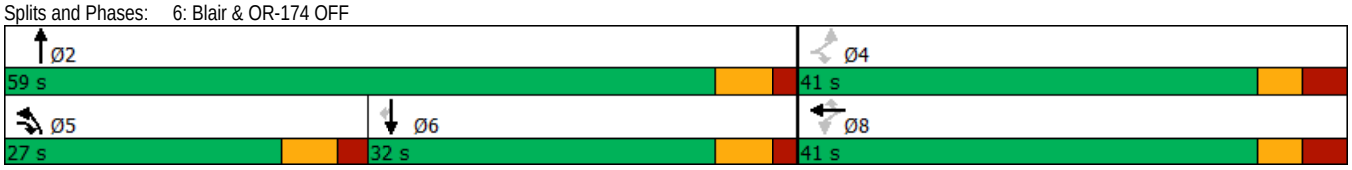


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	0	185	223	182	452	256	1277	0	0	650	86
Future Volume (vph)	86	0	185	223	182	452	256	1277	0	0	650	86
Adj. Flow (vph)	91	0	195	235	192	476	269	1344	0	0	684	91
Lane Group Flow (vph)	91	0	195	235	192	476	269	1344	0	0	684	91
Turn Type	Perm		pm+ov	Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		8						6
Detector Phase	4		5	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0	10.0	5.0	10.0			10.0	10.0
Minimum Split (s)	36.8		11.4	36.8	36.8	36.8	11.4	30.1			30.1	30.1
Total Split (s)	41.0		27.0	41.0	41.0	41.0	27.0	59.0			32.0	32.0
Total Split (%)	41.0%		27.0%	41.0%	41.0%	41.0%	27.0%	59.0%			32.0%	32.0%
Yellow Time (s)	3.3		4.2	3.3	3.3	3.3	4.2	4.2			4.2	4.2
All-Red Time (s)	3.5		2.2	3.5	3.5	3.5	2.2	1.9			1.9	1.9
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	6.8		6.4	6.8	6.8	6.8	6.4	6.1			6.1	6.1
Lead/Lag			Lead				Lead				Lag	Lag
Lead-Lag Optimize?			Yes				Yes				Yes	Yes
Recall Mode	None		None	None	None	None	None	Min			Min	Min
Act Effct Green (s)	28.8		48.5	28.8	28.8	28.8	12.6	41.7			22.4	22.4
Actuated g/C Ratio	0.34		0.58	0.34	0.34	0.34	0.15	0.50			0.27	0.27
v/c Ratio	0.24		0.22	0.41	0.31	0.84	0.55	0.80			0.53	0.19
Control Delay	24.0		8.4	25.0	23.6	36.2	40.0	22.3			28.4	4.6
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	24.0		8.4	25.0	23.6	36.2	40.0	22.3			28.4	4.6
LOS	C		A	C	C	D	D	C			C	A
Approach Delay		13.3			30.6			25.3			25.6	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	10.7		12.0	29.4	23.1	57.6	23.0	101.7			37.0	0.0
Queue Length 95th (m)	24.8		24.5	55.1	44.8	#123.9	36.7	128.0			51.3	8.0
Internal Link Dist (m)		137.2			105.9			166.4			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	472		1050	724	762	679	846	2241			1647	580
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.19		0.19	0.32	0.25	0.70	0.32	0.60			0.42	0.16

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 84
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 25.7 — Intersection LOS: C
Intersection Capacity Utilization 89.1% — ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Blair & OR-174 OFF



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	36	82	24	29	114	76
Future Volume (Veh/h)	36	82	24	29	114	76
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)	38	86	25	31	120	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				287		
pX, platoon unblocked						
vC, conflicting volume			124		162	81
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			124		162	81
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	92
cM capacity (veh/h)			1463		815	979

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	124	56	200
Volume Left	0	25	120
Volume Right	86	0	80
cSH	1700	1463	873
Volume to Capacity	0.07	0.02	0.23
Queue Length 95th (m)	0.0	0.4	6.7
Control Delay (s)	0.0	3.4	10.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.4	10.3
Approach LOS			B

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	1	104	3	9	132	2	3	0	12	2	0	0
Future Volume (vph)	1	104	3	9	132	2	3	0	12	2	0	0
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
Hourly flow rate (vph)	1	109	3	9	139	2	3	0	13	2	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	150	16	2
Volume Left (vph)	1	9	3	2
Volume Right (vph)	3	2	13	0
Hadj (s)	0.02	0.04	-0.42	0.23
Departure Headway (s)	4.1	4.1	4.0	4.7
Degree Utilization, x	0.13	0.17	0.02	0.00
Capacity (veh/h)	863	870	827	709
Control Delay (s)	7.7	7.9	7.1	7.7
Approach Delay (s)	7.7	7.9	7.1	7.7
Approach LOS	A	A	A	A

Intersection Summary				
Delay		7.8		
Level of Service		A		
Intersection Capacity Utilization	23.7%		ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	120	4	26	148	7	46
Future Volume (Veh/h)	120	4	26	148	7	46
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)	126	4	27	156	7	48
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			130		338	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			130		338	128
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		99	95
cM capacity (veh/h)			1455		645	922

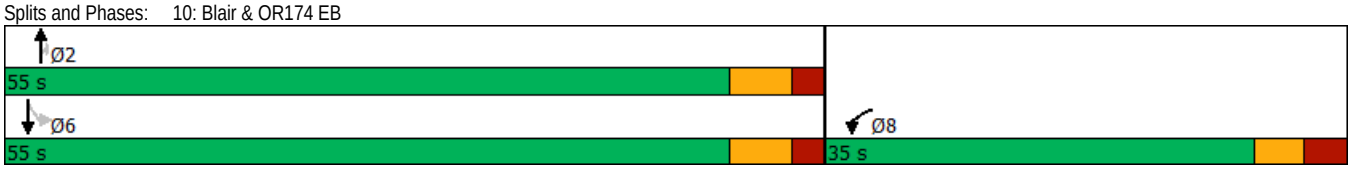
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	130	183	55
Volume Left	0	27	7
Volume Right	4	0	48
cSH	1700	1455	874
Volume to Capacity	0.08	0.02	0.06
Queue Length 95th (m)	0.0	0.4	1.5
Control Delay (s)	0.0	1.2	9.4
Lane LOS		A	A
Approach Delay (s)	0.0	1.2	9.4
Approach LOS			A

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	275	878	703	106	137	567
Future Volume (vph)	275	878	703	106	137	567
Adj. Flow (vph)	289	924	740	112	144	597
Lane Group Flow (vph)	289	924	740	112	0	741
Turn Type	Prot	Free	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	30.5	30.5
Total Split (s)	35.0		55.0	55.0	55.0	55.0
Total Split (%)	38.9%		61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.3		6.5	6.5		6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	18.7	80.2	48.7	48.7		48.7
Actuated g/C Ratio	0.23	1.00	0.61	0.61		0.61
v/c Ratio	0.73	0.62	0.36	0.12		0.55
Control Delay	39.9	1.9	9.3	2.2		12.2
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	39.9	1.9	9.3	2.2		12.2
LOS	D	A	A	A		B
Approach Delay	11.0		8.4			12.2
Approach LOS	B		A			B
Queue Length 50th (m)	40.7	0.0	26.7	0.0		31.3
Queue Length 95th (m)	65.5	0.0	47.5	6.7		59.2
Internal Link Dist (m)	139.6		109.0			143.1
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	608	1498	2058	965		1351
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.48	0.62	0.36	0.12		0.55

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 80.2	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	
Description: Signal Timing Plan: May 5th, 2015	

Splits and Phases: 10: Blair & OR174 EB



Future Background 2030
1: Aviation & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1112	216	231	812	253	129	267	125	176	492	196
Future Volume (vph)	176	1112	216	231	812	253	129	267	125	176	492	196
Adj. Flow (vph)	185	1171	227	243	855	266	136	281	132	185	518	206
Lane Group Flow (vph)	185	1171	227	243	855	266	136	281	132	185	518	206
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	30.1	30.1
Total Split (s)	17.0	54.0	54.0	17.0	54.0	54.0	19.0	30.1	30.1	19.0	30.1	30.1
Total Split (%)	14.2%	45.0%	45.0%	14.2%	45.0%	45.0%	15.8%	25.1%	25.1%	15.8%	25.1%	25.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.4	2.4
Lost Time Adjust (s)	0.7	-2.1	-2.1	0.7	-2.1	-2.1	-1.9	-2.1	-2.1	-1.9	-2.1	-2.1
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Ped	Ped	None	Ped	Ped
Act Effct Green (s)	59.1	50.0	50.0	61.3	51.1	51.1	14.1	26.1	26.1	15.0	27.0	27.0
Actuated g/C Ratio	0.49	0.42	0.42	0.51	0.43	0.43	0.12	0.22	0.22	0.12	0.22	0.22
v/c Ratio	0.63	0.83	0.31	1.08	0.59	0.34	0.68	0.38	0.32	0.88	0.68	0.48
Control Delay	24.2	37.5	6.9	115.1	28.8	3.9	68.5	41.9	10.1	88.8	48.2	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	37.5	6.9	115.1	28.8	3.9	68.5	41.9	10.1	88.8	48.2	20.9
LOS	C	D	A	F	C	A	E	D	B	F	D	C
Approach Delay		31.6			39.3			40.9			50.3	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	21.3	127.4	6.4	~49.2	81.2	0.0	30.9	29.9	1.5	43.4	59.7	16.1
Queue Length 95th (m)	33.8	156.2	22.4	#100.2	101.8	15.5	#54.5	42.9	17.4	#83.5	78.7	39.6
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	311	1411	721	224	1443	782	211	736	417	211	760	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.83	0.31	1.08	0.59	0.34	0.64	0.38	0.32	0.88	0.68	0.48

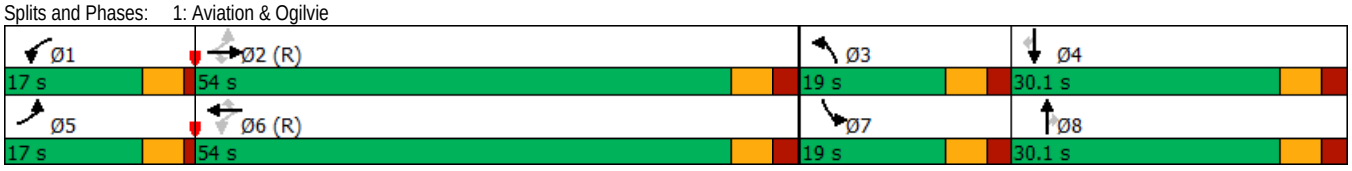
Intersection Summary

Cycle Length: 120.1
Actuated Cycle Length: 120.1
Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 39.0 Intersection LOS: D
Intersection Capacity Utilization 90.7% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 3rd, 2016

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Aviation & Ogilvie



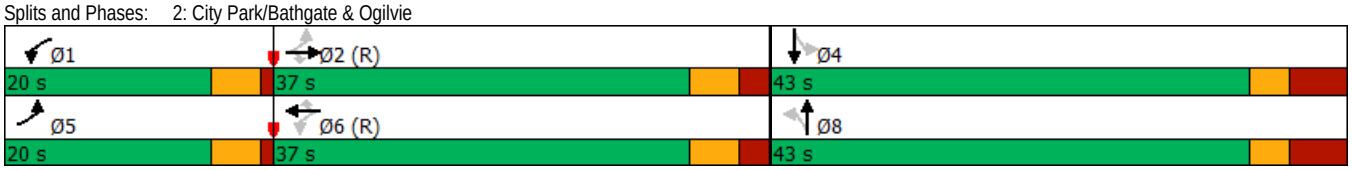
Future Background 2030
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1130	176	16	1097	188	141	33	31	217	59	209
Future Volume (vph)	166	1130	176	16	1097	188	141	33	31	217	59	209
Adj. Flow (vph)	175	1189	185	17	1155	198	148	35	33	228	62	220
Lane Group Flow (vph)	175	1189	185	17	1155	198	148	68	0	228	282	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	29.0	29.0	11.0	29.0	29.0	42.4	42.4		42.4	42.4	
Total Split (s)	20.0	37.0	37.0	20.0	37.0	37.0	43.0	43.0		43.0	43.0	
Total Split (%)	20.0%	37.0%	37.0%	20.0%	37.0%	37.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.7	-2.0	-2.0	0.7	-2.0	-2.0	-3.4	-3.4		-3.4	-3.4	
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	62.9	59.8	59.8	53.1	49.2	49.2	27.7	27.7		27.7	27.7	
Actuated g/C Ratio	0.63	0.60	0.60	0.53	0.49	0.49	0.28	0.28		0.28	0.28	
v/c Ratio	0.64	0.59	0.20	0.07	0.69	0.24	0.78	0.14		0.65	0.49	
Control Delay	23.0	17.0	6.2	9.4	18.9	1.9	58.8	14.4		39.8	10.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	23.0	17.0	6.2	9.4	18.9	1.9	58.8	14.4		39.8	10.3	
LOS	C	B	A	A	B	A	E	B		D	B	
Approach Delay		16.4			16.3			44.8			23.5	
Approach LOS		B			B			D			C	
Queue Length 50th (m)	12.8	60.7	4.3	0.8	76.8	1.4	26.4	5.0		38.9	10.7	
Queue Length 95th (m)	35.4	133.8	21.0	m2.4	#161.4	3.0	43.6	12.6		54.4	27.2	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	349	2027	917	398	1667	816	267	658		492	731	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.50	0.59	0.20	0.04	0.69	0.24	0.55	0.10		0.46	0.39	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: City Park/Bathgate & Ogilvie



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1372	72	27	1102	1	33	1	40	78	3	99
Future Volume (vph)	1	1372	72	27	1102	1	33	1	40	78	3	99
Adj. Flow (vph)	1	1444	76	28	1160	1	35	1	42	82	3	104
Lane Group Flow (vph)	1	1444	76	28	1161	0	35	43	0	82	107	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (%)	63.0%	63.0%	63.0%	63.0%	63.0%		37.0%	37.0%		37.0%	37.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	-1.9	-1.9	-1.9	-1.9	-1.9		-2.7	-2.7		-2.7	-2.7	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	74.2	74.2	74.2	74.2	74.2		17.8	17.8		17.8	17.8	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74		0.18	0.18		0.18	0.18	
v/c Ratio	0.00	0.57	0.07	0.14	0.46		0.17	0.15		0.36	0.34	
Control Delay	6.0	4.9	1.1	6.4	4.9		33.5	12.3		38.2	18.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.0	4.9	1.1	6.4	4.9		33.5	12.3		38.2	18.3	
LOS	A	A	A	A	A		C	B		D	B	
Approach Delay		4.7			5.0			21.8			26.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.0	30.9	0.1	0.8	23.6		6.1	1.0		14.7	8.0	
Queue Length 95th (m)	m0.1	50.3	m1.7	m4.5	57.6		11.7	8.1		22.7	18.0	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	278	2514	1075	194	2514		374	516		425	533	
Starvation Cap Reductn	0	26	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.00	0.58	0.07	0.14	0.46		0.09	0.08		0.19	0.20	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 6.7 Intersection LOS: A
Intersection Capacity Utilization 61.8% ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	1224	141	223	619	18	204	7	189	63	22	99
Future Volume (vph)	16	1224	141	223	619	18	204	7	189	63	22	99
Adj. Flow (vph)	17	1288	148	235	652	19	215	7	199	66	23	104
Lane Group Flow (vph)	17	1288	148	235	652	19	215	206	0	66	127	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	29.1	29.1	29.1	10.9	29.1	29.1	27.5	27.5		27.5	27.5	
Total Split (s)	46.0	46.0	46.0	15.0	61.0	61.0	34.0	34.0		34.0	34.0	
Total Split (%)	46.0%	46.0%	46.0%	15.0%	61.0%	61.0%	34.0%	34.0%		34.0%	34.0%	
Yellow Time (s)	3.7	3.7	3.7	3.0	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.4	2.4	1.0	2.4	2.4	3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	-2.1	-2.1	-2.1	0.0	-2.1	-2.1	-2.5	-2.5		-2.5	-2.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	47.9	47.9	47.9	64.8	64.8	64.8	26.2	26.2		26.2	26.2	
Actuated g/C Ratio	0.48	0.48	0.48	0.65	0.65	0.65	0.26	0.26		0.26	0.26	
v/c Ratio	0.06	0.79	0.21	0.79	0.30	0.03	0.78	0.41		0.31	0.28	
Control Delay	9.0	20.9	2.5	42.5	9.0	0.1	53.4	7.0		32.0	9.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.0	20.9	2.5	42.5	9.0	0.1	53.4	7.0		32.0	9.3	
LOS	A	C	A	D	A	A	D	A		C	A	
Approach Delay		18.9			17.5			30.7			17.1	
Approach LOS		B			B			C			B	
Queue Length 50th (m)	1.7	123.4	4.4	27.3	26.5	0.0	37.9	1.0		10.1	3.3	
Queue Length 95th (m)	m2.0	#159.0	6.5	#75.5	44.0	0.0	#67.2	16.8		21.1	16.1	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0	50.0			30.0		
Base Capacity (vph)	308	1623	707	298	2198	735	321	549		250	512	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.06	0.79	0.21	0.79	0.30	0.03	0.67	0.38		0.26	0.25	

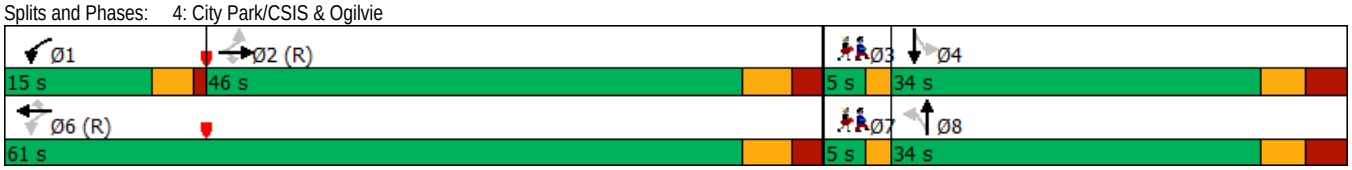
Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.0 Intersection LOS: C
Intersection Capacity Utilization 90.6% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th 2016

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: City Park/CSIS & Ogilvie



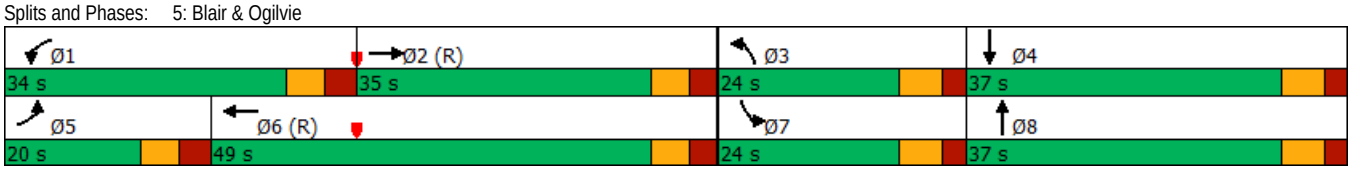
Future Background 2030
5: Blair & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	630	760	663	472	73	296	310	543	54	680	80
Future Volume (vph)	144	630	760	663	472	73	296	310	543	54	680	80
Adj. Flow (vph)	152	663	800	698	497	77	312	326	572	57	716	84
Lane Group Flow (vph)	152	663	800	698	574	0	312	326	572	57	800	0
Turn Type	Prot	NA	Free	Prot	NA		Prot	NA	Free	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			Free						Free			
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.8	34.4		11.8	34.4		11.5	33.5		11.5	33.5	
Total Split (s)	20.0	35.0		34.0	49.0		24.0	37.0		24.0	37.0	
Total Split (%)	15.4%	26.9%		26.2%	37.7%		18.5%	28.5%		18.5%	28.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		4.2	4.2		4.2	4.2	
All-Red Time (s)	3.1	2.7		3.1	2.7		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	-2.8	-2.4		-2.8	-2.4		-2.5	-2.5		-2.5	-2.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	15.6	31.6	130.0	30.0	46.1		18.7	42.6	130.0	12.2	33.6	
Actuated g/C Ratio	0.12	0.24	1.00	0.23	0.35		0.14	0.33	1.00	0.09	0.26	
v/c Ratio	0.75	0.80	0.55	0.92	0.50		0.66	0.56	0.39	0.36	0.93	
Control Delay	78.0	55.0	1.5	67.2	34.1		59.7	41.9	0.8	60.6	64.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	78.0	55.0	1.5	67.2	34.1		59.7	41.9	0.8	60.6	64.0	
LOS	E	E	A	E	C		E	D	A	E	E	
Approach Delay		30.7			52.3			27.1			63.8	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	38.1	85.2	0.0	90.6	59.6		39.0	70.1	0.0	13.9	105.3	
Queue Length 95th (m)	#68.5	107.7	0.0	#124.7	77.2		54.3	105.5	0.0	26.8	#144.3	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	208	825	1457	759	1152		505	584	1466	260	863	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.73	0.80	0.55	0.92	0.50		0.62	0.56	0.39	0.22	0.93	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 41.1 Intersection LOS: D
Intersection Capacity Utilization 88.4% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	0	540	93	142	150	322	883	0	0	1727	169
Future Volume (vph)	123	0	540	93	142	150	322	883	0	0	1727	169
Adj. Flow (vph)	129	0	568	98	149	158	339	929	0	0	1818	178
Lane Group Flow (vph)	129	0	568	98	149	158	339	929	0	0	1818	178
Turn Type	Perm		pm+ov	Perm	NA	Free	Prot	NA			NA	Free
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		Free						Free
Detector Phase	4		5	8	8		5	2			6	
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)	36.8		11.4	36.8	36.8		11.4	30.1			30.1	
Total Split (s)	36.8		31.0	36.8	36.8		31.0	94.0			63.0	
Total Split (%)	28.1%		23.7%	28.1%	28.1%		23.7%	71.9%			48.2%	
Yellow Time (s)	3.3		4.2	3.3	3.3		4.2	4.2			4.2	
All-Red Time (s)	3.5		1.9	3.5	3.5		1.9	1.9			1.9	
Lost Time Adjust (s)	-2.8		-2.1	-2.8	-2.8		-2.1	-2.1			-2.1	
Total Lost Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag			Lead				Lead				Lag	
Lead-Lag Optimize?			Yes				Yes				Yes	
Recall Mode	None		None	None	None		None	C-Max			C-Max	
Act Effct Green (s)	25.0		57.7	25.0	25.0	130.8	28.7	97.8			65.1	130.8
Actuated g/C Ratio	0.19		0.44	0.19	0.19	1.00	0.22	0.75			0.50	1.00
v/c Ratio	0.77		0.83	0.30	0.44	0.11	0.47	0.37			0.75	0.12
Control Delay	77.7		41.6	46.0	49.3	0.1	46.9	6.8			29.9	0.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	77.7		41.6	46.0	49.3	0.1	46.9	6.8			29.9	0.2
LOS	E		D	D	D	A	D	A			C	A
Approach Delay		48.3			29.3			17.5			27.3	
Approach LOS		D			C			B			C	
Queue Length 50th (m)	31.7		117.3	21.8	34.1	0.0	38.6	39.2			140.1	0.0
Queue Length 95th (m)	51.6		159.4	35.5	51.0	0.0	55.2	60.7			168.0	0.0
Internal Link Dist (m)		137.2			105.9			129.2			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	220		685	425	447	1478	724	2535			2423	1498
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.59		0.83	0.23	0.33	0.11	0.47	0.37			0.75	0.12

Intersection Summary

Cycle Length: 130.8
Actuated Cycle Length: 130.8
Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.0 Intersection LOS: C
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016

Splits and Phases: 6: Blair & OR174 WB Off

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	134	195	72	75	185	79
Future Volume (Veh/h)	134	195	72	75	185	79
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)	141	205	76	79	195	83
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				287		
pX, platoon unblocked						
vC, conflicting volume			346		474	244
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			346		474	244
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		62	90
cM capacity (veh/h)			1213		514	795

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	346	155	278
Volume Left	0	76	195
Volume Right	205	0	83
cSH	1700	1213	575
Volume to Capacity	0.20	0.06	0.48
Queue Length 95th (m)	0.0	1.5	19.9
Control Delay (s)	0.0	4.3	17.0
Lane LOS		A	C
Approach Delay (s)	0.0	4.3	17.0
Approach LOS			C

Intersection Summary			
Average Delay		6.9	
Intersection Capacity Utilization		54.3%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	273	12	41	193	25	12	1	43	13	5	4
Future Volume (vph)	5	273	12	41	193	25	12	1	43	13	5	4
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
Hourly flow rate (vph)	5	287	13	43	203	26	13	1	45	14	5	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	305	272	59	23
Volume Left (vph)	5	43	13	14
Volume Right (vph)	13	26	45	4
Hadj (s)	0.01	0.01	-0.38	0.05
Departure Headway (s)	4.4	4.5	4.8	5.3
Degree Utilization, x	0.37	0.34	0.08	0.03
Capacity (veh/h)	793	780	660	593
Control Delay (s)	10.0	9.7	8.3	8.5
Approach Delay (s)	10.0	9.7	8.3	8.5
Approach LOS	B	A	A	A

Intersection Summary				
Delay		9.7		
Level of Service		A		
Intersection Capacity Utilization	44.5%		ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	12	86	166	14	95
Future Volume (Veh/h)	207	12	86	166	14	95
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)	218	13	91	175	15	100
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			231		582	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			231		582	224
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		97	88
cM capacity (veh/h)			1337		443	815

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	231	266	115
Volume Left	0	91	15
Volume Right	13	0	100
cSH	1700	1337	735
Volume to Capacity	0.14	0.07	0.16
Queue Length 95th (m)	0.0	1.7	4.2
Control Delay (s)	0.0	3.1	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	3.1	10.8
Approach LOS			B

Intersection Summary			
Average Delay		3.4	
Intersection Capacity Utilization		43.5%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	198	591	794	311	520	915
Future Volume (vph)	198	591	794	311	520	915
Adj. Flow (vph)	208	622	836	327	547	963
Lane Group Flow (vph)	208	622	836	327	0	1510
Turn Type	Prot	Free	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	16.0	30.5
Total Split (s)	30.0		52.0	52.0	28.0	80.0
Total Split (%)	27.3%		47.3%	47.3%	25.5%	72.7%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	1.8	2.3
Lost Time Adjust (s)	-2.3		-2.5	-2.5		-2.5
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effct Green (s)	20.6	110.0	81.4	81.4		81.4
Actuated g/C Ratio	0.19	1.00	0.74	0.74		0.74
v/c Ratio	0.66	0.41	0.33	0.28		1.32dl
Control Delay	50.9	0.8	5.8	1.2		63.1
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	50.9	0.8	5.8	1.2		63.1
LOS	D	A	A	A		E
Approach Delay	13.4		4.5			63.1
Approach LOS	B		A			E
Queue Length 50th (m)	41.6	0.0	28.3	0.0		~190.5
Queue Length 95th (m)	62.5	0.0	43.9	7.8		#242.7
Internal Link Dist (m)	176.5		168.4			103.4
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	400	1517	2507	1181		1409
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.52	0.41	0.33	0.28		1.07

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 10: Blair & OR174 EB

Appendix G

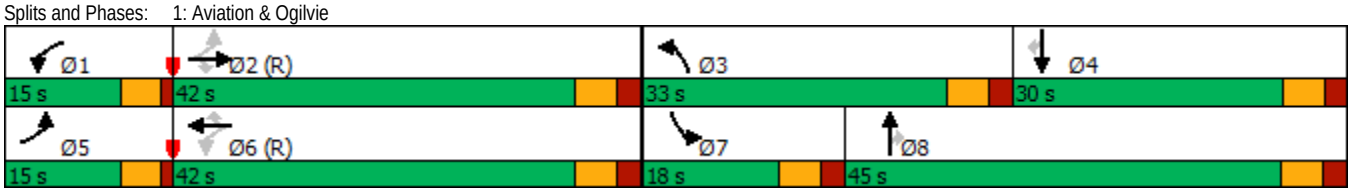
SYNCHRO 2030 FUTURE PROJECTED TRAFFIC ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	423	58	134	917	156	349	553	227	156	262	212
Future Volume (vph)	245	423	58	134	917	156	349	553	227	156	262	212
Adj. Flow (vph)	258	445	61	141	965	164	367	582	239	164	276	223
Lane Group Flow (vph)	258	445	61	141	965	164	367	582	239	164	276	223
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	29.9	29.9
Total Split (s)	15.0	42.0	42.0	15.0	42.0	42.0	33.0	45.0	45.0	18.0	30.0	30.0
Total Split (%)	12.5%	35.0%	35.0%	12.5%	35.0%	35.0%	27.5%	37.5%	37.5%	15.0%	25.0%	25.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	6.1	6.1	4.7	6.1	6.1	5.9	6.1	6.1	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	59.2	44.1	44.1	47.4	35.9	35.9	27.0	30.9	30.9	12.1	16.2	16.2
Actuated g/C Ratio	0.49	0.37	0.37	0.40	0.30	0.30	0.22	0.26	0.26	0.10	0.14	0.14
v/c Ratio	0.81	0.36	0.09	0.34	0.95	0.29	0.96	0.67	0.51	0.96	0.60	0.63
Control Delay	50.6	29.9	0.3	20.5	60.3	5.0	84.1	43.4	20.6	114.5	53.9	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	29.9	0.3	20.5	60.3	5.0	84.1	43.4	20.6	114.5	53.9	19.9
LOS	D	C	A	C	E	A	F	D	C	F	D	B
Approach Delay		34.6			48.8			51.4			57.4	
Approach LOS		C			D			D			E	
Queue Length 50th (m)	42.4	39.5	0.0	17.1	117.0	0.0	86.0	65.7	22.3	39.1	33.0	9.7
Queue Length 95th (m)	#116.0	59.7	0.0	33.4	#158.3	12.7	#144.4	76.2	42.3	#81.1	43.1	32.1
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	318	1245	655	425	1014	567	382	1098	562	170	680	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.36	0.09	0.33	0.95	0.29	0.96	0.53	0.43	0.96	0.41	0.51

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 48.3 — Intersection LOS: D
Intersection Capacity Utilization 92.0% — ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 3rd, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aviation & Ogilvie



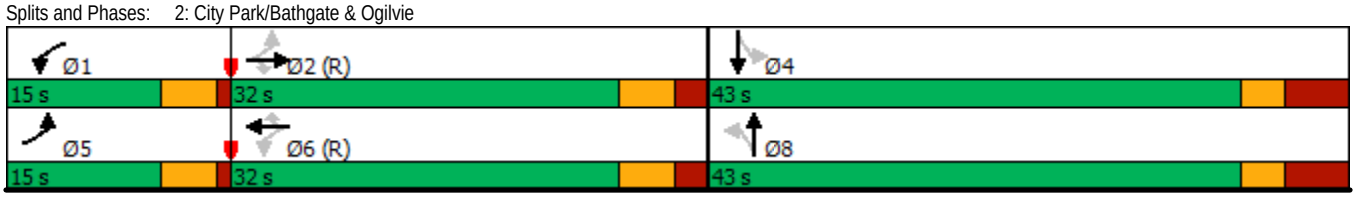
Future Projected 2030 AM
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	531	90	23	1137	209	132	34	21	125	33	218
Future Volume (vph)	164	531	90	23	1137	209	132	34	21	125	33	218
Adj. Flow (vph)	173	559	95	24	1197	220	139	36	22	132	35	229
Lane Group Flow (vph)	173	559	95	24	1197	220	139	58	0	132	264	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0	30.0	42.4	42.4		42.4	42.4	
Total Split (s)	15.0	32.0	32.0	15.0	32.0	32.0	43.0	43.0		43.0	43.0	
Total Split (%)	16.7%	35.6%	35.6%	16.7%	35.6%	35.6%	47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.0	6.0	4.7	6.0	6.0	7.4	7.4		7.4	7.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	57.8	52.2	52.2	50.7	43.2	43.2	19.8	19.8		19.8	19.8	
Actuated g/C Ratio	0.64	0.58	0.58	0.56	0.48	0.48	0.22	0.22		0.22	0.22	
v/c Ratio	0.62	0.28	0.11	0.05	0.74	0.27	0.79	0.15		0.47	0.51	
Control Delay	21.0	13.3	3.5	8.5	21.6	2.7	59.4	17.2		33.8	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	21.0	13.3	3.5	8.5	21.6	2.7	59.4	17.2		33.8	8.7	
LOS	C	B	A	A	C	A	E	B		C	A	
Approach Delay		13.8			18.5			47.0			17.1	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	9.8	18.8	0.0	1.0	83.4	0.1	23.4	5.1		20.5	5.0	
Queue Length 95th (m)	#35.4	55.7	8.0	m3.2	#170.3	11.5	34.5	11.1		28.6	18.6	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	307	1966	891	581	1628	814	320	673		503	742	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.56	0.28	0.11	0.04	0.74	0.27	0.43	0.09		0.26	0.36	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 92.7% ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: City Park/Bathgate & Ogilvie

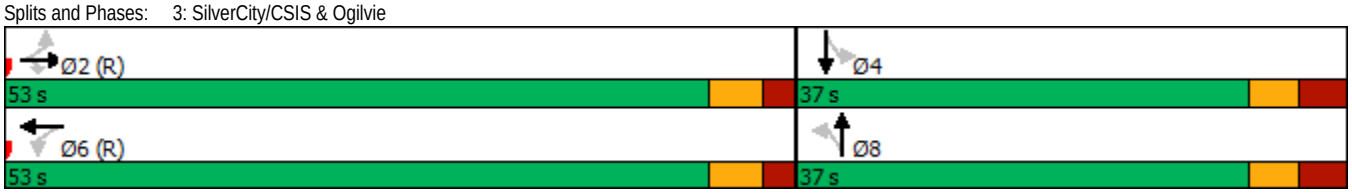


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	651	14	1	1207	56	7	1	4	7	0	8
Future Volume (vph)	37	651	14	1	1207	56	7	1	4	7	0	8
Adj. Flow (vph)	39	685	15	1	1271	59	7	1	4	7	0	8
Lane Group Flow (vph)	39	685	15	1	1330	0	7	5	0	7	8	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.9	29.9	29.9	29.9	29.9		36.7	36.7		36.7	36.7	
Total Split (s)	53.0	53.0	53.0	53.0	53.0		37.0	37.0		37.0	37.0	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9		6.7	6.7		6.7	6.7	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	77.0	77.0	77.0	77.0	77.0		14.0	14.0		14.0	14.0	
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.86		0.16	0.16		0.16	0.16	
v/c Ratio	0.14	0.24	0.01	0.00	0.47		0.03	0.02		0.03	0.03	
Control Delay	5.1	2.7	0.1	3.0	3.2		27.7	17.8		27.7	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.1	2.7	0.1	3.0	3.2		27.7	17.8		27.7	0.2	
LOS	A	A	A	A	A		C	B		C	A	
Approach Delay		2.8			3.2			23.6			13.1	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	0.0	0.0	0.0	0.0	1.2		1.1	0.2		1.1	0.0	
Queue Length 95th (m)	4.7	22.4	0.3	m0.0	17.3		3.7	2.4		3.7	0.0	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	279	2899	1230	589	2859		447	522		448	523	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.24	0.01	0.00	0.47		0.02	0.01		0.02	0.02	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 3.3 Intersection LOS: A
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie

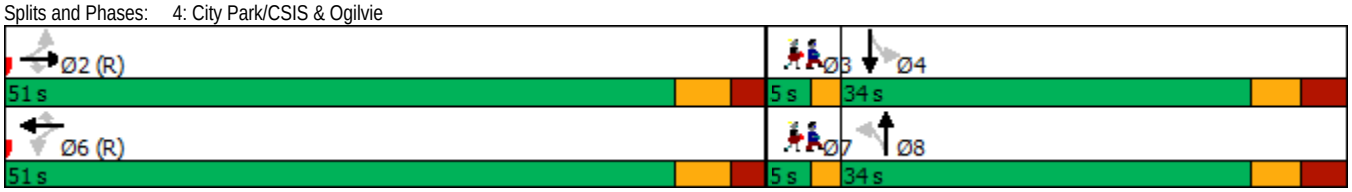


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	521	61	100	1063	121	76	35	91	4	3	34
Future Volume (vph)	89	521	61	100	1063	121	76	35	91	4	3	34
Adj. Flow (vph)	94	548	64	105	1119	127	80	37	96	4	3	36
Lane Group Flow (vph)	94	548	64	105	1119	127	80	133	0	4	39	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	35.1	35.1	35.1	35.1	35.1	35.1	33.5	33.5		33.5	33.5	
Total Split (s)	51.0	51.0	51.0	51.0	51.0	51.0	34.0	34.0		34.0	34.0	
Total Split (%)	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	37.8%	37.8%		37.8%	37.8%	
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)	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2		3.2	3.2	
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.5	6.5		6.5	6.5	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	62.0	62.0	62.0	62.0	62.0	62.0	14.4	14.4		14.4	14.4	
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16		0.16	0.16	
v/c Ratio	0.35	0.23	0.07	0.20	0.48	0.14	0.42	0.41		0.02	0.15	
Control Delay	19.6	9.9	7.8	8.7	8.9	2.2	38.8	14.4		27.2	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.6	9.9	7.8	8.7	8.9	2.2	38.8	14.4		27.2	11.6	
LOS	B	A	A	A	A	A	D	B		C	B	
Approach Delay		11.0			8.3			23.5			13.1	
Approach LOS		B			A			C			B	
Queue Length 50th (m)	3.6	10.2	0.0	4.7	33.5	0.0	13.2	5.8		0.6	0.5	
Queue Length 95th (m)	33.1	51.4	14.3	20.9	92.7	8.2	21.6	17.4		2.8	7.3	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0	50.0			30.0		
Base Capacity (vph)	265	2335	919	519	2335	937	365	535		354	451	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.35	0.23	0.07	0.20	0.48	0.14	0.22	0.25		0.01	0.09	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 88 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 10.6 — Intersection LOS: B
Intersection Capacity Utilization 76.7% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: City Park/CSIS & Ogilvie



Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

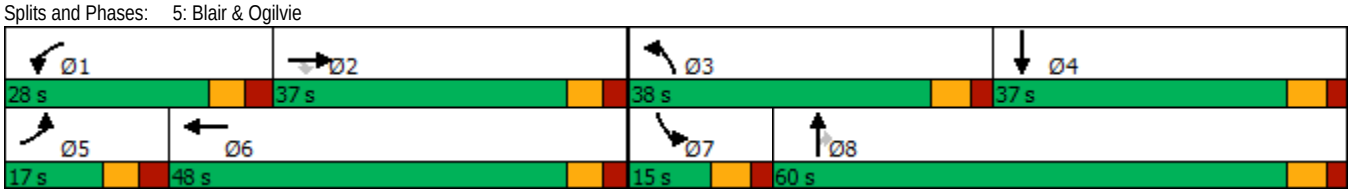
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	340	218	359	525	31	559	575	380	53	306	98
Future Volume (vph)	67	340	218	359	525	31	559	575	380	53	306	98
Adj. Flow (vph)	71	358	229	378	553	33	588	605	400	56	322	103
Lane Group Flow (vph)	71	358	229	378	586	0	588	605	400	56	425	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.8	34.4	34.4	11.8	34.4		11.5	33.5	33.5	11.5	33.5	
Total Split (s)	17.0	37.0	37.0	28.0	48.0		38.0	60.0	60.0	15.0	37.0	
Total Split (%)	12.1%	26.4%	26.4%	20.0%	34.3%		27.1%	42.9%	42.9%	10.7%	26.4%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	3.1	2.7	2.7	3.1	2.7		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.4	6.4	6.8	6.4		6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	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	None	None	None	None	
Act Effct Green (s)	9.2	19.1	19.1	18.2	32.0		25.9	47.6	47.6	8.0	26.0	
Actuated g/C Ratio	0.08	0.16	0.16	0.16	0.27		0.22	0.41	0.41	0.07	0.22	
v/c Ratio	0.53	0.65	0.55	0.74	0.64		0.81	0.83	0.53	0.49	0.58	
Control Delay	72.8	53.0	10.8	58.6	43.5		54.0	44.4	10.0	73.3	42.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	72.8	53.0	10.8	58.6	43.5		54.0	44.4	10.0	73.3	42.2	
LOS	E	D	B	E	D		D	D	B	E	D	
Approach Delay		40.4			49.4			39.3			45.8	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	17.1	44.4	0.0	46.3	70.7		71.7	132.0	15.0	13.6	44.3	
Queue Length 95th (m)	#36.1	61.9	20.5	68.7	92.2		99.0	#216.2	47.5	#30.3	68.6	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	154	926	533	622	1241		925	852	836	128	904	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.46	0.39	0.43	0.61	0.47		0.64	0.71	0.48	0.44	0.47	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 116.5
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 43.0 — Intersection LOS: D
Intersection Capacity Utilization 92.2% — ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie

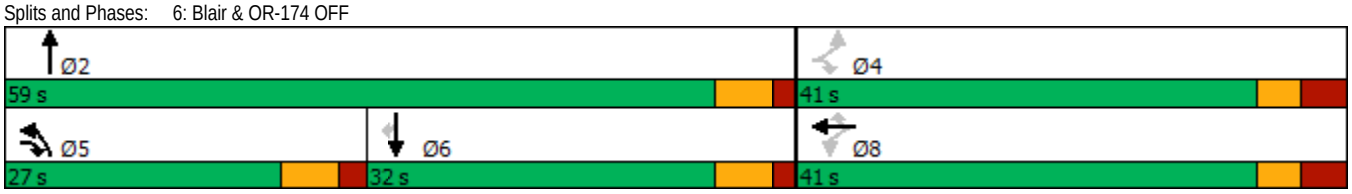


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	0	215	223	183	452	266	1277	0	0	650	86
Future Volume (vph)	86	0	215	223	183	452	266	1277	0	0	650	86
Adj. Flow (vph)	91	0	226	235	193	476	280	1344	0	0	684	91
Lane Group Flow (vph)	91	0	226	235	193	476	280	1344	0	0	684	91
Turn Type	Perm		pm+ov	Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		8						6
Detector Phase	4		5	8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0	10.0	5.0	10.0			10.0	10.0
Minimum Split (s)	36.8		11.4	36.8	36.8	36.8	11.4	30.1			30.1	30.1
Total Split (s)	41.0		27.0	41.0	41.0	41.0	27.0	59.0			32.0	32.0
Total Split (%)	41.0%		27.0%	41.0%	41.0%	41.0%	27.0%	59.0%			32.0%	32.0%
Yellow Time (s)	3.3		4.2	3.3	3.3	3.3	4.2	4.2			4.2	4.2
All-Red Time (s)	3.5		2.2	3.5	3.5	3.5	2.2	1.9			1.9	1.9
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	6.8		6.4	6.8	6.8	6.8	6.4	6.1			6.1	6.1
Lead/Lag			Lead				Lead				Lag	Lag
Lead-Lag Optimize?			Yes				Yes				Yes	Yes
Recall Mode	None		None	None	None	None	None	Min			Min	Min
Act Effct Green (s)	28.8		48.9	28.8	28.8	28.8	13.0	41.7			22.0	22.0
Actuated g/C Ratio	0.34		0.58	0.34	0.34	0.34	0.15	0.50			0.26	0.26
v/c Ratio	0.24		0.25	0.41	0.32	0.84	0.55	0.80			0.54	0.19
Control Delay	24.0		8.6	25.0	23.6	36.2	39.5	22.3			28.9	4.8
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	24.0		8.6	25.0	23.6	36.2	39.5	22.3			28.9	4.8
LOS	C		A	C	C	D	D	C			C	A
Approach Delay		13.0			30.6			25.3			26.1	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	10.7		14.5	29.4	23.3	57.6	24.0	101.7			37.1	0.0
Queue Length 95th (m)	24.8		27.9	55.1	45.0	#123.9	37.5	128.0			52.3	8.1
Internal Link Dist (m)		137.2			105.9			166.4			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	471		1050	724	762	679	846	2241			1633	575
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.19		0.22	0.32	0.25	0.70	0.33	0.60			0.42	0.16

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 84
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 25.7 — Intersection LOS: C
Intersection Capacity Utilization 89.1% — ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Blair & OR-174 OFF



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	38	112	24	29	125	76
Future Volume (vph)	38	112	24	29	125	76
Adj. Flow (vph)	40	118	25	31	132	80
Lane Group Flow (vph)	158	0	0	56	212	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 34.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	38	112	24	29	125	76
Future Volume (Veh/h)	38	112	24	29	125	76
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)	40	118	25	31	132	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				287		
pX, platoon unblocked						
vC, conflicting volume			158		180	99
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			158		180	99
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		83	92
cM capacity (veh/h)			1422		795	957

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	158	56	212
Volume Left	0	25	132
Volume Right	118	0	80
cSH	1700	1422	849
Volume to Capacity	0.09	0.02	0.25
Queue Length 95th (m)	0.0	0.4	7.5
Control Delay (s)	0.0	3.5	10.6
Lane LOS		A	B
Approach Delay (s)	0.0	3.5	10.6
Approach LOS			B

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	130	4	11	141	2	5	0	18	2	0	0
Future Volume (vph)	1	130	4	11	141	2	5	0	18	2	0	0
Adj. Flow (vph)	1	137	4	12	148	2	5	0	19	2	0	0
Lane Group Flow (vph)	0	142	0	0	162	0	0	24	0	0	2	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization 25.9%	ICU Level of Service A	
Analysis Period (min) 15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	1	130	4	11	141	2	5	0	18	2	0	0
Future Volume (vph)	1	130	4	11	141	2	5	0	18	2	0	0
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
Hourly flow rate (vph)	1	137	4	12	148	2	5	0	19	2	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	142	162	24	2
Volume Left (vph)	1	12	5	2
Volume Right (vph)	4	2	19	0
Hadj (s)	0.02	0.04	-0.40	0.23
Departure Headway (s)	4.1	4.1	4.2	4.8
Degree Utilization, x	0.16	0.19	0.03	0.00
Capacity (veh/h)	856	857	801	689
Control Delay (s)	7.9	8.1	7.3	7.8
Approach Delay (s)	7.9	8.1	7.3	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay		8.0		
Level of Service		A		
Intersection Capacity Utilization		25.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	121	6	35	150	13	72
Future Volume (vph)	121	6	35	150	13	72
Adj. Flow (vph)	127	6	37	158	14	76
Lane Group Flow (vph)	133	0	0	195	90	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 32.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	121	6	35	150	13	72
Future Volume (Veh/h)	121	6	35	150	13	72
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)	127	6	37	158	14	76
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			133		362	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			133		362	130
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		98	92
cM capacity (veh/h)			1452		621	920

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	133	195	90
Volume Left	0	37	14
Volume Right	6	0	76
cSH	1700	1452	856
Volume to Capacity	0.08	0.03	0.11
Queue Length 95th (m)	0.0	0.6	2.7
Control Delay (s)	0.0	1.6	9.7
Lane LOS		A	A
Approach Delay (s)	0.0	1.6	9.7
Approach LOS			A

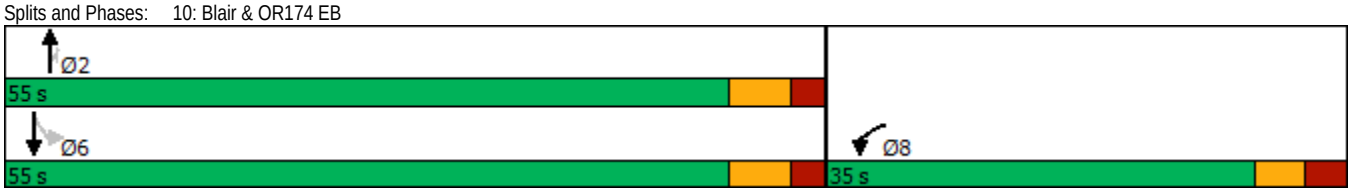
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	275	886	705	106	139	571
Future Volume (vph)	275	886	705	106	139	571
Adj. Flow (vph)	289	933	742	112	146	601
Lane Group Flow (vph)	289	933	742	112	0	747
Turn Type	Prot	Free	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	30.5	30.5
Total Split (s)	35.0		55.0	55.0	55.0	55.0
Total Split (%)	38.9%		61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.3		6.5	6.5		6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	18.7	80.2	48.7	48.7		48.7
Actuated g/C Ratio	0.23	1.00	0.61	0.61		0.61
v/c Ratio	0.73	0.62	0.36	0.12		0.55
Control Delay	39.9	2.0	9.3	2.2		12.3
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	39.9	2.0	9.3	2.2		12.3
LOS	D	A	A	A		B
Approach Delay	10.9		8.4			12.3
Approach LOS	B		A			B
Queue Length 50th (m)	40.7	0.0	26.7	0.0		31.7
Queue Length 95th (m)	65.5	0.0	47.6	6.7		60.0
Internal Link Dist (m)	139.6		109.0			143.1
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	608	1498	2058	965		1350
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.48	0.62	0.36	0.12		0.55

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 10.5 — Intersection LOS: B
Intersection Capacity Utilization 73.7% — ICU Level of Service D
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2015

Splits and Phases: 10: Blair & OR174 EB



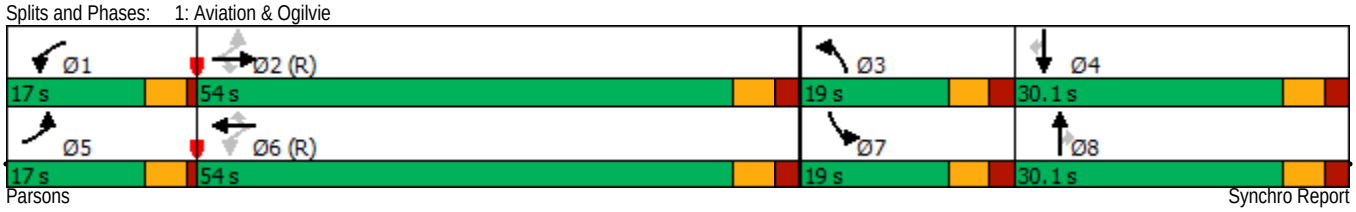
Future Projected 2030 PM
1: Aviation & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1114	216	234	813	254	129	267	129	178	492	196
Future Volume (vph)	176	1114	216	234	813	254	129	267	129	178	492	196
Adj. Flow (vph)	185	1173	227	246	856	267	136	281	136	187	518	206
Lane Group Flow (vph)	185	1173	227	246	856	267	136	281	136	187	518	206
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.9	34.1	34.1	10.9	34.1	34.1	10.9	30.1	30.1	10.9	30.1	30.1
Total Split (s)	17.0	54.0	54.0	17.0	54.0	54.0	19.0	30.1	30.1	19.0	30.1	30.1
Total Split (%)	14.2%	45.0%	45.0%	14.2%	45.0%	45.0%	15.8%	25.1%	25.1%	15.8%	25.1%	25.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4	2.4	2.2	2.4	2.4
Lost Time Adjust (s)	0.7	-2.1	-2.1	0.7	-2.1	-2.1	-1.9	-2.1	-2.1	-1.9	-2.1	-2.1
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Ped	Ped	None	Ped	Ped
Act Effct Green (s)	59.1	50.0	50.0	61.3	51.1	51.1	14.1	26.1	26.1	15.0	27.0	27.0
Actuated g/C Ratio	0.49	0.42	0.42	0.51	0.43	0.43	0.12	0.22	0.22	0.12	0.22	0.22
v/c Ratio	0.63	0.83	0.32	1.10	0.59	0.34	0.68	0.38	0.33	0.89	0.68	0.48
Control Delay	24.2	37.6	7.0	119.2	28.8	3.9	68.5	41.9	10.8	90.4	48.2	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	37.6	7.0	119.2	28.8	3.9	68.5	41.9	10.8	90.4	48.2	20.9
LOS	C	D	A	F	C	A	E	D	B	F	D	C
Approach Delay		31.7			40.2			40.8			50.7	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	21.3	127.7	6.6	~50.7	81.3	0.0	30.9	29.9	2.3	44.0	59.7	16.1
Queue Length 95th (m)	33.8	156.6	22.6	#101.7	102.2	15.5	#54.5	42.9	18.4	#84.9	78.7	39.6
Internal Link Dist (m)		253.2			805.4			242.7			219.9	
Turn Bay Length (m)	75.0		65.0	45.0		65.0	100.0		15.0	110.0		15.0
Base Capacity (vph)	311	1411	720	224	1443	782	211	736	417	211	760	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.83	0.32	1.10	0.59	0.34	0.64	0.38	0.33	0.89	0.68	0.48

Intersection Summary

Cycle Length: 120.1
Actuated Cycle Length: 120.1
Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 39.4 Intersection LOS: D
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
Description: Signal Timing Plan: May 3rd, 2016
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aviation & Ogilvie



Future Projected 2030 PM
2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1130	183	16	1097	188	146	33	31	217	59	209
Future Volume (vph)	166	1130	183	16	1097	188	146	33	31	217	59	209
Adj. Flow (vph)	175	1189	193	17	1155	198	154	35	33	228	62	220
Lane Group Flow (vph)	175	1189	193	17	1155	198	154	68	0	228	282	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	29.0	29.0	11.0	29.0	29.0	42.4	42.4		42.4	42.4	
Total Split (s)	20.0	37.0	37.0	20.0	37.0	37.0	43.0	43.0		43.0	43.0	
Total Split (%)	20.0%	37.0%	37.0%	20.0%	37.0%	37.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.3	2.3	1.0	2.3	2.3	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.7	-2.0	-2.0	0.7	-2.0	-2.0	-3.4	-3.4		-3.4	-3.4	
Total Lost Time (s)	5.4	4.0	4.0	5.4	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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)	62.8	59.8	59.8	53.0	49.2	49.2	27.7	27.7		27.7	27.7	
Actuated g/C Ratio	0.63	0.60	0.60	0.53	0.49	0.49	0.28	0.28		0.28	0.28	
v/c Ratio	0.64	0.59	0.21	0.07	0.69	0.24	0.81	0.14		0.65	0.49	
Control Delay	23.0	17.0	6.2	9.4	19.0	1.9	62.7	14.3		39.7	10.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	23.0	17.0	6.2	9.4	19.0	1.9	62.7	14.3		39.7	10.2	
LOS	C	B	A	A	B	A	E	B		D	B	
Approach Delay		16.3			16.4			47.9			23.4	
Approach LOS		B			B			D			C	
Queue Length 50th (m)	12.8	60.7	4.4	0.8	76.8	1.4	27.8	5.0		38.9	10.7	
Queue Length 95th (m)	35.4	133.8	21.6	m2.4	#161.4	3.0	45.6	12.6		54.4	27.2	
Internal Link Dist (m)		805.4			169.5			132.3			125.7	
Turn Bay Length (m)	70.0		50.0	50.0		80.0	30.0			45.0		
Base Capacity (vph)	349	2025	919	398	1666	815	267	658		492	731	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.50	0.59	0.21	0.04	0.69	0.24	0.58	0.10		0.46	0.39	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 19.2 Intersection LOS: B
Intersection Capacity Utilization 85.7% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

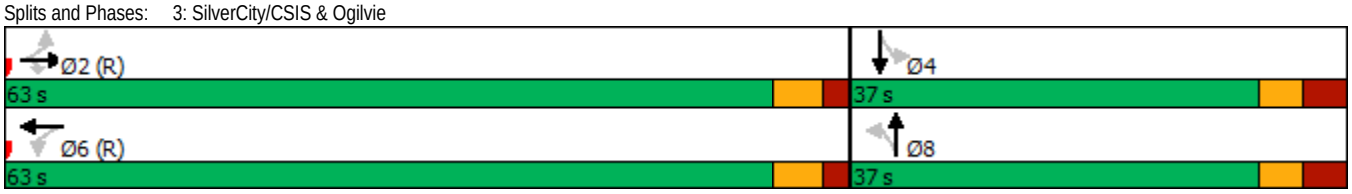
Splits and Phases: 2: City Park/Bathgate & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1372	72	27	1102	1	33	1	40	78	3	99
Future Volume (vph)	1	1372	72	27	1102	1	33	1	40	78	3	99
Adj. Flow (vph)	1	1444	76	28	1160	1	35	1	42	82	3	104
Lane Group Flow (vph)	1	1444	76	28	1161	0	35	43	0	82	107	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (s)	63.0	63.0	63.0	63.0	63.0		37.0	37.0		37.0	37.0	
Total Split (%)	63.0%	63.0%	63.0%	63.0%	63.0%		37.0%	37.0%		37.0%	37.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2		3.4	3.4		3.4	3.4	
Lost Time Adjust (s)	-1.9	-1.9	-1.9	-1.9	-1.9		-2.7	-2.7		-2.7	-2.7	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	74.2	74.2	74.2	74.2	74.2		17.8	17.8		17.8	17.8	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74		0.18	0.18		0.18	0.18	
v/c Ratio	0.00	0.57	0.07	0.14	0.46		0.17	0.15		0.36	0.34	
Control Delay	6.0	4.9	1.1	6.4	4.9		33.5	12.3		38.2	18.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.0	4.9	1.1	6.4	4.9		33.5	12.3		38.2	18.3	
LOS	A	A	A	A	A		C	B		D	B	
Approach Delay		4.7			5.0			21.8			26.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.0	30.9	0.1	0.8	23.6		6.1	1.0		14.7	8.0	
Queue Length 95th (m)	m0.1	50.3	m1.7	m4.5	57.6		11.7	8.1		22.7	18.0	
Internal Link Dist (m)		169.5			200.1			56.2			60.0	
Turn Bay Length (m)	70.0		90.0	85.0			20.0					
Base Capacity (vph)	278	2514	1075	194	2514		374	516		425	533	
Starvation Cap Reductn	0	26	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.00	0.58	0.07	0.14	0.46		0.09	0.08		0.19	0.20	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 6.7 — Intersection LOS: A
Intersection Capacity Utilization 61.8% — ICU Level of Service B
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: SilverCity/CSIS & Ogilvie



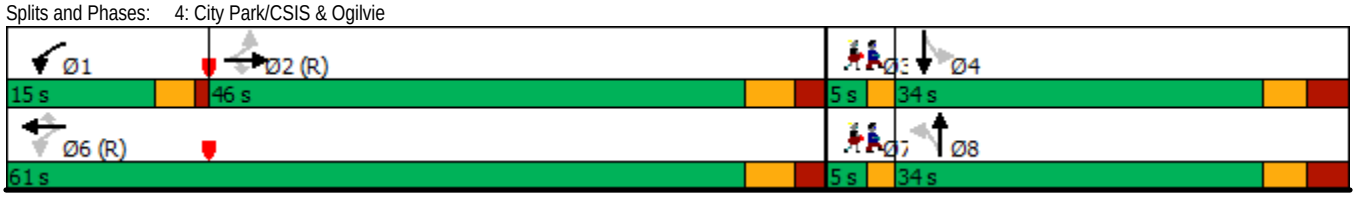
Future Projected 2030 PM
4: City Park/CSIS & Ogilvie

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	1224	141	224	619	18	204	7	190	63	22	99
Future Volume (vph)	16	1224	141	224	619	18	204	7	190	63	22	99
Adj. Flow (vph)	17	1288	148	236	652	19	215	7	200	66	23	104
Lane Group Flow (vph)	17	1288	148	236	652	19	215	207	0	66	127	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	29.1	29.1	29.1	10.9	29.1	29.1	27.5	27.5		27.5	27.5	
Total Split (s)	46.0	46.0	46.0	15.0	61.0	61.0	34.0	34.0		34.0	34.0	
Total Split (%)	46.0%	46.0%	46.0%	15.0%	61.0%	61.0%	34.0%	34.0%		34.0%	34.0%	
Yellow Time (s)	3.7	3.7	3.7	3.0	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.4	2.4	1.0	2.4	2.4	3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	-2.1	-2.1	-2.1	0.0	-2.1	-2.1	-2.5	-2.5		-2.5	-2.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	47.8	47.8	47.8	64.8	64.8	64.8	26.2	26.2		26.2	26.2	
Actuated g/C Ratio	0.48	0.48	0.48	0.65	0.65	0.65	0.26	0.26		0.26	0.26	
v/c Ratio	0.06	0.79	0.21	0.79	0.30	0.03	0.78	0.41		0.31	0.28	
Control Delay	9.0	21.0	2.5	42.5	9.0	0.1	53.4	7.0		32.0	9.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.0	21.0	2.5	42.5	9.0	0.1	53.4	7.0		32.0	9.3	
LOS	A	C	A	D	A	A	D	A		C	A	
Approach Delay		19.0			17.5			30.7			17.1	
Approach LOS		B			B			C			B	
Queue Length 50th (m)	1.8	123.7	4.5	27.5	26.5	0.0	37.9	1.0		10.1	3.3	
Queue Length 95th (m)	m2.0	#159.0	6.5	#76.4	44.0	0.0	#67.2	16.8		21.1	16.1	
Internal Link Dist (m)		200.1			350.0			137.2			101.6	
Turn Bay Length (m)	45.0		130.0	100.0		65.0	50.0			30.0		
Base Capacity (vph)	308	1621	706	299	2198	735	321	549		249	512	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.06	0.79	0.21	0.79	0.30	0.03	0.67	0.38		0.27	0.25	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 30 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 90.7% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: City Park/CSIS & Ogilvie



Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	5.0	5.0
Total Split (%)	5%	5%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

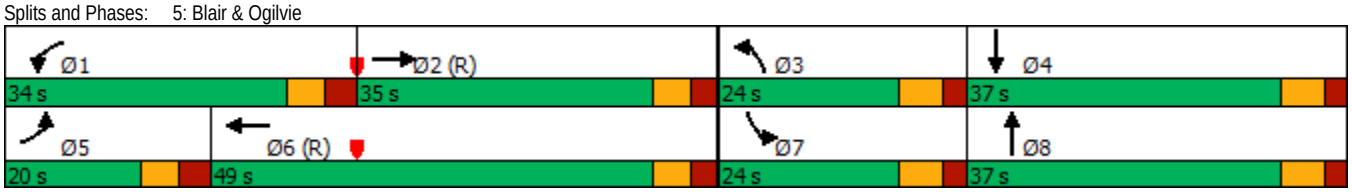
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	631	760	663	473	73	296	310	543	54	680	80
Future Volume (vph)	144	631	760	663	473	73	296	310	543	54	680	80
Adj. Flow (vph)	152	664	800	698	498	77	312	326	572	57	716	84
Lane Group Flow (vph)	152	664	800	698	575	0	312	326	572	57	800	0
Turn Type	Prot	NA	Free	Prot	NA		Prot	NA	Free	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			Free						Free			
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.8	34.4		11.8	34.4		11.5	33.5		11.5	33.5	
Total Split (s)	20.0	35.0		34.0	49.0		24.0	37.0		24.0	37.0	
Total Split (%)	15.4%	26.9%		26.2%	37.7%		18.5%	28.5%		18.5%	28.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		4.2	4.2		4.2	4.2	
All-Red Time (s)	3.1	2.7		3.1	2.7		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	-2.8	-2.4		-2.8	-2.4		-2.5	-2.5		-2.5	-2.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	15.6	31.6	130.0	30.0	46.1		18.7	42.6	130.0	12.2	33.6	
Actuated g/C Ratio	0.12	0.24	1.00	0.23	0.35		0.14	0.33	1.00	0.09	0.26	
v/c Ratio	0.75	0.80	0.55	0.92	0.50		0.66	0.56	0.39	0.36	0.93	
Control Delay	78.0	55.1	1.5	67.2	34.2		59.7	41.9	0.8	60.6	64.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	78.0	55.1	1.5	67.2	34.2		59.7	41.9	0.8	60.6	64.0	
LOS	E	E	A	E	C		E	D	A	E	E	
Approach Delay		30.7			52.3			27.1			63.8	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	38.1	85.4	0.0	90.6	59.7		39.0	70.1	0.0	13.9	105.3	
Queue Length 95th (m)	#68.5	107.8	0.0	#124.7	77.4		54.3	105.5	0.0	26.8	#144.3	
Internal Link Dist (m)		350.0			283.0			212.5			120.0	
Turn Bay Length (m)	70.0			110.0			150.0			30.0		
Base Capacity (vph)	208	825	1457	759	1152		505	584	1466	260	863	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.73	0.80	0.55	0.92	0.50		0.62	0.56	0.39	0.22	0.93	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 41.1 Intersection LOS: D
Intersection Capacity Utilization 88.4% ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 4th, 2016
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Blair & Ogilvie

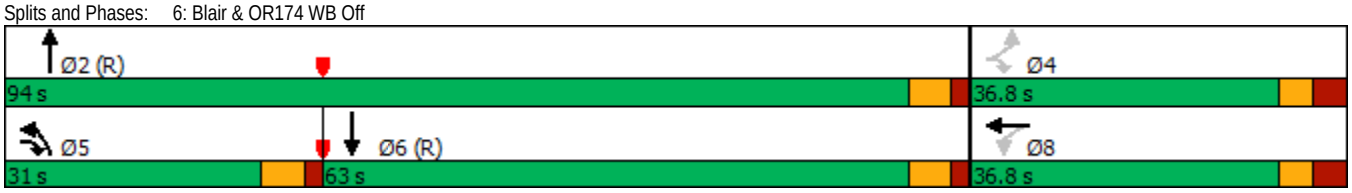


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	0	561	93	145	150	348	883	0	0	1727	169
Future Volume (vph)	123	0	561	93	145	150	348	883	0	0	1727	169
Adj. Flow (vph)	129	0	591	98	153	158	366	929	0	0	1818	178
Lane Group Flow (vph)	129	0	591	98	153	158	366	929	0	0	1818	178
Turn Type	Perm		pm+ov	Perm	NA	Free	Prot	NA			NA	Free
Protected Phases			5		8		5	2			6	
Permitted Phases	4		4	8		Free						Free
Detector Phase	4		5	8	8		5	2			6	
Switch Phase												
Minimum Initial (s)	10.0		5.0	10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)	36.8		11.4	36.8	36.8		11.4	30.1			30.1	
Total Split (s)	36.8		31.0	36.8	36.8		31.0	94.0			63.0	
Total Split (%)	28.1%		23.7%	28.1%	28.1%		23.7%	71.9%			48.2%	
Yellow Time (s)	3.3		4.2	3.3	3.3		4.2	4.2			4.2	
All-Red Time (s)	3.5		1.9	3.5	3.5		1.9	1.9			1.9	
Lost Time Adjust (s)	-2.8		-2.1	-2.8	-2.8		-2.1	-2.1			-2.1	
Total Lost Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag			Lead				Lead				Lag	
Lead-Lag Optimize?			Yes				Yes				Yes	
Recall Mode	None		None	None	None		None	C-Max			C-Max	
Act Effct Green (s)	25.1		58.7	25.1	25.1	130.8	29.6	97.7			64.1	130.8
Actuated g/C Ratio	0.19		0.45	0.19	0.19	1.00	0.23	0.75			0.49	1.00
v/c Ratio	0.78		0.85	0.30	0.45	0.11	0.49	0.37			0.76	0.12
Control Delay	79.1		43.0	45.9	49.5	0.1	46.9	6.9			30.7	0.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	79.1		43.0	45.9	49.5	0.1	46.9	6.9			30.7	0.2
LOS	E		D	D	D	A	D	A			C	A
Approach Delay		49.5			29.6			18.2			28.0	
Approach LOS		D			C			B			C	
Queue Length 50th (m)	31.7		122.4	21.7	35.0	0.0	41.5	39.5			143.4	0.0
Queue Length 95th (m)	51.9		169.9	35.5	52.3	0.0	59.5	60.7			168.0	0.0
Internal Link Dist (m)		137.2			105.9			129.2			212.5	
Turn Bay Length (m)				70.0		25.0	85.0					70.0
Base Capacity (vph)	216		694	425	447	1478	742	2531			2388	1498
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.60		0.85	0.23	0.34	0.11	0.49	0.37			0.76	0.12

Intersection Summary

Cycle Length: 130.8
Actuated Cycle Length: 130.8
Offset: 50 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 28.8 — Intersection LOS: C
Intersection Capacity Utilization 90.2% — ICU Level of Service E
Analysis Period (min) 15
Description: Signal Timing Plan: May 5th, 2016

Splits and Phases: 6: Blair & OR174 WB Off



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	135	216	72	76	214	79
Future Volume (vph)	135	216	72	76	214	79
Adj. Flow (vph)	142	227	76	80	225	83
Lane Group Flow (vph)	369	0	0	156	308	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	135	216	72	76	214	79
Future Volume (Veh/h)	135	216	72	76	214	79
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)	142	227	76	80	225	83
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				287		
pX, platoon unblocked						
vC, conflicting volume			369		488	256
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			369		488	256
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		55	89
cM capacity (veh/h)			1190		505	783

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	369	156	308
Volume Left	0	76	225
Volume Right	227	0	83
cSH	1700	1190	558
Volume to Capacity	0.22	0.06	0.55
Queue Length 95th (m)	0.0	1.6	25.4
Control Delay (s)	0.0	4.3	19.1
Lane LOS		A	C
Approach Delay (s)	0.0	4.3	19.1
Approach LOS			C

Intersection Summary			
Average Delay		7.9	
Intersection Capacity Utilization		57.5%	ICU Level of Service B
Analysis Period (min)		15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	291	14	47	217	25	13	1	47	13	5	4
Future Volume (vph)	5	291	14	47	217	25	13	1	47	13	5	4
Adj. Flow (vph)	5	306	15	49	228	26	14	1	49	14	5	4
Lane Group Flow (vph)	0	326	0	0	303	0	0	64	0	0	23	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	291	14	47	217	25	13	1	47	13	5	4
Future Volume (vph)	5	291	14	47	217	25	13	1	47	13	5	4
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
Hourly flow rate (vph)	5	306	15	49	228	26	14	1	49	14	5	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	326	303	64	23
Volume Left (vph)	5	49	14	14
Volume Right (vph)	15	26	49	4
Hadj (s)	0.01	0.01	-0.38	0.05
Departure Headway (s)	4.5	4.5	5.0	5.5
Degree Utilization, x	0.41	0.38	0.09	0.03
Capacity (veh/h)	783	771	640	573
Control Delay (s)	10.5	10.2	8.5	8.7
Approach Delay (s)	10.5	10.2	8.5	8.7
Approach LOS	B	B	A	A

Intersection Summary				
Delay		10.1		
Level of Service		B		
Intersection Capacity Utilization		47.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	209	17	110	167	18	113
Future Volume (vph)	209	17	110	167	18	113
Adj. Flow (vph)	220	18	116	176	19	119
Lane Group Flow (vph)	238	0	0	292	138	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	209	17	110	167	18	113
Future Volume (Veh/h)	209	17	110	167	18	113
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)	220	18	116	176	19	119
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			238		637	229
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			238		637	229
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		95	85
cM capacity (veh/h)			1329		403	810

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	238	292	138
Volume Left	0	116	19
Volume Right	18	0	119
cSH	1700	1329	711
Volume to Capacity	0.14	0.09	0.19
Queue Length 95th (m)	0.0	2.2	5.4
Control Delay (s)	0.0	3.6	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.6	11.3
Approach LOS			B

Intersection Summary			
Average Delay		3.9	
Intersection Capacity Utilization		46.8%	ICU Level of Service A
Analysis Period (min)		15	

Future Projected 2030 PM
10: Blair & OR174 EB

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	198	614	797	311	522	918
Future Volume (vph)	198	614	797	311	522	918
Adj. Flow (vph)	208	646	839	327	549	966
Lane Group Flow (vph)	208	646	839	327	0	1515
Turn Type	Prot	Free	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	25.3		30.5	30.5	16.0	30.5
Total Split (s)	30.0		52.0	52.0	28.0	80.0
Total Split (%)	27.3%		47.3%	47.3%	25.5%	72.7%
Yellow Time (s)	3.3		4.2	4.2	4.2	4.2
All-Red Time (s)	3.0		2.3	2.3	1.8	2.3
Lost Time Adjust (s)	-2.3		-2.5	-2.5		-2.5
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effct Green (s)	20.6	110.0	81.4	81.4		81.4
Actuated g/C Ratio	0.19	1.00	0.74	0.74		0.74
v/c Ratio	0.66	0.43	0.33	0.28		1.33dl
Control Delay	50.9	0.9	5.8	1.2		65.0
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	50.9	0.9	5.8	1.2		65.0
LOS	D	A	A	A		E
Approach Delay	13.0		4.5			65.0
Approach LOS	B		A			E
Queue Length 50th (m)	41.6	0.0	28.5	0.0		~192.0
Queue Length 95th (m)	62.5	0.0	44.2	7.8		#244.1
Internal Link Dist (m)	176.5		168.4			103.4
Turn Bay Length (m)		60.0		85.0		
Base Capacity (vph)	400	1517	2507	1181		1406
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.52	0.43	0.33	0.28		1.08

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 32.5 — Intersection LOS: C
Intersection Capacity Utilization 87.6% — ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 10: Blair & OR174 EB

Appendix H

MMLOS ANALYSIS

Multi-Modal Level of Service - Segments Form

Consultant	**Parsons**	**Project**	**476910**
Scenario	**Future Total 2030**	**Date**	**Jan. 21, 2019**
Comments			

SEGMENTS		**City Park**	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8	Section 9
Pedestrian	Sidewalk Width Boulevard Width	**B**	1.8 m 0.5 - 2 m								
	Avg Daily Curb Lane Traffic Volume		≤ 3000								
	Operating Speed On-Street Parking		> 30 to 50 km/h yes								
	Exposure to Traffic PLoS		**B**	-	-	-	-	-	-	-	-
	Effective Sidewalk Width		2.0 m								
	Pedestrian Volume		250 ped/hr								
	Crowding PLoS		**B**	-	-	-	-	-	-	-	-
	Level of Service		**B**	-	-	-	-	-	-	-	-
Bicycle	Type of Cycling Facility	**B**	Curbside Bike Lane								
	Number of Travel Lanes		≤ 1 each direction								
	Operating Speed		≤ 50 km/h								
	# of Lanes & Operating Speed LoS		**A**	-	-	-	-	-	-	-	-
	Bike Lane (+ Parking Lane) Width		≥ 1.8 m								
	Bike Lane Width LoS		**A**	-	-	-	-	-	-	-	-
	Bike Lane Blockages		Rare								
	Blockage LoS		**A**	-	-	-	-	-	-	-	-
	Median Refuge Width (no median = < 1.8 m)		< 1.8 m refuge								
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes								
	Sidestreet Operating Speed		>40 to 50 km/h								
	Unsignalized Crossing - Lowest LoS		**B**	-	-	-	-	-	-	-	-
	Level of Service		**B**	-	-	-	-	-	-	-	-
Transit	Facility Type	**D**	Mixed Traffic								
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≥ 0.8								
	Level of Service		**D**	-	-	-	-	-	-	-	-
Truck	Truck Lane Width	**B**	> 3.7 m								
	Travel Lanes per Direction		1								
	Level of Service		**B**	-	-	-	-	-	-	-	-

Multi-Modal Level of Service - Segments Form

Consultant	**Parsons**	**Project**	**476910**
Scenario	**Existing**	**Date**	**Jan. 21, 2019**
Comments			

SEGMENTS		**City Park**	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8	Section 9
Pedestrian	Sidewalk Width Boulevard Width	**B**	1.8 m > 2 m								
	Avg Daily Curb Lane Traffic Volume		≤ 3000								
	Operating Speed On-Street Parking		> 30 to 50 km/h yes								
	Exposure to Traffic PLoS		**A**	-	-	-	-	-	-	-	-
	Effective Sidewalk Width		2.0 m								
	Pedestrian Volume		250 ped/hr								
	Crowding PLoS		**B**	-	-	-	-	-	-	-	-
	Level of Service		**B**	-	-	-	-	-	-	-	-
Bicycle	Type of Cycling Facility	**D**	Mixed Traffic								
	Number of Travel Lanes		2-3 lanes total								
	Operating Speed		>40 to <50 km/h								
	# of Lanes & Operating Speed LoS		**D**	-	-	-	-	-	-	-	-
	Bike Lane (+ Parking Lane) Width										
	Bike Lane Width LoS		-	-	-	-	-	-	-	-	-
	Bike Lane Blockages										
	Blockage LoS		-	-	-	-	-	-	-	-	-
	Median Refuge Width (no median = < 1.8 m)		< 1.8 m refuge								
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes								
	Sidestreet Operating Speed		>40 to 50 km/h								
	Unsignalized Crossing - Lowest LoS		**B**	-	-	-	-	-	-	-	-
	Level of Service		**D**	-	-	-	-	-	-	-	-
Transit	Facility Type	**D**	Mixed Traffic								
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≥ 0.8								
	Level of Service		**D**	-	-	-	-	-	-	-	-
Truck	Truck Lane Width	**B**	> 3.7 m								
	Travel Lanes per Direction		1								
	Level of Service		**B**	-	-	-	-	-	-	-	-