1440 Blair Towers Place

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report (Rev. #2)

Prepared for:

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PN: 2023-096

Table of Contents

List of Figures

Table of Tables

List of Appendices

1 Screening

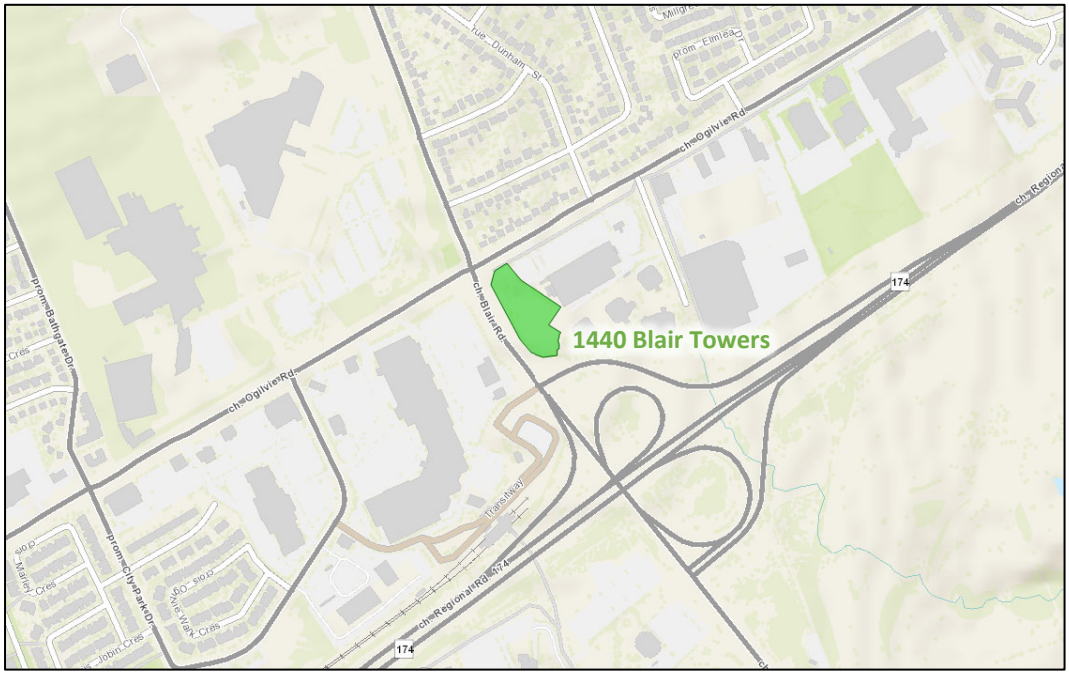
This study has been prepared according to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, incorporating the 2023 Revision to Transportation Impact Assessment Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for the TIA Study PM. As shown in the Screening Form, a TIA is required, and this study has been prepared to support the Official Plan Amendment/Zoning By-Law Amendment application.

2 Existing and Planned Conditions

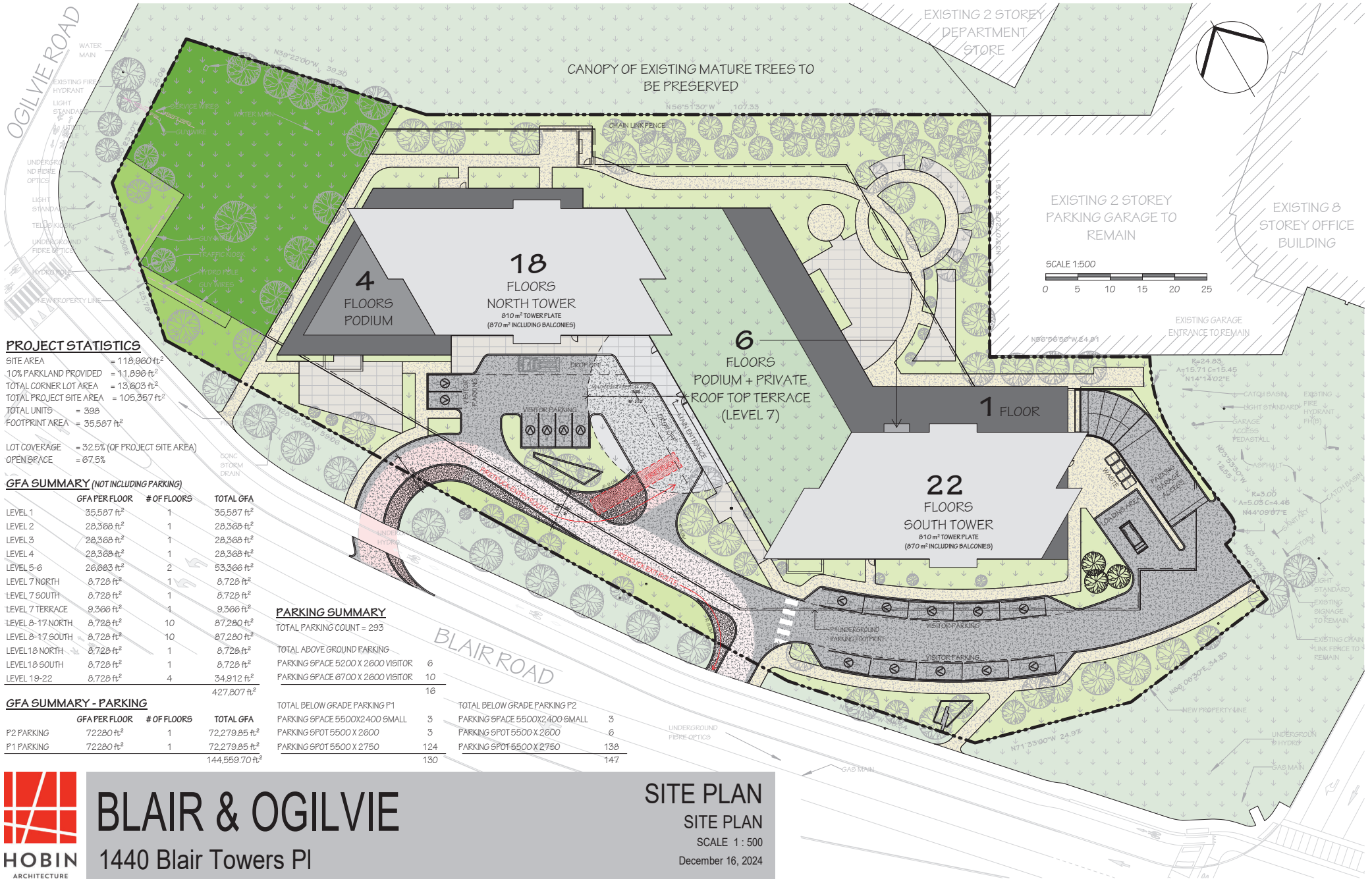
2.1 Proposed Development

The development site is located at 1440 Blair Towers Place and is zoned as Transit Oriented Development Zone (TD2[2085]). The development will consist of approximately 398 seniors housing units in two towers sharing a single podium to be built-out by 2027. The plan includes the relocation of the existing right-in-only access and a proposed right-out-only on Blair Road and proposes 293 vehicle parking spaces on-site. The site is within the Blair Transit Oriented Development (TOD) area and Blair Protected Major Transit Station Areas (PMTSA). Figure 1 illustrates the study area context. Figure 2 illustrates the proposed concept plan.

Figure 1: Area Context Plan



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 4, 2023



PROJECT STATISTICS

SITE AREA	= 118,960 ft²
10% PARKLAND PROVIDED	= 11,896 ft²
TOTAL CORNER LOT AREA	= 13,603 ft²
TOTAL PROJECT SITE AREA	= 105,357 ft²
TOTAL UNITS	= 398
FOOTPRINT AREA	= 35,587 ft²
LOT COVERAGE	= 32.5% (OF PROJECT SITE AREA)
OPEN SPACE	= 67.5%

GFA SUMMARY *(NOT INCLUDING PARKING)*

	GFA PER FLOOR	# OF FLOORS	TOTAL GFA
LEVEL 1	35,587 ft²	1	35,587 ft²
LEVEL 2	28,368 ft²	1	28,368 ft²
LEVEL 3	28,368 ft²	1	28,368 ft²
LEVEL 4	28,368 ft²	1	28,368 ft²
LEVEL 5-6	26,683 ft²	2	53,366 ft²
LEVEL 7 NORTH	8,728 ft²	1	8,728 ft²
LEVEL 7 SOUTH	8,728 ft²	1	8,728 ft²
LEVEL 7 TERRACE	9,366 ft²	1	9,366 ft²
LEVEL 8-17 NORTH	8,728 ft²	10	87,280 ft²
LEVEL 8-17 SOUTH	8,728 ft²	10	87,280 ft²
LEVEL 18 NORTH	8,728 ft²	1	8,728 ft²
LEVEL 18 SOUTH	8,728 ft²	1	8,728 ft²
LEVEL 19-22	8,728 ft²	4	34,912 ft²
			427,807 ft²

GFA SUMMARY - PARKING

	GFA PER FLOOR	# OF FLOORS	TOTAL GFA
P2 PARKING	72280 ft²	1	72,279.85 ft²
P1 PARKING	72280 ft²	1	72,279.85 ft²
			144,559.70 ft²

PARKING SUMMARY

TOTAL PARKING COUNT = 293

TOTAL ABOVE GROUND PARKING	
PARKING SPACE 5200 X 2600 VISITOR	6
PARKING SPACE 6700 X 2600 VISITOR	10
	16

TOTAL BELOW GRADE PARKING P1	
PARKING SPACE 5500X2400 SMALL	3
PARKING SPOT 5500 X 2600	3
PARKING SPOT 5500 X 2750	124
	130

TOTAL BELOW GRADE PARKING P2	
PARKING SPACE 5500X2400 SMALL	3
PARKING SPOT 5500 X 2600	6
PARKING SPOT 5500 X 2750	138
	147

HOBIN ARCHITECTURE

BLAIR & OGILVIE

1440 Blair Towers Pl

SITE PLAN

SITE PLAN

SCALE 1 : 500

December 16, 2024

2.2 Existing Conditions

2.2.1 Area Road Network

Ottawa Road 174 (OR174): Ottawa Road 174 is a City of Ottawa urban freeway with a six-lane rural cross-section including a transit lane in each direction. The posted speed limit is 100 km/h and outside of interchanges, the existing right-of-way is generally 91.0 metres within the study area and is subject to existing corridor protection within the Official Plan. Ottawa Road 174 is designated as a truck route.

Blair Road: Blair Road is a City of Ottawa arterial road. North of Crownhill Street, it has a two-lane semi-urban cross-section curbed with a sidewalk on the east side of the road, and it includes a bike lane on the east side of the road and a paved shoulder on the west side of the road. Between Crownhill Street and Ogilvie Road, it has a three-lane urban cross-section (two southbound lanes) with sidewalks and bike lanes on both sides of the road. Between Ogilvie Road and the Gloucester Centre access, it has a divided four-lane urban cross-section with sidewalks on both sides of the road. South of the Gloucester Centre access, it has a four-lane urban cross-section. Bike lanes are present across the bridge over OR 174. North of Ogilvie Road, the posted speed limit is 50 km/h, and the posted speed limit is 70 km/h to the south. North of OR 174, the Official Plan reserves a 30.0-metre right-of-way. South of OR 174, the Official Plan reserves a 37.5-metre right-of-way. Blair Road is designated as a truck route.

Ogilvie Road: Ogilvie Road is a City of Ottawa arterial road with a divided four-lane urban cross-section. West of Blair Road, sidewalks and bike lanes are on both sides of the road. East of Blair Road, a sidewalk is present on the north side of the road and a multi-use pathway (MUP) is on the south side of the road. The posted speed limit is 60 km/h. East of Blair Road, the Official Plan reserves a 37.5-metre right-of-way and west of Blair Road, the Official Plan reserves a 44.5-metre right-of-way Ogilvie Road is designated as a truck route.

Blair Towers Place: Blair Towers Place is a City of Ottawa local road. It has a four-lane urban cross-section north of the Costco access and a three-lane urban cross-section (two southbound lanes) with a parking lane on the east side of the road south of the Costco access. A multi-use pathway is present on the east side of the road and a sidewalk on the west side of the road. The unposted speed limit is assumed to be 50 km/h, and the existing right-of-way varies between 29.0 metres and 38.0 metres.

2.2.2 Existing Intersections

The existing signalized area intersections within 400 metres of the site have been summarized below:

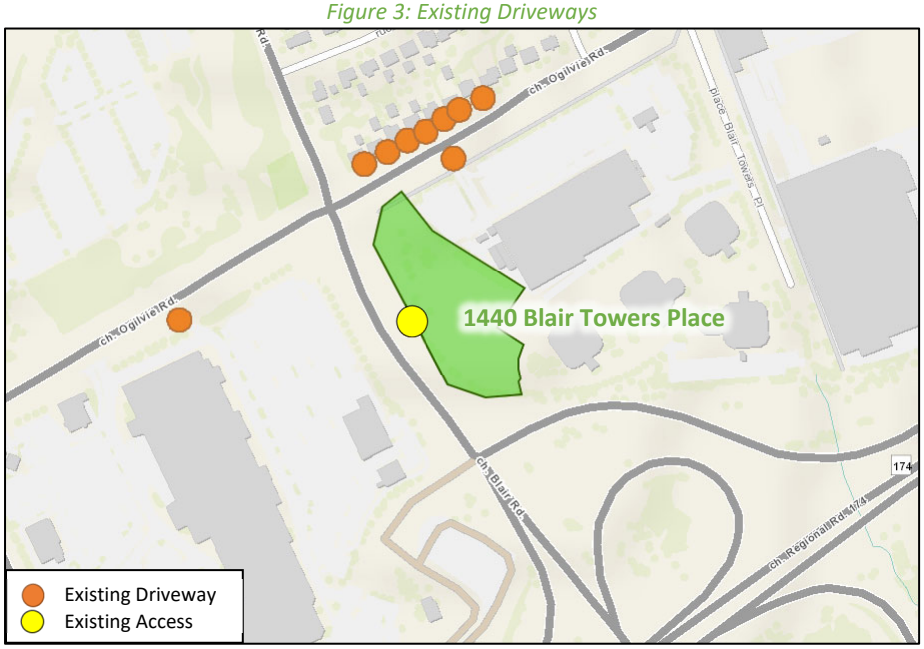
Blair Road at Ogilvie Road	The intersection of Blair Road at Ogilvie Road is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane, a left-turn lane, a through lane, and an auxiliary channelized right-turn lane, and the southbound approach consists of an auxiliary left-turn lane, a through lane, a shared through/right-turn lane, and a bike lane. The eastbound approach consists of an auxiliary left-turn lane, two through lanes, a bike lane, and a channelized right-turn lane, and the westbound approach consists of two auxiliary left-turn lanes, a through lane, and a shared through/right-turn lane. No turn restrictions were noted.
Blair Road at Inbound Site Access	The intersection of Blair Road at Inbound Site Access is an uncontrolled intersection. The east leg is inbound only, and is accessed from the auxiliary right-turn lane for the downstream Blair

	Road at Ogilvie Road intersection. Given the presence of median, there is no interaction with the southbound Blair Road.
Blair Road at OR 174 WB	The intersection of Blair Road at OR 174 WB is a signalized intersection. The northbound approach consists of two auxiliary left-turn lanes and two through lanes, and the southbound approach consists of three through lanes and an auxiliary channelized right-turn lane. The eastbound approach consists of an auxiliary left-turn lane and a right-turn lane, and the westbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary right-turn lane. No turn restrictions were noted.
Blair Towers Place at Ogilvie Road	The intersection of Blair Towers Place at Ogilvie Road is a signalized T-intersection. The northbound approach consists of an auxiliary left-turn lane, a left-turn lane, and a right-turn lane. The eastbound approach consists of two through lanes and an auxiliary channelized right-turn lane, and the westbound approach consists of an auxiliary left-turn lane and two through lanes. No turn restrictions were noted.
Blair Towers Access at Blair Towers Place	The intersection of Blair Towers Access at Blair Towers Place is an unsignalized T-intersection, stop-controlled on the minor approach of the site access. The northbound approach consists of a shared all-movement lane, and the southbound approach consists of a through lane and a right-turn lane. The west leg consists of an inbound lane and outbound lane divided by a median.

2.2.3 Existing Driveways

Within 200 metres of the site access, one driveway to the Gloucester Centre, seven driveways to detached dwellings, and one driveway to a retail store are present on Ogilive Road. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



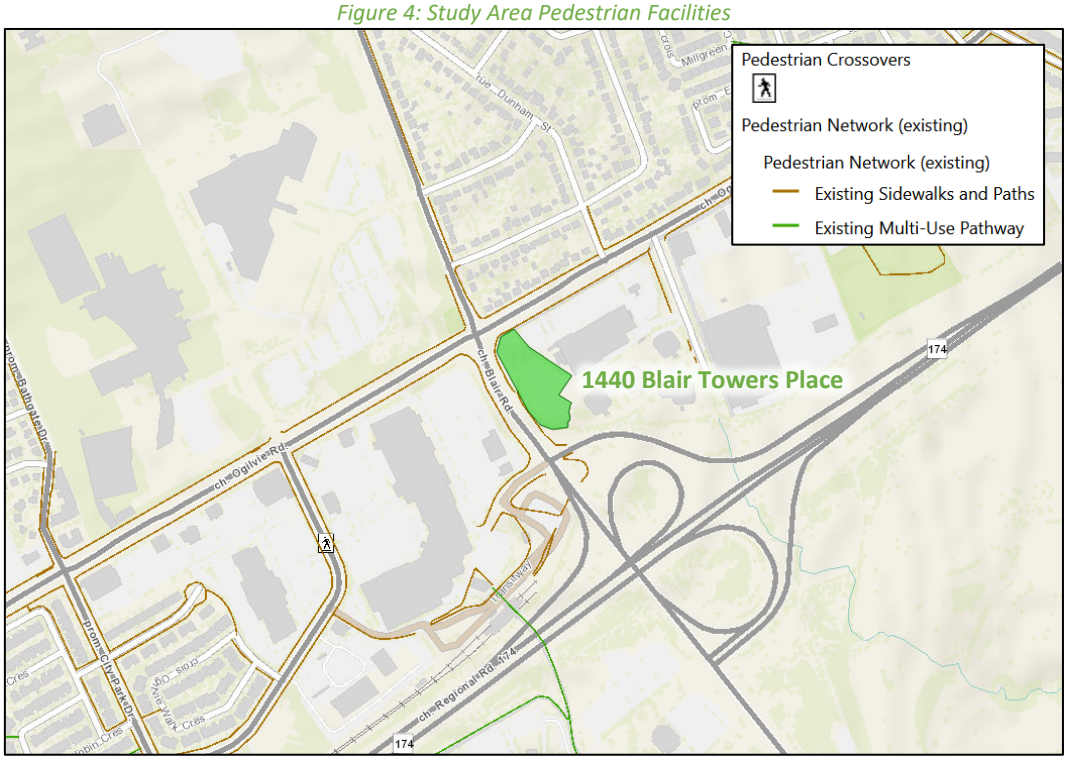
Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 4, 2023

2.2.4 Cycling and Pedestrian Facilities

Figure 4 illustrates the pedestrian facilities in the study area and Figure 5 illustrates the cycling facilities.

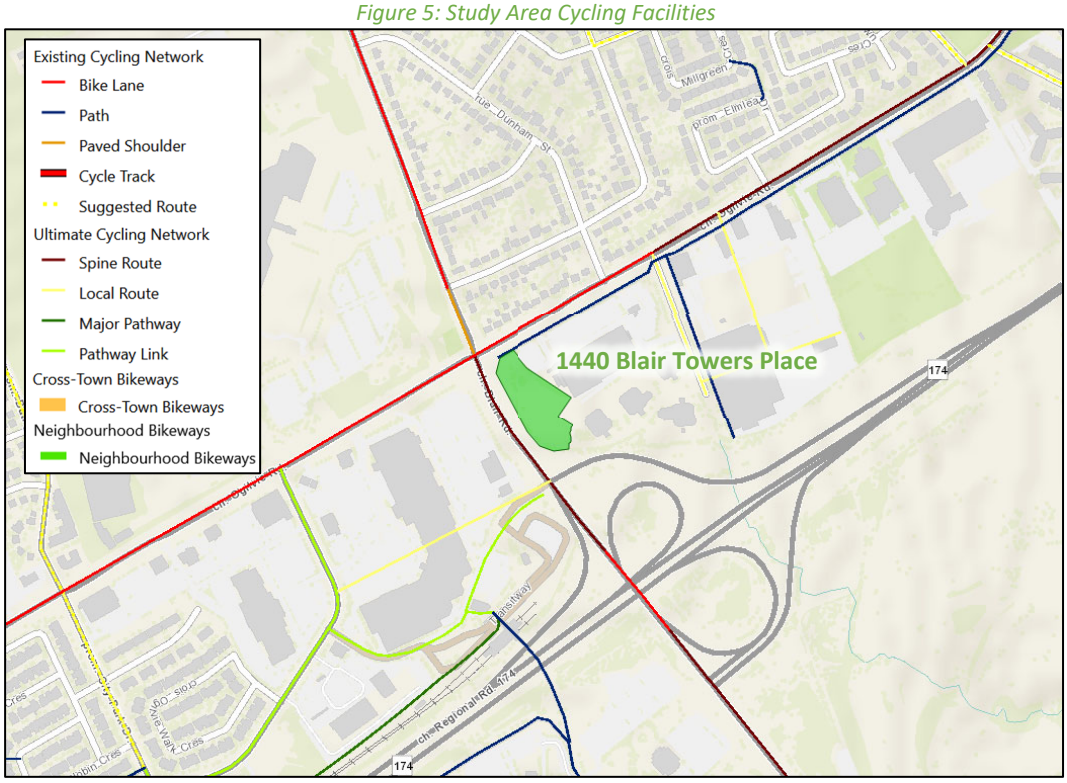
Sidewalks are provided along both sides of Ogilvie Road west of Blair Road, and Blair Road between Ogilvie Road and the OR 174 westbound off-ramp, along the east side of Blair Road north of Ogilvie Road, along the north side of Ogilvie Road east of Blair Road, and on the west side of Blair Towers Place. Bike lanes are provided on both sides of Ogilvie Road west of Blair Road and on the south side of the road west of Blair Towers Place, and multi-use pathways are provided on the south side of Ogilvie Road east of Blair Road and on the east side of Blair Towers Place. Ogilvie Road and Blair Road are spine cycling routes and Blair Towers Place is a local route.

Figure 4: Study Area Pedestrian Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: August 31, 2023

Figure 5: Study Area Cycling Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: August 31, 2023

Pedestrian and cyclist volumes included in study area intersection counts, presented in Section 2.2.7, have been compiled and are illustrated in Figure 6 and Figure 7, respectively.

Figure 6: Existing Pedestrian Volumes

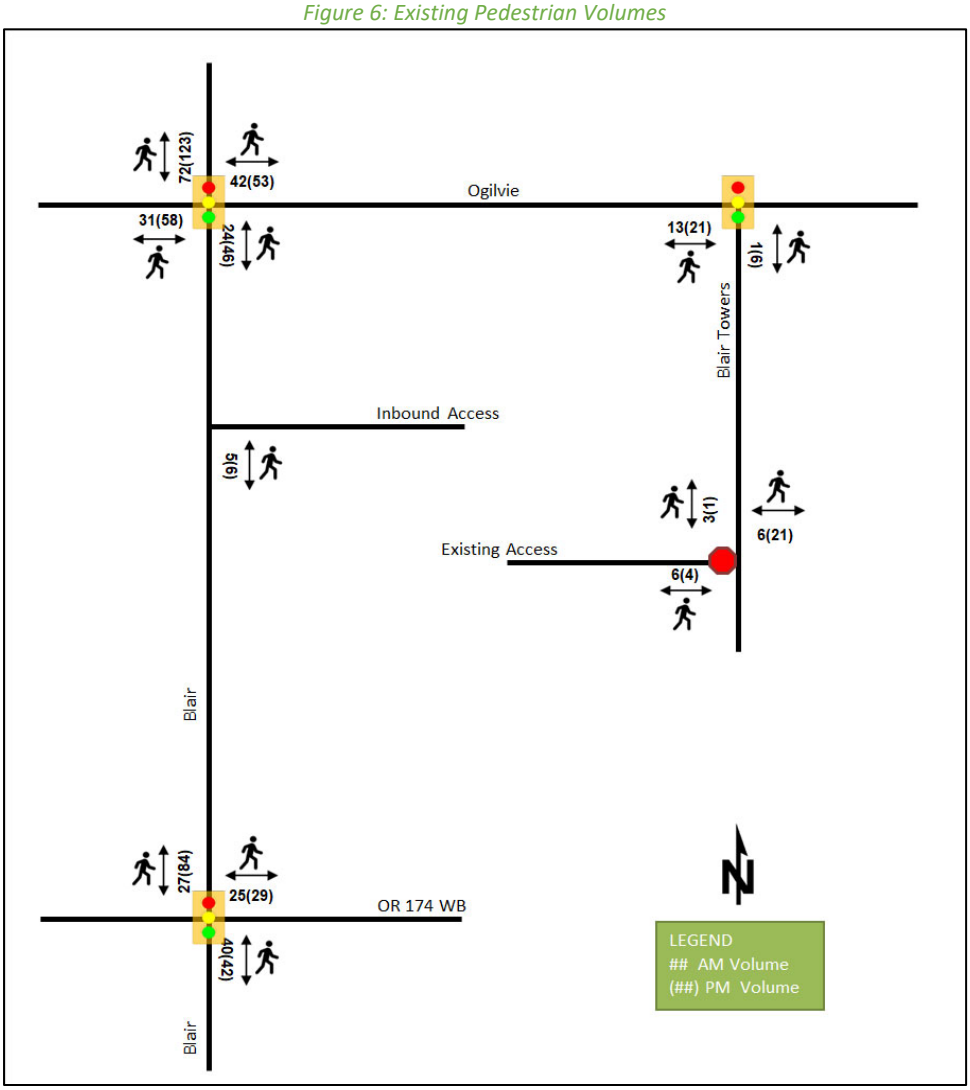
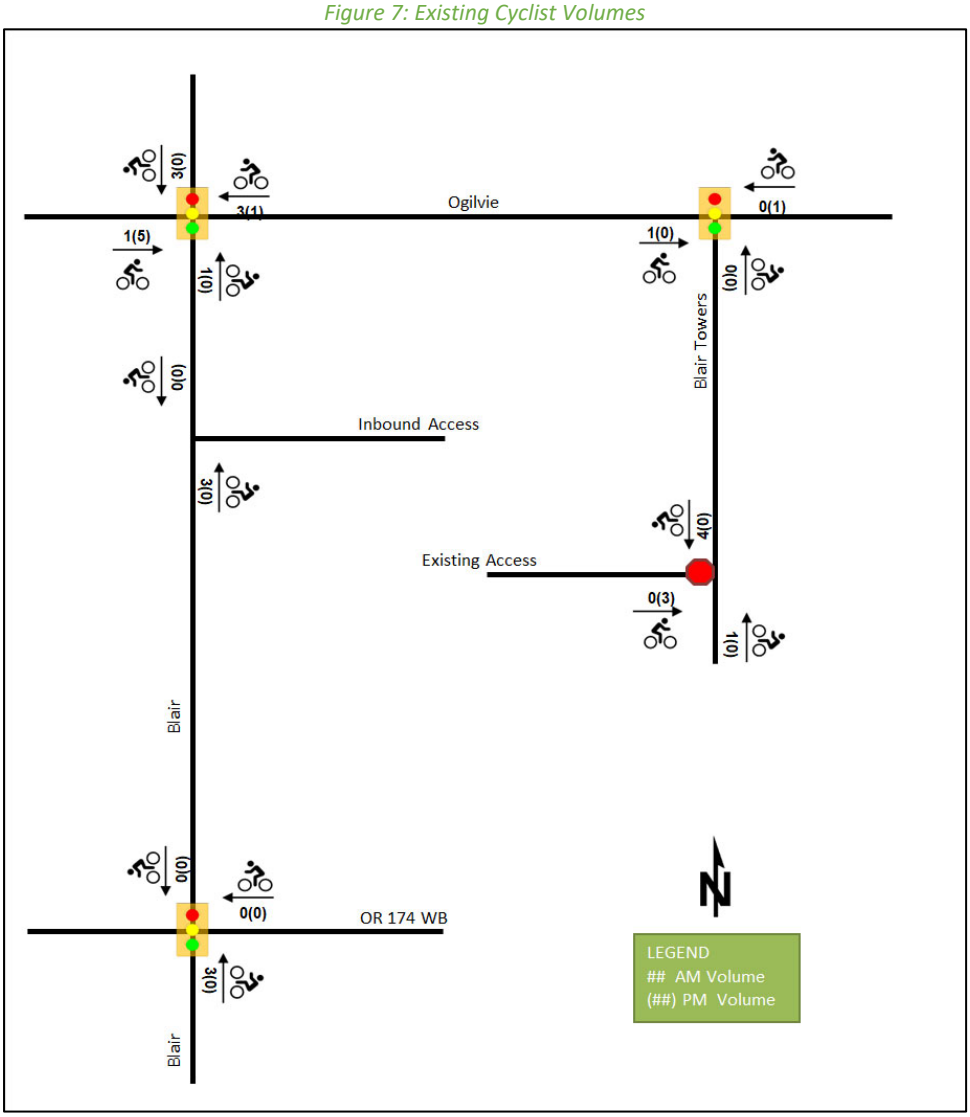


Figure 7: Existing Cyclist Volumes



2.2.5 Existing Transit

Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates transit stops within 400 metres and transit stations within 800 metres. All transit information is from September 6, 2023, and is included for general information purposes and context to the surrounding area.

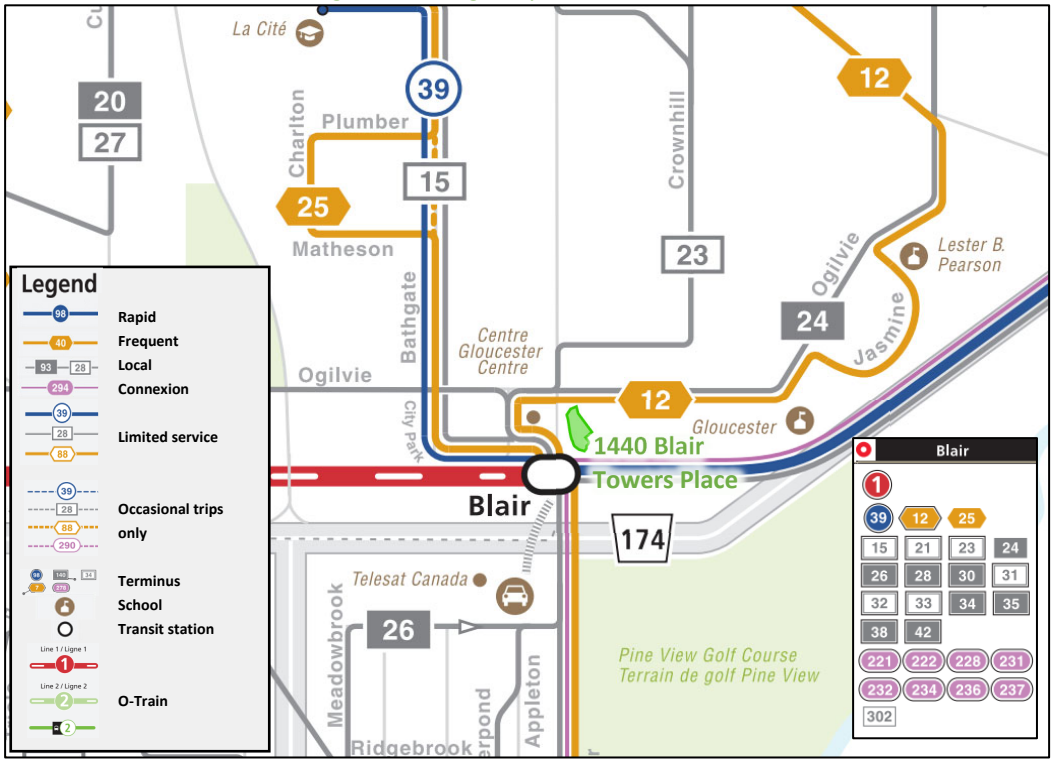
Within the study area, routes #12, #24, #28, #35, #619, #622, #624, #630, #631, and #633 travel along Ogilvie Road, and routes #26 travels along Blair Road. Route #23 travels along Blair Road and Ogilvie Road to Blair Station. The closest bus stop is located at Blair Road at Ogilvie Road, and it is within 100 metres of the site. Routes #26, #28, and #35 are routes providing service to secondary schools through the study area. The frequency of these routes within proximity of the proposed site based on September 6, 2023 service levels are:

- Route # 12 – 15-minute service all day
- Route # 23 – 30-minute service in peak hours, 60-minute service from 9AM to 12PM
- Route # 24 – 15-minute during peak hours, 30-minute service all day
- Route # 26 – One trip in the morning, and two trips in the afternoon in the peak direction
- Route # 28 – Three trips in the morning, and three trips in the afternoon in the peak direction

- Route # 35 – One trip in the morning, and two trips in the afternoon in the peak direction
- Route # 619 – Two morning buses and one afternoon bus per day in the peak direction
- Route # 622 – Two morning buses and one afternoon bus per day in the peak direction
- Route # 624 – One bus each during morning and afternoon per day in the peak direction
- Route # 630 – Two morning buses and one afternoon bus per day in the peak direction
- Route # 631 – One bus each during morning and afternoon per day in the peak direction
- Route # 633 – One bus each during morning and afternoon per day in the peak direction

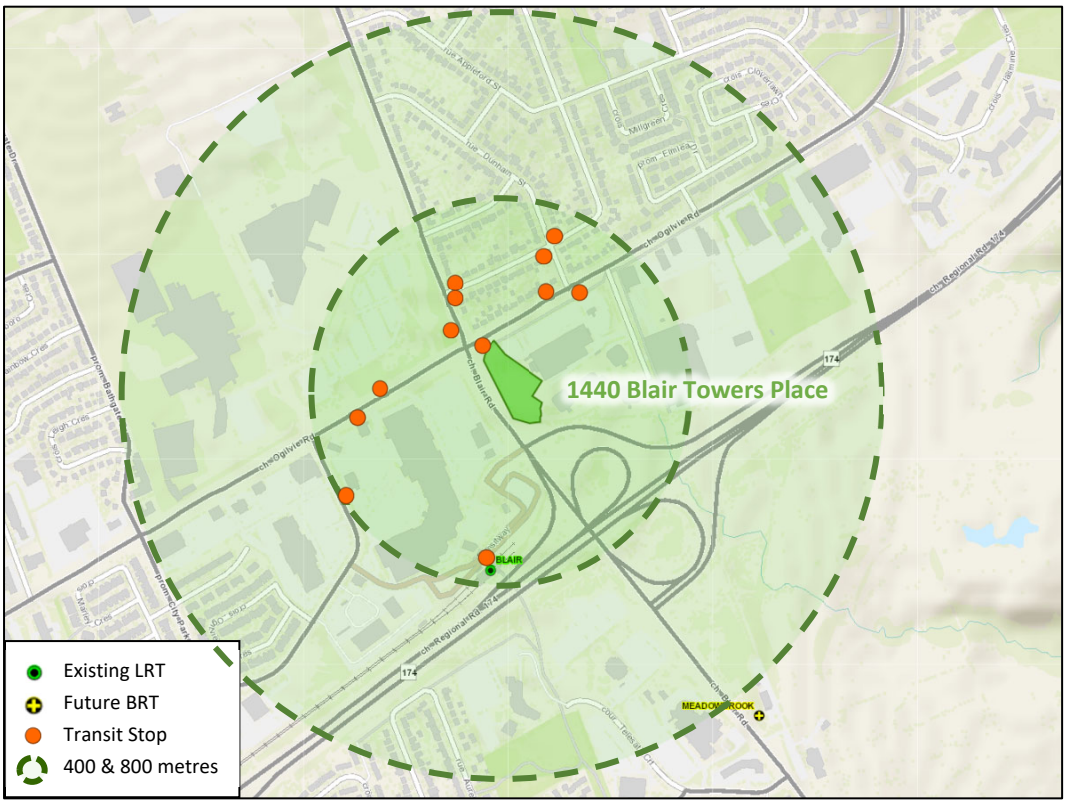
Additionally, the Blair LRT station is located within a 600-metre walking distance from the site. The LRT line provides 5-minute service during the peak periods, and 10–15-minute service outside of peaks. Bus routes are also provided at the Blair station, which provides service within the study area, and routes servicing Blair station are summarized within Figure 8.

Figure 8: Existing Study Area Transit Service



Source: http://www.octranspo.com/ Accessed: September 6, 2023

Figure 9: Existing Study Area Transit Stops



Source: http://www.octranspo.com/ Accessed: September 6, 2023

2.2.6 Existing Area Traffic Management Measures

There are no existing area traffic management measures within the study area.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts were acquired from the City of Ottawa for the existing study area intersection. Table 1 summarizes the intersection count dates.

Table 1: Intersection Count Date

Intersection	Count Date	Source
Blair Road at Ogilvie Road	Wednesday, April 24, 2019	City of Ottawa
Blair Road at OR 174 WB	Wednesday, January 09, 2019	City of Ottawa
Blair Towers Place at Ogilvie Road	Wednesday, January 16, 2019	City of Ottawa
Blair Road at Inbound Site Access	Tuesday, August 22, 2023	The Traffic Specialist
Blair Towers Access at Blair Towers Place	Tuesday, August 22, 2023	The Traffic Specialist

Figure 10 illustrates the existing traffic counts and Table 2 summarizes the existing intersection operations. The level of service for signalized intersections is based on volume to capacity ratio (v/c) calculations for individual lane movements and HCM 2000 v/c calculations for the overall intersection, and average delay for unsignalized intersections. Given the intersection of Blair Road at the inbound site access is inbound only and has no interaction with the southbound Blair Road, it is expected to operate with no delay and will not be modelled. Detailed turning movement count data is included in Appendix B and the Synchro worksheets are provided in Appendix C.

Figure 10: Existing Traffic Counts

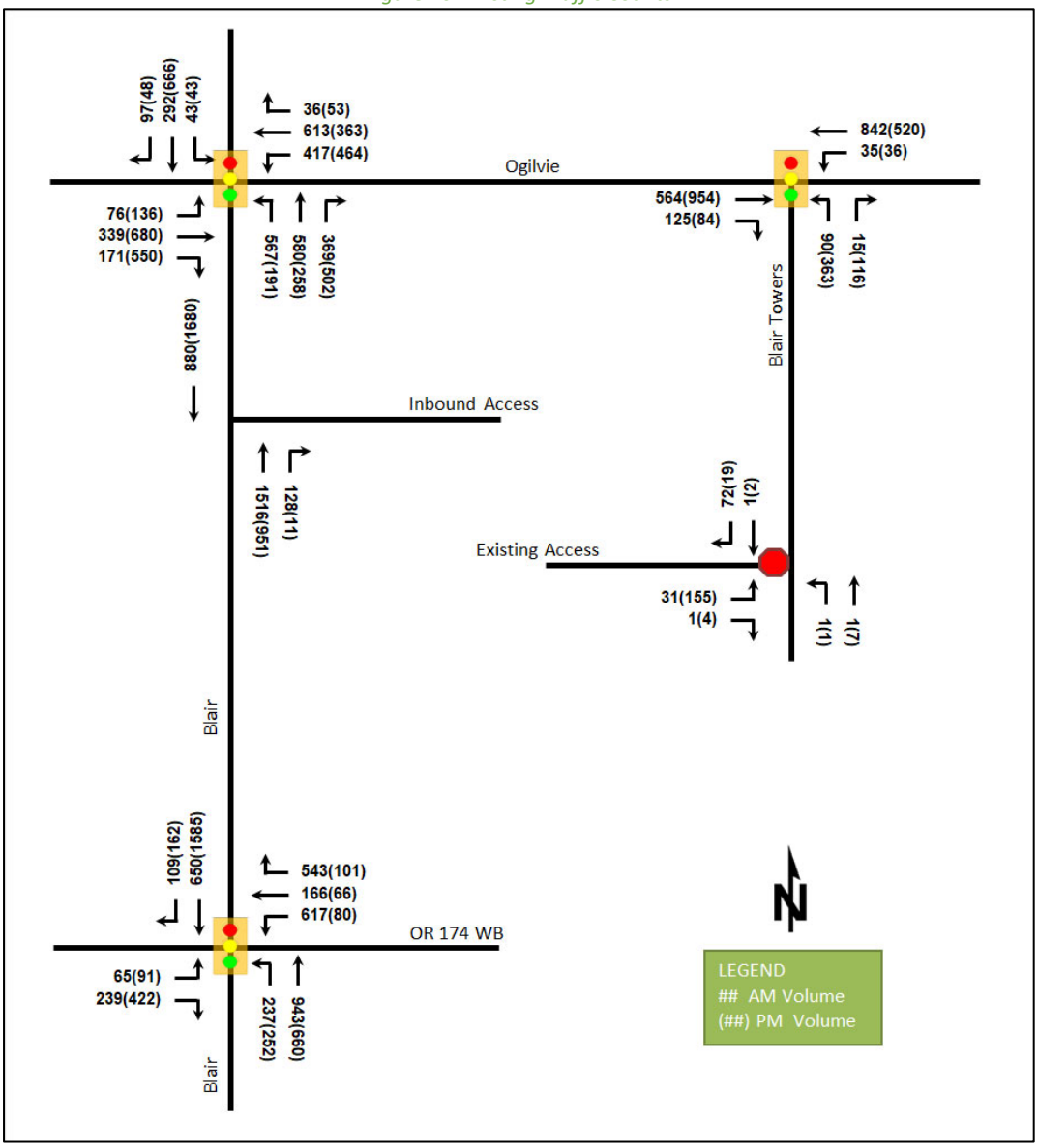


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Blair Road at Ogilvie Road *Signalized*	EBL	A	0.57	73.4	39.0	C	0.78	**86.0**	**#69.7**
	EBT	A	0.58	51.0	64.7	D	0.84	58.2	**#145.0**
	EBR	A	0.44	9.2	19.8	**F**	**1.14**	**111.1**	**#225.6**
	WBL	E	0.91	77.6	**#98.8**	D	0.84	67.2	89.3
	WBT/R	D	0.82	54.1	**#133.7**	A	0.42	36.0	67.3
	NBL	E	0.92	70.3	**#122.8**	B	0.69	73.5	43.0
	NBT	E	0.94	62.9	**#256.7**	A	0.55	47.6	102.3
	NBR	A	0.52	5.3	22.5	C	0.75	14.8	71.3
	SBL	A	0.49	**80.6**	26.6	A	0.43	73.7	25.7
	SBT/R	B	0.64	48.9	71.5	E	0.96	74.9	**#158.4**
	Overall	**E**	**0.97**	**53.5**	-	**E**	**0.99**	**63.0**	-
Blair Road at OR 174 WB *Signalized*	EBL	A	0.21	25.3	20.5	A	0.38	47.6	39.4
	EBR	A	0.42	12.9	37.9	D	0.81	42.2	136.4
	WBL	**F**	**1.21**	**141.5**	**#230.1**	A	0.24	43.4	34.0
	WBT	A	0.16	23.4	20.7	A	0.19	42.4	28.6
	WBR	**F**	**1.09**	**93.7**	**#183.9**	A	0.28	9.0	15.2
	NBL	B	0.65	47.4	36.0	B	0.68	59.9	48.2
	NBT	A	0.60	18.1	90.0	A	0.33	9.2	47.3
	SBT	A	0.50	29.7	56.7	C	0.78	32.3	165.8
	SBR	A	0.23	6.4	12.9	A	0.27	8.9	23.9
	Overall	**E**	**0.91**	**54.7**	-	**D**	**0.84**	**30.2**	-
Blair Towers Place at Ogilvie Road *Signalized*	EBT	A	0.28	6.8	40.1	A	0.44	7.8	69.3
	EBR	A	0.13	2.2	8.2	A	0.09	1.5	5.1
	WBL	A	0.08	7.8	8.1	A	0.13	7.2	7.6
	WBT	A	0.41	7.8	64.6	A	0.25	6.2	32.9
	NBL	A	0.17	22.7	8.6	C	0.72	52.0	57.2
	NBR	A	0.07	9.6	3.5	A	0.41	21.2	26.1
	Overall	**A**	**0.38**	**7.9**	-	**A**	**0.50**	**15.6**	-
Blair Towers Access at Blair Towers Place *Unsignalized*	EBL/R	A	0.04	8.7	0.8	A	0.18	9.3	4.5
	NBL/T	A	0.00	7.4	0.0	A	0.00	7.3	0.0
	SBT	-	-	-	-	-	-	-	-
	SBR	-	-	-	-	-	-	-	-
	Overall	**A**	**-**	**2.7**	-	**A**	**-**	**7.9**	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 0.90
Delay = average vehicle delay in seconds
m = metered queue
# = volume for the 95th %ile cycle exceeds capacity

At the intersection of Blair Road at Ogilvie Road, during the AM peak hour, the westbound left-turn, westbound through/right, northbound left, and northbound through may exhibit extended queues and the southbound left movement may be subject to high delays. During the PM peak hour, the eastbound right movement is over theoretical capacity and may be subject to high delays and extended queues. Also, during the PM peak hour, the eastbound left movement may be subject to high delays and extended queues, and the eastbound through and southbound through/right movements may exhibit extended queues. No mitigation is proposed for the capacity issues at this intersection beyond the planned improvements as part of the Montreal-Blair Transit Priority EA study. These improvements will be focused on reducing auto capacity further to support transit and active modes in the area.

At the intersection of Blair Road at OR 174 WB, the westbound left and westbound right movements are over theoretical capacity and may be subject to high delays and extended queues during the AM peak hour. No mitigation is proposed for the capacity issues at the intersection beyond the planned improvements as part of the Blair Road Widening for Transit Priority EA study. These improvements will be focused on reducing auto capacity further to support transit and active modes in the area.

2.2.8 Collision Analysis

Collision data have been acquired from the City of Ottawa open data website (data.ottawa.ca) for five years prior to the commencement of this TIA for the surrounding study area road network. Table 3 summarizes the collision types and conditions in the study area, Figure 11 illustrates the area collisions, and Table 4 summarizes the total collisions for each of the locations analyzed. Collision data are included in Appendix D.

Table 3: Study Area Collision Summary, 2018-2022

		Number	%
Total Collisions		**153**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	23	15%
	Property Damage Only	130	85%
Initial Impact Type	**Angle**	17	11%
	Rear end	100	65%
	Sideswipe	17	11%
	Turning Movement	9	6%
	SMV Other	5	3%
	Other	5	3%
Road Surface Condition	**Dry**	32	21%
	Wet	7	5%
	Loose Snow	2	1%
	Slush	3	2%
	Packed Snow	10	7%
	Ice	32	21%
Pedestrian Involved		2	1%
Cyclists Involved		2	1%

Figure 11: Study Area Collision Records

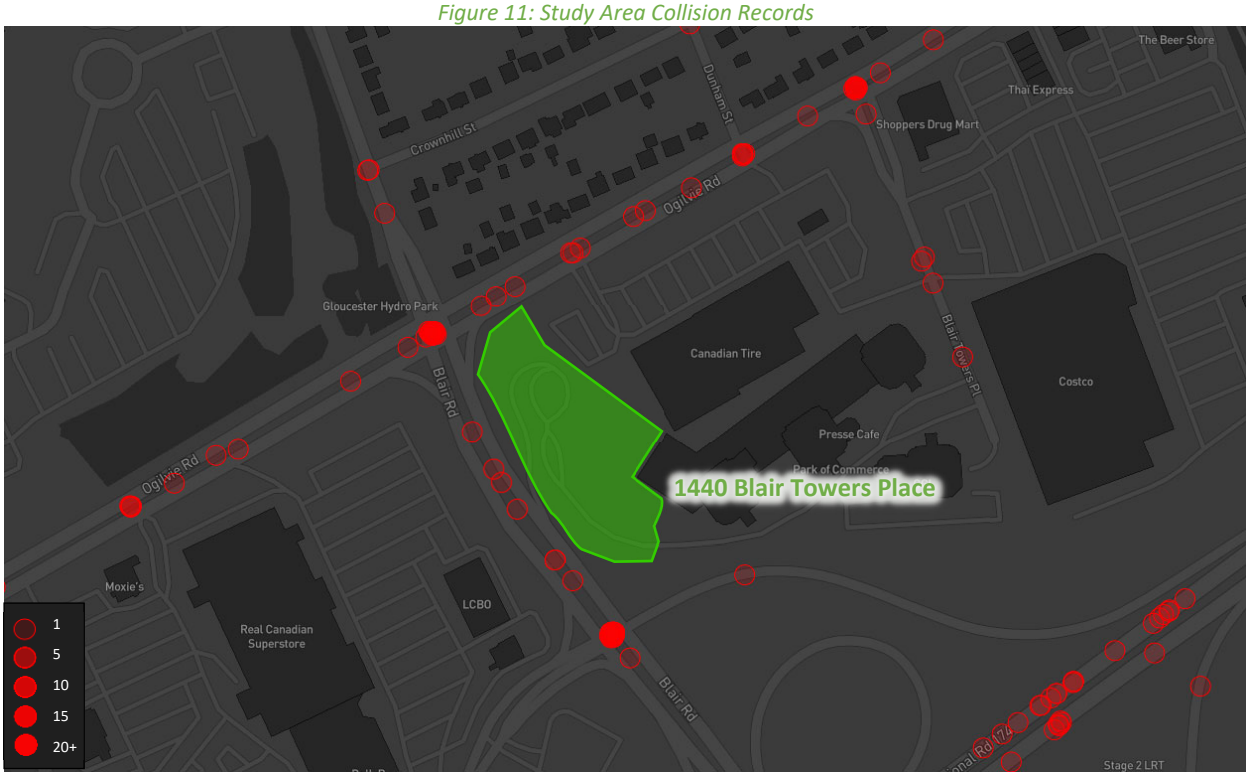


Table 4: Summary of Collision Locations, 2018-2022

	Number	%
Intersections / Segments	**153**	**100%**
Blair Rd at Ogilvie Rd	83	54%
Blair Rd at Regional Rd 174 N/OR174 IC112 Ramp 61	51	33%
Blair Towers Pl at Ogilvie Rd	11	7%
Blair Rd btwn Ogilvie Rd & OR174 IC112 Ramp 36	5	3%
Blair Towers Pl btwn end & Ogilvie Rd	3	2%

Within the study area, the intersections of Blair Road at Ogilvie Road, Blair Road at Regional Road 174 N/OR174 IC112 Ramp 61, and Blair Towers Place at Ogilvie Road are noted to have experienced higher collisions than other locations. Table 5, Table 6, and Table 7 summarize the collision types and conditions for each of the locations. The segment of Blair Road between Ogilvie Road and the OR 174 westbound ramp was noted to have only recorded five collisions in total, with four in 2019 (two each as sideswipe and rear end) and one rear end collision in 2020. It is anticipated that collisions will remain lower than historical amounts with the recent reduction in a northbound receiving lane at the adjacent intersection of Blair Road at the OR 174 westbound ramp.

Table 5: Blair Road at Ogilvie Road Collision Summary

		Number	%
Total Collisions		**83**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	11	13%
	Property Damage Only	72	87%
Initial Impact Type	**Angle**	1	1%
	Rear end	66	80%
	Sideswipe	11	13%
	Turning Movement	2	2%

		Number	%
Total Collisions		**83**	**100%**
	SMV Other	1	1%
	Other	2	2%
Road Surface Condition	**Dry**	55	66%
	Wet	17	20%
	Loose Snow	4	5%
	Slush	2	2%
	Ice	5	6%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

The Blair Road at Ogilvie Road intersection had a total of 83 collisions during the 2018-2022 time period, with 72 involving property damage only and the remaining eleven having non-fatal injuries. The collision types are most represented by rear end with 66 collisions, followed by eleven sideswipe, two collisions each for the turning movement and "other" collision types, and one collision each for the angle and "SMV other" collision types. Almost all of the collisions are of the types typically associated with congestion at the intersection, and only one angle and two turning movement collisions occurred in the study period. No further examination is required as part of this study.

Table 6: Blair Road at Regional Road 174 N/OR174 IC112 Ramp 61 Collision Summary

		Number	%
Total Collisions		**51**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	9	18%
	Property Damage Only	42	82%
Initial Impact Type	**Angle**	13	25%
	Rear end	26	51%
	Sideswipe	2	4%
	Turning Movement	4	8%
	SMV Other	4	8%
	Other	2	4%
Road Surface Condition	**Dry**	30	59%
	Wet	12	24%
	Loose Snow	3	6%
	Packed Snow	2	4%
	Ice	4	8%
Pedestrian Involved		2	4%
Cyclists Involved		0	0%

The Blair Road at Regional Road 174 N/OR174 IC112 Ramp 61 intersection had a total of 51 collisions during the 2018-2022 time period, with 42 involving property damage only and the remaining nine having non-fatal injuries. The collision types are most represented by rear end with 26 collisions, followed by 13 angle, four collisions each for turning movement and "SMV other", and with the remaining collisions split between sideswipe and "other". It was noted that only two collisions in total, and only one of the 13 angle collisions, occurred in 2022 after the intersection was reconstructed and the westbound right-turn channel was removed. Weather conditions do not affect collisions at this location. It is anticipated that the additional planned intersection modifications will further improve collisions at this location in the future, and no further examination is required as part of this study.

Table 7: Blair Towers Place at Ogilvie Road Collision Summary

		Number	%
Total Collisions		**11**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	2	18%
	Property Damage Only	9	82%
Initial Impact Type	**Angle**	2	18%
	Rear end	5	45%
	Sideswipe	2	18%
	Turning Movement	1	9%
	Other	1	9%
Road Surface Condition	**Dry**	8	73%
	Wet	2	18%
	Ice	1	9%
Pedestrian Involved		0	0%
Cyclists Involved		2	18%

The Blair Towers Place at Ogilvie Road intersection had a total of eleven collisions during the 2018-2022 time period, with nine involving property damage only and the remaining two having non-fatal injuries. The collision types are most represented by rear end with five collisions, followed by two collisions each for angle and sideswipe, and with the remaining collisions split between turning movement and "other". Rear end collisions are typical of congestion and weather conditions do not affect collisions at this location. No further examination is required as part of this study.

2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

2.3.1.1 Transportation Master Plan (2013)

Within the Transportation Master Plan, the Network Concept and 2031 Affordable Transit Network identify exclusive bus lanes and transit signal priority along Blair Road between Blair Station and Montreal Road. Bus lanes are planned to be provided through a combination of road widening (north of Ogilvie Road) and conversion of existing traffic lanes (south of Ogilvie Road). It is noted that EA studies have been completed for the planned transit priority along Blair Road, and details are provided in Section 2.3.1.3 and Section 2.3.1.3.

Within the Transportation Master Plan, the Network Concept identifies transit signal priority along Ogilvie Road between Blair Road and St. Laurent Boulevard, transit signal priority and queue jump lanes along Blair Road between Innes Road and Blair Station, and Ottawa Road 174 widening from four to six lanes between Highway 417 and Trim Road, however, these are not included in the Affordable Network.

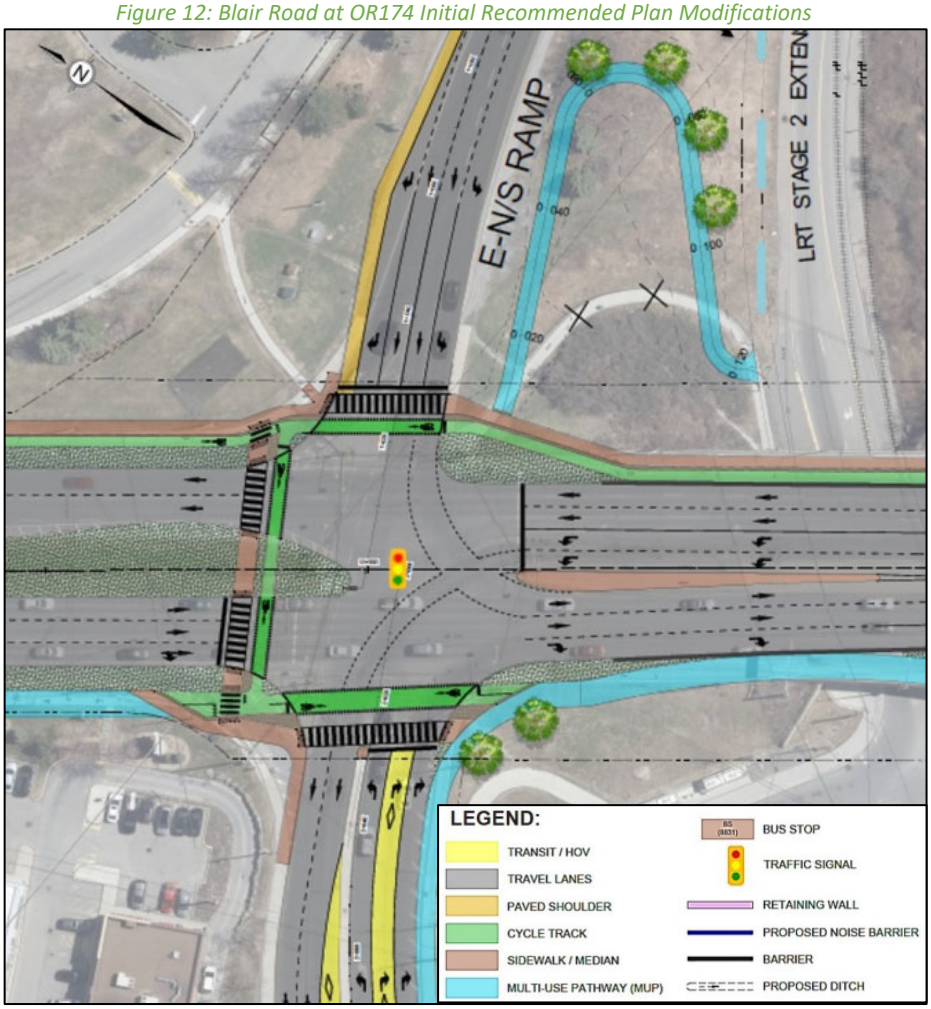
2.3.1.2 City's 2013 Ottawa Cycling Plan

The City's 2013 Ottawa Cycling Plan identifies bike lanes along Blair Road between Ogilvie Road and Meadowbrook Road as part of the Phase 3 Cycling Plan.

2.3.1.3 Blair Road Transit Priority (Ogilvie Road to Innes Road) EA Study

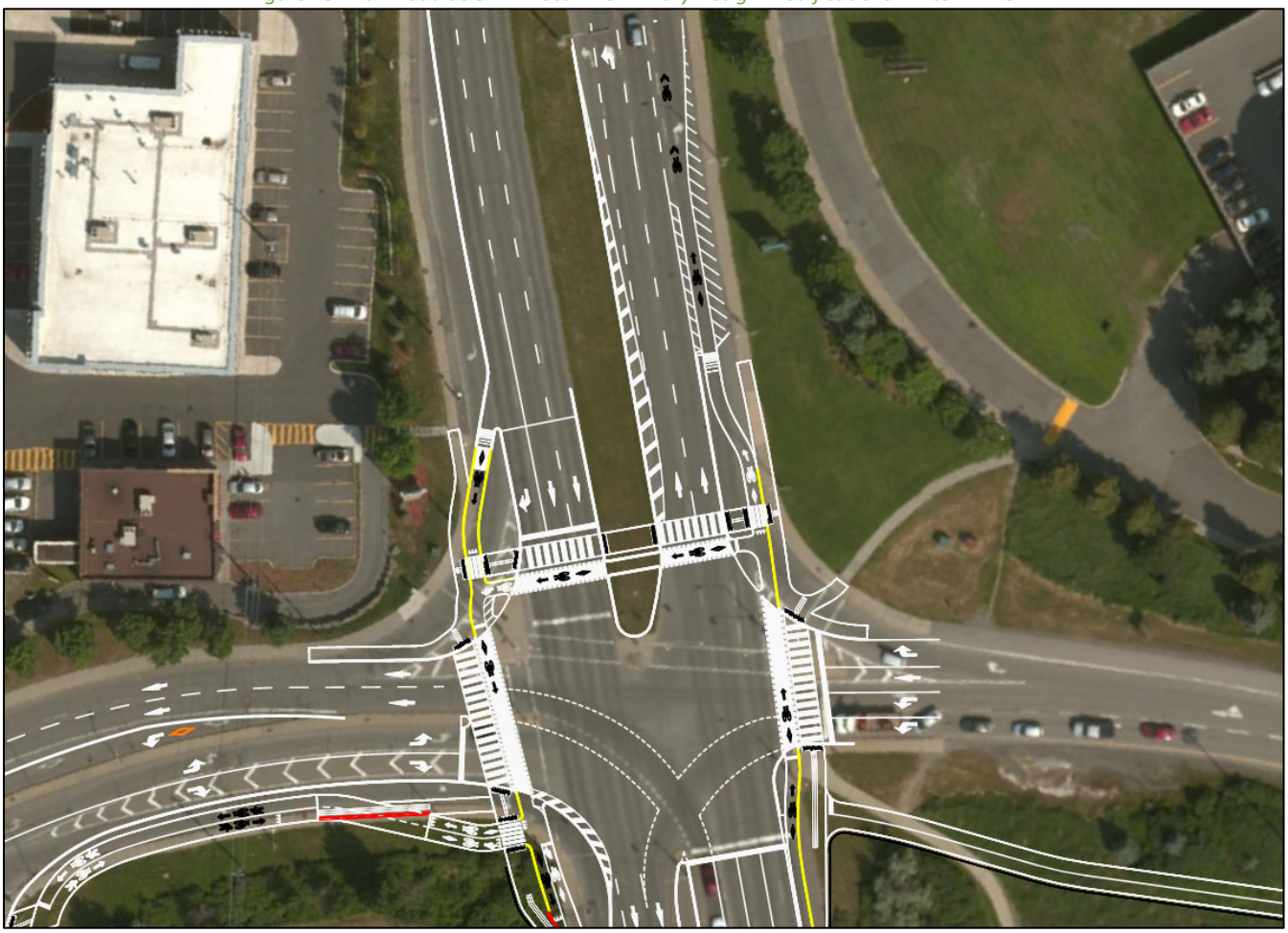
The Blair Road Transit Priority (Ogilvie Road to Innes Road) EA study is underway and is in the preliminary design phase. The initial recommended plan for the modifications for the intersection of Blair Road at the OR 174 westbound off-ramp are illustrated in Figure 12, and the 66% preliminary design which ties into the interim conditions is illustrated in Figure 13. It is noted that the EA study to the north, discussed in Section 2.3.1.4 will extend to the north leg of the intersection of Blair Road at the OR 174 westbound off-ramp.

Figure 12: Blair Road at OR174 Initial Recommended Plan Modifications



Source: https://ottawa.ca/en/parking-roads-and-travel/transportation-planning/completed-projects/blair-road-widening-transit-priority-innes-road-blair-lrt-station-stand-alone-environmental-assessment-study Accessed: September 6, 2023

Figure 13: Blair Road at OR174 66% Preliminary Design Modifications – Interim Tie-In

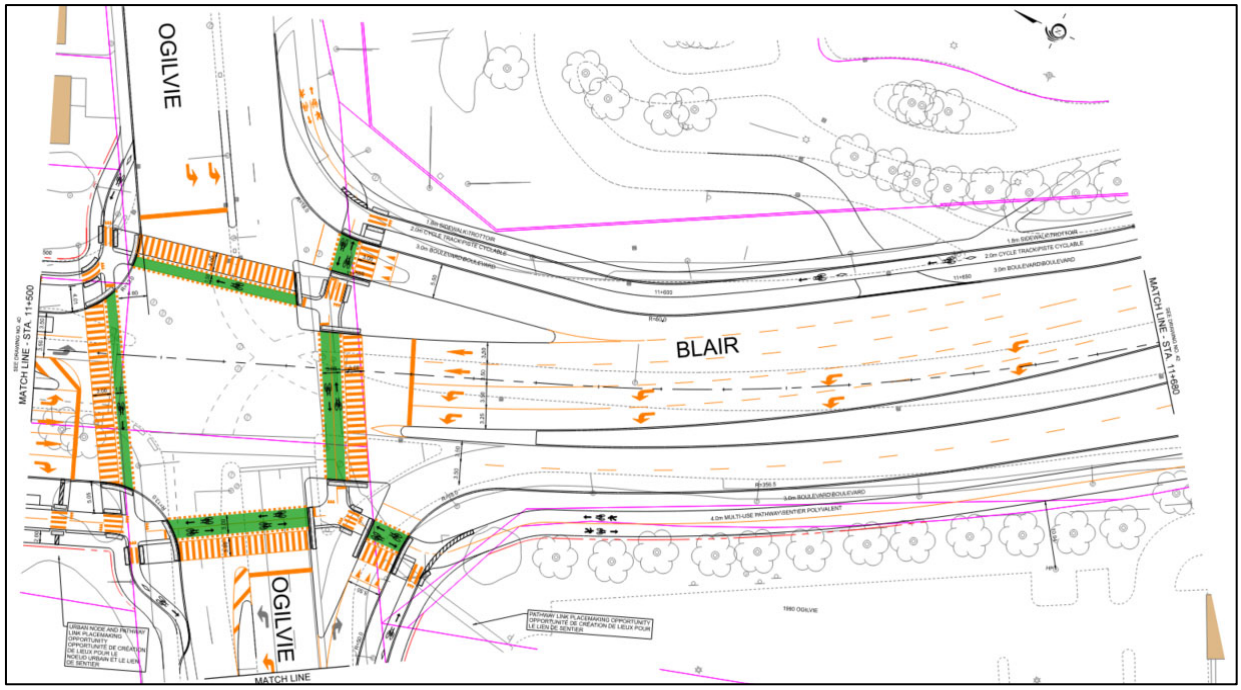


Source: Blair Road Transit Priority (Ogilvie Road to Innes Road) EA Study, 66% Design, Provided by Parsons Corporation on 2023-10-03

2.3.1.4 Montreal-Blair Road Transit Priority Corridor

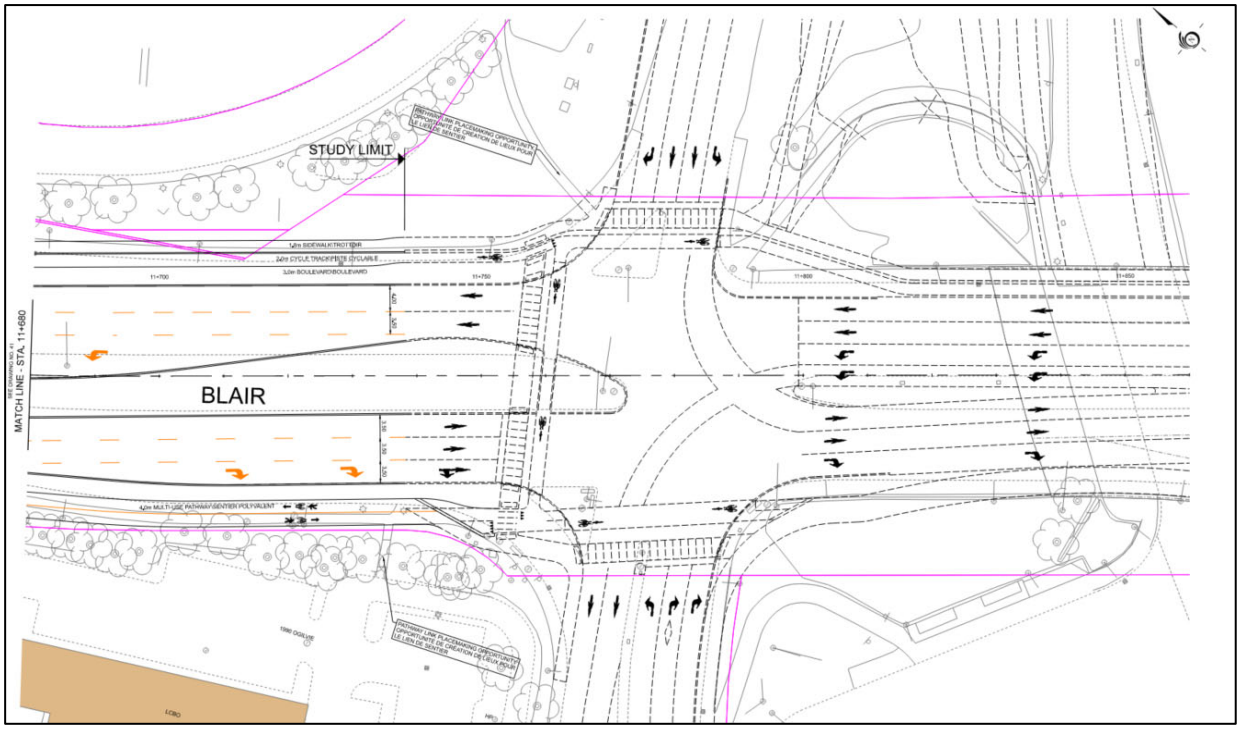
Montreal-Blair Road Transit Priority Corridor EA study has completed, and the modifications for the intersections of Blair Road at Ogilvie Road and the segment of Blair Road between Ogilvie Road and the OR 174 westbound off-ramp are illustrated in Figure 14 and Figure 15, respectively.

Figure 14: Blair Road at Ogilvie Road Modifications



Source: https://ottawa.ca/en/city-hall/public-engagement/projects/montreal-blair-road-transit-priority-corridor Accessed: September 6, 2023

Figure 15: Blair Road between Ogilvie Road and OR174 Modifications

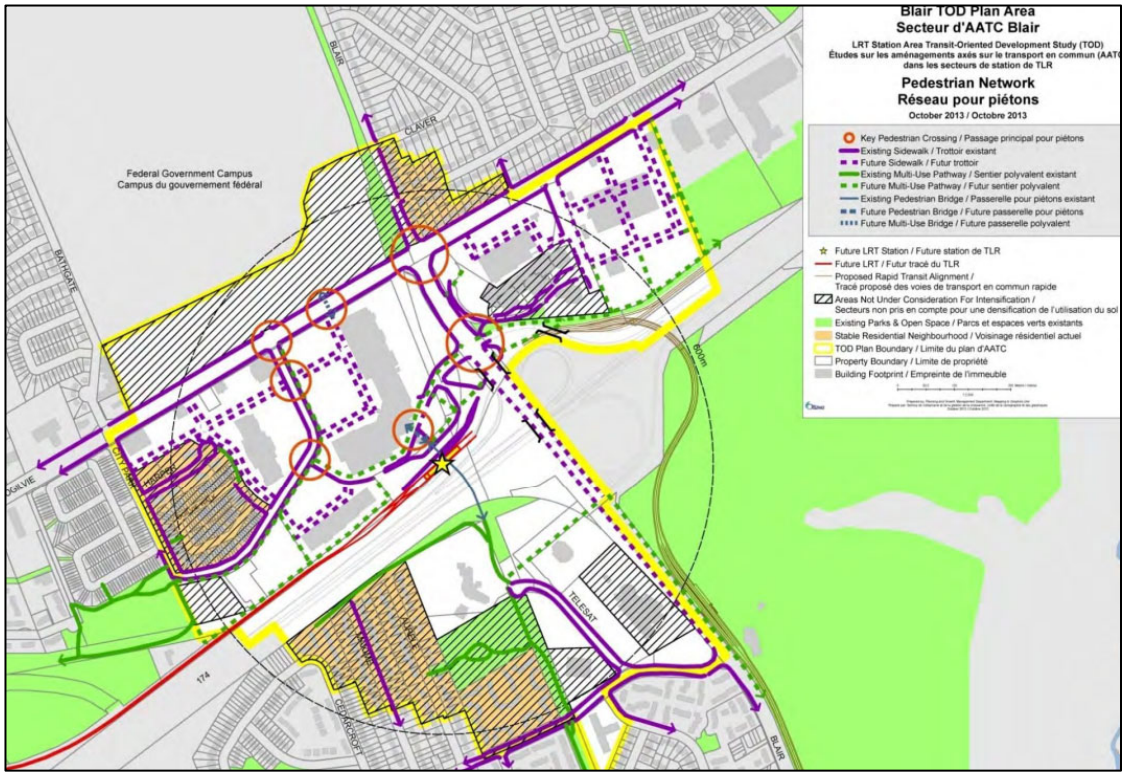


Source: https://ottawa.ca/en/city-hall/public-engagement/projects/montreal-blair-road-transit-priority-corridor Accessed: September 6, 2023

2.3.1.5 Blair Transit Oriented Development (TOD) Plan

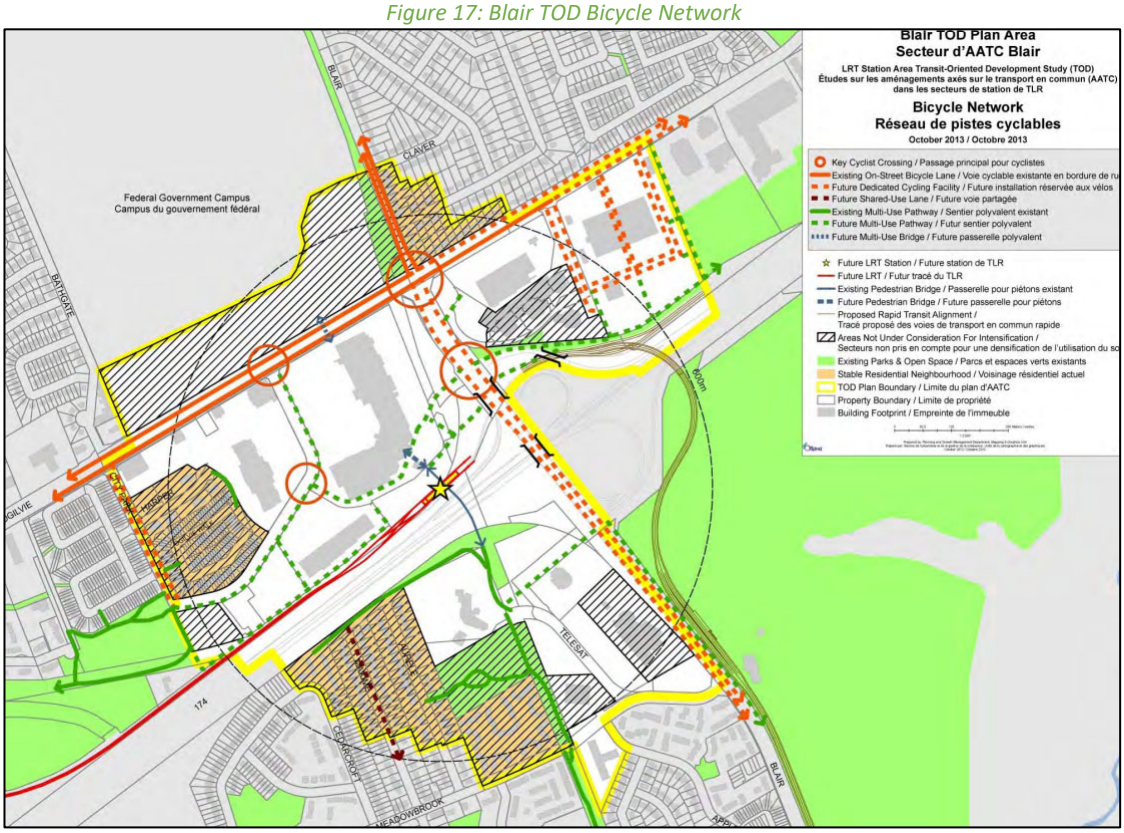
The Blair TOD plan outlines a future multi-use bridge over Ogilvie Road, and a new east-west multi-use pathway linking the northwest and northeast sectors of the TOD area. Future bike lanes are proposed along the north side of Ogilvie Road east if Blair Road and the south side of Ogilvie Road east of Blair Towers Place, and on both sides of Blair Road south of Ogilvie Road. Figure 12 and Figure 13 illustrate the Blair pedestrian and cycling TOD plans.

Figure 16: Blair TOD Pedestrian Network



Source: https://ottawa.ca/en/transit-oriented-development-tod-plans Accessed: September 6, 2023

Figure 17: Blair TOD Bicycle Network

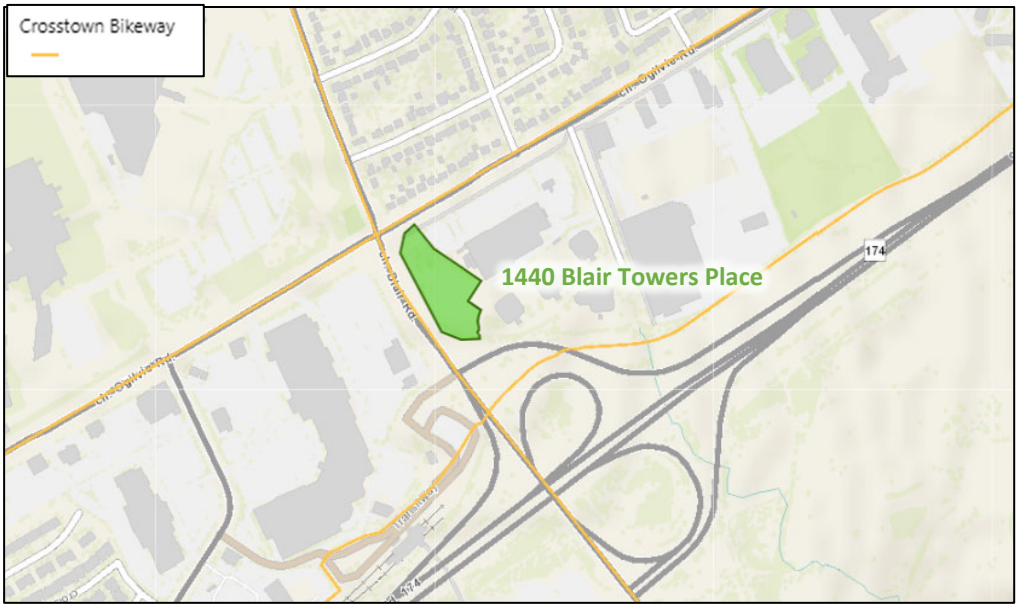


Source https://ottawa.ca/en/transit-oriented-development-tod-plans Accessed: September 6, 2023

2.3.1.6 Transportation Master Plan Part 1 (2023)

Beyond those improvements listed in the Blair TOD plan, and EA studies, Blair Road, Ogilvie Road, and the MUP north of OR 174 are designated as cross-town bikeways, and Figure 18 illustrates the cross-town bikeways in the Draft Transportation Master Plan.

Figure 18: Draft Transportation Master Plan - Cross-town Bikeways

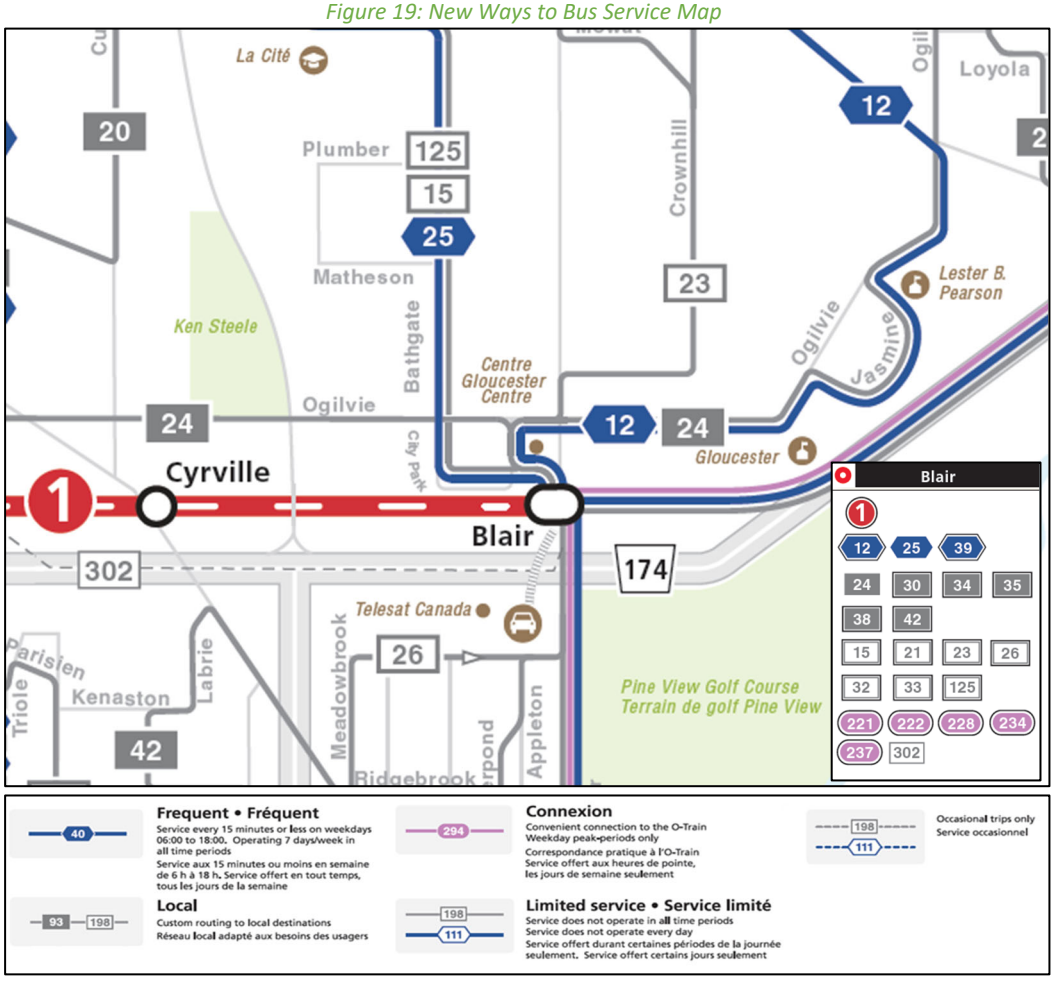


Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 8, 2023

2.3.1.7 OC Transpo's New Ways to Bus

Responding to recent ridership trends and anticipating the upcoming completion of the Stage 2 expansion of LRT service within the City, the OC Transpo bus service is planned to be recalibrated to focus on frequency, local service in neighbourhoods, and connections to key destinations. These changes are expected in 2025, and the new service map is illustrated in Figure 19.

Figure 19: New Ways to Bus Service Map



Source: www.octranspo.com Accessed: December 19, 2024

2.3.2 Other Study Area Developments

1900 and 2000 City Park Drive

The proposed development application includes the Official Plan amendment and zoning amendment applications to allow approximately 2,250 residential units within eight buildings. The development is forecast to generate 135 new AM and 143 new PM two-way peak-hour auto trips, and the anticipated build-out horizon is 2037. (Novatech, 2023)

1600 James Naismith Drive

The proposed development application includes a site plan application to convert the existing 8-storey office building into a multi-residential rental apartment building consisting of 218 dwelling units. The development is forecast to generate 139 fewer person trips during the AM peak and 115 fewer person trips during the PM peak, and to be built out in 2025. (CGH, 2022)

2040 Arrowsmith Drive
The proposed development application includes a site plan application to include a six-storey residential tower containing 50 affordable housing units. A screening form indicates that a TIA is not required for this development. (WSP, 2022)

Shoppers City East Redevelopment – Phase 2
The proposed development application includes a site plan application to include approximately 160,000 ft^2 warehouse membership club store and an 18-position gas-bar. Construction was completed in 2020. (Parsons, 2016)

Gloucester Centre Phase – 1 (1980 Ogilvie Road)
The proposed development application includes a zoning by-law amendment to allow a 30-storey mixed-use building with 356 apartment units, 10,967 sq. ft. of office space and 18,821 sq. ft. of ground floor retail The development is forecast to generate 54 person trips during the AM peak and 76 person trips during the PM peak and was initially assumed to be built out in 2020. (CGH, 2019)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of:

- Blair Road at:
  - Ogilvie Road
  - OR 174 WB
  - Site Access(es)
- Blair Towers Place at:
  - Ogilvie Road
  - Site Access

The boundary road will be Ogilvie Road and Blair Road, and no screenlines are present within proximity to the site.

3.2 Time Periods

As the proposed development is composed entirely of residential units the AM and PM peak hours will be examined.

3.3 Horizon Years

The anticipated build-out year is 2027. As a result, the full build-out plus five years horizon year is 2032.

4 Development-Generated Travel Demand

4.1 Mode Shares

Examining the mode shares recommended in the TRANS Trip Generation Manual (2020) for the subject district, derived from the most recent National Capital Region Origin-Destination survey (OD Survey), the existing average district mode shares by land use for Beacon Hill have been summarized in Table 8.

Table 8: TRANS Trip Generation Manual Recommended Mode Shares – Beacon Hill

Travel Mode	Residential (All Dwelling Types)	
	AM	PM
Auto Driver	48%	50%
Auto Passenger	11%	18%
Transit	28%	21%
Cycling	2%	2%
Walking	11%	9%
Total	**100%**	**100%**

Being within 600 metres' walking distance of the Blair LRT station, the Gloucester Centre and Shoppers City East, higher transit and walking mode share targets are considered achievable at this location. The proposed modified mode share targets are summarized in Table 9.

Table 9: Proposed Development Mode Shares

Travel Mode	Residential (All Dwelling Types)	
	AM	PM
Auto Driver	36%	38%
Auto Passenger	8%	15%
Transit	38%	31%
Cycling	2%	2%
Walking	16%	14%
Total	**100%**	**100%**

4.2 Trip Generation

This TIA has been prepared using the vehicle trip rates and derived person trip rates for the residential component from the ITE Trip Generation Manual 11th Edition (2021) using the fitted curve equations and the City-prescribed conversion factor of 1.28. Table 10 summarizes the person trip rates by peak hour.

Table 10: Trip Generation Person Trip Rates by Peak Hour

Land Use	Land Use Code	Peak Hour	Vehicle Trip Rate	Person Trip Rates
Senior Adult Housing	252 (ITE)	AM	0.19	0.24
		PM	0.25	0.32

Using the above person trip rates, the total person trip generation has been estimated. Table 11 summarizes the total person trip generation.

Table 11: Person Trip Generation by Peak Hour

Land Use	Units	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Senior Adult Housing	398	33	63	96	71	56	127

Using the above mode share targets for a LRT area and the person trip rates, the person trips by mode have been projected. Table 12 summarizes the trip generation by mode and peak hour.

Table 12: Trip Generation by Mode

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Senior Adult Housing	Auto Driver	**36%**	12	23	35	**38%**	27	21	48
	Auto Passenger	**8%**	3	5	8	**15%**	11	8	19
	Transit	**38%**	13	24	37	**31%**	22	17	39
	Cycling	**2%**	1	1	2	**2%**	1	1	2
	Walking	**16%**	5	10	15	**14%**	10	8	18
	Total	**100%**	**34**	**63**	**97**	**100%**	**71**	**55**	**126**

As shown above, a total of 35 AM and 48 PM new peak hour two-way vehicle trips are projected as a result of the proposed development.

4.3 Trip Distribution

To understand the travel patterns of the subject development, the OD Survey has been reviewed to determine the travel, and these patterns were applied based on the build-out of Beacon Hill. Table 13 below summarizes the distributions.

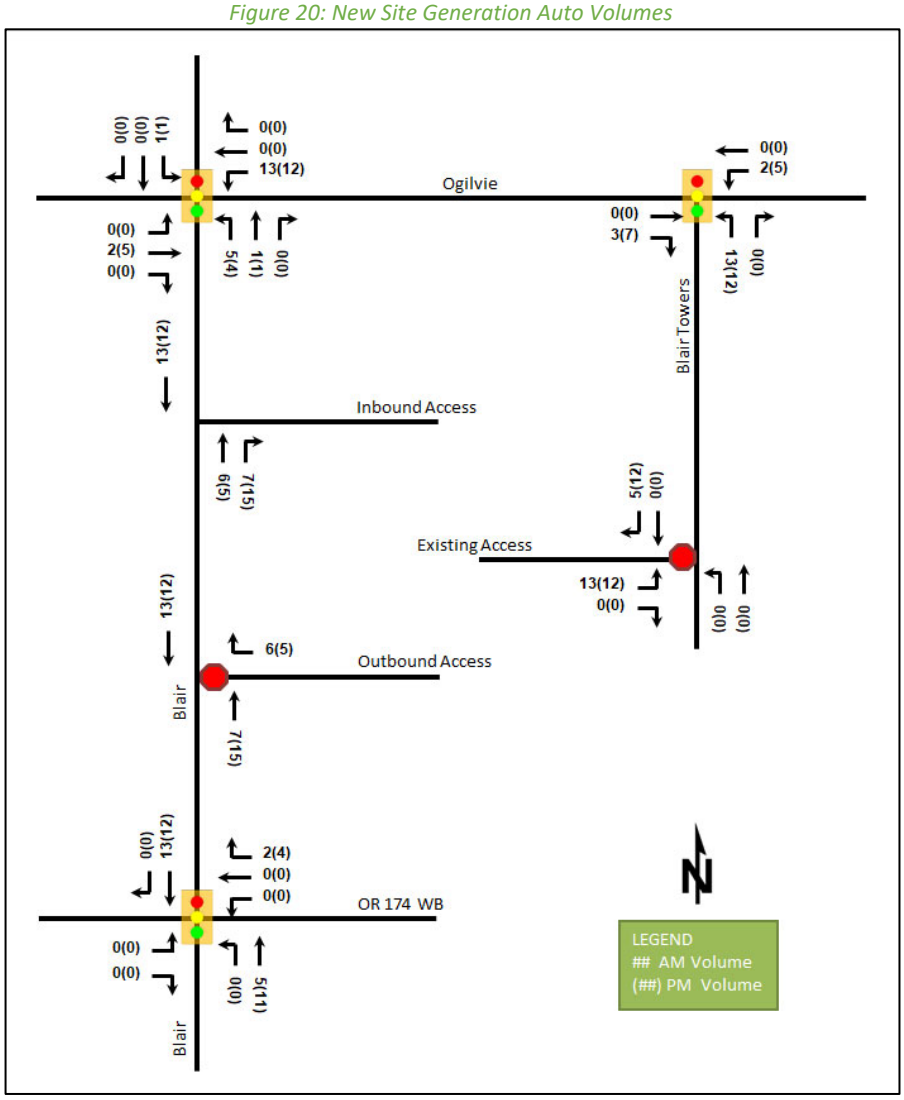
Table 13: OD Survey Distribution – Beacon Hill

To/From	Residential % of Trips	Via
North	5%	5% Blair Rd (N)
South	20%	20% Blair Rd (S)
East	35%	15% OR 174 (S), 20% Ogilvie Rd (E)
West	40%	20% OR 174 (S), 20% Ogilvie Rd (W)
Total	**100%**	**100%**

4.4 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the study area road network. Figure 20 illustrates the new site generated volumes.

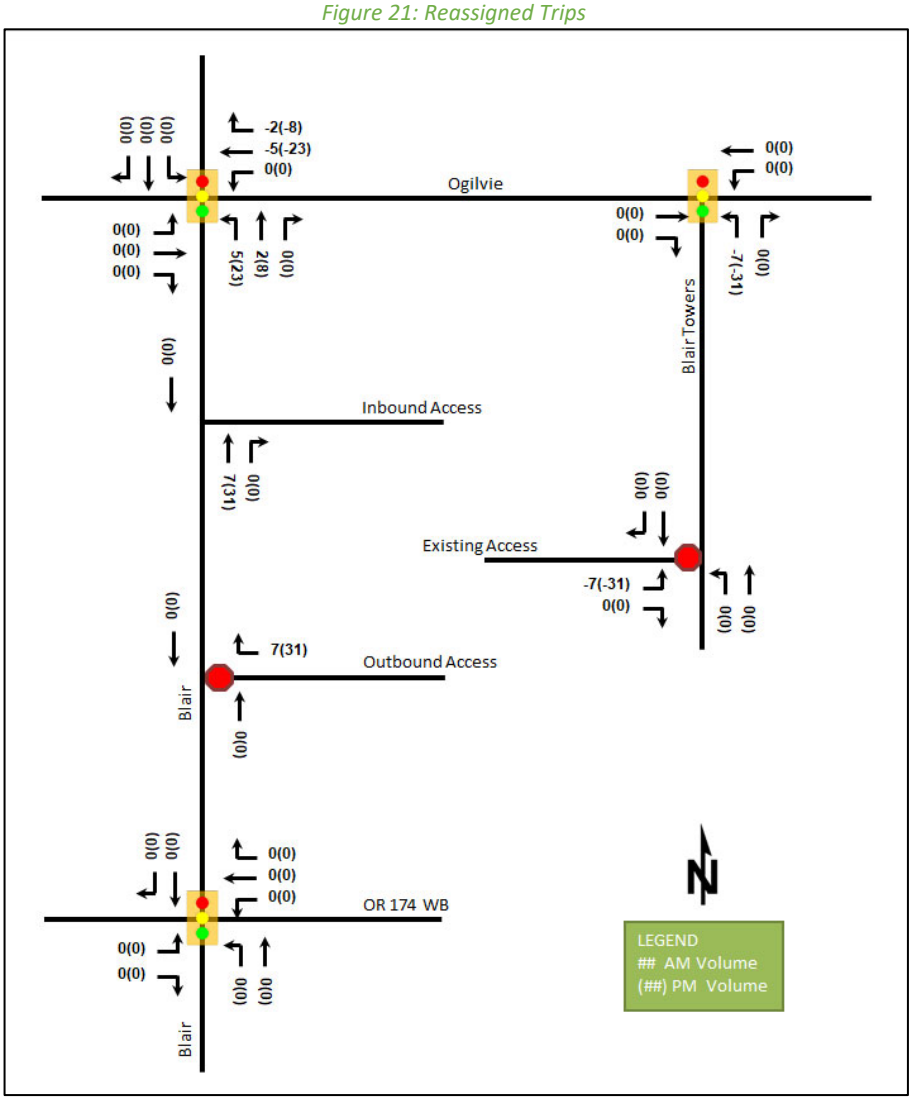
Figure 20: New Site Generation Auto Volumes



4.5 Existing Trip Reassignment

As the development is proposing the addition of a new outbound access for the internal roadway onto Blair Road, it is expected that a portion of the outbound auto trips from the existing Blair Towers offices travelling north on Blair Road and west on Ogilvie Road will divert to this access. Figure 21 illustrates the forecasted Blair Towers offices' existing volume reassignment.

Figure 21: Reassigned Trips



5 Exemption Review

Table 14 summarizes the exemptions for this TIA.

Table 14: Exemption Review

Module	Element	Explanation	Exempt/Required
Site Design and TDM			
Development Design	4.1.2 Circulation and Access	Only required for site plan and zoning by-law applications	Required
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt
Parking	4.2.1 Parking Supply	Only required for site plan and zoning by-law applications	Required
Boundary Street Design		All applications	Required

Module	Element	Explanation	Exempt/Required
Transportation Demand Management	All Elements	Only required when the development generates more than 60 person-trips	Required
Network Impact			
Background Network Travel Demand	All Elements	Only required when one or more other Network Impact Modules are triggered when the development generates more than 75 auto or transit trips	Exempt
Demand Rationalization		Only required when one or more other Network Impact Modules when the development generates more than 75 auto trips	Exempt
Neighbourhood Traffic Calming	4.6.1 Adjacent Neighbourhoods	If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1. Access to Collector or Local; 2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: • School (within 250m walking distance); • Park; • Retirement / Older Adult Facility (i.e. long-term care and retirement homes); • Licenced Child Care Centre; • Community Centre; or • 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; 4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more.	Exempt
Transit	4.7.1 Transit Route Capacity	Only required when the development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	Only required when the development generates more than 75 auto trips	Exempt

Module	Element	Explanation	Exempt/Required
Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of equivalent volume permitted by established zoning	Exempt
Intersection Design	4.4.1-2/4.9.1 Intersection Control	Only required when the development generates more than 75 auto trips	Exempt
	4.4.3/4.9.2 Intersection Design	Only required when the development generates more than 75 auto trips	Exempt – Access Design Module to be included within the TIA

6 Development Design

6.1 Design for Sustainable Modes

The proposed development is a senior's housing community. Four hard-surface connections to the sidewalk on Blair Road are provided, one south of the park oriented to the corner of the Blair Road at Ogilvie Road intersection, one along the inbound access, one along the outbound access, and the existing pedestrian connection between Blair Road south of Ogilvie Road and the adjacent office buildings is proposed as being relocated southward. Based on the proposed building entrance locations, no demand is expected between the building entrances and the sidewalk connecting diagonally from the northeast corner of the intersection of Blair Road at the OR 174 westbound off-ramp to the site drive aisle serving the office buildings, and therefore no connection to this existing facility is proposed.

Bicycle parking is anticipated to be located primarily within the building. Short-term vehicle parking is proposed in front of the building entrances within a one-way (counterclockwise) drop-off loop, additional visitor parking is provided within laybys along the drive aisle to the south of the proposed outbound access, and long-term parking is proposed via a ramp to underground parking levels on the east side of the site. Two pick-up/drop-off laybys are provided along the one-way drop-off loop.

Local bus stops at the intersection of Blair Road at Ogilvie Road are within a 300-metre walk, those west of Dunham Street on Ogilvie Road are within a 400-metre walk, those east of City Park Drive on Ogilvie Road are within a 430-metre walk, and Blair Station is approximately a 600-metre walk from the entrance.

The infrastructure TDM checklist is provided in Appendix E.

6.2 Circulation and Access

The development concept proposes the relocation of an existing inbound access northward on Blair Road, and the provision of a new outbound access between the inbound access and Blair Road at the OR 174 westbound off-ramp, each accessing the internal drive aisle connecting through Blair Towers Place.

Short-term parking is provided on the west side of the site in front of the buildings along the one-way drop-off loop accessing the main drive aisle, and within laybys along the drive aisle south of the proposed outbound access. Long-term parking is provided via the 6.0-metre-wide ramp to underground parking at the eastern extent of the site, which is proposed to be graded and delineated to maintain sightlines between the adjacent access of the office parking structure and adjacent loading access.

A loading area is provided west of the parking garage ramp that includes a depressed concrete area for waste collection and loading/unloading operations. Emergency services are anticipated to access the site via the two

public road frontages and the main internal drive aisle including a fire lane which is designated between the two-one-way access with a spur onto the drop-off loop that services the main entrance, and the drop-off loop permits ambulance access. The site has been designed to permit the intended operations with a 6.7-metre-wide drive aisle and a 6.0-metre-wide drop-off loop. Concrete aprons are provided where required to facilitate truck movements, and the turning templates are provided in Appendix F.

7 Parking

7.1 Parking Supply

The site proposes the provision of 293 vehicle parking spaces and 100 bicycle spaces. From the zoning by-law, based on the site's TOD designation, no minimum vehicle parking requirement exists, and the maximum vehicle parking requirement is 1.75 per dwelling unit for resident and visitor parking, equating to 700 spaces. The minimum visitor parking requirement is 0.1 per dwelling unit, which equal to 40 spaces. The minimum requirement for the bicycle parking is 0.25 per dwelling unit or rooming unit, equating to 100 spaces.

The maximum vehicle parking requirement, minimum visitor parking, and minimum bicycle parking requirements are all satisfied by the proposed development.

8 Boundary Street Design

Table 15 summarizes the MMLOS analysis for the boundary streets of Blair Road and Ogilvie Road. The boundary street analysis is based on the policy area of "Within 600 metres of a rapid transit station". The MMLOS worksheets has been provided in Appendix G.

Table 15: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Blair Road	Existing	F	A	F	C	-	-	A	D
	Future	D	A	A	C	-	-	A	D
Ogilvie Road	Existing/ Future	D	A	A	C	-	-	A	D

The pedestrian LOS targets will not be met along the segments of Blair Road and Ogilvie Road. The future pedestrian configurations along Blair Road and the present and future configurations along Ogilvie Road are the most robust considered within the MMLOS framework, and to meet the theoretical pedestrian LOS targets. To meet these targets, the operating speeds would need to be lower than 30 km/h on both roads.

The bicycle LOS is not met along the segment of Blair Road in the existing conditions but will be met in the future with the completion of the improvements from the two EA projects through the provision of a cycletrack.

Though constituting a transit priority corridor, based on routing through Blair Station, no bus routes currently utilize Blair Road between Ogilvie Road and the OR 174 westbound off-ramp along the site frontage. Therefore, no transit LOS analysis was performed.

It is assumed that the City's balance of MMLOS objectives is being achieved by the planned conditions associated with the EA studies, and no mitigation is required or proposed as part of the subject development.

9 Transportation Demand Management

9.1 Context for TDM

The mode shares used within the TIA represent a shift from auto modes to transit modes based on the site context. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on auto travel and transit with the proximity to the Blair LRT station and the Gloucester Centre, and those assumptions have been carried through the analysis. The proximity of the rapid transit station and mall are anticipated to provide the opportunity to meet the target transit mode share. Based on the land use's lower trip generation, minimal impacts would be associated with not meeting the target mode shares.

9.3 TDM Program

The "suite of post occupancy TDM measures" has been summarized in the TDM checklists for the residential land uses. The checklist is provided in Appendix E. The key TDM measures recommended include:

- Display local area maps with walking/cycling access routes and key destinations at major entrances
- Display relevant transit schedules and route maps at entrances
- Provide a multimodal travel option information package to new residents
- Unbundle parking costs from monthly rent costs

10 Intersection Design

10.1 Location and Design of Access

The existing inbound access is proposed as being shifted northward to be 60.3 metres from the Ogilvie Road corridor and to comprise a 4.5-metre-wide travel lane with 2.5-metre-wide mountable concrete apron to facilitate truck movements for an overall width of 7.0 metres. The throat length is proposed to be 24.0 metres from the back of the existing/future sidewalk to the first point of potential conflict, which is a merging movement from the minor stop-controlled one-way drop-off loop outlet. Beyond this point, a further 30.0 metres of throat is provided to the next conflict point of the diverging movement at the inlet of the drop-off loop.

The new outbound access is proposed to be 5.0-metres in width with a mountable concrete apron on the north corner to facilitate truck movements from the internal drive aisle, with a throat length of 8.3 metres between the back of the existing/future sidewalk and the drive aisle. The access is proposed as being located 86.7 metres from the edge of the roadway of the OR 174 westbound off-ramp, and 125 metres from the existing stop bar on the northbound approach of Blair Road at Ogilvie Road. This location is beyond the storage length of the auxiliary turn lane(s) in the existing and planned conditions and clears the bike lane merge taper in the interim conditions.

Site access configurations in the ultimate conditions, with both area EA projects completed, are provided in Appendix H. Site access configurations considering the interim conditions, after the Blair Road Transit Priority project has been completed and before construction for the Montreal-Blair Road Transit Priority project has been initiated, are provided in Appendix I. Turning templates for the proposed access configurations are provided in Appendix F.

10.1.1 Discussion on Location and Width Criteria

Both access locations meet the Geometric Design Guide for Canadian Roads (TAC, 2017) corner clearance suggested minimum values, both accesses meet the minimum and maximum width criteria from the Private

Approach By-Law, and the inbound access meets the Private Approach By-Law's required off-set from adjacent rights-of-way along arterials roads.

For the outbound access, while the Private Approach By-Law provides that the subject development's access be located 60 metres from the nearest intersecting street line, the property lines for the off-ramp flares out substantially for the interchange thereby inhibiting the typical application of the by-law provision. Thus, it is recommended that the TAC criteria govern the design of the location.

10.1.2 Discussion on Throat Length Criteria

The Geometric Design Guide for Canadian Roads (TAC, 2017) suggests a minimum clear throat length for vehicular accesses for land uses of more than 200 apartment units to be 40 metres, and for sites with between 20,000-45,000 m^2 of office space (estimated range of the existing Blair Towers) to be 45 metres.

The retirement community nature will have a decreased travel demand from typical residential land uses and therefore, the suggested minimum value may be conservative. The adjacent office buildings have an alternative access on Blair Towers Place that mitigates much of the demand on this access, where approximately 64% of the existing inbound volumes use the Blair Road access. Based on this split, the suggested minimum throat length for offices between 10,000 m^2 and 20,000 m^2 may be a more appropriate target, for which the suggested minimum throat length is 30 metres.

Given the only conflict within the first 54 metres of throat constitutes a merging movement where the main aisle will have priority, and given the level of use forecast for the access, the throat length proposed are considered adequate for the proposed development site. It is noted that the irregular geometry of the site limits the opportunity to provide additional throat length.

While the proposed outbound throat length is below the range of suggested minimum values, the outbound access will not create spillback onto the public road and any queueing impacts will be contained on-site. Queuing space for one vehicle has been provided between the active facilities on Blair Road and the internal drive aisle, and queueing space for two vehicles has been provided between the roadway edge and the drive aisle.

10.2 Intersection Control

The inbound access will remain as an uncontrolled access, and the outbound access is proposed to be stop-controlled on the site access.

10.2.1 Recommended Design Elements

The accesses are proposed to comply with City standard SC7.1 with a continuous and depressed sidewalk and cycletrack through the access.

11 Summary of Improvements Indicated and Modifications Options

The following summarizes the analysis and results presented in this TIA report:

Proposed Site and Screening

- The proposed site includes 398 senior's housing units within two towers sharing a single podium
- Accesses is proposed via the relocation of an inbound driveway on Blair Road at the north of the site, the addition of an outbound driveway at the south of the site, and the use of an access on Blair Towers Place connecting to the existing internal drive aisle
- The development is proposed to be completed as a single phase by 2027
- The Trip Generation, Location, and Safety Triggers were met for the TIA Screening

- The subject report is in support of an official plan amendment/zoning by-law amendment

Existing and Planned Conditions

- Blair Road and Ogilvie Road are arterial roads in the study area
- Sidewalks/MUPS are generally provided on both sides of the study area roadways, and on-street bike lanes on both sides of the roadway on Ogilvie Road west of Blair Road and on the south side of Ogilvie Road west of Blair Towers Place
- Ogilvie Road and Blair Road are spine cycling routes and Blair Towers Place is a local route
- The high volumes roadways have produced a high number of collisions at the study area intersections of Blair Road at Ogilvie Road, and Blair Road at the OR 174 westbound off-ramp, and the collisions are mostly of the types associated with congestion
- At the intersection of Blair Road at the OR 174 westbound off-ramp, a higher proportion of angle collisions were noted, but almost all of these were recorded before the intersection reconstruction removing the westbound right-turn channel
- Bus routes travel along Blair Road and Ogilvie Road, and the site lies within 600 metres of Blair Station on the LRT Confederation Line
- Some high delays and overcapacity movements are noted at the intersection of Blair Road at Ogilvie Road during the PM peak hour, and at the intersection of Blair Road at the OR174 westbound off-ramp during the AM peak hour
- Two EA studies have been undertaken in the study area, modifying the intersections of Blair Road at Ogilvie Road and Blair Road at the OR 174 westbound off-ramp and the segment of Blair Road between them
- The Blair TOD plan outlines improvements to pedestrian and cycling facilities connecting to Blair Station

Development Generated Travel Demand

- The proposed development is forecasted produce 96 two-way people trips during the AM peak hour and 127 two-way people trips during the PM peak hour
- Of the forecasted people trips, 35 two-way trips will be vehicle trips during the AM peak hour and 48 two-way trips will be vehicle trips during the PM peak hour based on a 36-38% modal share target
- Of the forecasted trips, 5% are anticipated to travel north, 20% to travel south, and 35% travel east, and 40% to travel west
- Once an outbound access is provided on Blair Road, it is anticipated that existing traffic exiting the site on Blair Towers bound for the west and north will divert to the new access, and fewer than 36 total outbound movements in either peak hour with new traffic and existing diversions are anticipated on the new outbound access as a result

Development Design

- Pedestrian connections will be made to sidewalks along Blair Road south of the park, and on the north sides of the proposed inbound and outbound site accesses
- The existing pedestrian connection between Blair Road south of Ogilvie Road and the adjacent office buildings is proposed as being relocated southward
- Auto parking will be provided in underground parking levels, within laybys along the drive aisle, and within a small surface lot surrounding the drop-off loop

- While no demand is anticipated between the subject site between the existing sidewalk connection from the south of the drive aisle to the intersection of Blair Road at the OR 174 westbound off-ramp, it will be maintained to permit the connection for the office buildings to the east
- A loading area is provided on the east side of the site west of the underground parking ramp with a depressed concrete area for loading and garbage collection, and emergency services can access the site via the two public road frontages and the internal drive aisle

Parking

- 293 vehicle parking spaces and 100 bicycle parking spaces are proposed as being provided
- No minimum vehicle parking rate is required by the zoning by-law for residents, the minimum visitor parking rate is 40 spaces, the maximum number of vehicle parking spaces for the entire site that is permitted is 700, and 100 bicycle parking spaces are required
- The maximum vehicle parking requirement, minimum visitor parking, and minimum bicycle parking requirements are all satisfied by the proposed development

Boundary Street Design

- The boundary streets will not meet pedestrian MMLOS targets due to the operating speeds and volumes on the boundary roads
- It is assumed that the City's balance of MMLOS objectives is being achieved by the planned conditions associated with the EA studies, and no mitigation is required or proposed as part of the subject development

TDM

- Supportive TDM measures to be included within the proposed development are recommended to include:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances
    - Display relevant transit schedules and route maps at entrances
    - Provide a multimodal travel option information package to new residents
    - Unbundle parking costs from monthly rent costs

Intersection Design

- The inbound access is proposed as being relocated to 60 metres from the highway line of Ogilvie Road, to comprise a 4.5 metre travel lane and 2.5 metre concrete truck apron, with a throat length of 24 metres to the first potential merging conflict and a further 30 metres to the diverging conflict with the drop-off loop
- The outbound access is proposed to be 5.0 metres wide with a concrete truck apron on the north corner, located 125 metres from the stop bar on the northbound approach of Ogilvie Road, beyond the storage length for the left-turn movement, and approximately 87 metres from the roadway of the OR 174 westbound off-ramp
- Both access locations meet the TAC corner clearance, both accesses meet the minimum and maximum width criteria from the Private Approach By-Law, the inbound access meets the Private Approach By-Law's offset from adjacent roads, and the outbound access cannot meet this offset due to the nature of the right-of-way associated with the off-ramp
- Throat length for the inbound access is considered adequate given the lower trip generation of the proposed land use and the first potential conflict point being a merging conflict

- Queueing for one vehicle behind the back of sidewalk and two vehicles from the future Blair Road roadway is provided by the proposed outbound access design, and any queuing on the outbound access will be contained on-site
- The accesses are proposed to comply with City standard SC7.1

12 Conclusion

It is recommended that, from a transportation perspective, the proposed development applications proceed.

Prepared By:

John Kingsley
Transportation Engineering-Intern

Reviewed By:

Christopher Gordon, P.Eng.
Senior Transportation Engineer

Appendix A

TIA Screening Form and PM Certification Form

6 Plaza Court
Ottawa, ON K2H 7W1

City of Ottawa 2017 TIA Guidelines
Step 1 - Screening Form

Date: 9-Aug-23
Project Number: 2023-096
Project Reference: 1440 Blair Towers Place

1.1 Description of Proposed Development	
Municipal Address	1440 Blair Towers Place
Description of Location	Southeast quadrant of the intersection of Blair Road at Ogilvie road
Land Use Classification	Transit Oriented Development (TD2[2085])
Development Size	400 Seniors Units
Accesses	Connection to existing full-moves access on Blair Towers Pl, relocation of right-in-only access on Blair Rd, new right-out-only access on Blair Rd
Phase of Development	Single
Buildout Year	2027
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger		
Land Use Type	Multi-Family (High-Rise)	
Development Size	400	Units
Trip Generation Trigger	Yes	

1.3 Location Triggers		
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	Yes	Blair Road Transit Priority Corridor
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	Yes	Blair PMTSA
Location Trigger	Yes	

1.4. Safety Triggers	
Are posted speed limits on a boundary street 80 km/hr or greater?	No
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	No
Is the proposed driveway 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)?	Yes
Is the proposed driveway within auxiliary lanes of an intersection?	Yes
Does the proposed driveway make use of an existing median break that serves an existing site?	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No
Does the development include a drive-thru facility?	No
Safety Trigger	Yes

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.

City Of Ottawa
Infrastructure Services and Community Sustainability
Planning and Growth Management
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Ville d'Ottawa
Services d 'infrastructure et Viabilité des collectivités
Urbanisme et Gestion de la croissance
110, avenue Laurier Ouest
Ottawa (Ontario) K1P 1J1
Tél. : 613-580-2424
Télécopieur: 613-560-6006

Dated at ___Ottawa_____ this __20__ day of _____September_____, 2018.
(City)

Name: _____Andrew Harte_____
(Please Print)

Professional Title: _____Professional Engineer_____

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

Office Contact Information (Please Print)
Address: 6 Plaza Court
City / Postal Code: Ottawa / K2H 7W1
Telephone / Extension: (613) 697-3797
E-Mail Address: Andrew.Harte@CGHTransportation.com

Appendix B

Turning Movement Counts

Transportation Services - Traffic Services

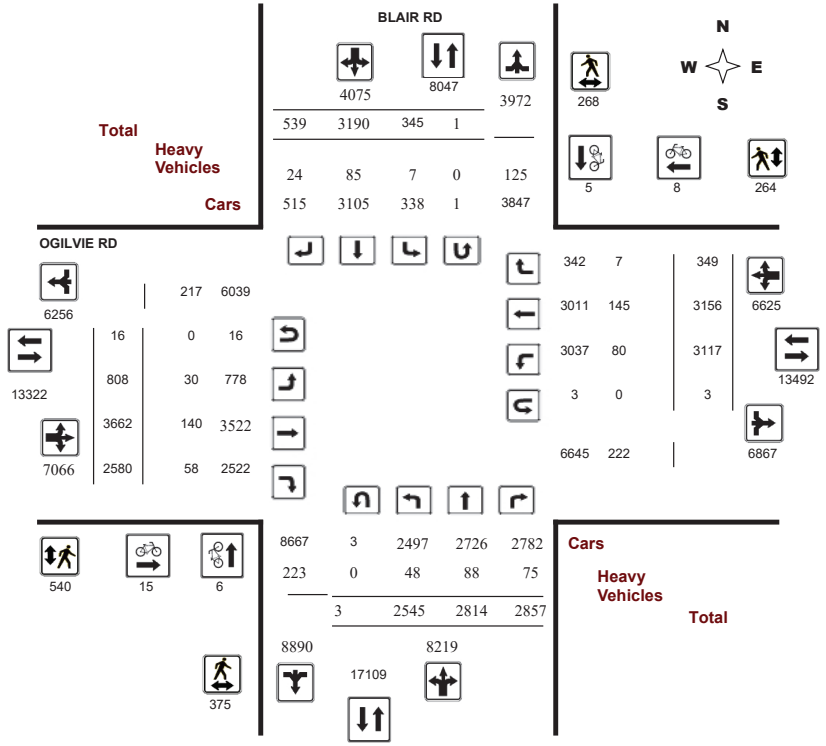
Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Diagram



Transportation Services - Traffic Services

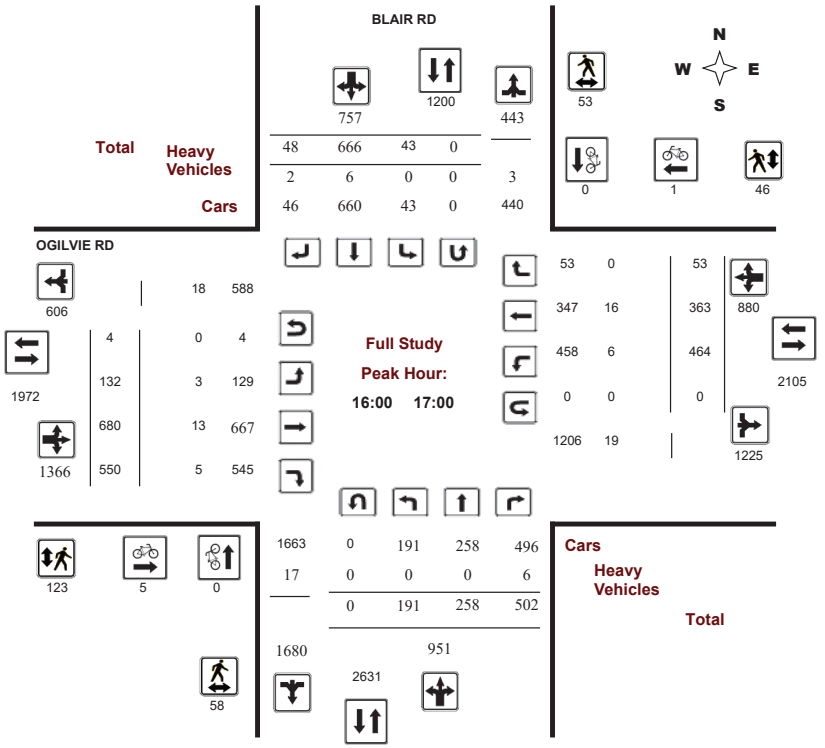
Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Peak Hour Diagram



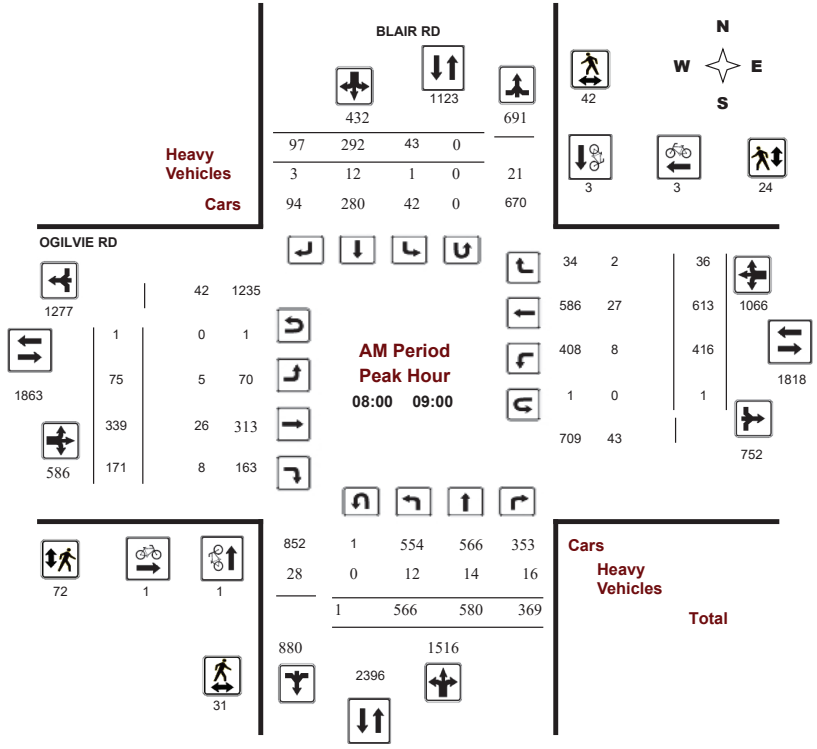
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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



Comments

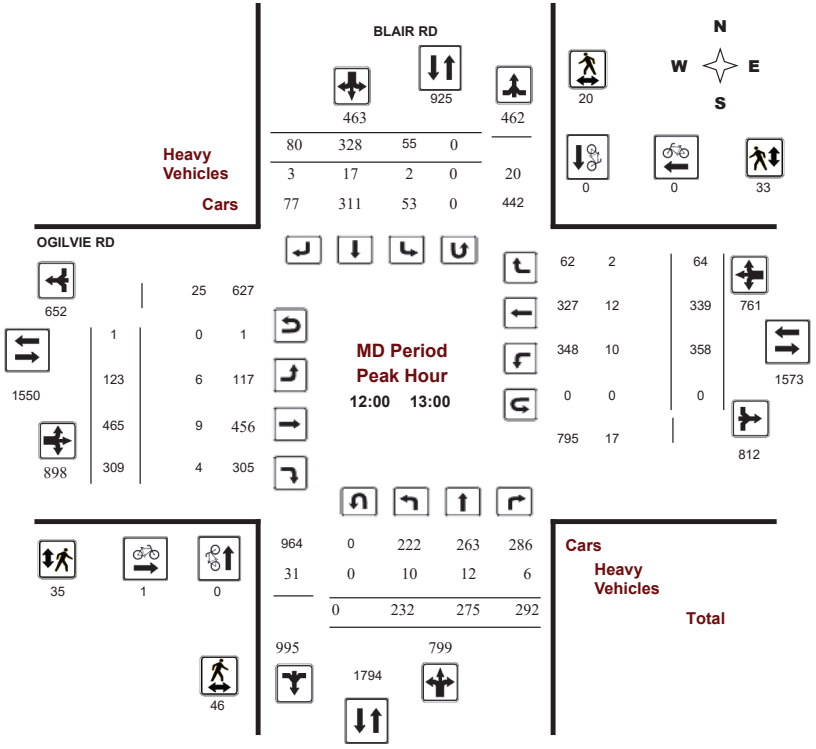
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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



Comments

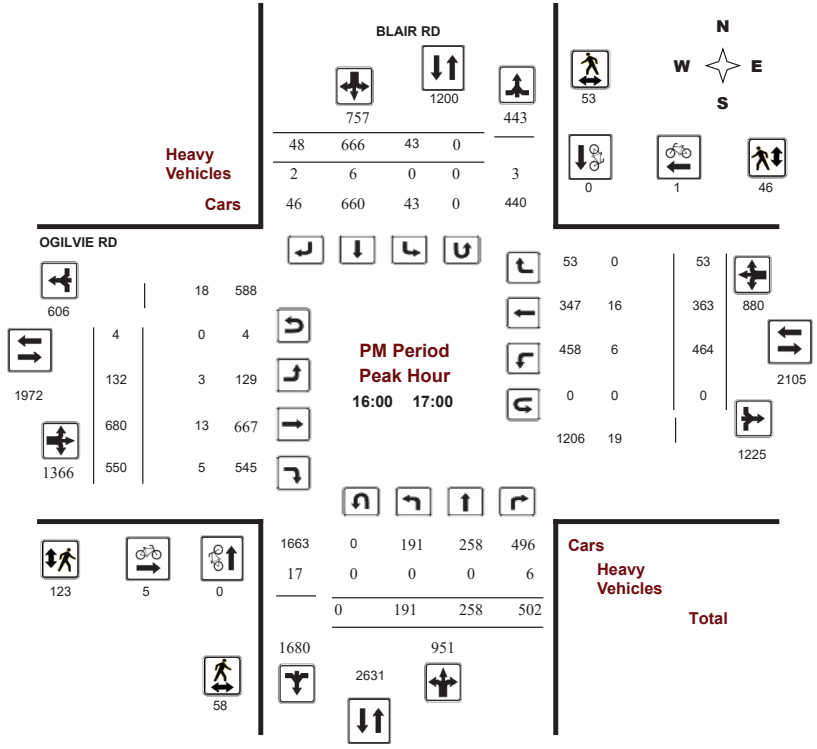
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, April 24, 2019

Total Observed U-Turns

Northbound: 3 Southbound: 1

Eastbound: 16 Westbound: 3

AADT Factor .90

	BLAIR RD								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	531	530	246	**1307**	34	234	63	**331**	**1638**	59	230	112	**401**	334	434	20	**788**	**1189**	**2827**
08:00 09:00	566	580	369	**1515**	43	292	97	**432**	**1947**	75	339	171	**585**	416	613	36	**1065**	**1650**	**3597**
09:00 10:00	428	407	281	**1116**	36	241	70	**347**	**1463**	54	320	177	**551**	314	383	34	**731**	**1282**	**2745**
11:30 12:30	224	250	292	**766**	66	367	80	**513**	**1279**	107	429	260	**796**	362	301	42	**705**	**1501**	**2780**
12:30 13:30	223	287	286	**796**	43	301	72	**416**	**1212**	111	430	364	**905**	347	341	68	**756**	**1661**	**2873**
15:00 16:00	206	270	413	**889**	43	607	64	**714**	**1603**	130	569	466	**1165**	493	368	37	**898**	**2063**	**3666**
16:00 17:00	191	258	502	**951**	43	666	48	**757**	**1708**	132	680	550	**1362**	464	363	53	**880**	**2242**	**3950**
17:00 18:00	176	232	468	**876**	37	482	45	**564**	**1440**	140	665	480	**1285**	387	353	59	**799**	**2084**	**3524**
Sub Total	2545	2814	2857	**8216**	345	3190	539	**4074**	**12290**	808	3662	2580	**7050**	3117	3156	349	**6622**	**13672**	**25962**
U Turns	3			**3**	1			**1**	**4**	**16**			**16**	3			**3**	**19**	**23**
Total	2548	2814	2857	**8219**	346	3190	539	**4075**	**12294**	824	3662	2580	**7066**	3120	3156	349	**6625**	**13691**	**25985**
EQ 12Hr	3542	3911	3971	**11424**	481	4434	749	**5664**	**17088**	1145	5090	3586	**9821**	4337	4387	485	**9209**	**19030**	**36118**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	3188	3520	3574	**10282**	433	3991	674	**5098**	**15380**	1030	4581	3227	**8838**	3903	3948	436	**8287**	**17125**	**32505**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**.90**					
AVG 24Hr	4176	4611	4682	**13469**	567	5228	883	**6678**	**20147**	1349	6001	4227	**11577**	5113	5172	571	**10856**	**22433**	**42580**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study 15 Minute Increments

		BLAIR RD									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		126	47			39	12		**362**		40	27			69	3		**208**	**570**
07:15	07:30		123	58			55	18		**409**		38	28			82	2		**230**	**639**
07:30	07:45		154	76			81	12		**460**		59	31			116	9		**323**	**783**
07:45	08:00		127	65			59	21		**408**		93	26			167	6		**430**	**838**
08:00	08:15		147	103			78	27		**482**		80	40			180	12		**439**	**921**
08:15	08:30		150	80			76	22		**455**		76	38			153	8		**407**	**862**
08:30	08:45		142	90			72	28		**503**		79	44			147	10		**405**	**908**
08:45	09:00		141	96			66	20		**508**		104	49			133	6		**401**	**909**
09:00	09:15		141	95			55	13		**477**		89	37			111	8		**335**	**812**
09:15	09:30		119	72			60	19		**400**		79	41			124	7		**353**	**753**
09:30	09:45		77	56			60	21		**289**		82	52			74	8		**309**	**598**
09:45	10:00		70	58			66	17		**297**		70	47			74	11		**287**	**584**
11:30	11:45		59	58			87	16		**284**		108	58			73	7		**358**	**642**
11:45	12:00		70	85			105	23		**375**		92	61			69	8		**338**	**713**
12:00	12:15		44	75			95	24		**298**		116	70			83	15		**417**	**715**
12:15	12:30		77	74			80	17		**322**		113	71			76	12		**389**	**711**
12:30	12:45		80	88			94	27		**368**		105	67			80	18		**377**	**745**
12:45	13:00		74	55			59	12		**274**		131	101			100	19		**476**	**750**
13:00	13:15		72	65			88	19		**296**		92	100			80	15		**396**	**692**
13:15	13:30		61	78			60	14		**274**		102	96			81	16		**414**	**688**
15:00	15:15		59	87			150	16		**384**		141	138			81	11		**523**	**907**
15:15	15:30		82	106			149	17		**415**		145	115			97	10		**516**	**931**
15:30	15:45		66	100			170	14		**405**		139	105			115	12		**550**	**955**
15:45	16:00		63	120			138	17		**399**		144	108			75	4		**475**	**874**
16:00	16:15		55	120			191	12		**431**		151	131			89	14		**540**	**971**
16:15	16:30		64	135			193	15		**470**		168	166			97	14		**587**	**1057**
16:30	16:45		66	115			132	10		**386**		164	135			98	10		**562**	**948**
16:45	17:00		73	132			150	11		**421**		197	118			79	15		**557**	**978**
17:00	17:15		60	112			126	12		**364**		172	131			100	13		**557**	**921**
17:15	17:30		62	134			135	14		**400**		203	134			91	11		**576**	**976**
17:30	17:45		54	115			122	10		**351**		143	109			79	15		**489**	**840**
17:45	18:00		56	107			99	9		**327**		147	106			83	20		**467**	**794**
Total:		0	2814	2857	0	0	3190	539	0	**12294**	0	3662	2580	0	0	3156	349	0	**12294**	**25,985**

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Cyclist Volume

		BLAIR RD			OGILVIE RD			
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	1	0	**1**	0	0	**0**	**1**
07:15	07:30	0	0	**0**	0	0	**0**	**0**
07:30	07:45	0	1	**1**	0	0	**0**	**1**
07:45	08:00	0	0	**0**	0	1	**1**	**1**
08:00	08:15	1	1	**2**	0	1	**1**	**3**
08:15	08:30	0	0	**0**	0	2	**2**	**2**
08:30	08:45	0	1	**1**	0	0	**0**	**1**
08:45	09:00	0	1	**1**	1	0	**1**	**2**
09:00	09:15	0	0	**0**	0	0	**0**	**0**
09:15	09:30	0	0	**0**	0	1	**1**	**1**
09:30	09:45	0	0	**0**	0	0	**0**	**0**
09:45	10:00	0	0	**0**	0	1	**1**	**1**
11:30	11:45	0	0	**0**	0	1	**1**	**1**
11:45	12:00	1	0	**1**	0	0	**0**	**1**
12:00	12:15	0	0	**0**	0	0	**0**	**0**
12:15	12:30	0	0	**0**	1	0	**1**	**1**
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	1	0	**1**	1	0	**1**	**2**
13:15	13:30	0	0	**0**	0	0	**0**	**0**
15:00	15:15	0	0	**0**	2	0	**2**	**2**
15:15	15:30	0	0	**0**	1	0	**1**	**1**
15:30	15:45	0	0	**0**	0	0	**0**	**0**
15:45	16:00	0	0	**0**	3	0	**3**	**3**
16:00	16:15	0	0	**0**	3	1	**4**	**4**
16:15	16:30	0	0	**0**	1	0	**1**	**1**
16:30	16:45	0	0	**0**	1	0	**1**	**1**
16:45	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	2	1	**3**	1	0	**1**	**4**
17:45	18:00	0	0	**0**	0	0	**0**	**0**
Total		6	5	**11**	15	8	**23**	**34**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Pedestrian Volume

Time Period		BLAIR RD NB Approach (E or W Crossing)	BLAIR RD SB Approach (E or W Crossing)	BLAIR RD Total	OGILVIE RD EB Approach (N or S Crossing)	OGILVIE RD WB Approach (N or S Crossing)	OGILVIE RD Total	Grand Total
07:00	07:15	13	8	**21**	19	9	**28**	**49**
07:15	07:30	10	13	**23**	15	11	**26**	**49**
07:30	07:45	14	12	**26**	35	11	**46**	**72**
07:45	08:00	17	15	**32**	52	18	**70**	**102**
08:00	08:15	9	10	**19**	15	7	**22**	**41**
08:15	08:30	4	19	**23**	29	12	**41**	**64**
08:30	08:45	8	6	**14**	16	4	**20**	**34**
08:45	09:00	10	7	**17**	12	1	**13**	**30**
09:00	09:15	8	8	**16**	7	10	**17**	**33**
09:15	09:30	12	3	**15**	6	5	**11**	**26**
09:30	09:45	5	2	**7**	6	4	**10**	**17**
09:45	10:00	4	4	**8**	5	1	**6**	**14**
11:30	11:45	7	4	**11**	7	2	**9**	**20**
11:45	12:00	12	4	**16**	11	2	**13**	**29**
12:00	12:15	13	5	**18**	10	12	**22**	**40**
12:15	12:30	13	4	**17**	6	0	**6**	**23**
12:30	12:45	7	9	**16**	7	15	**22**	**38**
12:45	13:00	13	2	**15**	12	6	**18**	**33**
13:00	13:15	4	2	**6**	9	5	**14**	**20**
13:15	13:30	7	3	**10**	5	1	**6**	**16**
15:00	15:15	12	13	**25**	16	10	**26**	**51**
15:15	15:30	11	15	**26**	18	12	**30**	**56**
15:30	15:45	18	11	**29**	28	12	**40**	**69**
15:45	16:00	12	7	**19**	20	6	**26**	**45**
16:00	16:15	22	15	**37**	35	13	**48**	**85**
16:15	16:30	16	15	**31**	34	10	**44**	**75**
16:30	16:45	10	14	**24**	33	15	**48**	**72**
16:45	17:00	10	9	**19**	21	8	**29**	**48**
17:00	17:15	30	17	**47**	20	18	**38**	**85**
17:15	17:30	15	3	**18**	15	9	**24**	**42**
17:30	17:45	15	5	**20**	9	7	**16**	**36**
17:45	18:00	14	4	**18**	7	8	**15**	**33**
Total	.....	375	268	**643**	540	264	**804**	**1447**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study Heavy Vehicles

Time Period		BLAIR RD Northbound LT	ST	RT	N TOT	BLAIR RD Southbound LT	ST	RT	S TOT	STR TOT	OGILVIE RD Eastbound LT	ST	RT	E TOT	OGILVIE RD Westbound LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	5	2		0	0	0		**9**	1	7	0		2	1	0		**11**	**20**
07:15	07:30	0	3	5		0	1	1		**10**	2	2	5		2	2	0		**13**	**23**
07:30	07:45	4	4	4		0	4	2		**18**	1	11	1		2	5	0		**20**	**38**
07:45	08:00	1	1	1		0	1	1		**5**	0	9	2		4	9	1		**25**	**30**
08:00	08:15	0	2	5		0	4	1		**12**	1	8	1		2	9	1		**22**	**34**
08:15	08:30	4	6	1		0	4	1		**16**	2	6	3		5	8	0		**24**	**40**
08:30	08:45	3	1	3		0	4	0		**11**	2	5	2		1	7	1		**18**	**29**
08:45	09:00	5	5	7		1	0	1		**19**	0	7	2		0	3	0		**12**	**31**
09:00	09:15	3	2	6		0	7	1		**19**	2	4	3		8	5	0		**22**	**41**
09:15	09:30	1	6	2		0	1	0		**10**	2	5	3		0	5	0		**15**	**25**
09:30	09:45	0	13	3		1	4	2		**23**	0	3	4		1	4	0		**12**	**35**
09:45	10:00	3	7	0		0	4	1		**15**	0	6	2		3	4	0		**15**	**30**
11:30	11:45	0	4	2		0	6	0		**12**	1	3	1		1	3	1		**10**	**22**
11:45	12:00	1	3	2		0	1	0		**7**	1	2	4		3	1	0		**11**	**18**
12:00	12:15	5	1	2		0	3	0		**11**	3	1	2		2	4	1		**13**	**24**
12:15	12:30	2	3	0		1	4	1		**11**	1	3	0		0	3	0		**7**	**18**
12:30	12:45	2	1	2		1	6	1		**13**	0	2	2		2	2	0		**8**	**21**
12:45	13:00	1	7	2		0	4	1		**15**	2	3	0		6	3	1		**15**	**30**
13:00	13:15	4	2	2		0	4	2		**14**	0	3	1		2	3	0		**9**	**23**
13:15	13:30	1	3	1		0	3	1		**9**	1	2	4		1	2	0		**10**	**19**
15:00	15:15	2	2	6		2	2	0		**14**	0	8	1		6	6	0		**21**	**35**
15:15	15:30	0	3	5		0	4	1		**13**	1	11	3		0	9	1		**25**	**38**
15:30	15:45	1	2	0		0	3	2		**8**	1	6	1		9	10	0		**27**	**35**
15:45	16:00	0	1	0		0	4	0		**5**	1	4	0		3	3	0		**11**	**16**
16:00	16:15	0	0	2		0	2	0		**4**	0	2	3		2	3	0		**10**	**14**
16:15	16:30	0	0	0		0	2	1		**3**	2	4	1		1	5	0		**13**	**16**
16:30	16:45	0	0	1		0	1	0		**2**	0	2	0		1	7	0		**10**	**12**
16:45	17:00	0	0	3		0	1	1		**5**	1	5	1		2	1	0		**10**	**15**
17:00	17:15	2	1	1		0	0	0		**4**	0	1	1		0	5	0		**7**	**11**
17:15	17:30	0	0	2		0	1	1		**4**	0	1	2		3	3	0		**9**	**13**
17:30	17:45	0	0	3		1	0	0		**4**	1	1	1		1	3	0		**7**	**11**
17:45	18:00	1	0	0		0	0	1		**2**	1	3	2		5	7	0		**18**	**20**
Total:	None	48	88	75	**0**	7	85	24	**0**	**327**	30	140	58	**0**	80	145	7	**0**	**460**	**787**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ OGILVIE RD

Survey Date: Wednesday, April 24, 2019 **WO No:** 38576

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

Full Study 15 Minute U-Turn Total

Time Period		BLAIR RD Northbound U-Turn Total	BLAIR RD Southbound U-Turn Total	OGILVIE RD Eastbound U-Turn Total	OGILVIE RD Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	**0**
07:15	07:30	1	0	1	0	**2**
07:30	07:45	0	0	0	1	**1**
07:45	08:00	0	0	0	0	**0**
08:00	08:15	1	0	0	1	**2**
08:15	08:30	0	0	1	0	**1**
08:30	08:45	0	0	0	0	**0**
08:45	09:00	0	0	0	0	**0**
09:00	09:15	0	0	0	0	**0**
09:15	09:30	0	0	0	0	**0**
09:30	09:45	0	0	0	0	**0**
09:45	10:00	0	0	2	0	**2**
11:30	11:45	0	0	0	0	**0**
11:45	12:00	0	0	1	0	**1**
12:00	12:15	0	0	0	0	**0**
12:15	12:30	0	0	0	0	**0**
12:30	12:45	0	0	1	0	**1**
12:45	13:00	0	0	0	0	**0**
13:00	13:15	0	0	1	0	**1**
13:15	13:30	0	0	0	0	**0**
15:00	15:15	0	0	0	0	**0**
15:15	15:30	0	0	1	0	**1**
15:30	15:45	0	0	0	0	**0**
15:45	16:00	0	0	0	0	**0**
16:00	16:15	0	0	2	0	**2**
16:15	16:30	0	0	0	0	**0**
16:30	16:45	0	0	1	0	**1**
16:45	17:00	0	0	1	0	**1**
17:00	17:15	1	0	1	0	**2**
17:15	17:30	0	0	0	0	**0**
17:30	17:45	0	1	1	1	**3**
17:45	18:00	0	0	2	0	**2**
Total		3	1	16	3	**23**

Transportation Services - Traffic Services

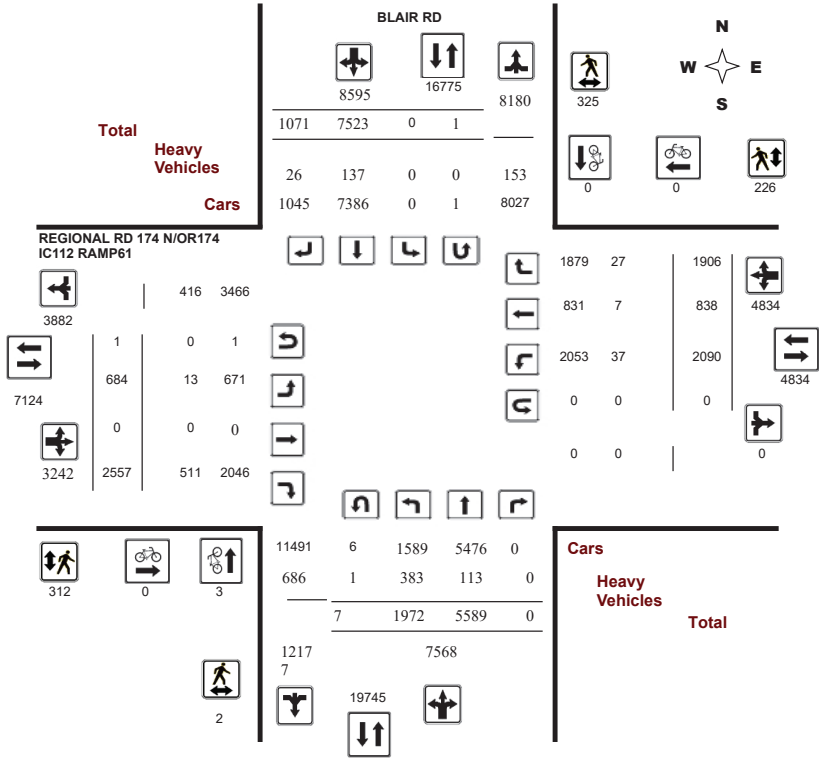
Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Diagram



Transportation Services - Traffic Services

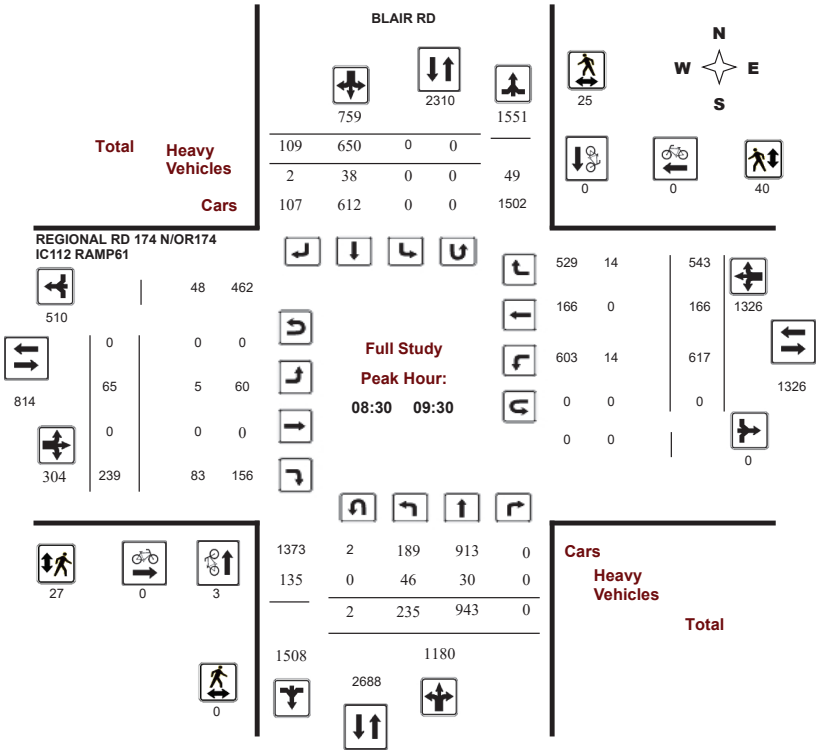
Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Peak Hour Diagram



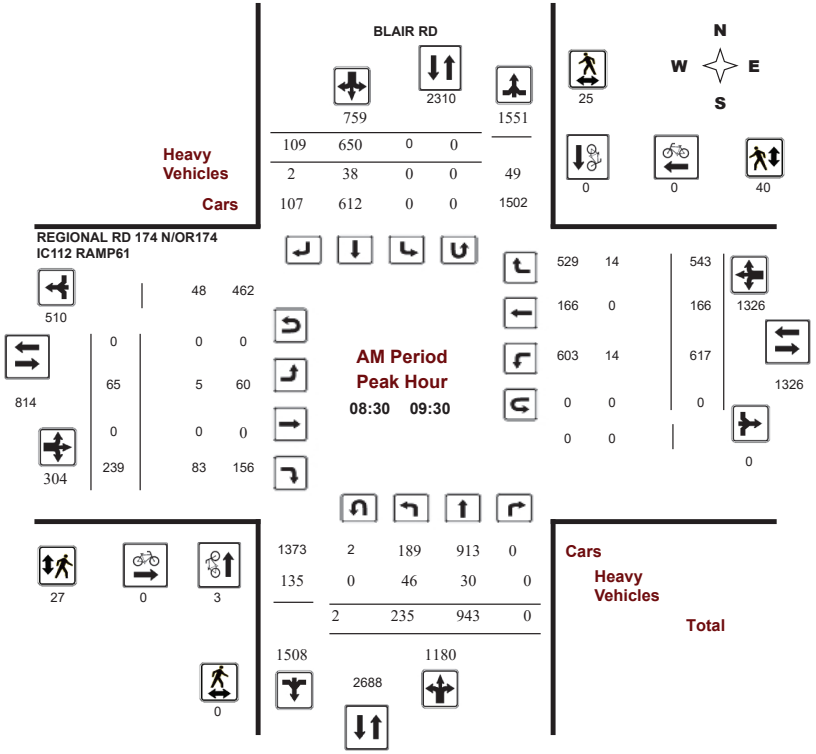
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

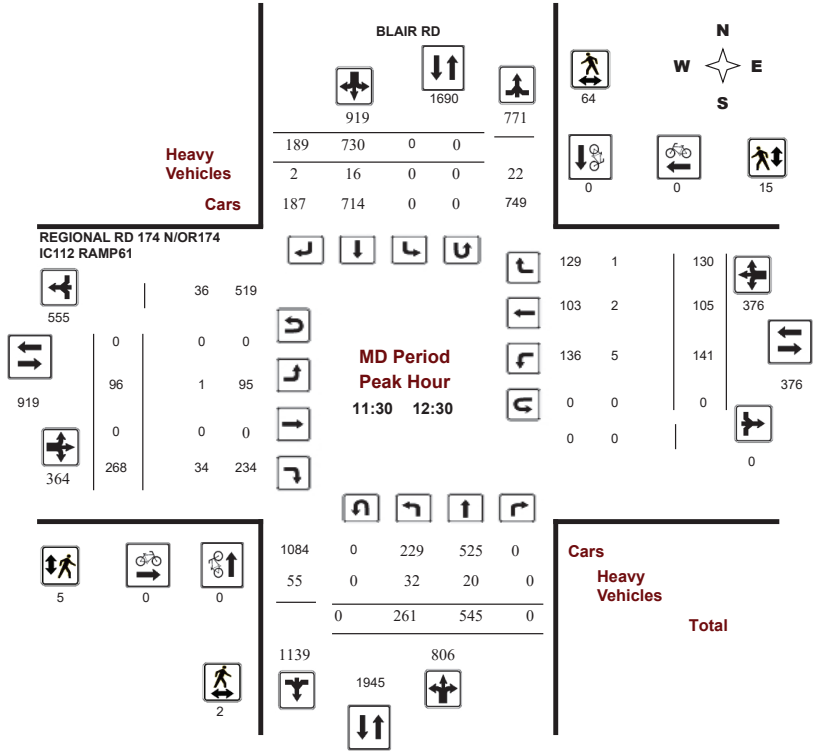
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

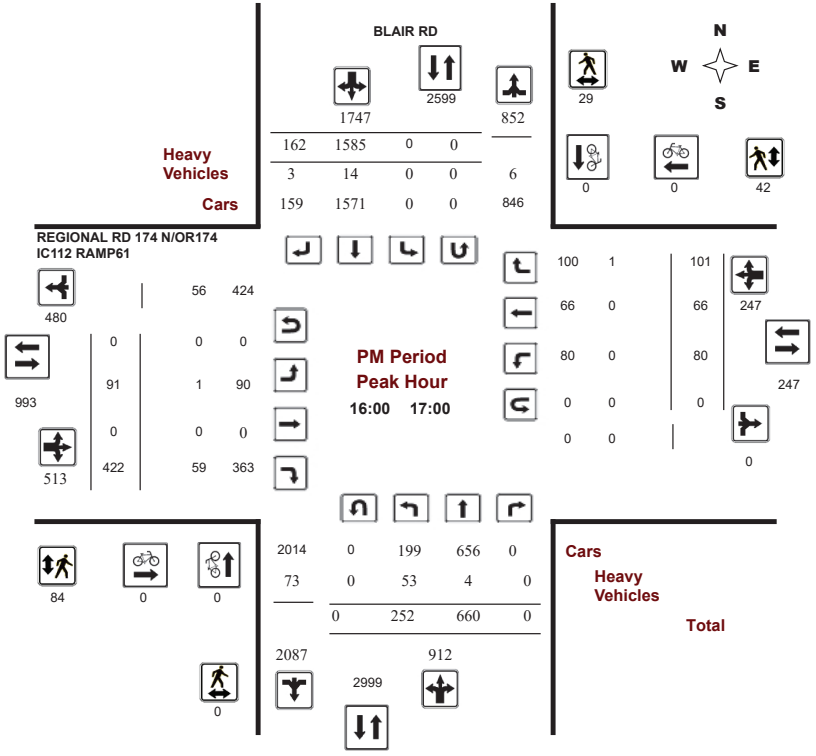
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 09, 2019

Total Observed U-Turns

Northbound: 7 Southbound: 1

Eastbound: 1 Westbound: 0

AADT Factor 1.00

	BLAIR RD								REGIONAL RD 174 N/OR174 IC112 RAMP61									
	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	223	941	0	**1164**	0	572	101	**673**	**1837**	53	0	259	**312**	437	127	391	**955**	**1267**	**3104**
08:00 09:00	237	948	0	**1185**	0	707	94	**801**	**1986**	80	0	286	**366**	546	184	482	**1212**	**1578**	**3564**
09:00 10:00	250	730	0	**980**	0	561	118	**679**	**1659**	61	0	231	**292**	555	148	472	**1175**	**1467**	**3126**
11:30 12:30	261	545	0	**806**	0	730	189	**919**	**1725**	96	0	268	**364**	141	105	130	**376**	**740**	**2465**
12:30 13:30	233	552	0	**785**	0	707	127	**834**	**1619**	106	0	291	**397**	137	63	106	**306**	**703**	**2322**
15:00 16:00	247	616	0	**863**	0	1475	133	**1608**	**2471**	92	0	390	**482**	111	71	124	**306**	**788**	**3259**
16:00 17:00	252	660	0	**912**	0	1585	162	**1747**	**2659**	91	0	422	**513**	80	66	101	**247**	**760**	**3419**
17:00 18:00	269	597	0	**866**	0	1186	147	**1333**	**2199**	105	0	410	**515**	83	74	100	**257**	**772**	**2971**
Sub Total	1972	5589	0	**7561**	0	7523	1071	**8594**	**16155**	684	0	2557	**3241**	2090	838	1906	**4834**	**8075**	**24230**
U Turns	7			**7**	1			**1**	**8**	1			**1**	0			**0**	**1**	**9**
Total	1979	5589	0	**7568**	1	7523	1071	**8595**	**16163**	685	0	2557	**3242**	2090	838	1906	**4834**	**8076**	**24239**
EQ 12Hr	2751	7769	0	**10520**	1	10457	1489	**11947**	**22467**	952	0	3554	**4506**	2905	1165	2649	**6719**	**11225**	**33692**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	2751	7769	0	**10520**	1	10457	1489	**11947**	**22467**	952	0	3554	**4506**	2905	1165	2649	**6719**	**11225**	**33692**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	3604	10177	0	**13781**	1	13699	1951	**15651**	**29432**	1247	0	4656	**5903**	3806	1526	3470	**8802**	**14705**	**44137**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study 15 Minute Increments

		BLAIR RD									REGIONAL RD 174 N/OR174 IC112 RAMP61									
		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		207	0			110	19		**386**		0	54			18	75		**211**	**597**
07:15	07:30		206	0			131	22		**416**		0	69			26	110		**330**	**746**
07:30	07:45		278	0			152	25		**513**		0	71			36	99		**349**	**862**
07:45	08:00		250	0			179	35		**523**		0	65			47	107		**377**	**900**
08:00	08:15		233	0			186	26		**511**		0	90			48	94		**376**	**887**
08:15	08:30		225	0			168	26		**492**		0	71			52	108		**384**	**876**
08:30	08:45		231	0			203	23		**512**		0	59			35	130		**370**	**882**
08:45	09:00		259	0			150	19		**473**		0	66			49	150		**448**	**921**
09:00	09:15		244	0			145	27		**473**		0	62			32	114		**375**	**848**
09:15	09:30		209	0			152	40		**481**		0	52			50	149		**437**	**918**
09:30	09:45		162	0			152	17		**389**		0	54			47	136		**400**	**789**
09:45	10:00		115	0			112	34		**319**		0	63			19	73		**255**	**574**
11:30	11:45		129	0			181	48		**408**		0	69			29	32		**181**	**589**
11:45	12:00		145	0			192	42		**453**		0	52			21	36		**174**	**627**
12:00	12:15		126	0			178	52		**406**		0	73			36	34		**202**	**608**
12:15	12:30		145	0			179	47		**458**		0	74			19	28		**183**	**641**
12:30	12:45		126	0			180	33		**408**		0	67			12	35		**168**	**576**
12:45	13:00		161	0			187	43		**440**		0	71			14	24		**165**	**605**
13:00	13:15		126	0			185	20		**388**		0	72			16	25		**181**	**569**
13:15	13:30		139	0			155	31		**384**		0	81			21	22		**189**	**573**
15:00	15:15		136	0			386	35		**619**		0	99			14	37		**203**	**822**
15:15	15:30		163	0			371	28		**634**		0	107			19	34		**210**	**844**
15:30	15:45		161	0			346	33		**592**		0	96			20	25		**190**	**782**
15:45	16:00		156	0			372	37		**626**		0	88			18	28		**186**	**812**
16:00	16:15		158	0			424	28		**671**		0	103			21	26		**197**	**868**
16:15	16:30		162	0			408	39		**689**		0	92			15	28		**173**	**862**
16:30	16:45		175	0			389	43		**647**		0	124			17	23		**201**	**848**
16:45	17:00		165	0			364	52		**652**		0	103			13	24		**189**	**841**
17:00	17:15		163	0			358	35		**606**		0	101			24	31		**202**	**808**
17:15	17:30		138	0			324	37		**577**		0	107			15	26		**203**	**780**
17:30	17:45		148	0			265	41		**512**		0	92			19	27		**179**	**691**
17:45	18:00		148	0			239	34		**505**		0	110			16	16		**188**	**693**
Total:		0	5589	0	0	0	7523	1071	0	**16163**	0	0	2557	0	0	838	1906	0	**16163**	**24,239**

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Cyclist Volume

Time Period		BLAIR RD			REGIONAL RD 174 N/OR174 IC112 RAMP61			Grand Total
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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**
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	1	0	**1**	0	0	**0**	**1**
08:45	09:00	2	0	**2**	0	0	**0**	**2**
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**
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**
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	0	**0**	**0**
13:15	13:30	0	0	**0**	0	0	**0**	**0**
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**
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**
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**
Total		3	0	**3**	0	0	**0**	**3**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Pedestrian Volume

Time Period		BLAIR RD			REGIONAL RD 174 N/OR174 IC112 RAMP61			Grand Total
		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	
07:00	07:15	0	7	**7**	12	5	**17**	**24**
07:15	07:30	0	7	**7**	9	6	**15**	**22**
07:30	07:45	0	9	**9**	12	6	**18**	**27**
07:45	08:00	0	11	**11**	17	14	**31**	**42**
08:00	08:15	0	3	**3**	13	11	**24**	**27**
08:15	08:30	0	9	**9**	8	9	**17**	**26**
08:30	08:45	0	11	**11**	17	10	**27**	**38**
08:45	09:00	0	6	**6**	7	20	**27**	**33**
09:00	09:15	0	3	**3**	2	5	**7**	**10**
09:15	09:30	0	5	**5**	1	5	**6**	**11**
09:30	09:45	0	3	**3**	3	2	**5**	**8**
09:45	10:00	0	4	**4**	3	3	**6**	**10**
11:30	11:45	0	10	**10**	1	5	**6**	**16**
11:45	12:00	2	11	**13**	2	1	**3**	**16**
12:00	12:15	0	26	**26**	1	3	**4**	**30**
12:15	12:30	0	17	**17**	1	6	**7**	**24**
12:30	12:45	0	29	**29**	2	7	**9**	**38**
12:45	13:00	0	27	**27**	4	6	**10**	**37**
13:00	13:15	0	14	**14**	2	6	**8**	**22**
13:15	13:30	0	20	**20**	3	1	**4**	**24**
15:00	15:15	0	10	**10**	12	3	**15**	**25**
15:15	15:30	0	9	**9**	17	7	**24**	**33**
15:30	15:45	0	2	**2**	14	9	**23**	**25**
15:45	16:00	0	12	**12**	19	9	**28**	**40**
16:00	16:15	0	9	**9**	18	15	**33**	**42**
16:15	16:30	0	7	**7**	19	12	**31**	**38**
16:30	16:45	0	7	**7**	25	6	**31**	**38**
16:45	17:00	0	6	**6**	22	9	**31**	**37**
17:00	17:15	0	8	**8**	24	10	**34**	**42**
17:15	17:30	0	6	**6**	9	4	**13**	**19**
17:30	17:45	0	12	**12**	8	2	**10**	**22**
17:45	18:00	0	5	**5**	5	9	**14**	**19**
Total		2	325	**327**	312	226	**538**	**865**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Heavy Vehicles

		BLAIR RD									REGIONAL RD 174 N/OR174 IC112 RAMP61									
		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	8	9	0		0	3	1		**21**	0	0	19		0	1	0		**20**	**41**
07:15	07:30	14	3	0		0	2	4		**23**	0	0	32		0	1	0		**33**	**56**
07:30	07:45	15	5	0		0	3	2		**25**	0	0	31		0	0	1		**32**	**57**
07:45	08:00	18	2	0		0	4	0		**24**	0	0	29		5	0	0		**34**	**58**
08:00	08:15	19	3	0		0	2	0		**24**	0	0	30		1	0	1		**32**	**56**
08:15	08:30	20	1	0		0	2	2		**25**	2	0	28		0	0	0		**30**	**55**
08:30	08:45	12	8	0		0	11	1		**32**	0	0	27		3	0	3		**33**	**65**
08:45	09:00	9	9	0		0	5	0		**23**	4	0	25		0	0	3		**32**	**55**
09:00	09:15	9	7	0		0	14	0		**30**	0	0	22		8	0	3		**33**	**63**
09:15	09:30	16	6	0		0	8	1		**31**	1	0	9		3	0	5		**18**	**49**
09:30	09:45	10	7	0		0	3	0		**20**	0	0	12		5	0	2		**19**	**39**
09:45	10:00	8	3	0		0	5	0		**16**	0	0	13		2	1	0		**16**	**33**
11:30	11:45	4	4	0		0	5	1		**14**	0	0	10		1	1	0		**12**	**26**
11:45	12:00	12	8	0		0	3	0		**23**	0	0	9		3	0	0		**12**	**35**
12:00	12:15	4	6	0		0	5	1		**16**	1	0	7		0	0	0		**8**	**24**
12:15	12:30	12	2	0		0	3	0		**17**	0	0	8		1	1	1		**11**	**28**
12:30	12:45	6	8	0		0	4	0		**18**	0	0	8		0	0	1		**9**	**27**
12:45	13:00	9	2	0		0	8	2		**21**	0	0	9		0	1	0		**10**	**31**
13:00	13:15	5	1	0		0	6	0		**12**	0	0	7		1	1	0		**9**	**21**
13:15	13:30	8	1	0		0	4	0		**13**	0	0	10		1	0	1		**12**	**25**
15:00	15:15	12	5	0		0	7	1		**25**	0	0	12		1	0	1		**14**	**39**
15:15	15:30	12	1	0		0	6	0		**19**	3	0	15		1	0	1		**20**	**39**
15:30	15:45	13	2	0		0	4	5		**24**	0	0	12		0	0	1		**13**	**37**
15:45	16:00	14	1	0		0	3	0		**18**	0	0	11		0	0	2		**13**	**31**
16:00	16:15	9	1	0		0	5	0		**15**	0	0	14		0	0	1		**15**	**30**
16:15	16:30	23	1	0		0	1	1		**26**	1	0	15		0	0	0		**16**	**42**
16:30	16:45	5	2	0		0	4	2		**13**	0	0	16		0	0	0		**16**	**29**
16:45	17:00	16	0	0		0	4	0		**20**	0	0	14		0	0	0		**14**	**34**
17:00	17:15	10	1	0		0	0	1		**12**	0	0	14		0	0	0		**14**	**26**
17:15	17:30	13	2	0		0	0	0		**15**	0	0	13		0	0	0		**13**	**28**
17:30	17:45	18	0	0		0	1	1		**20**	1	0	16		1	0	0		**18**	**38**
17:45	18:00	20	2	0		0	2	0		**24**	0	0	14		0	0	0		**14**	**38**
Total:	None	383	113	0	**0**	0	137	26	**0**	**659**	13	0	511	**0**	37	7	27	**0**	**595**	**1,255**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study 15 Minute U-Turn Total

		BLAIR RD		REGIONAL RD 174 N/OR174 IC112 RAMP61		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	**0**
07:15	07:30	0	0	0	0	**0**
07:30	07:45	0	0	0	0	**0**
07:45	08:00	1	0	0	0	**1**
08:00	08:15	1	0	0	0	**1**
08:15	08:30	0	0	0	0	**0**
08:30	08:45	0	0	0	0	**0**
08:45	09:00	1	0	0	0	**1**
09:00	09:15	0	0	0	0	**0**
09:15	09:30	1	0	0	0	**1**
09:30	09:45	1	0	0	0	**1**
09:45	10:00	1	0	0	0	**1**
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	1	0	0	0	**1**
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	1	0	**1**
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	1	0	0	**1**
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		7	1	1	0	**9**

Transportation Services - Traffic Services

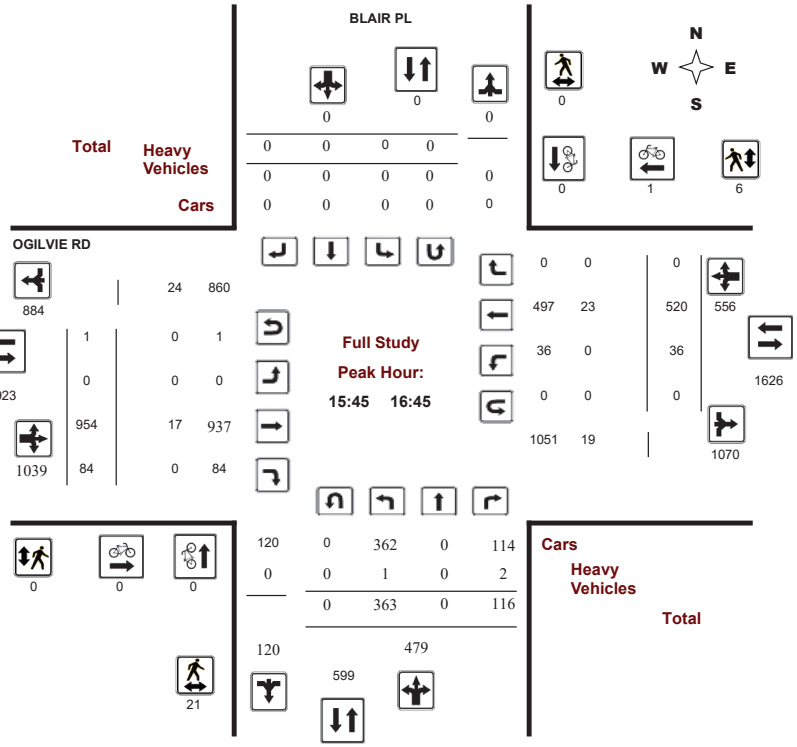
Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

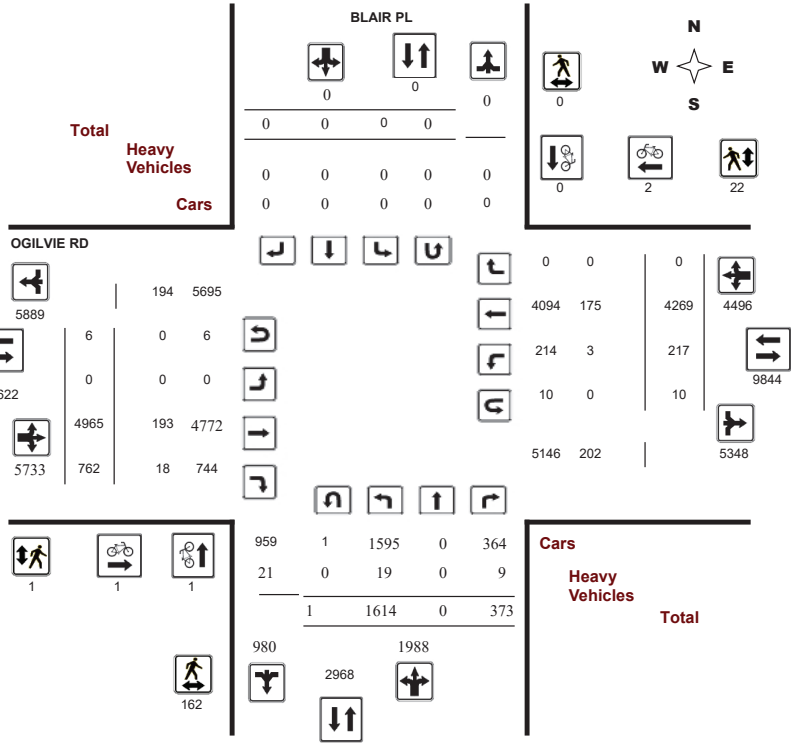
Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Diagram



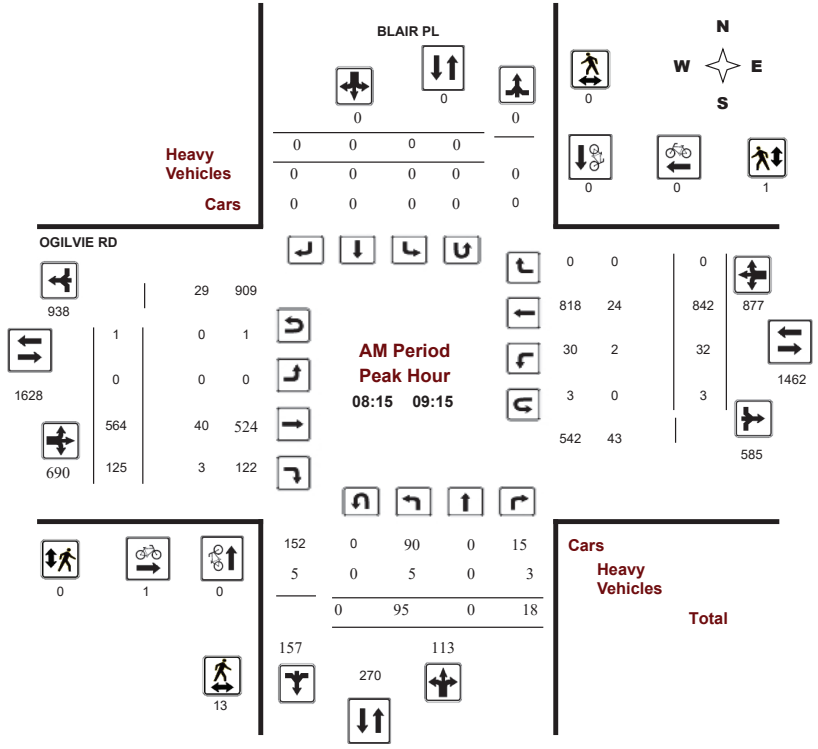
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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



Comments

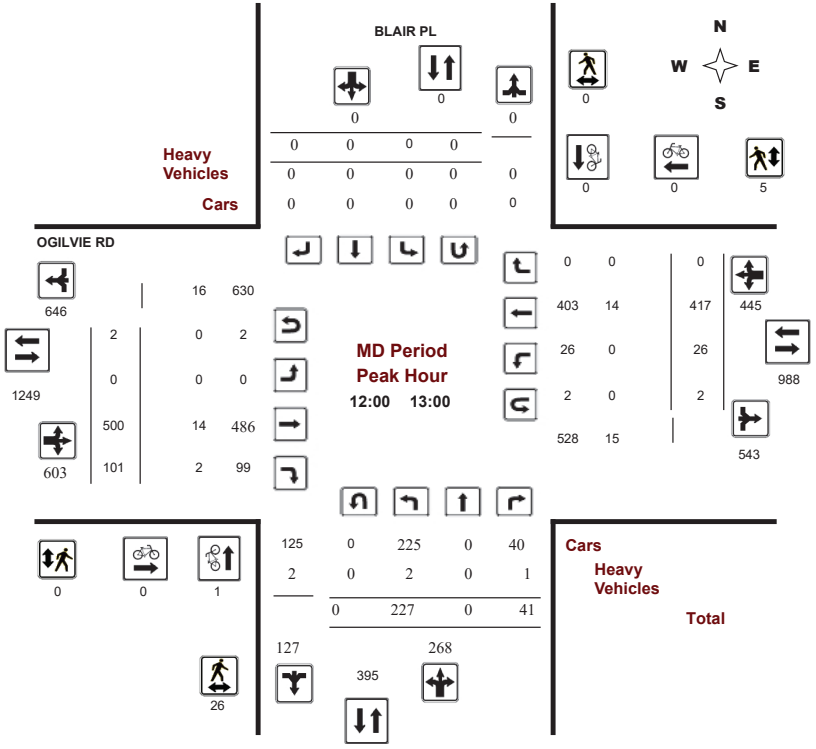
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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



Comments

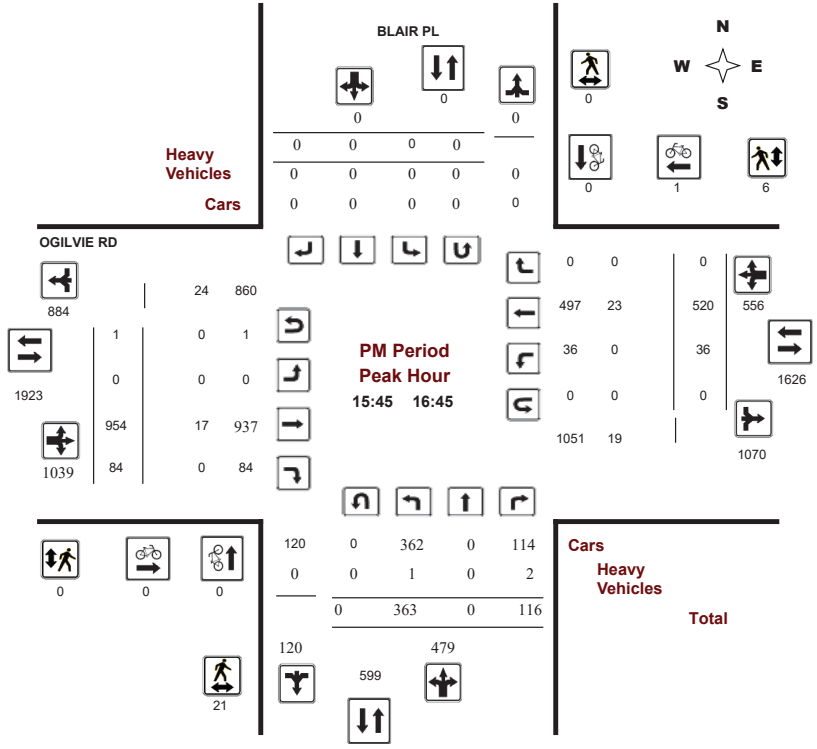
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 16, 2019

Total Observed U-Turns

Northbound: 1 Southbound: 0

Eastbound: 6 Westbound: 10

AADT Factor 1.00

	BLAIR PL								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	84	0	7	**91**	0	0	0	**0**	**91**	0	284	128	**412**	28	588	0	**616**	**1028**	**1119**
08:00 09:00	93	0	13	**106**	0	0	0	**0**	**106**	0	502	140	**642**	34	872	0	**906**	**1548**	**1654**
09:00 10:00	93	0	17	**110**	0	0	0	**0**	**110**	0	437	62	**499**	17	535	0	**552**	**1051**	**1161**
11:30 12:30	216	0	44	**260**	0	0	0	**0**	**260**	0	502	92	**594**	22	403	0	**425**	**1019**	**1279**
12:30 13:30	208	0	22	**230**	0	0	0	**0**	**230**	0	505	103	**608**	28	399	0	**427**	**1035**	**1265**
15:00 16:00	278	0	65	**343**	0	0	0	**0**	**343**	0	800	93	**893**	31	575	0	**606**	**1499**	**1842**
16:00 17:00	360	0	114	**474**	0	0	0	**0**	**474**	0	1007	75	**1082**	34	468	0	**502**	**1584**	**2058**
17:00 18:00	282	0	91	**373**	0	0	0	**0**	**373**	0	928	69	**997**	23	429	0	**452**	**1449**	**1822**
Sub Total	1614	0	373	**1987**	0	0	0	**0**	**1987**	0	4965	762	**5727**	217	4269	0	**4486**	**10213**	**12200**
U Turns	1			**1**	0			**0**	**1**	**6**			**6**	10			**10**	**16**	**17**
Total	1615	0	373	**1988**	0	0	0	**0**	**1988**	6	4965	762	**5733**	227	4269	0	**4496**	**10229**	**12217**
EQ 12Hr	2245	0	518	**2763**	0	0	0	**0**	**2763**	8	6901	1059	**7968**	316	5934	0	**6250**	**14218**	**16981**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	2245	0	518	**2763**	0	0	0	**0**	**2763**	8	6901	1059	**7968**	316	5934	0	**6250**	**14218**	**16981**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	2941	0	679	**3620**	0	0	0	**0**	**3620**	10	9040	1387	**10437**	414	7774	0	**8188**	**18625**	**22245**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study 15 Minute Increments

		BLAIR PL									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		0	1			0	0		**25**		52	28			117	0		**206**	**231**
07:15	07:30		0	0			0	0		**20**		50	23			125	0		**203**	**223**
07:30	07:45		0	4			0	0		**27**		83	31			156	0		**276**	**303**
07:45	08:00		0	2			0	0		**19**		99	46			190	0		**343**	**362**
08:00	08:15		0	0			0	0		**20**		103	34			230	0		**375**	**395**
08:15	08:30		0	2			0	0		**31**		124	37			256	0		**429**	**460**
08:30	08:45		0	4			0	0		**25**		135	38			211	0		**393**	**418**
08:45	09:00		0	7			0	0		**30**		140	31			175	0		**355**	**385**
09:00	09:15		0	5			0	0		**27**		165	19			200	0		**390**	**417**
09:15	09:30		0	4			0	0		**29**		107	19			120	0		**254**	**283**
09:30	09:45		0	5			0	0		**26**		85	13			101	0		**202**	**228**
09:45	10:00		0	3			0	0		**28**		80	11			114	0		**208**	**236**
11:30	11:45		0	7			0	0		**52**		125	25			106	0		**260**	**312**
11:45	12:00		0	8			0	0		**59**		142	26			90	0		**264**	**323**
12:00	12:15		0	16			0	0		**77**		117	26			105	0		**256**	**333**
12:15	12:30		0	13			0	0		**72**		118	15			102	0		**240**	**312**
12:30	12:45		0	8			0	0		**58**		136	28			113	0		**288**	**346**
12:45	13:00		0	4			0	0		**61**		129	32			97	0		**264**	**325**
13:00	13:15		0	2			0	0		**64**		123	26			112	0		**268**	**332**
13:15	13:30		0	8			0	0		**47**		117	17			77	0		**218**	**265**
15:00	15:15		0	9			0	0		**76**		170	23			151	0		**353**	**429**
15:15	15:30		0	11			0	0		**68**		208	19			128	0		**356**	**424**
15:30	15:45		0	15			0	0		**90**		213	25			162	0		**408**	**498**
15:45	16:00		0	30			0	0		**110**		209	26			134	0		**382**	**492**
16:00	16:15		0	35			0	0		**150**		243	17			141	0		**410**	**560**
16:15	16:30		0	19			0	0		**100**		246	20			131	0		**404**	**504**
16:30	16:45		0	32			0	0		**119**		256	21			114	0		**399**	**518**
16:45	17:00		0	28			0	0		**105**		262	17			82	0		**372**	**477**
17:00	17:15		0	27			0	0		**118**		256	16			108	0		**384**	**502**
17:15	17:30		0	21			0	0		**92**		247	21			119	0		**395**	**487**
17:30	17:45		0	26			0	0		**94**		214	16			113	0		**350**	**444**
17:45	18:00		0	17			0	0		**69**		211	16			89	0		**324**	**393**
Total:		0	0	373	0	0	0	0	0	**1988**	0	4965	762	0	0	4269	0	0	**1988**	**12,217**

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Cyclist Volume

		BLAIR PL			OGILVIE RD			
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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**
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**	1	0	**1**	**1**
08:45	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**
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**
12:30	12:45	0	0	**0**	0	0	**0**	**0**
12:45	13:00	1	0	**1**	0	0	**0**	**1**
13:00	13:15	0	0	**0**	0	0	**0**	**0**
13:15	13:30	0	0	**0**	0	0	**0**	**0**
15:00	15:15	0	0	**0**	0	1	**1**	**1**
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**
16:00	16:15	0	0	**0**	0	1	**1**	**1**
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**
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**
Total		1	0	**1**	1	2	**3**	**4**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Pedestrian Volume

		BLAIR PL			OGILVIE RD			
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	3	0	**3**	1	0	**1**	**4**
07:30	07:45	3	0	**3**	0	0	**0**	**3**
07:45	08:00	6	0	**6**	0	1	**1**	**7**
08:00	08:15	4	0	**4**	0	0	**0**	**4**
08:15	08:30	2	0	**2**	0	0	**0**	**2**
08:30	08:45	2	0	**2**	0	0	**0**	**2**
08:45	09:00	2	0	**2**	0	0	**0**	**2**
09:00	09:15	7	0	**7**	0	1	**1**	**8**
09:15	09:30	3	0	**3**	0	0	**0**	**3**
09:30	09:45	5	0	**5**	0	0	**0**	**5**
09:45	10:00	4	0	**4**	0	0	**0**	**4**
11:30	11:45	4	0	**4**	0	1	**1**	**5**
11:45	12:00	1	0	**1**	0	0	**0**	**1**
12:00	12:15	10	0	**10**	0	0	**0**	**10**
12:15	12:30	2	0	**2**	0	2	**2**	**4**
12:30	12:45	7	0	**7**	0	2	**2**	**9**
12:45	13:00	7	0	**7**	0	1	**1**	**8**
13:00	13:15	3	0	**3**	0	1	**1**	**4**
13:15	13:30	7	0	**7**	0	0	**0**	**7**
15:00	15:15	4	0	**4**	0	0	**0**	**4**
15:15	15:30	6	0	**6**	0	0	**0**	**6**
15:30	15:45	19	0	**19**	0	1	**1**	**20**
15:45	16:00	6	0	**6**	0	2	**2**	**8**
16:00	16:15	3	0	**3**	0	2	**2**	**5**
16:15	16:30	6	0	**6**	0	0	**0**	**6**
16:30	16:45	6	0	**6**	0	2	**2**	**8**
16:45	17:00	9	0	**9**	0	1	**1**	**10**
17:00	17:15	5	0	**5**	0	1	**1**	**6**
17:15	17:30	10	0	**10**	0	1	**1**	**11**
17:30	17:45	2	0	**2**	0	3	**3**	**5**
17:45	18:00	2	0	**2**	0	0	**0**	**2**
Total	.....	162	0	**162**	1	22	**23**	**185**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study Heavy Vehicles

		BLAIR PL								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	1	0	0		0	0	0		**1**	0	10	0		0	1	0		**11**	**12**
07:15	07:30	0	0	0		0	0	0		**0**	0	5	0		0	6	0		**11**	**11**
07:30	07:45	0	0	1		0	0	0		**1**	0	7	0		0	3	0		**10**	**11**
07:45	08:00	1	0	1		0	0	0		**2**	0	7	1		0	8	0		**16**	**18**
08:00	08:15	0	0	0		0	0	0		**0**	0	8	2		0	11	0		**21**	**21**
08:15	08:30	3	0	0		0	0	0		**3**	0	13	0		2	5	0		**20**	**23**
08:30	08:45	0	0	1		0	0	0		**1**	0	5	2		0	9	0		**16**	**17**
08:45	09:00	1	0	0		0	0	0		**1**	0	14	1		0	5	0		**20**	**21**
09:00	09:15	1	0	2		0	0	0		**3**	0	8	0		0	5	0		**13**	**16**
09:15	09:30	0	0	0		0	0	0		**0**	0	7	0		0	2	0		**9**	**9**
09:30	09:45	0	0	0		0	0	0		**0**	0	7	0		0	5	0		**12**	**12**
09:45	10:00	3	0	0		0	0	0		**3**	0	4	2		0	4	0		**10**	**13**
11:30	11:45	1	0	0		0	0	0		**1**	0	4	1		0	6	0		**11**	**12**
11:45	12:00	0	0	0		0	0	0		**0**	0	3	0		0	4	0		**7**	**7**
12:00	12:15	1	0	0		0	0	0		**1**	0	2	1		0	3	0		**6**	**7**
12:15	12:30	0	0	1		0	0	0		**1**	0	3	0		0	2	0		**5**	**6**
12:30	12:45	0	0	0		0	0	0		**0**	0	5	1		0	7	0		**13**	**13**
12:45	13:00	1	0	0		0	0	0		**1**	0	4	0		0	2	0		**6**	**7**
13:00	13:15	2	0	0		0	0	0		**2**	0	5	1		0	2	0		**8**	**10**
13:15	13:30	1	0	0		0	0	0		**1**	0	6	1		0	0	0		**7**	**8**
15:00	15:15	0	0	0		0	0	0		**0**	0	13	1		0	16	0		**30**	**30**
15:15	15:30	0	0	0		0	0	0		**0**	0	15	0		0	12	0		**27**	**27**
15:30	15:45	0	0	1		0	0	0		**1**	0	5	3		1	15	0		**24**	**25**
15:45	16:00	1	0	2		0	0	0		**3**	0	6	0		0	7	0		**13**	**16**
16:00	16:15	0	0	0		0	0	0		**0**	0	5	0		0	5	0		**10**	**10**
16:15	16:30	0	0	0		0	0	0		**0**	0	1	0		0	5	0		**6**	**6**
16:30	16:45	0	0	0		0	0	0		**0**	0	5	0		0	6	0		**11**	**11**
16:45	17:00	0	0	0		0	0	0		**0**	0	5	1		0	1	0		**7**	**7**
17:00	17:15	0	0	0		0	0	0		**0**	0	2	0		0	7	0		**9**	**9**
17:15	17:30	2	0	0		0	0	0		**2**	0	3	0		0	4	0		**7**	**9**
17:30	17:45	0	0	0		0	0	0		**0**	0	4	0		0	4	0		**8**	**8**
17:45	18:00	0	0	0		0	0	0		**0**	0	2	0		0	3	0		**5**	**5**
Total:	None	19	0	9	**0**	0	0	0	**0**	**28**	0	193	18	**0**	3	175	0	**0**	**389**	**417**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR PL @ OGILVIE RD

Survey Date: Wednesday, January 16, 2019 **WO No:** 38281

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

Full Study 15 Minute U-Turn Total

Time Period		BLAIR PL Northbound U-Turn Total	BLAIR PL Southbound U-Turn Total	OGILVIE RD Eastbound U-Turn Total	OGILVIE RD 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	1	**2**
08:30	08:45	0	0	0	0	**0**
08:45	09:00	0	0	0	2	**2**
09:00	09:15	0	0	0	0	**0**
09:15	09:30	0	0	0	1	**1**
09:30	09:45	0	0	0	2	**2**
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	1	**1**
12:15	12:30	0	0	0	0	**0**
12:30	12:45	0	0	2	0	**2**
12:45	13:00	0	0	0	1	**1**
13:00	13:15	0	0	0	0	**0**
13:15	13:30	0	0	0	0	**0**
15:00	15:15	1	0	0	0	**1**
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	1	0	**1**
16:30	16:45	0	0	0	0	**0**
16:45	17:00	0	0	0	0	**0**
17:00	17:15	0	0	1	0	**1**
17:15	17:30	0	0	0	1	**1**
17:30	17:45	0	0	1	1	**2**
17:45	18:00	0	0	0	0	**0**
Total		1	0	6	10	**17**

Transportation Services - Traffic Services

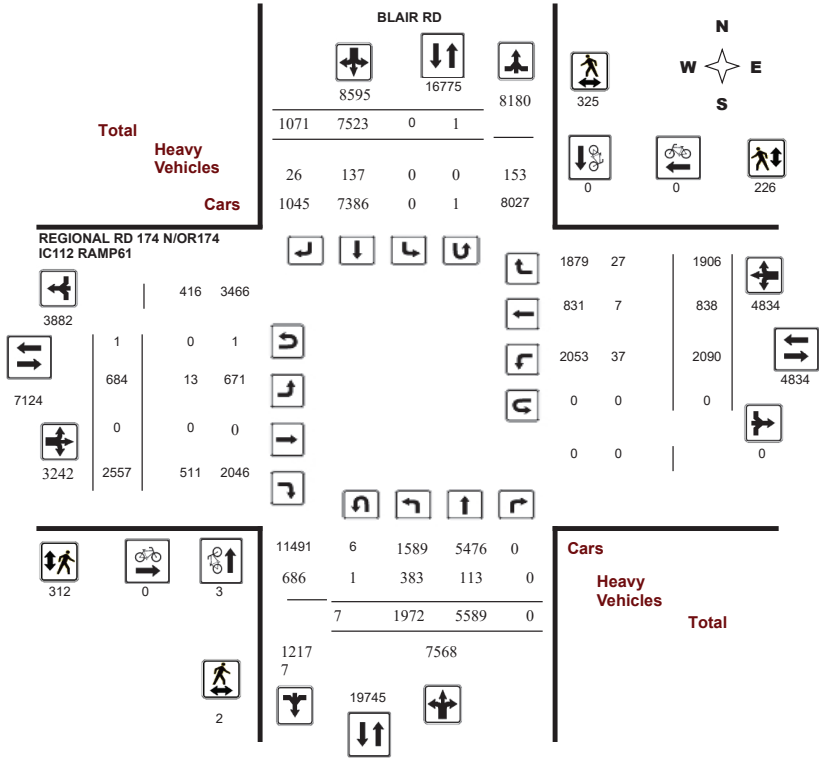
Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Diagram



Transportation Services - Traffic Services

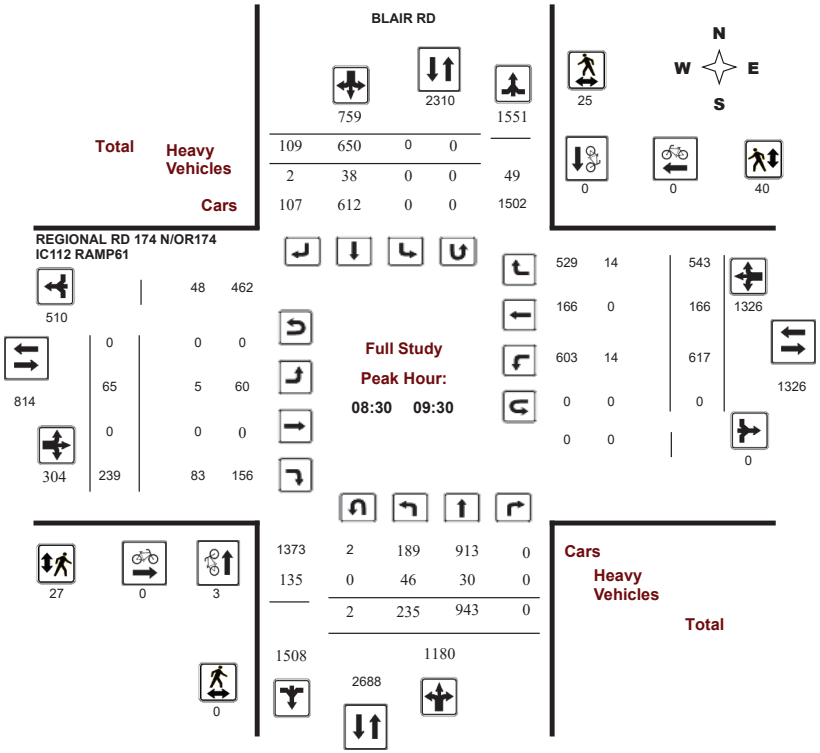
Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Peak Hour Diagram



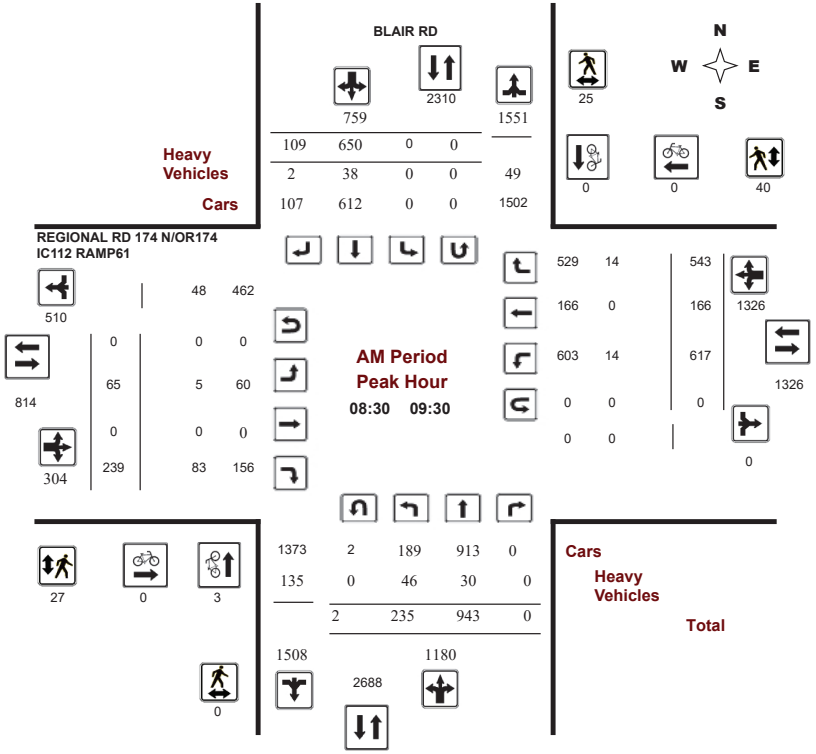
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

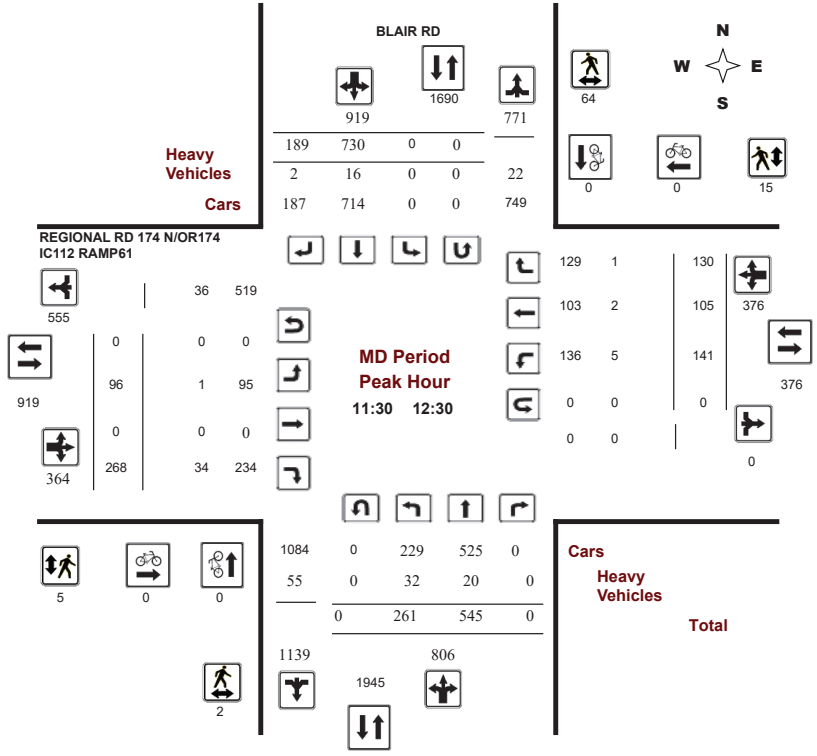
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

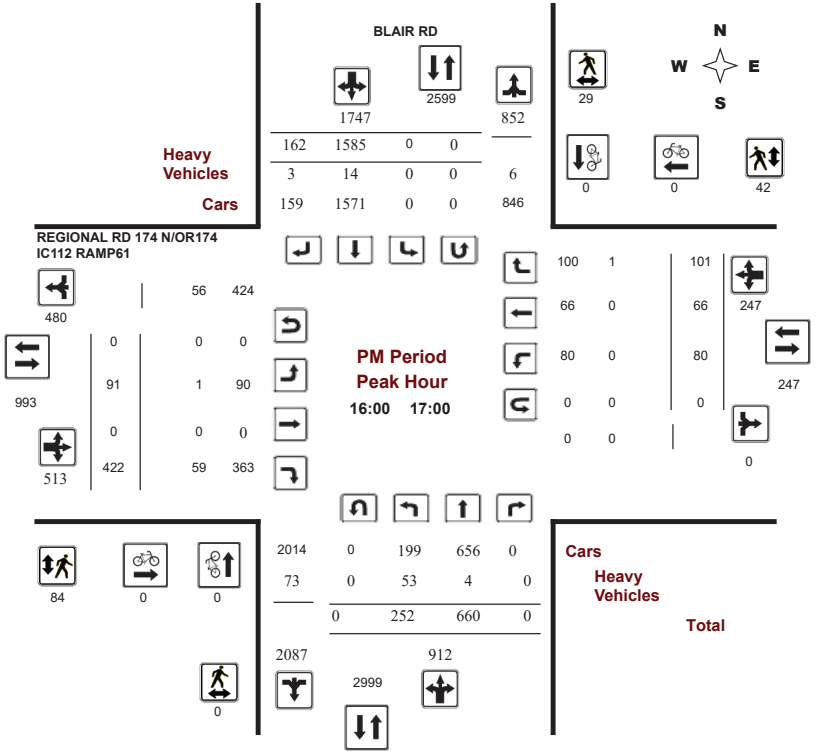
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 09, 2019

Total Observed U-Turns

Northbound: 7 Southbound: 1

Eastbound: 1 Westbound: 0

AADT Factor 1.00

	BLAIR RD								REGIONAL RD 174 N/OR174 IC112 RAMP61									
	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	223	941	0	**1164**	0	572	101	**673**	**1837**	53	0	259	**312**	437	127	391	**955**	**1267**	**3104**
08:00 09:00	237	948	0	**1185**	0	707	94	**801**	**1986**	80	0	286	**366**	546	184	482	**1212**	**1578**	**3564**
09:00 10:00	250	730	0	**980**	0	561	118	**679**	**1659**	61	0	231	**292**	555	148	472	**1175**	**1467**	**3126**
11:30 12:30	261	545	0	**806**	0	730	189	**919**	**1725**	96	0	268	**364**	141	105	130	**376**	**740**	**2465**
12:30 13:30	233	552	0	**785**	0	707	127	**834**	**1619**	106	0	291	**397**	137	63	106	**306**	**703**	**2322**
15:00 16:00	247	616	0	**863**	0	1475	133	**1608**	**2471**	92	0	390	**482**	111	71	124	**306**	**788**	**3259**
16:00 17:00	252	660	0	**912**	0	1585	162	**1747**	**2659**	91	0	422	**513**	80	66	101	**247**	**760**	**3419**
17:00 18:00	269	597	0	**866**	0	1186	147	**1333**	**2199**	105	0	410	**515**	83	74	100	**257**	**772**	**2971**
Sub Total	1972	5589	0	**7561**	0	7523	1071	**8594**	**16155**	684	0	2557	**3241**	2090	838	1906	**4834**	**8075**	**24230**
U Turns	7			**7**	1			**1**	**8**	1			**1**	0			**0**	**1**	**9**
Total	1979	5589	0	**7568**	1	7523	1071	**8595**	**16163**	685	0	2557	**3242**	2090	838	1906	**4834**	**8076**	**24239**
EQ 12Hr	2751	7769	0	**10520**	1	10457	1489	**11947**	**22467**	952	0	3554	**4506**	2905	1165	2649	**6719**	**11225**	**33692**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	2751	7769	0	**10520**	1	10457	1489	**11947**	**22467**	952	0	3554	**4506**	2905	1165	2649	**6719**	**11225**	**33692**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	3604	10177	0	**13781**	1	13699	1951	**15651**	**29432**	1247	0	4656	**5903**	3806	1526	3470	**8802**	**14705**	**44137**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study 15 Minute Increments

		BLAIR RD									REGIONAL RD 174 N/OR174 IC112 RAMP61									
		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		207	0			110	19		**386**		0	54			18	75		**211**	**597**
07:15	07:30		206	0			131	22		**416**		0	69			26	110		**330**	**746**
07:30	07:45		278	0			152	25		**513**		0	71			36	99		**349**	**862**
07:45	08:00		250	0			179	35		**523**		0	65			47	107		**377**	**900**
08:00	08:15		233	0			186	26		**511**		0	90			48	94		**376**	**887**
08:15	08:30		225	0			168	26		**492**		0	71			52	108		**384**	**876**
08:30	08:45		231	0			203	23		**512**		0	59			35	130		**370**	**882**
08:45	09:00		259	0			150	19		**473**		0	66			49	150		**448**	**921**
09:00	09:15		244	0			145	27		**473**		0	62			32	114		**375**	**848**
09:15	09:30		209	0			152	40		**481**		0	52			50	149		**437**	**918**
09:30	09:45		162	0			152	17		**389**		0	54			47	136		**400**	**789**
09:45	10:00		115	0			112	34		**319**		0	63			19	73		**255**	**574**
11:30	11:45		129	0			181	48		**408**		0	69			29	32		**181**	**589**
11:45	12:00		145	0			192	42		**453**		0	52			21	36		**174**	**627**
12:00	12:15		126	0			178	52		**406**		0	73			36	34		**202**	**608**
12:15	12:30		145	0			179	47		**458**		0	74			19	28		**183**	**641**
12:30	12:45		126	0			180	33		**408**		0	67			12	35		**168**	**576**
12:45	13:00		161	0			187	43		**440**		0	71			14	24		**165**	**605**
13:00	13:15		126	0			185	20		**388**		0	72			16	25		**181**	**569**
13:15	13:30		139	0			155	31		**384**		0	81			21	22		**189**	**573**
15:00	15:15		136	0			386	35		**619**		0	99			14	37		**203**	**822**
15:15	15:30		163	0			371	28		**634**		0	107			19	34		**210**	**844**
15:30	15:45		161	0			346	33		**592**		0	96			20	25		**190**	**782**
15:45	16:00		156	0			372	37		**626**		0	88			18	28		**186**	**812**
16:00	16:15		158	0			424	28		**671**		0	103			21	26		**197**	**868**
16:15	16:30		162	0			408	39		**689**		0	92			15	28		**173**	**862**
16:30	16:45		175	0			389	43		**647**		0	124			17	23		**201**	**848**
16:45	17:00		165	0			364	52		**652**		0	103			13	24		**189**	**841**
17:00	17:15		163	0			358	35		**606**		0	101			24	31		**202**	**808**
17:15	17:30		138	0			324	37		**577**		0	107			15	26		**203**	**780**
17:30	17:45		148	0			265	41		**512**		0	92			19	27		**179**	**691**
17:45	18:00		148	0			239	34		**505**		0	110			16	16		**188**	**693**
Total:		0	5589	0	0	0	7523	1071	0	**16163**	0	0	2557	0	0	838	1906	0	**16163**	**24,239**

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Cyclist Volume

Time Period		BLAIR RD			REGIONAL RD 174 N/OR174 IC112 RAMP61			Grand Total
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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**
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	1	0	**1**	0	0	**0**	**1**
08:45	09:00	2	0	**2**	0	0	**0**	**2**
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**
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**
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	0	**0**	**0**
13:15	13:30	0	0	**0**	0	0	**0**	**0**
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**
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**
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**
Total		3	0	**3**	0	0	**0**	**3**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Pedestrian Volume

Time Period		BLAIR RD			REGIONAL RD 174 N/OR174 IC112 RAMP61			Grand Total
		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	
07:00	07:15	0	7	**7**	12	5	**17**	**24**
07:15	07:30	0	7	**7**	9	6	**15**	**22**
07:30	07:45	0	9	**9**	12	6	**18**	**27**
07:45	08:00	0	11	**11**	17	14	**31**	**42**
08:00	08:15	0	3	**3**	13	11	**24**	**27**
08:15	08:30	0	9	**9**	8	9	**17**	**26**
08:30	08:45	0	11	**11**	17	10	**27**	**38**
08:45	09:00	0	6	**6**	7	20	**27**	**33**
09:00	09:15	0	3	**3**	2	5	**7**	**10**
09:15	09:30	0	5	**5**	1	5	**6**	**11**
09:30	09:45	0	3	**3**	3	2	**5**	**8**
09:45	10:00	0	4	**4**	3	3	**6**	**10**
11:30	11:45	0	10	**10**	1	5	**6**	**16**
11:45	12:00	2	11	**13**	2	1	**3**	**16**
12:00	12:15	0	26	**26**	1	3	**4**	**30**
12:15	12:30	0	17	**17**	1	6	**7**	**24**
12:30	12:45	0	29	**29**	2	7	**9**	**38**
12:45	13:00	0	27	**27**	4	6	**10**	**37**
13:00	13:15	0	14	**14**	2	6	**8**	**22**
13:15	13:30	0	20	**20**	3	1	**4**	**24**
15:00	15:15	0	10	**10**	12	3	**15**	**25**
15:15	15:30	0	9	**9**	17	7	**24**	**33**
15:30	15:45	0	2	**2**	14	9	**23**	**25**
15:45	16:00	0	12	**12**	19	9	**28**	**40**
16:00	16:15	0	9	**9**	18	15	**33**	**42**
16:15	16:30	0	7	**7**	19	12	**31**	**38**
16:30	16:45	0	7	**7**	25	6	**31**	**38**
16:45	17:00	0	6	**6**	22	9	**31**	**37**
17:00	17:15	0	8	**8**	24	10	**34**	**42**
17:15	17:30	0	6	**6**	9	4	**13**	**19**
17:30	17:45	0	12	**12**	8	2	**10**	**22**
17:45	18:00	0	5	**5**	5	9	**14**	**19**
Total		2	325	**327**	312	226	**538**	**865**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study Heavy Vehicles

		BLAIR RD									REGIONAL RD 174 N/OR174 IC112 RAMP61									
		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	8	9	0		0	3	1		**21**	0	0	19		0	1	0		**20**	**41**
07:15	07:30	14	3	0		0	2	4		**23**	0	0	32		0	1	0		**33**	**56**
07:30	07:45	15	5	0		0	3	2		**25**	0	0	31		0	0	1		**32**	**57**
07:45	08:00	18	2	0		0	4	0		**24**	0	0	29		5	0	0		**34**	**58**
08:00	08:15	19	3	0		0	2	0		**24**	0	0	30		1	0	1		**32**	**56**
08:15	08:30	20	1	0		0	2	2		**25**	2	0	28		0	0	0		**30**	**55**
08:30	08:45	12	8	0		0	11	1		**32**	0	0	27		3	0	3		**33**	**65**
08:45	09:00	9	9	0		0	5	0		**23**	4	0	25		0	0	3		**32**	**55**
09:00	09:15	9	7	0		0	14	0		**30**	0	0	22		8	0	3		**33**	**63**
09:15	09:30	16	6	0		0	8	1		**31**	1	0	9		3	0	5		**18**	**49**
09:30	09:45	10	7	0		0	3	0		**20**	0	0	12		5	0	2		**19**	**39**
09:45	10:00	8	3	0		0	5	0		**16**	0	0	13		2	1	0		**16**	**33**
11:30	11:45	4	4	0		0	5	1		**14**	0	0	10		1	1	0		**12**	**26**
11:45	12:00	12	8	0		0	3	0		**23**	0	0	9		3	0	0		**12**	**35**
12:00	12:15	4	6	0		0	5	1		**16**	1	0	7		0	0	0		**8**	**24**
12:15	12:30	12	2	0		0	3	0		**17**	0	0	8		1	1	1		**11**	**28**
12:30	12:45	6	8	0		0	4	0		**18**	0	0	8		0	0	1		**9**	**27**
12:45	13:00	9	2	0		0	8	2		**21**	0	0	9		0	1	0		**10**	**31**
13:00	13:15	5	1	0		0	6	0		**12**	0	0	7		1	1	0		**9**	**21**
13:15	13:30	8	1	0		0	4	0		**13**	0	0	10		1	0	1		**12**	**25**
15:00	15:15	12	5	0		0	7	1		**25**	0	0	12		1	0	1		**14**	**39**
15:15	15:30	12	1	0		0	6	0		**19**	3	0	15		1	0	1		**20**	**39**
15:30	15:45	13	2	0		0	4	5		**24**	0	0	12		0	0	1		**13**	**37**
15:45	16:00	14	1	0		0	3	0		**18**	0	0	11		0	0	2		**13**	**31**
16:00	16:15	9	1	0		0	5	0		**15**	0	0	14		0	0	1		**15**	**30**
16:15	16:30	23	1	0		0	1	1		**26**	1	0	15		0	0	0		**16**	**42**
16:30	16:45	5	2	0		0	4	2		**13**	0	0	16		0	0	0		**16**	**29**
16:45	17:00	16	0	0		0	4	0		**20**	0	0	14		0	0	0		**14**	**34**
17:00	17:15	10	1	0		0	0	1		**12**	0	0	14		0	0	0		**14**	**26**
17:15	17:30	13	2	0		0	0	0		**15**	0	0	13		0	0	0		**13**	**28**
17:30	17:45	18	0	0		0	1	1		**20**	1	0	16		1	0	0		**18**	**38**
17:45	18:00	20	2	0		0	2	0		**24**	0	0	14		0	0	0		**14**	**38**
Total:	None	383	113	0	**0**	0	137	26	**0**	**659**	13	0	511	**0**	37	7	27	**0**	**595**	**1,255**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61

Survey Date: Wednesday, January 09, 2019 **WO No:** 38232

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

Full Study 15 Minute U-Turn Total

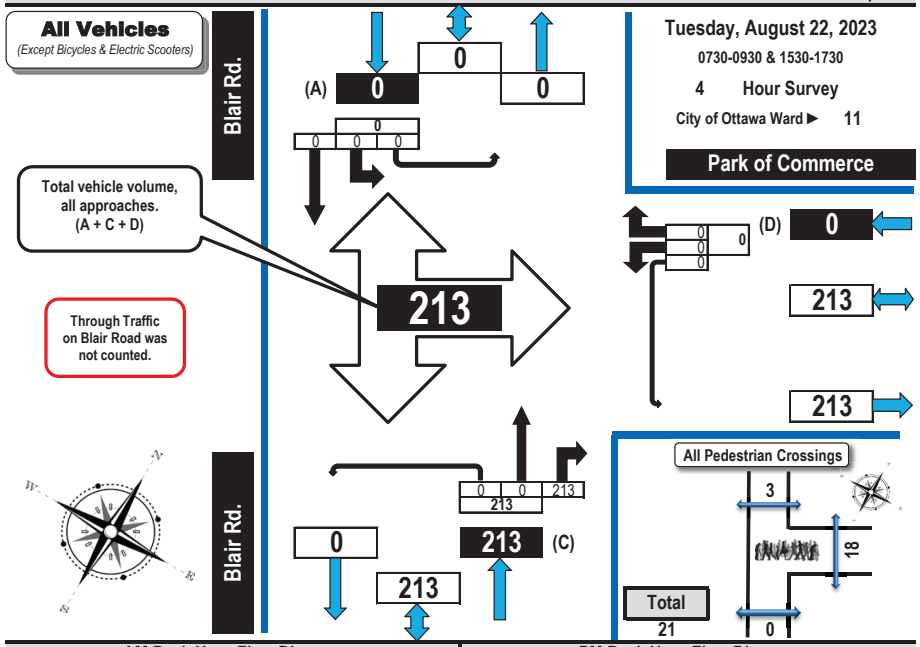
		BLAIR RD		REGIONAL RD 174 N/OR174 IC112 RAMP61		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	**0**
07:15	07:30	0	0	0	0	**0**
07:30	07:45	0	0	0	0	**0**
07:45	08:00	1	0	0	0	**1**
08:00	08:15	1	0	0	0	**1**
08:15	08:30	0	0	0	0	**0**
08:30	08:45	0	0	0	0	**0**
08:45	09:00	1	0	0	0	**1**
09:00	09:15	0	0	0	0	**0**
09:15	09:30	1	0	0	0	**1**
09:30	09:45	1	0	0	0	**1**
09:45	10:00	1	0	0	0	**1**
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	1	0	0	0	**1**
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	1	0	**1**
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	1	0	0	**1**
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		7	1	1	0	**9**

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

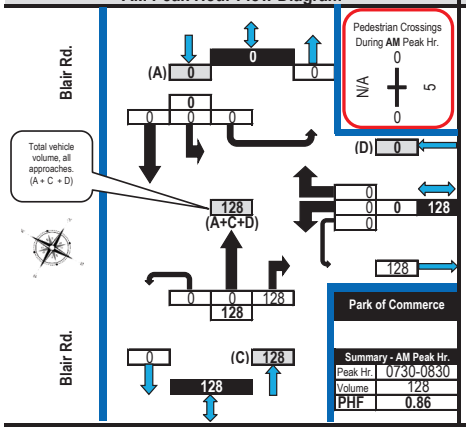
Blair Road & Park of Commerce Access — Gloucester, ON

All Vehicles *(Except Bicycles & Electric Scooters)*

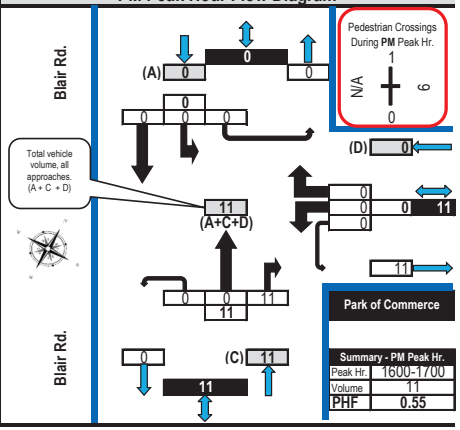
Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



AM Peak Hour Flow Diagram



PM Peak Hour Flow Diagram

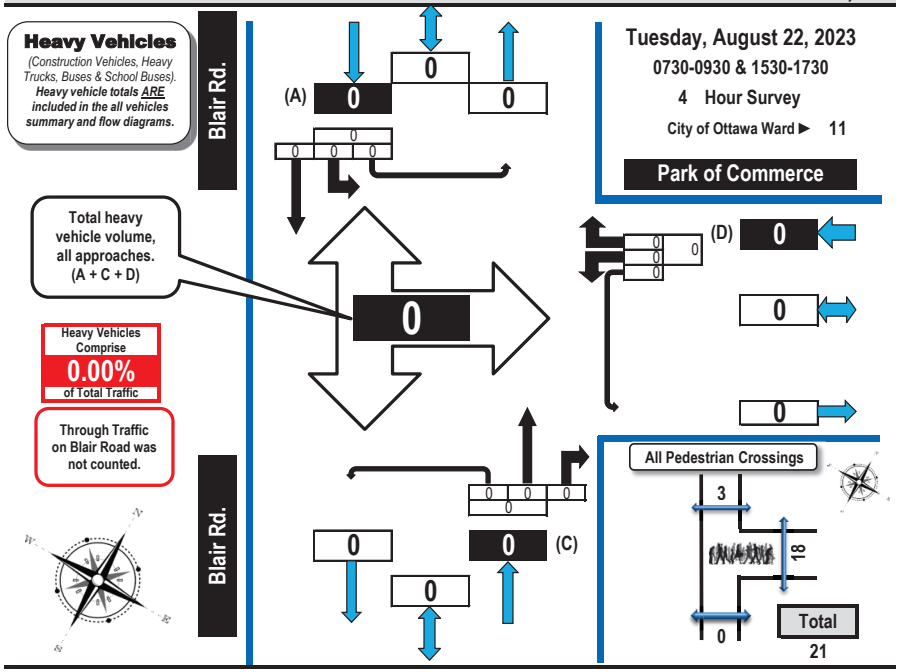


Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4 to 13)
Flow Diagram

Blair Road & Park of Commerce Access — Gloucester, ON

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

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



	N/A					Park of Commerce					Blair Rd.					Blair Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0730-0800						0		0	0	0		0	0	0	0	0	0		0	0	0
0800-0900						0		0	0	0		0	0	0	0	0	0		0	0	0
0900-0930						0		0	0	0		0	0	0	0	0	0		0	0	0
1530-1600						0		0	0	0		0	0	0	0	0	0		0	0	0
1600-1700						0		0	0	0		0	0	0	0	0	0		0	0	0
1700-1730						0		0	0	0		0	0	0	0	0	0		0	0	0
Totals						0		0	0	0		0	0	0	0	0	0		0	0	0

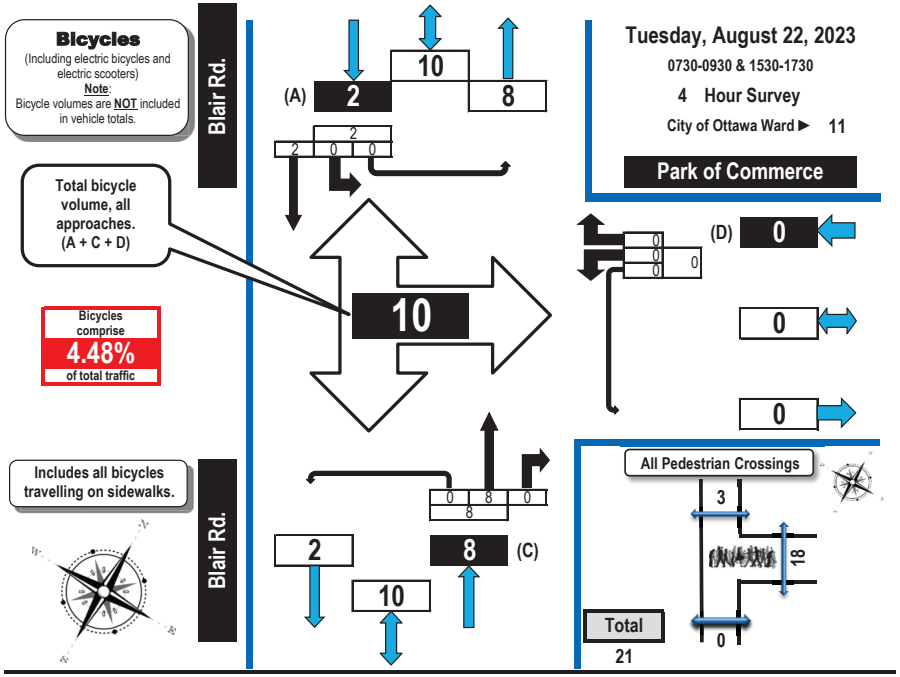
Through Traffic on Blair Road was not counted.

Turning Movement Count
Bicycle Summary
Flow Diagram

Blair Road & Park of Commerce Access — Gloucester, ON

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are NOT included in vehicle totals.

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



	N/A					Park of Commerce					Blair Rd.					Blair Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0730-0800						0		0	0	0		0	0	0	0	0	0		0	0	0
0800-0900						0		0	0	0		3	0	0	3	0	1		0	1	4
0900-0930						0		0	0	0		0	0	0	0	0	0		0	0	0
1530-1600						0		0	0	0		0	0	0	0	0	1		0	1	1
1600-1700						0		0	0	0		4	0	0	4	0	0		0	0	4
1700-1730						0		0	0	0		1	0	0	1	0	0		0	0	1
Totals						0		0	0	0		8	0	0	8	0	2		0	2	10

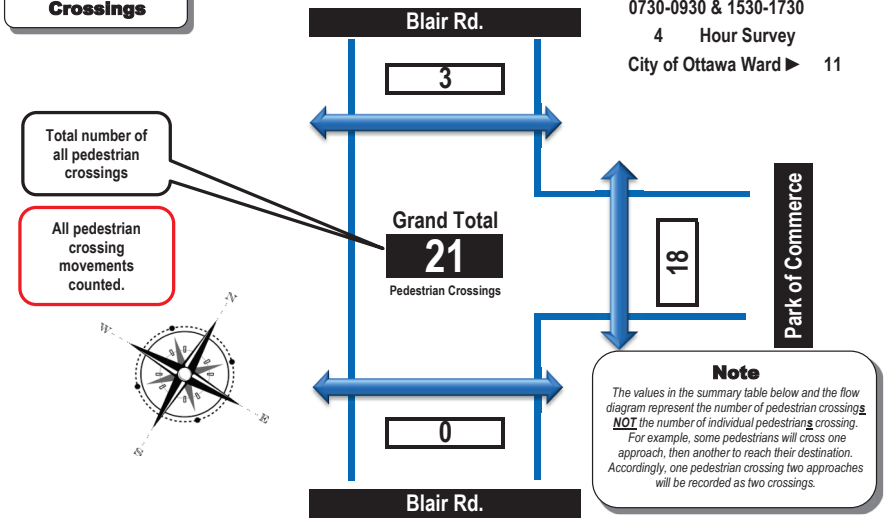
ALL bicycle movements counted

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Blair Road & Park of Commerce Access — Gloucester, ON

Pedestrian Crossings

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



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

Time Period	West Side Crossing N/A	East Side Crossing Park of Commerce	Street Total	South Side Crossing Blair Rd.	North Side Crossing Blair Rd.	Street Total	Grand Total
0730-0800		2	2	0	0	0	2
0800-0900		6	6	0	0	0	6
0900-0930		2	2	0	0	0	2
1530-1600		2	2	0	2	2	4
1600-1700		6	6	0	1	1	7
1700-1730		0	0	0	0	0	0
Totals	0	18	18	0	3	3	21

All pedestrian crossing movements counted.

Comments:
Traffic to the Park of Commerce access only as traffic on Blair Road was not counted. Accordingly, the peak hours refer only to the traffic entering the Park of Commerce access. All bicycle movements were recorded. No heavy vehicles turned into the Park of Commerce.

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Blair Road & Park of Commerce Access — Gloucester, ON

Survey Date: Tuesday, August 22, 2023 **Start Time:** 0730 **AADT Factor:** 0.9
Weather AM: Clear/Sunny 14° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0730-0930 & 1530-1730
Weather PM: Clear/Sunny 24° C **Surveyor(s):** T. Carmody

	N/A					Park of Commerce						Blair Rd.					Blair Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0730-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	63	0	63	0	0	0	0	0	63	63
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	105	0	105	0	0	0	0	0	105	105
0900-0930	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	26	0	0	0	0	0	26	26
1530-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	5	5
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	0	11	11
1700-1730	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3	3
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	213	0	213	0	0	0	0	0	213	213

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.86											Highest Hourly Vehicle Volume Between 0700h & 1000h											
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0730-0830	0	0	0	0	0	0	0	0	0	0	0	0	0	128	0	128	0	0	0	0	0	128	128

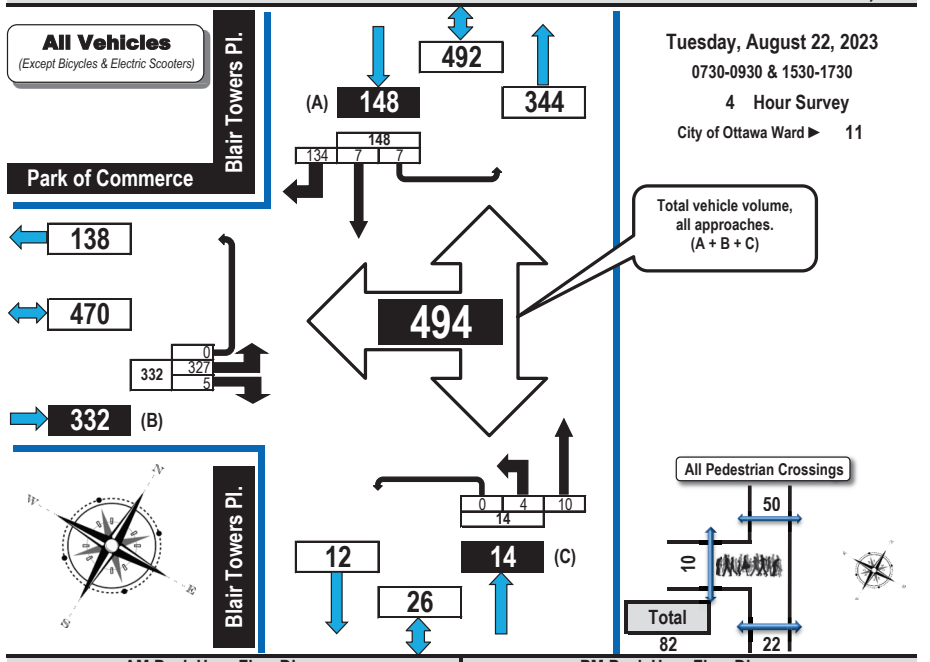
PM Peak Hour Factor ➡ 0.55											Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	0	11	11

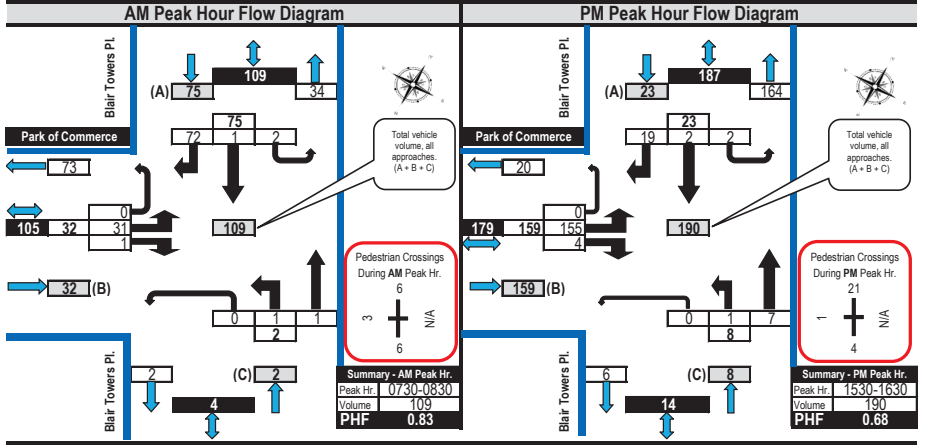
Comments:
Traffic to the Park of Commerce access only as traffic on Blair Road was not counted. Accordingly, the peak hours refer only to the traffic entering the Park of Commerce access. All bicycle movements were recorded. No heavy vehicles turned into the Park of Commerce.

Notes:
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

Turning Movement Count
Summary, AM and PM Peak Hour
Flow Diagrams
All Vehicles Except Bicycles

Blair Towers Place & Park of Commerce Access — Gloucester, ON



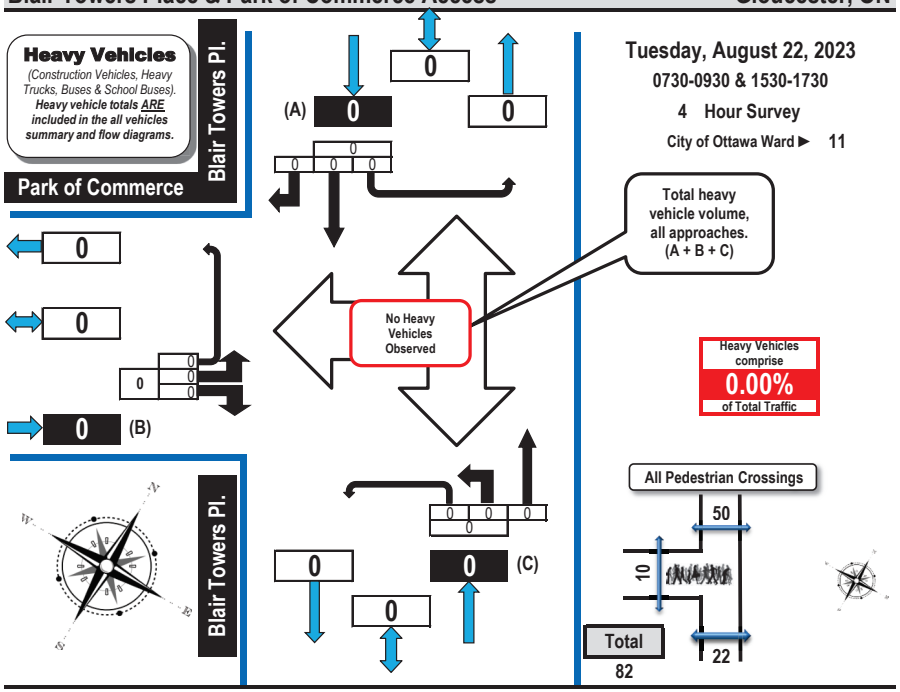


Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4 to 13)
Flow Diagram

Blair Towers Place & Park of Commerce Access — **Gloucester, ON**

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

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



	Park of Commerce					N/A					Blair Towers Pl.					Blair Towers Pl.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0730-0800	0		0	0	0						0	0		0	0		0	0	0	0	0
0800-0900	0		0	0	0						0	0		0	0		0	0	0	0	0
0900-0930	0		0	0	0						0	0		0	0		0	0	0	0	0
1530-1600	0		0	0	0						0	0		0	0		0	0	0	0	0
1600-1700	0		0	0	0						0	0		0	0		0	0	0	0	0
1700-1730	0		0	0	0						0	0		0	0		0	0	0	0	0
Totals	0		0	0	0						0	0		0	0		0	0	0	0	0

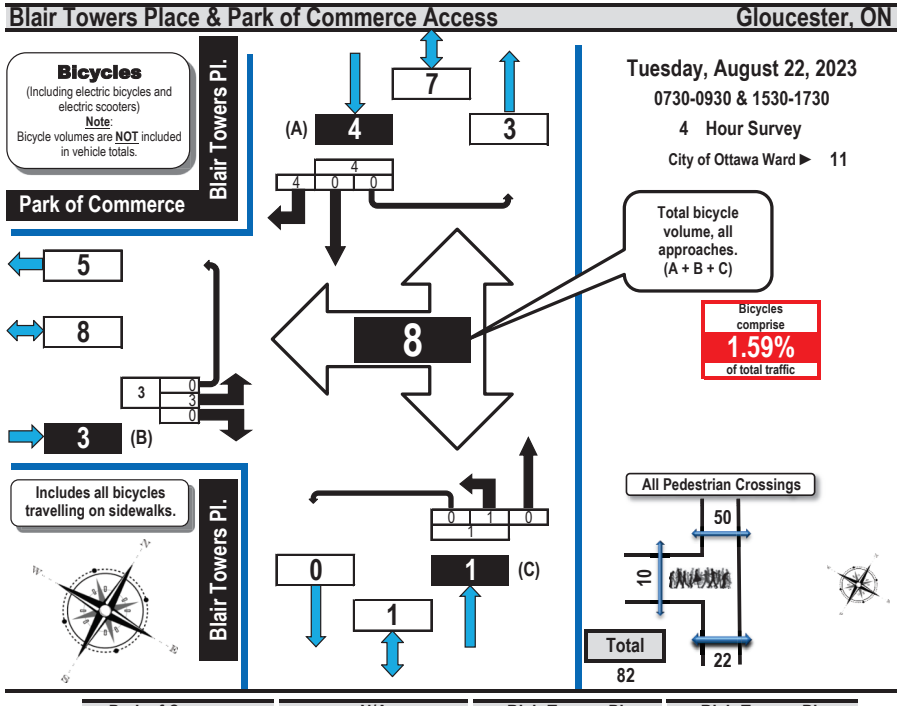
No Heavy Vehicles Observed

Turning Movement Count
Bicycle Summary
Flow Diagram

Blair Towers Place & Park of Commerce Access — **Gloucester, ON**

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are NOT included in vehicle totals.

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ► 11



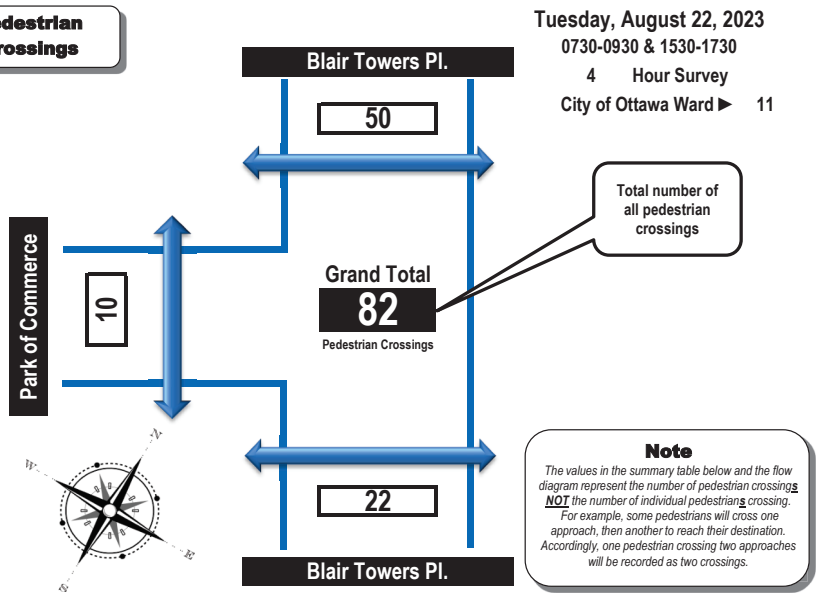
	Park of Commerce					N/A					Blair Towers Pl.					Blair Towers Pl.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0730-0800	0		0	0	0						0	0		0	0		0	0	0	0	0
0800-0900	0		0	0	0						0	0		0	0		0	2	0	2	2
0900-0930	0		0	0	0						1	0		0	1		0	2	0	2	3
1530-1600	0		0	0	0						0	0		0	0		0	0	0	0	0
1600-1700	1		0	0	1						0	0		0	0		0	0	0	0	1
1700-1730	2		0	0	2						0	0		0	0		0	0	0	0	2
Totals	3		0	0	3						1	0		0	1		0	4	0	4	8

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Blair Towers Place & Park of Commerce Access — Gloucester, ON

Pedestrian Crossings

Tuesday, August 22, 2023
0730-0930 & 1530-1730
4 Hour Survey
City of Ottawa Ward ▶ 11



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

Time Period	West Side Crossing Park of Commerce	East Side Crossing N/A	Street Total	South Side Crossing Blair Towers Pl.	North Side Crossing Blair Towers Pl.	Street Total	Grand Total
0730-0800	2		2	3	3	6	8
0800-0900	4		4	5	5	10	14
0900-0930	0		0	2	8	10	10
1530-1600	0		0	4	12	16	16
1600-1700	3		3	4	16	20	23
1700-1730	1		1	4	6	10	11
Totals	10		10	22	50	72	82

Comments:
The access to the Park of Commerce is divided by a median with the north leg as one way inbound and the south leg as one way outbound. No heavy vehicles observed.

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Blair Towers Place & Park of Commerce Access — Gloucester, ON

Survey Date: Tuesday, August 22, 2023 **Start Time:** 0730 **AADT Factor:** 0.9
Weather AM: Clear/Sunny 14° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0730-0930 & 1530-1730
Weather PM: Clear/Sunny 24° C **Surveyor(s):** J. Mousseau

	Park of Commerce					N/A						Blair Towers Pl.					Blair Towers Pl.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0730-0800	20	0	0	0	20	0	0	0	0	0	20	0	1	0	0	1	0	1	31	1	33	34	54
0800-0900	25	0	1	0	26	0	0	0	0	0	26	1	0	0	0	1	0	0	63	1	64	65	91
0900-0930	10	0	0	0	10	0	0	0	0	0	10	2	0	0	0	2	0	2	11	0	13	15	25
1530-1600	63	0	1	0	64	0	0	0	0	0	64	1	3	0	0	4	0	2	7	1	10	14	78
1600-1700	153	0	3	0	156	0	0	0	0	0	156	0	4	0	0	4	0	0	20	4	24	28	184
1700-1730	56	0	0	0	56	0	0	0	0	0	56	0	2	0	0	2	0	2	2	0	4	6	62
Totals	327	0	5	0	332	0	0	0	0	0	332	4	10	0	0	14	0	7	134	7	148	162	494

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.83												Highest Hourly Vehicle Volume Between 0700h & 1000h										
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0730-0830	31	0	1	0	32	0	0	0	0	0	32	1	1	0	0	2	0	1	72	2	75	77	109

PM Peak Hour Factor ➡ 0.68												Highest Hourly Vehicle Volume Between 1500h & 1800h										
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
1530-1630	155	0	4	0	159	0	0	0	0	0	159	1	7	0	0	8	0	2	19	2	23	31	190

Comments:
The access to the Park of Commerce is divided by a median with the north leg as one way inbound and the south leg as one way outbound. No heavy vehicles observed.

Notes:
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

Appendix C

Synchro Intersection Worksheets – Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	76	339	171	417	613	567	580	369	43	292
Future Volume (vph)	76	339	171	417	613	567	580	369	43	292
Lane Group Flow (vph)	84	377	190	463	721	630	644	410	48	432
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	7	4		3	8
Permitted Phases			2					4		
Detector Phase	5	2	2	1	6	7	4	4	3	8
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	38.6	38.6	11.8	38.6	11.5	35.5	35.5	11.5	35.5
Total Split (s)	28.0	39.0	39.0	28.0	39.0	36.0	58.0	58.0	15.0	37.0
Total Split (%)	20.0%	27.9%	27.9%	20.0%	27.9%	25.7%	41.4%	41.4%	10.7%	26.4%
Maximum Green (s)	21.2	32.4	32.4	21.2	32.4	29.5	51.5	51.5	8.5	30.5
Yellow Time (s)	3.7	3.3	3.3	3.7	3.3	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	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	6.6	6.6	6.8	6.6	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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		22.0	22.0		22.0
Pedestrian Calls (#/hr)		31	31		42		24	24		72
Act Effct Green (s)	12.3	27.4	27.4	20.8	35.9	28.1	51.5	51.5	7.7	28.2
Actuated g/C Ratio	0.09	0.21	0.21	0.16	0.27	0.21	0.39	0.39	0.06	0.21
v/c Ratio	0.57	0.58	0.44	0.91	0.82	0.92	0.94	0.52	0.49	0.64
Control Delay	73.4	51.0	9.2	77.6	54.1	70.3	62.9	5.3	80.6	48.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	51.0	9.2	77.6	54.1	70.3	62.9	5.3	80.6	48.9
LOS	E	D	A	E	D	E	E	A	F	D
Approach Delay		41.7			63.3		51.6			52.1
Approach LOS		D			E		D			D
Queue Length 50th (m)	22.7	48.4	0.0	66.1	95.7	88.8	~177.2	0.0	13.1	53.4
Queue Length 95th (m)	39.0	64.7	19.8	#98.8	#133.7	#122.8	#256.7	22.5	26.6	71.5
Internal Link Dist (m)		402.9			318.9		221.0			378.3
Turn Bay Length (m)	75.0			110.0		140.0		180.0	35.0	
Base Capacity (vph)	257	780	482	524	879	730	691	797	108	737
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	0.33	0.48	0.39	0.88	0.82	0.86	0.93	0.51	0.44	0.59

Intersection Summary

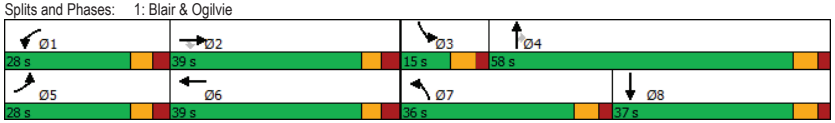
Cycle Length: 140
Actuated Cycle Length: 131.2
Natural Cycle: 130
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94
Intersection Signal Delay: 53.5 — Intersection LOS: D
Intersection Capacity Utilization 95.5% — ICU Level of Service F
Analysis Period (min) 15

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

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

Splits and Phases: 1: Blair & Ogilvie



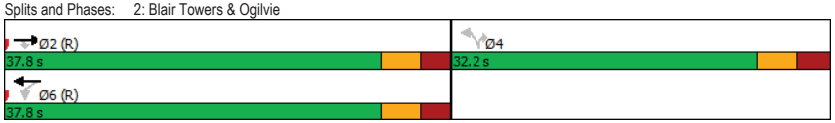
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	564	125	35	842	90	15
Future Volume (vph)	564	125	35	842	90	15
Lane Group Flow (vph)	627	139	39	936	100	17
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		4	4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.9	26.9	24.0	24.0	32.2	32.2
Total Split (s)	37.8	37.8	37.8	37.8	32.2	32.2
Total Split (%)	54.0%	54.0%	54.0%	54.0%	46.0%	46.0%
Maximum Green (s)	31.9	31.9	31.9	31.9	26.0	26.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	14.0	14.0			19.0	19.0
Pedestrian Calls (#/hr)	13	13			1	1
Act Effct Green (s)	49.1	49.1	49.1	49.1	13.2	13.2
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.19	0.19
v/c Ratio	0.28	0.13	0.08	0.41	0.17	0.07
Control Delay	6.8	2.2	7.8	7.8	22.7	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	2.2	7.8	7.8	22.7	9.6
LOS	A	A	A	A	C	A
Approach Delay	6.0			7.8	20.8	
Approach LOS	A			A	C	
Queue Length 50th (m)	13.9	0.0	1.4	23.4	6.0	0.0
Queue Length 95th (m)	40.1	8.2	8.1	64.6	8.6	3.5
Internal Link Dist (m)	318.9			316.0	196.1	
Turn Bay Length (m)		255.0	75.0		70.0	130.0
Base Capacity (vph)	2218	1056	485	2303	1149	473
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.13	0.08	0.41	0.09	0.04

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 4.8 (7%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 7.9 — Intersection LOS: A
Intersection Capacity Utilization 49.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Blair Towers & Ogilvie



Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	65	239	617	166	543	237	943	650	109
Future Volume (vph)	65	239	617	166	543	237	943	650	109
Lane Group Flow (vph)	72	266	686	184	603	263	1048	722	121
Turn Type	Perm	pt+ov	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4 5		8		5	2	6	
Permitted Phases	4		8		8				6
Detector Phase	4	4 5	8	8	8	5	2	6	6
Switch Phase									
Minimum Initial (s)	10.0		10.0	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	36.8		36.8	36.8	36.8	11.4	30.1	30.1	30.1
Total Split (s)	41.0		41.0	41.0	41.0	27.0	59.0	32.0	32.0
Total Split (%)	41.0%		41.0%	41.0%	41.0%	27.0%	59.0%	32.0%	32.0%
Maximum Green (s)	34.2		34.2	34.2	34.2	20.6	52.9	25.9	25.9
Yellow Time (s)	3.3		3.3	3.3	3.3	4.2	4.2	4.2	4.2
All-Red Time (s)	3.5		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
Total Lost Time (s)	6.8		6.8	6.8	6.8	6.4	6.1	6.1	6.1
Lead/Lag						Lead		Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None	None	None	None	Max	Max	Max
Walk Time (s)			7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)			23.0	23.0	23.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)			25	25	25		40	27	27
Act Effct Green (s)	34.2	55.4	34.2	34.2	34.2	14.8	52.9	31.7	31.7
Actuated g/C Ratio	0.34	0.55	0.34	0.34	0.34	0.15	0.53	0.32	0.32
v/c Ratio	0.21	0.42	1.21	0.16	1.09	0.65	0.60	0.50	0.23
Control Delay	25.3	12.9	141.5	23.4	93.7	47.4	18.1	29.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	12.9	141.5	23.4	93.7	47.4	18.1	29.7	6.4
LOS	C	B	F	C	F	D	B	C	A
Approach Delay				107.2			24.0	26.4	
Approach LOS				F			C	C	
Queue Length 50th (m)	9.8	24.3	~163.2	12.9	~118.5	25.0	70.2	41.2	0.0
Queue Length 95th (m)	20.5	37.9	#230.1	20.7	#183.9	36.0	90.0	56.7	12.9
Internal Link Dist (m)				433.0			88.6	221.0	
Turn Bay Length (m)	125.0		70.0		70.0	70.0			60.0
Base Capacity (vph)	351	699	567	1134	552	567	1736	1455	531
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	0.21	0.38	1.21	0.16	1.09	0.46	0.60	0.50	0.23

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.21
Intersection Signal Delay: 54.7 Intersection LOS: D
Intersection Capacity Utilization 88.1% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Blair & Gloucester Centre/OR 174 WB

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	1	1	1	1	72
Future Vol, veh/h	31	1	1	1	1	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	1	1	1	1	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	4	1	81	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1018	1084	1517	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	1017	1084	1517	-	-	-
Mov Cap-2 Maneuver	1017	-	-	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3.7	0
HCM LOS	A		

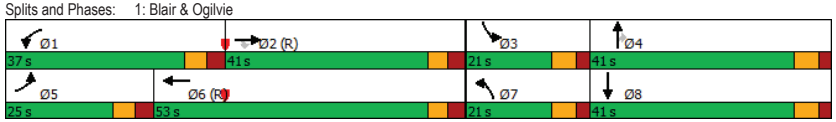
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1517	-	1019	-	-
HCM Lane V/C Ratio	0.001	-	0.035	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	136	680	550	464	363	191	258	502	43	666
Future Volume (vph)	136	680	550	464	363	191	258	502	43	666
Lane Group Flow (vph)	151	756	611	516	462	212	287	558	48	793
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	7	4		3	8
Permitted Phases			2					4		
Detector Phase	5	2	2	1	6	7	4	4	3	8
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	38.6	38.6	11.8	38.6	11.5	35.5	35.5	11.5	35.5
Total Split (s)	25.0	41.0	41.0	37.0	53.0	21.0	41.0	41.0	21.0	41.0
Total Split (%)	17.9%	29.3%	29.3%	26.4%	37.9%	15.0%	29.3%	29.3%	15.0%	29.3%
Maximum Green (s)	18.2	34.4	34.4	30.2	46.4	14.5	34.5	34.5	14.5	34.5
Yellow Time (s)	3.7	3.3	3.3	3.7	3.3	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	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	6.6	6.6	6.8	6.6	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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)		25.0	25.0		25.0		22.0	22.0		22.0
Pedestrian Calls (#/hr)		58	58		53		46	46		123
Act Effct Green (s)	16.4	38.0	38.0	26.8	48.4	13.3	41.8	41.8	9.4	35.4
Actuated g/C Ratio	0.12	0.27	0.27	0.19	0.35	0.10	0.30	0.30	0.07	0.25
v/c Ratio	0.78	0.84	1.14	0.84	0.42	0.69	0.55	0.75	0.43	0.96
Control Delay	86.0	58.2	111.1	67.2	36.0	73.5	47.6	14.8	73.7	74.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	58.2	111.1	67.2	36.0	73.5	47.6	14.8	73.7	74.9
LOS	F	E	F	E	D	E	D	B	E	E
Approach Delay		82.2			52.5		35.5			74.9
Approach LOS		F			D		D			E
Queue Length 50th (m)	40.6	105.4	~148.3	71.2	51.3	29.5	68.4	17.0	13.0	115.4
Queue Length 95th (m)	#69.7	#145.0	#225.6	89.3	67.3	43.0	102.3	71.3	25.7	#158.4
Internal Link Dist (m)		402.9			318.9		221.0			378.3
Turn Bay Length (m)	75.0			110.0		140.0		180.0	35.0	
Base Capacity (vph)	215	900	537	693	1095	333	521	744	171	823
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.84	1.14	0.74	0.42	0.64	0.55	0.75	0.28	0.96

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 130

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 63.0 Intersection LOS: E
Intersection Capacity Utilization 95.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Blair & Ogilvie



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	954	84	36	520	363	116
Future Volume (vph)	954	84	36	520	363	116
Lane Group Flow (vph)	1060	93	40	578	403	129
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		4	4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.9	26.9	24.0	24.0	32.2	32.2
Total Split (s)	70.0	70.0	70.0	70.0	45.0	45.0
Total Split (%)	60.9%	60.9%	60.9%	60.9%	39.1%	39.1%
Maximum Green (s)	64.1	64.1	64.1	64.1	38.8	38.8
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	14.0	14.0			19.0	19.0
Pedestrian Calls (#/hr)	21	21			6	6
Act Effct Green (s)	82.8	82.8	82.8	82.8	20.1	20.1
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.17	0.17
v/c Ratio	0.44	0.09	0.13	0.25	0.72	0.41
Control Delay	7.8	1.5	7.2	6.2	52.0	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	1.5	7.2	6.2	52.0	21.2
LOS	A	A	A	A	D	C
Approach Delay	7.3			6.3	44.6	
Approach LOS	A			A	D	
Queue Length 50th (m)	45.0	0.0	2.4	20.3	44.6	10.0
Queue Length 95th (m)	69.3	5.1	7.5	32.9	57.2	26.1
Internal Link Dist (m)	318.9			316.0	213.9	
Turn Bay Length (m)		255.0	75.0		70.0	130.0
Base Capacity (vph)	2388	1045	302	2342	1085	541
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.09	0.13	0.25	0.37	0.24

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 4.8 (4%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 54.5% ICU Level of Service A
Analysis Period (min) 15

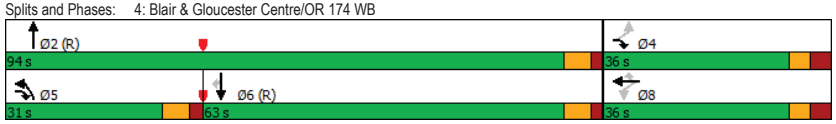
Splits and Phases: 2: Blair Towers & Ogilvie

Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	91	422	80	66	101	252	660	1585	162
Future Volume (vph)	91	422	80	66	101	252	660	1585	162
Lane Group Flow (vph)	101	469	89	73	112	280	733	1761	180
Turn Type	Perm	pt+ov	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4 5		8		5	2	6	
Permitted Phases	4		8		8				6
Detector Phase	4	4 5	8	8	8	5	2	6	6
Switch Phase									
Minimum Initial (s)	10.0		10.0	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	16.8		36.8	36.8	36.8	11.4	30.1	30.1	30.1
Total Split (s)	36.0		36.0	36.0	36.0	31.0	94.0	63.0	63.0
Total Split (%)	27.7%		27.7%	27.7%	27.7%	23.8%	72.3%	48.5%	48.5%
Maximum Green (s)	29.2		29.2	29.2	29.2	24.6	87.9	56.9	56.9
Yellow Time (s)	3.3		3.3	3.3	3.3	4.2	4.2	4.2	4.2
All-Red Time (s)	3.5		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
Total Lost Time (s)	6.8		6.8	6.8	6.8	6.4	6.1	6.1	6.1
Lead/Lag						Lead		Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)			7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)			23.0	23.0	23.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)			29	29	29		42	84	84
Act Effct Green (s)	29.2	55.5	29.2	29.2	29.2	19.9	87.9	61.6	61.6
Actuated g/C Ratio	0.22	0.43	0.22	0.22	0.22	0.15	0.68	0.47	0.47
v/c Ratio	0.38	0.81	0.24	0.19	0.28	0.68	0.33	0.78	0.27
Control Delay	47.6	42.2	43.4	42.4	9.0	59.9	9.2	32.3	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	42.2	43.4	42.4	9.0	59.9	9.2	32.3	8.9
LOS	D	D	D	D	A	E	A	C	A
Approach Delay				29.1			23.2	30.1	
Approach LOS				C			C	C	
Queue Length 50th (m)	22.1	98.1	18.8	15.3	0.0	35.2	37.7	135.7	8.1
Queue Length 95th (m)	39.4	136.4	34.0	28.6	15.2	48.2	47.3	165.8	23.9
Internal Link Dist (m)				433.0			88.6	221.0	
Turn Bay Length (m)	125.0		70.0		70.0	70.0			60.0
Base Capacity (vph)	268	628	372	391	403	513	2242	2259	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.75	0.24	0.19	0.28	0.55	0.33	0.78	0.27

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
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: 0.81
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 84.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Blair & Gloucester Centre/OR 174 WB



Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	155	4	1	7	2	19
Future Vol, veh/h	155	4	1	7	2	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	4	1	8	2	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	12	2	23	0	-	0
Stage 1	2	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1008	1082	1592	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1007	1082	1592	-	-	-
Mov Cap-2 Maneuver	1007	-	-	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	1013	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	1009	-	-
HCM Lane V/C Ratio	0.001	-	0.175	-	-
HCM Control Delay (s)	7.3	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Appendix D

Collision Data

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Traffic Control Condition	Classification Of Accident	Initial Impact Type	Road Surface Condition	# Vehicles	# Motorcycles	# Bicycles	# Pedestrians
1/16/2018	2018	9:04	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
1/14/2018	2018	17:28	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/8/2018	2018	18:34	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
3/1/2018	2018	12:34	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2/26/2018	2018	7:41	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
4/12/2018	2018	16:58	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
3/27/2018	2018	20:10	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
5/15/2018	2018	20:45	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
5/25/2018	2018	11:30	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
5/18/2018	2018	15:12	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
6/6/2018	2018	12:06	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
6/12/2018	2018	19:08	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
5/30/2018	2018	16:23	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
6/9/2018	2018	20:44	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
7/30/2018	2018	14:30	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
8/17/2018	2018	7:29	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/14/2018	2018	19:04	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	01 - Dry	0	0	0	0
9/23/2018	2018	12:41	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
11/14/2018	2018	13:13	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/30/2018	2018	17:20	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
12/12/2018	2018	8:13	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
12/12/2018	2018	18:26	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	0	0	0	0
4/9/2019	2019	15:21	BLAIR RD @ OGILVIE RD (0004120)	04 - Freezing Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	04 - Slush	0	0	0	0
6/18/2019	2019	12:18	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/30/2019	2019	15:52	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	01 - Dry	0	0	0	0
11/1/2019	2019	10:25	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
12/12/2019	2019	15:23	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/11/2019	2019	17:52	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	0	0	0	0
1/15/2020	2020	17:45	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	02 - Wet	0	0	0	0
1/30/2020	2020	11:50	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2/12/2020	2020	14:15	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/5/2020	2020	10:18	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/12/2020	2020	19:05	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2/23/2020	2020	0:15	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2/28/2020	2020	8:58	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
5/26/2020	2020	15:15	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/16/2020	2020	16:24	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
6/26/2020	2020	6:15	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
10/7/2020	2020	14:10	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/13/2020	2020	20:10	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/25/2020	2020	17:00	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/8/2020	2020	16:40	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
10/29/2020	2020	11:04	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/2/2020	2020	9:45	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/3/2020	2020	14:43	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/17/2020	2020	13:24	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	0	0	0	0
12/9/2020	2020	17:45	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
11/22/2020	2020	21:00	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
11/26/2020	2020	16:25	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
11/25/2020	2020	7:25	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
11/30/2020	2020	12:30	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
1/20/2021	2021	8:43	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
12/20/2020	2020	5:24	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
1/7/2021	2021	20:06	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/29/2020	2020	10:36	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
12/18/2020	2020	15:50	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	02 - Non-fatal injury	04 - Sideswipe	01 - Dry	0	0	0	0
2/28/2021	2021	9:09	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	0	0	0	0
3/26/2021	2021	18:37	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
3/20/2021	2021	10:07	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/16/2021	2021	7:10	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
5/6/2021	2021	18:00	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
6/5/2021	2021	9:28	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
6/15/2021	2021	13:49	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
6/17/2021	2021	15:30	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
8/18/2021	2021	9:21	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/8/2021	2021	16:15	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/28/2021	2021	14:00	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/24/2021	2021	12:10	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
10/1/2021	2021	8:46	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
9/25/2021	2021	18:00	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
10/15/2021	2021	9:10	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/25/2021	2021	18:19	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
11/23/2021	2021	17:13	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
12/15/2021	2021	11:30	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
12/15/2021	2021	14:30	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	04 - Slush	0	0	0	0
12/16/2021	2021	14:25	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/5/2021	2021	16:30	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
12/27/2021	2021	20:24	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	0	0
2/17/2022	2022	20:12	BLAIR RD @ OGILVIE RD (0004120)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	03 - Loose snow	0	0	0	0
2/12/2022	2022	20:50	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
5/13/2022	2022	9:43	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
4/19/2022	2022	10:19	BLAIR RD @ OGILVIE RD (0004120)	02 - Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	0	0	0	0
10/15/2022	2022	16:53	BLAIR RD @ OGILVIE RD (0004120)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	0	0	0	0
4/26/2019	2019	14:25	BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36 (__3ZA25Q)	02 - Rain	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	0	0	0	0
5/16/2019	2019	15:57	BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36 (__3ZA25Q)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
8/17/2019	2019	15:28	BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36 (__3ZA25Q)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/12/2019	2019	14:50	BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36 (__3ZA25Q)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
6/22/2020	2020	8:26	BLAIR RD btwn OGILVIE RD & OR174 IC112 RAMP36 (__3ZA25Q)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/6/2018	2018	10:13	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
3/22/2018	2018	10:57	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
4/16/2018	2018	16:09	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	04 - Freezing Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	06 - Ice	0	0	0	0
3/28/2018	2018	11:24	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
5/29/2018	2018	18:34	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
7/14/2018	2018	21:44	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
8/14/2018	2018	19:12	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
9/5/2018	2018	11:48	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/21/2018	2018	7:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	03 - Dawn	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
10/25/2018	2018	7:13	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/1/2018	2018	21:38	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	1
11/20/2018	2018	8:52	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	0	0	0	0
1/18/2019	2019	6:25	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	03 - Snow	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	0	0	0	0
1/24/2019	2019	17:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	05 - Packed snow	0	0	0	0
1/29/2019	2019	9:08	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	0	0	0	0
3/21/2019	2019	7:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
5/8/2019	2019	9:30	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
5/4/2019	2019	13:25	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
7/11/2019	2019	18:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
8/6/2019	2019	14:51	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0

8/6/2019	2019	9:14	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
8/16/2019	2019	7:53	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
8/25/2019	2019	12:50	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
11/27/2019	2019	17:38	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	02 - Wet	0	0	0	0
12/3/2019	2019	10:12	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
1/20/2020	2020	17:57	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
1/21/2020	2020	13:20	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
2/5/2020	2020	15:05	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2/12/2020	2020	9:30	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
7/8/2020	2020	19:44	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	01 - Dry	0	0	0	0
6/20/2020	2020	19:48	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
9/30/2020	2020	10:56	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
12/12/2020	2020	16:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
11/30/2020	2020	17:01	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	1
1/21/2021	2021	14:46	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	03 - Snow	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	06 - Ice	0	0	0	0
1/21/2021	2021	19:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	05 - Packed snow	0	0	0	0
12/18/2020	2020	15:55	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
1/30/2021	2021	19:26	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2/20/2021	2021	15:00	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	01 - Dry	0	0	0	0
2/19/2021	2021	7:55	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
3/2/2021	2021	17:05	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
3/30/2021	2021	16:35	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
5/21/2021	2021	10:46	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
7/2/2021	2021	15:28	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
8/10/2021	2021	13:57	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
9/8/2021	2021	8:55	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
10/21/2021	2021	13:15	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
10/21/2021	2021	22:33	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
11/25/2021	2021	16:45	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	02 - Rain	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	0	0
1/7/2022	2022	14:10	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	03 - Loose snow	0	0	0	0
2/13/2022	2022	9:15	BLAIR RD @ REGIONAL RD 174 N/OR174 IC112 RAMP61 (0003617)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
9/18/2018	2018	15:04	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
12/12/2018	2018	17:00	BLAIR PL @ OGILVIE RD (0004162)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
1/6/2019	2019	6:00	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
3/27/2019	2019	17:50	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
9/22/2019	2019	15:54	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	04 - Sideswipe	01 - Dry	0	0	1	0
12/4/2020	2020	17:09	BLAIR PL @ OGILVIE RD (0004162)	02 - Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
3/6/2021	2021	18:36	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
9/7/2021	2021	15:15	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
12/26/2021	2021	13:08	BLAIR PL @ OGILVIE RD (0004162)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
2/15/2022	2022	18:41	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
4/28/2022	2022	15:30	BLAIR PL @ OGILVIE RD (0004162)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	01 - Dry	0	0	1	0
12/17/2018	2018	16:16	BLAIR PL btwn END & OGILVIE RD (__3ZA4B6)	01 - Clear	05 - Dusk	10 - No control	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
1/23/2019	2019	12:30	BLAIR PL btwn END & OGILVIE RD (__3ZA4B6)	03 - Snow	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	05 - Packed snow	0	0	0	0
8/5/2020	2020	14:12	BLAIR PL btwn END & OGILVIE RD (__3ZA4B6)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0

Appendix E

TDM Checklists

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☑
	2.2	**Bicycle skills training**	
BETTER	2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☐

		TDM measures: *Residential developments*	Check if proposed & add descriptions
	3.	**TRANSIT**	
	3.1	**Transit information**	
BASIC	3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER	3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☐
	3.2	**Transit fare incentives**	
BASIC ★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☐
BETTER	3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐
	3.3	**Enhanced public transit service**	
BETTER ★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☐
	3.4	**Private transit service**	
BETTER	3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☐
	4.	**CARSHARING & BIKESHARING**	
	4.1	**Bikeshare stations & memberships**	
BETTER	4.1.1	Contract with provider to install on-site bikeshare station *(multi-family)*	☐
BETTER	4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☐
	4.2	**Carshare vehicles & memberships**	
BETTER	4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☐
BETTER	4.2.2	Provide residents with carshare memberships, either free or subsidized	☐
	5.	**PARKING**	
	5.1	**Priced parking**	
BASIC ★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☐
BASIC ★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☑

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☑
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☐
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☐
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☐
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

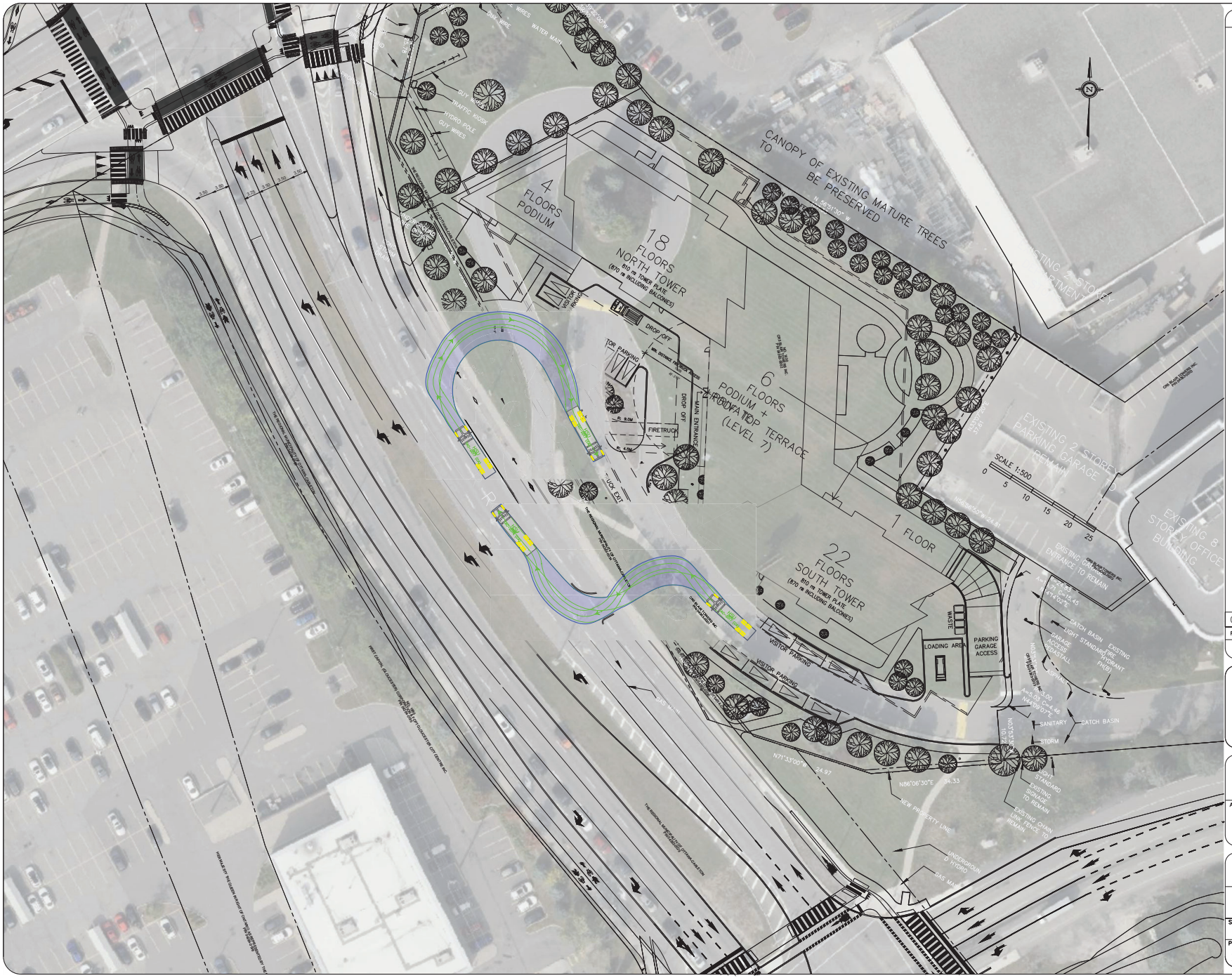
		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☐
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☐
	2.3	**Bicycle repair station**	
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☑
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☑

Appendix F

Turning Templates



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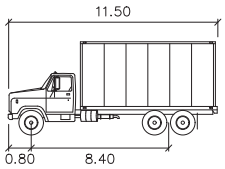

HSU

	meters
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Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
HSU Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
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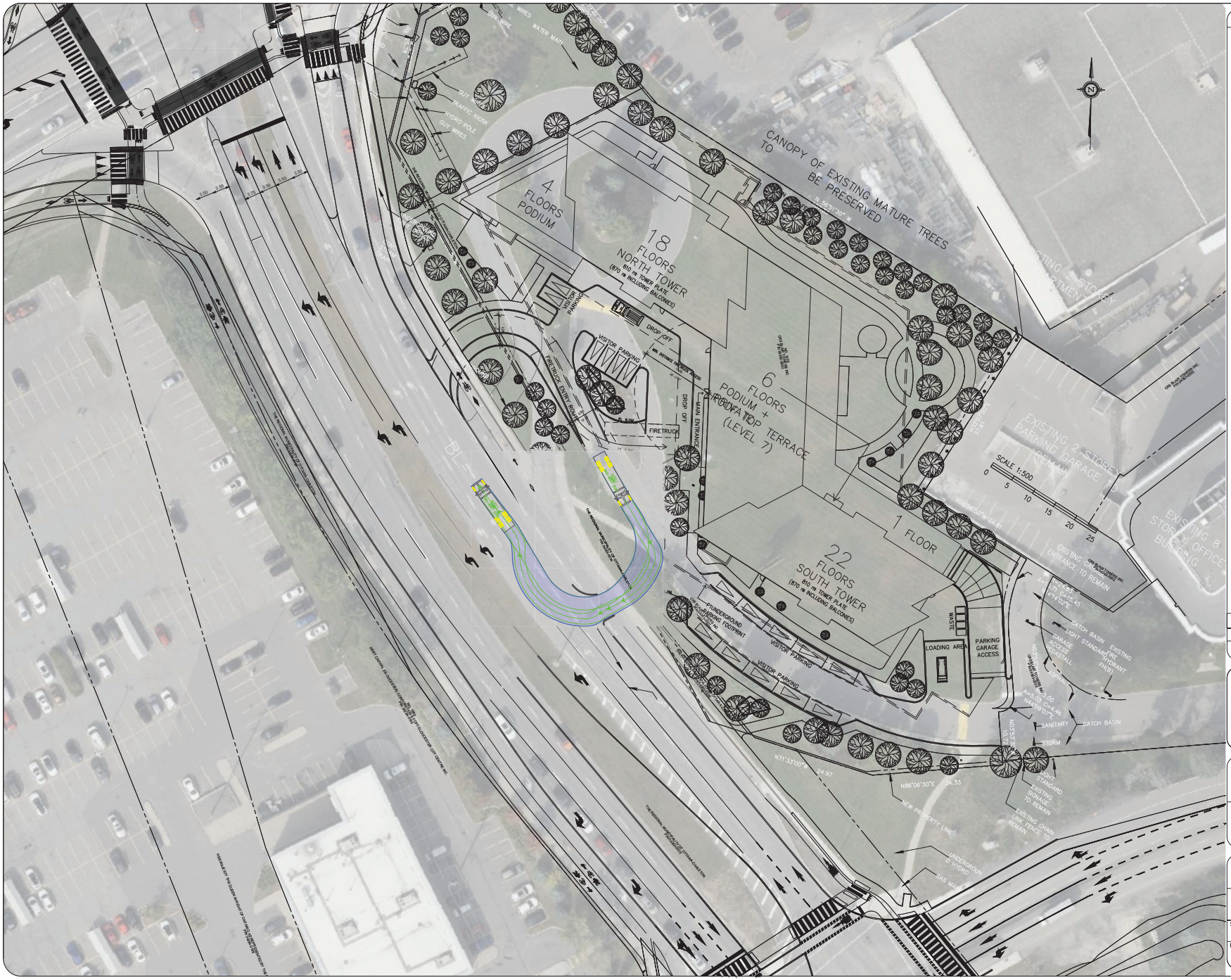

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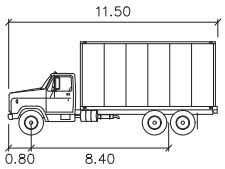

HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
HSU Movements (2)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
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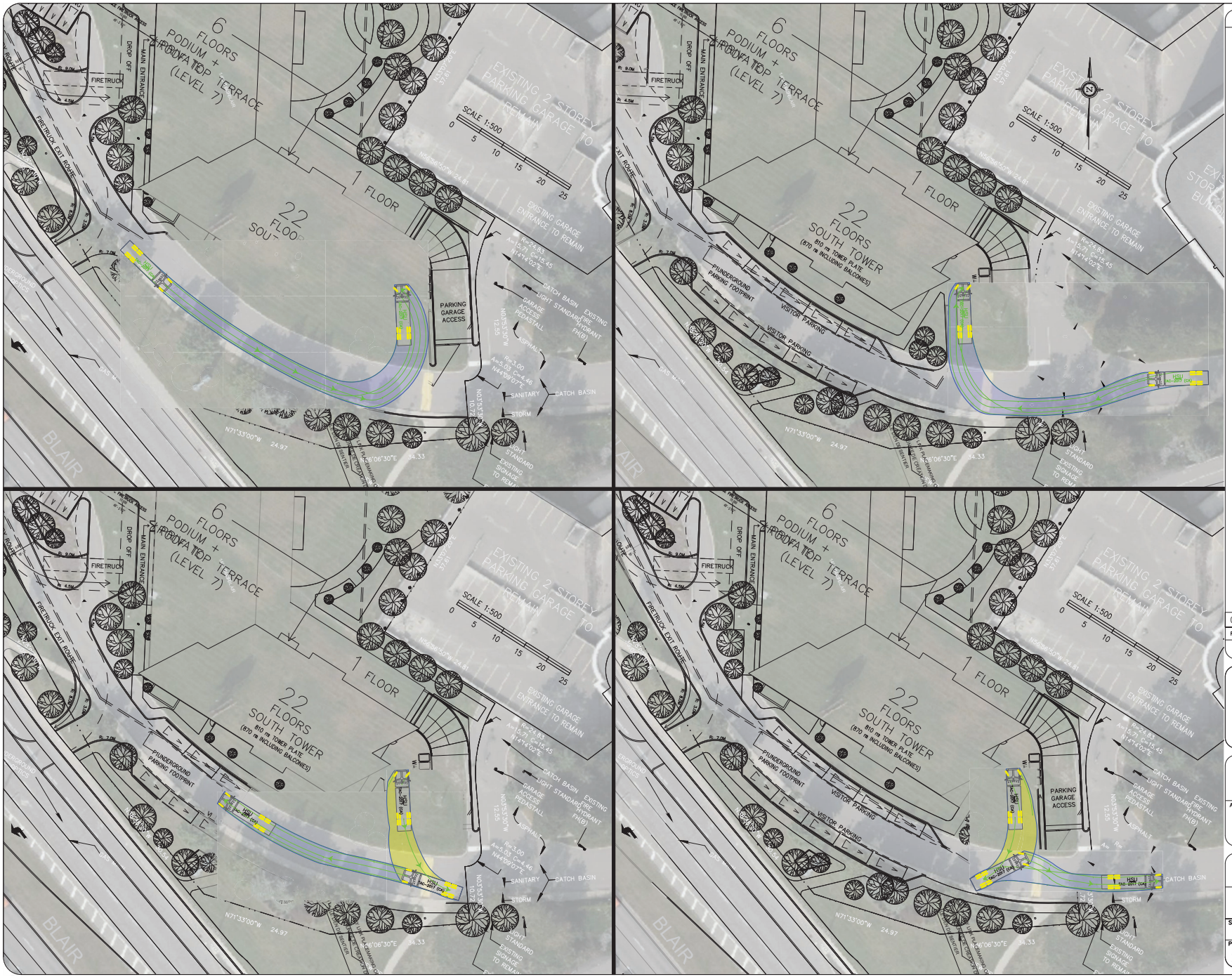

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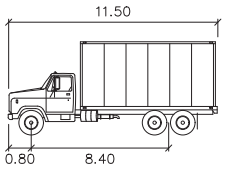

HSU

	meters
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Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

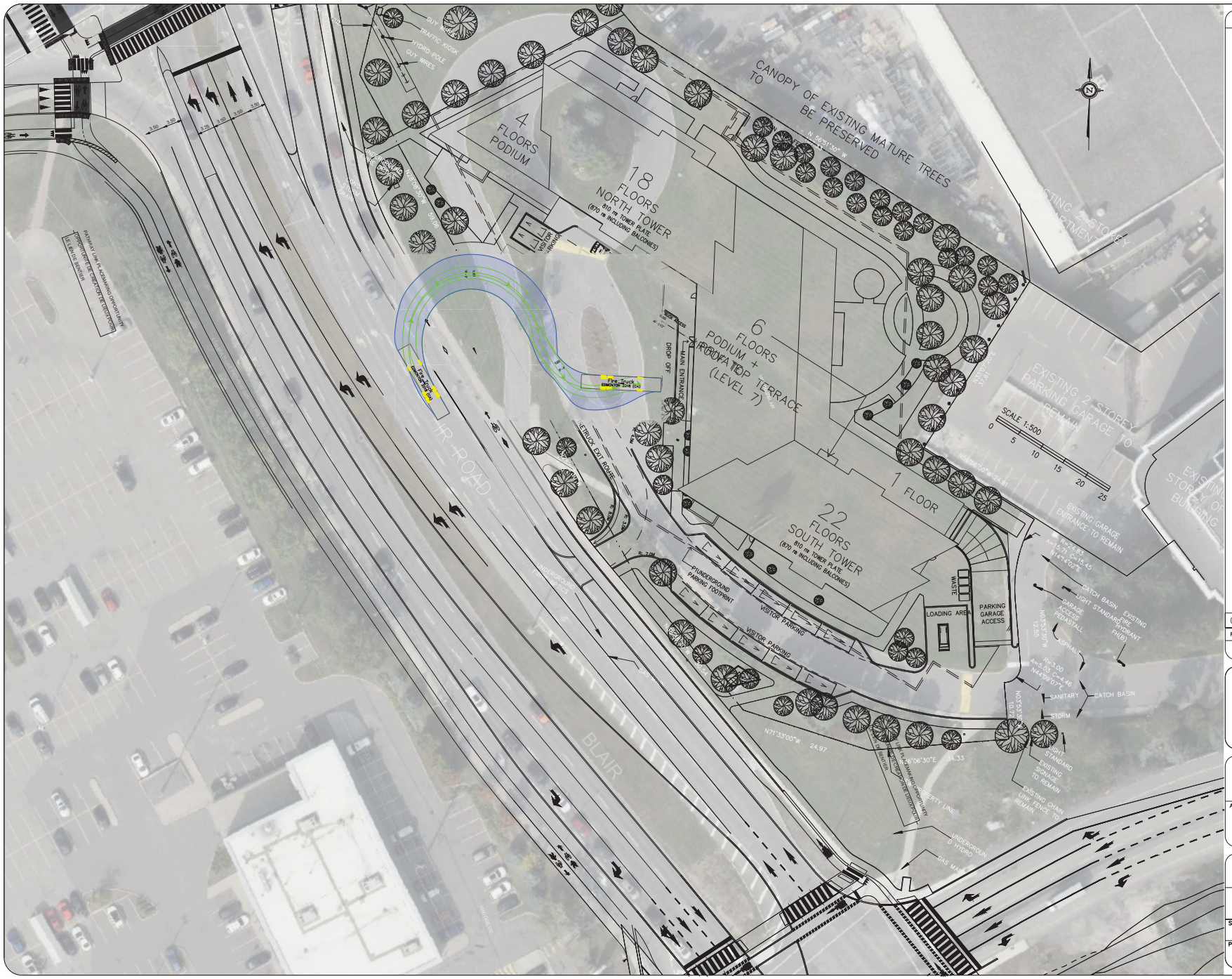
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Garbage Truck Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	003	03



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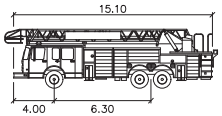

Fire Truck

	meters
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Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 32.6

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

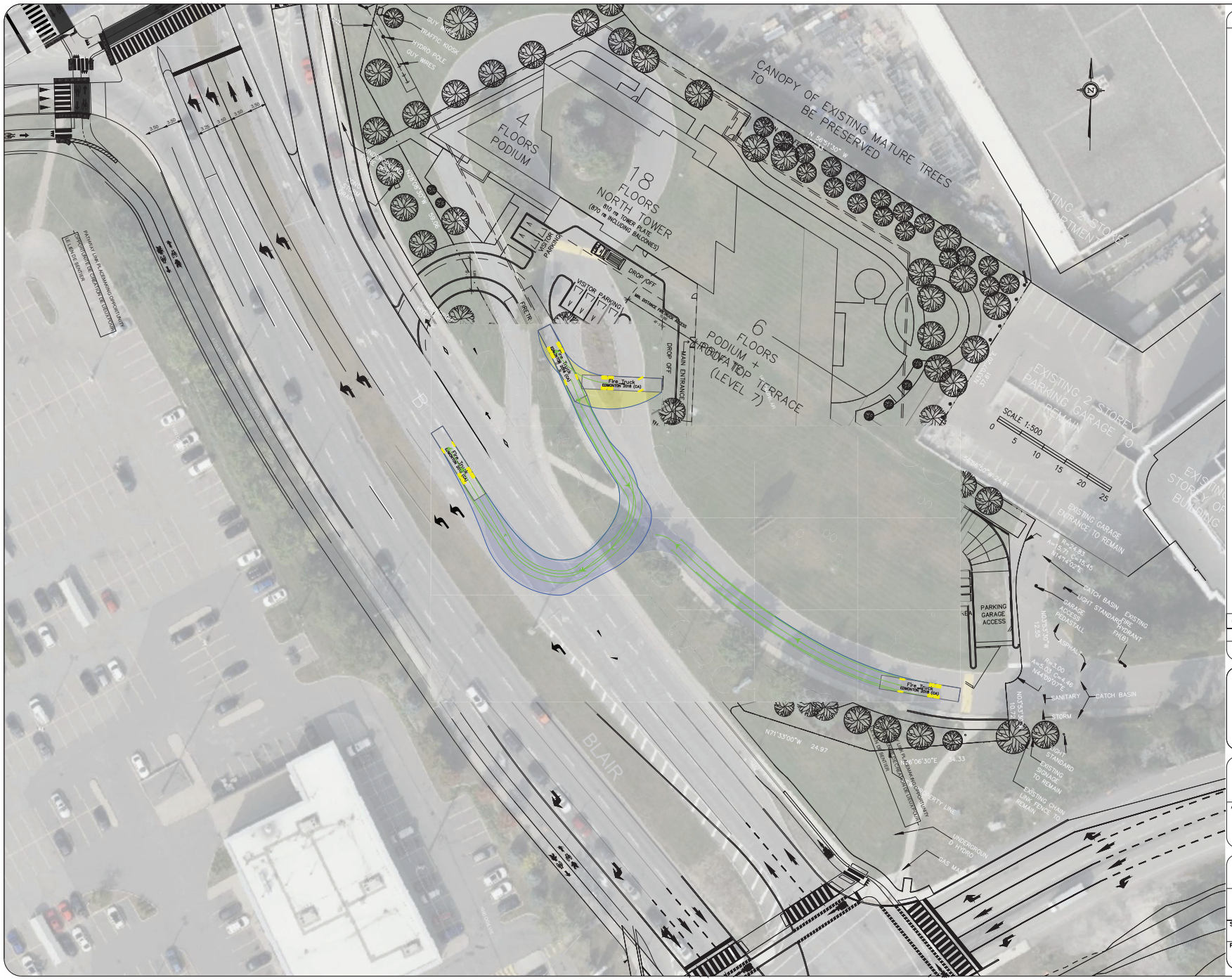
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Fire Truck Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	004	03



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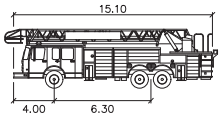


Fire Truck

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 32.6

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

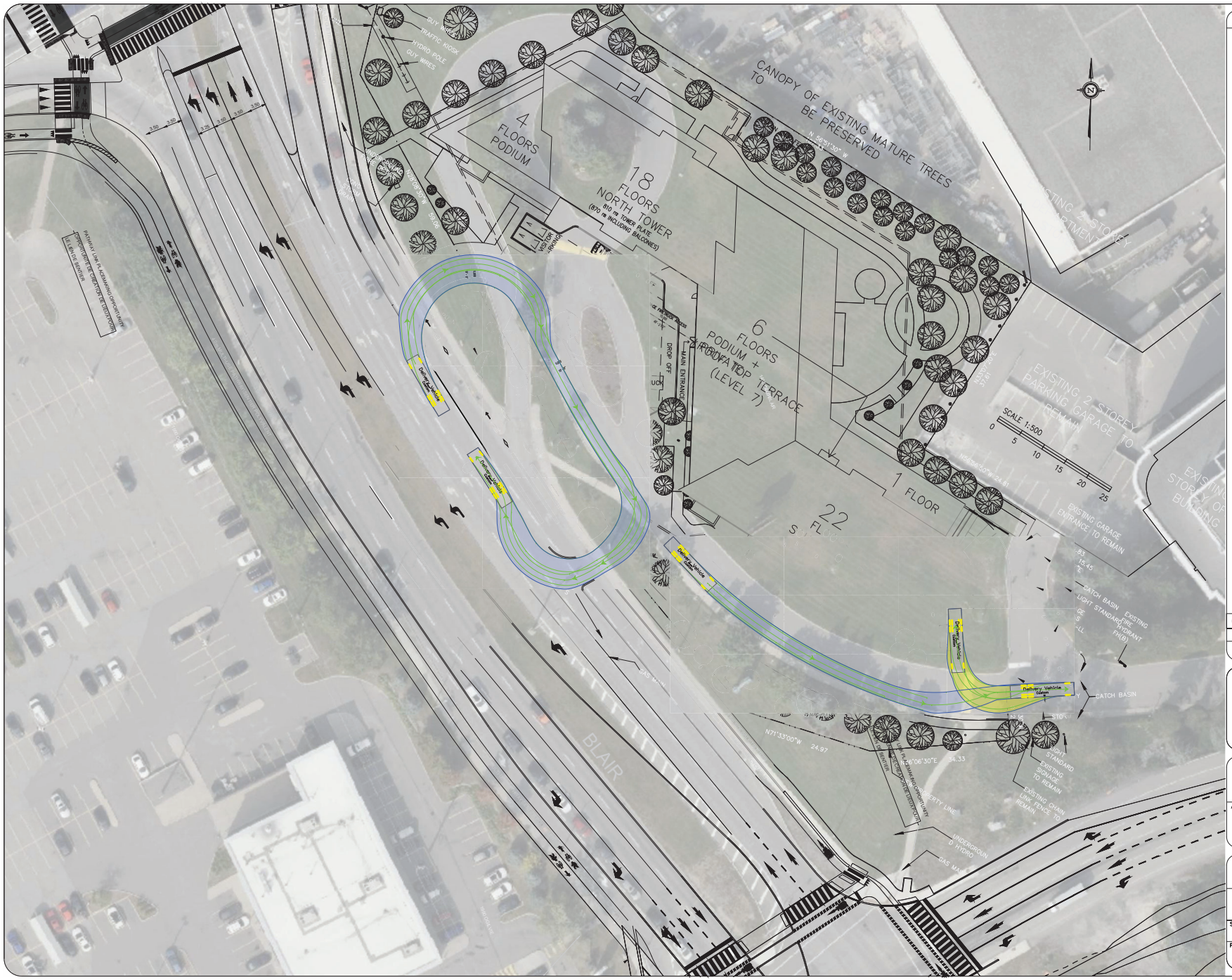
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Fire Truck Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	005	03



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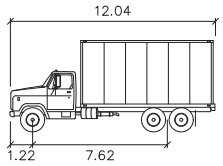

Delivery Vehicle

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Track	: 2.44
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Steering Angle	: 40.0

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

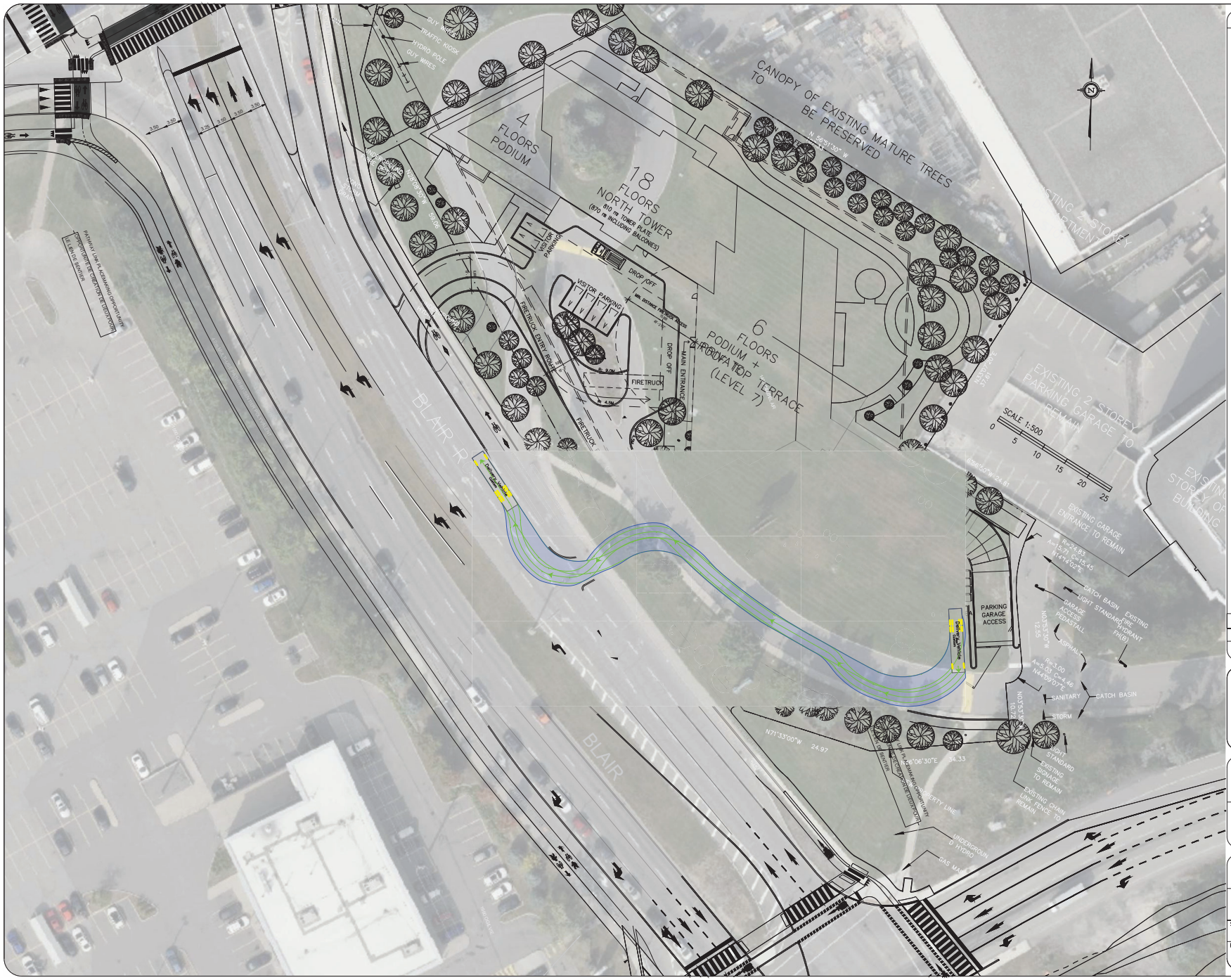
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Delivery Veh. Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	006	03



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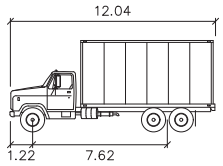


Delivery Vehicle

	meters
Width	: 2.44
Track	: 2.44
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

STATUS:

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

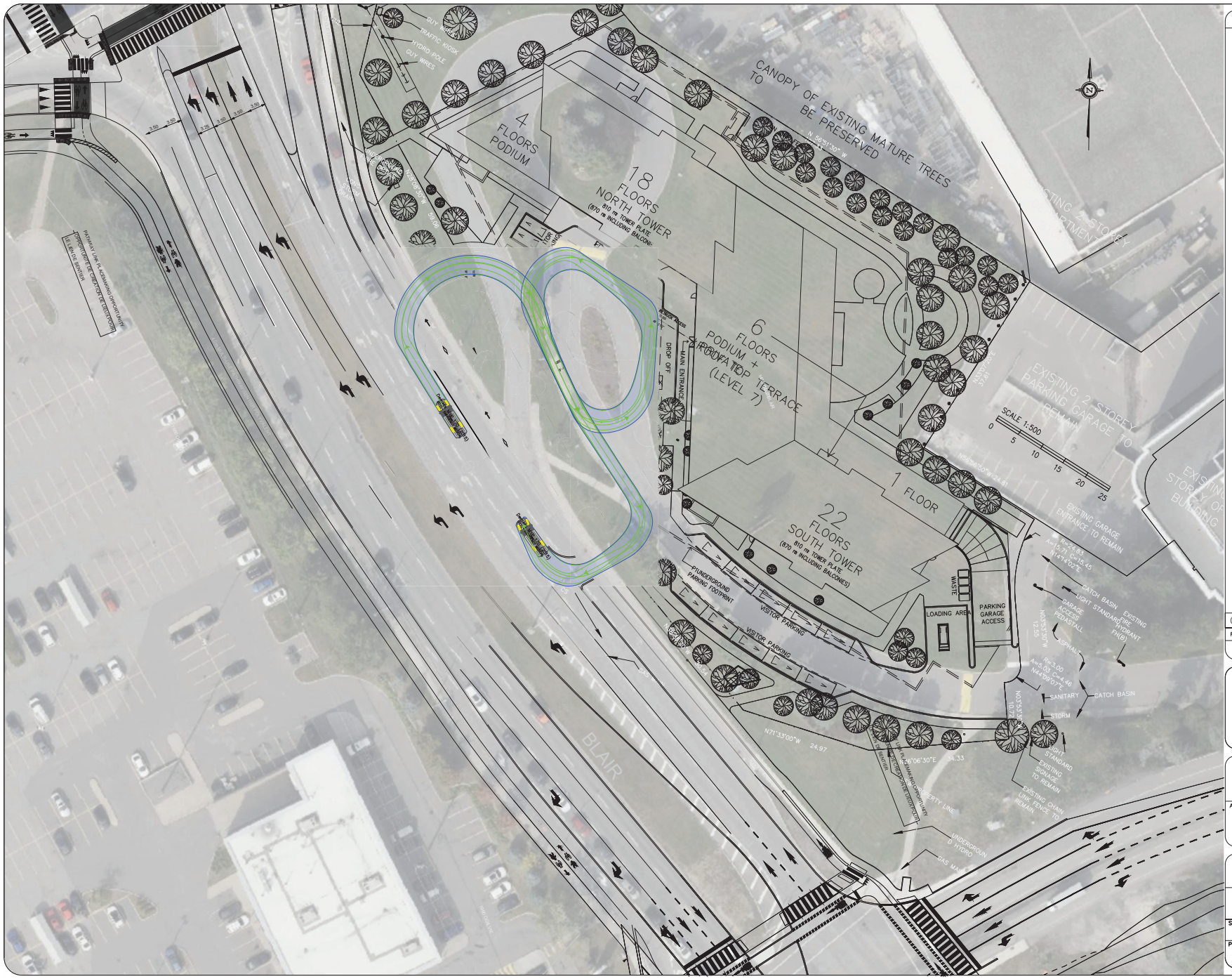
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Delivery Veh. Movements (2)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	007	03



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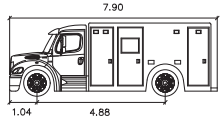

Demers MXP 170 (2015)

	meters
Width	: 2.41
Track	: 2.20
Lock to Lock Time	: 6.0
Steering Angle	: 37.3

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03	Issued for Review	AN	2024-12-19

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CLIENT: Le Groupe Maurice

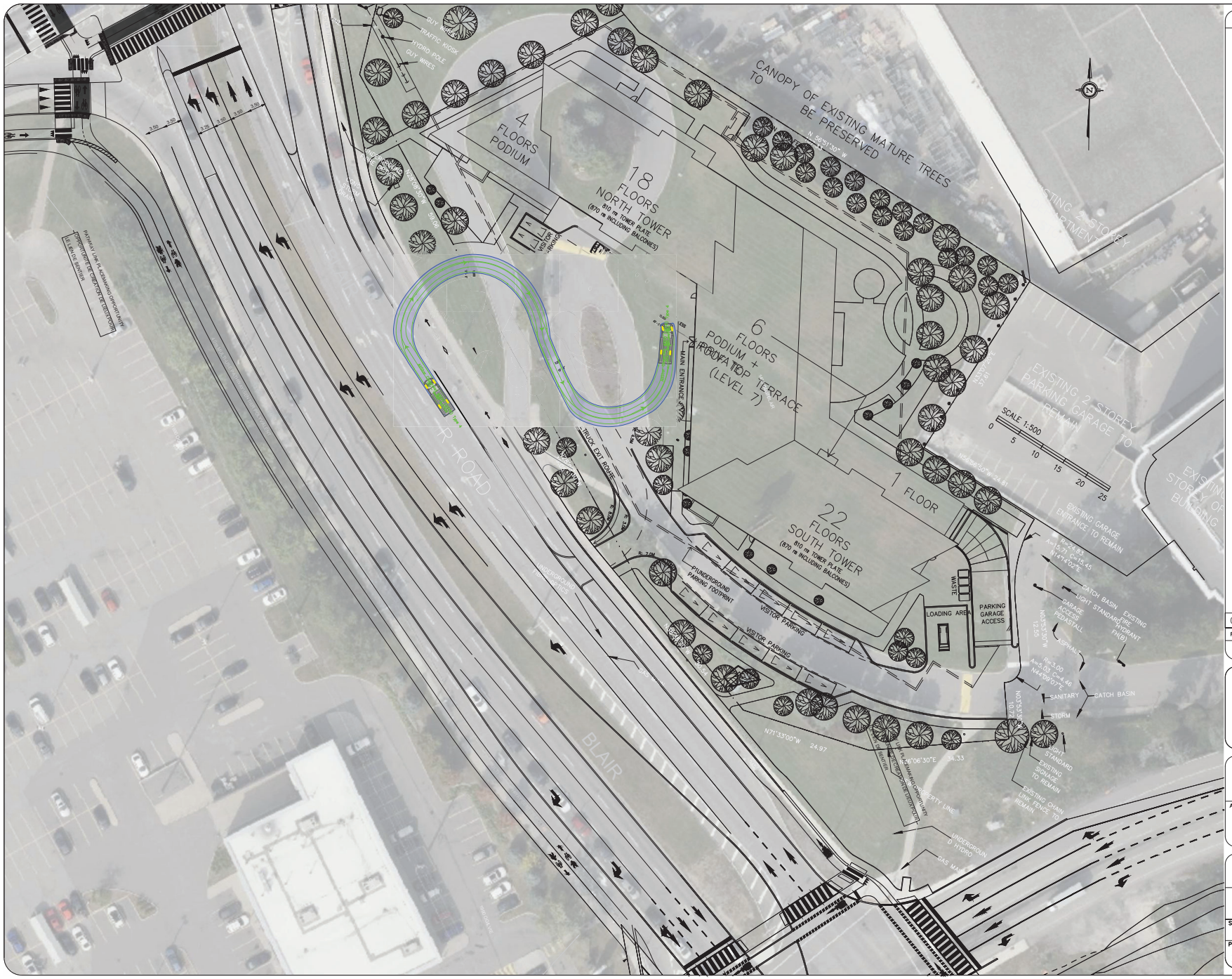
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Ambulance Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	008	03



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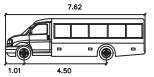

AllStar Chevrolet 4500 (2016) Type 4

	meters
Width	: 2.44
Track	: 1.96
Lock to Lock Time	: 6.0
Steering Angle	: 34.2

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

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(343) 999-9117

CLIENT: Le Groupe Maurice

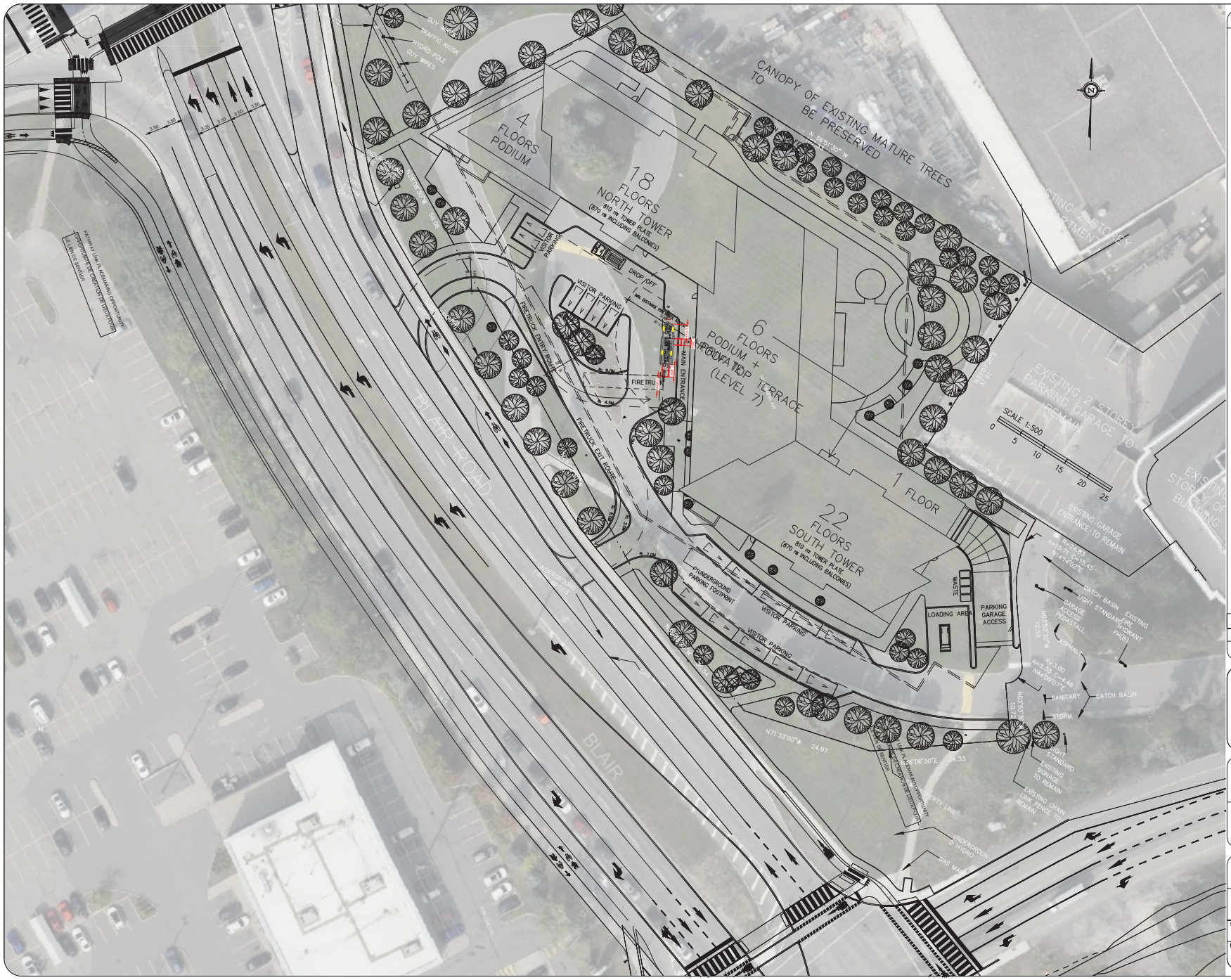
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Para Transpo Movements (1)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	009	03



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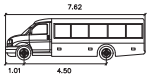

AllStar Chevrolet 4500 (2016) Type 4

	meters
Width	: 2.44
Track	: 1.96
Lock to Lock Time	: 6.0
Steering Angle	: 34.2

REV:	DESCRIPTION:	BY:	DATE:
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CLIENT: Le Groupe Maurice

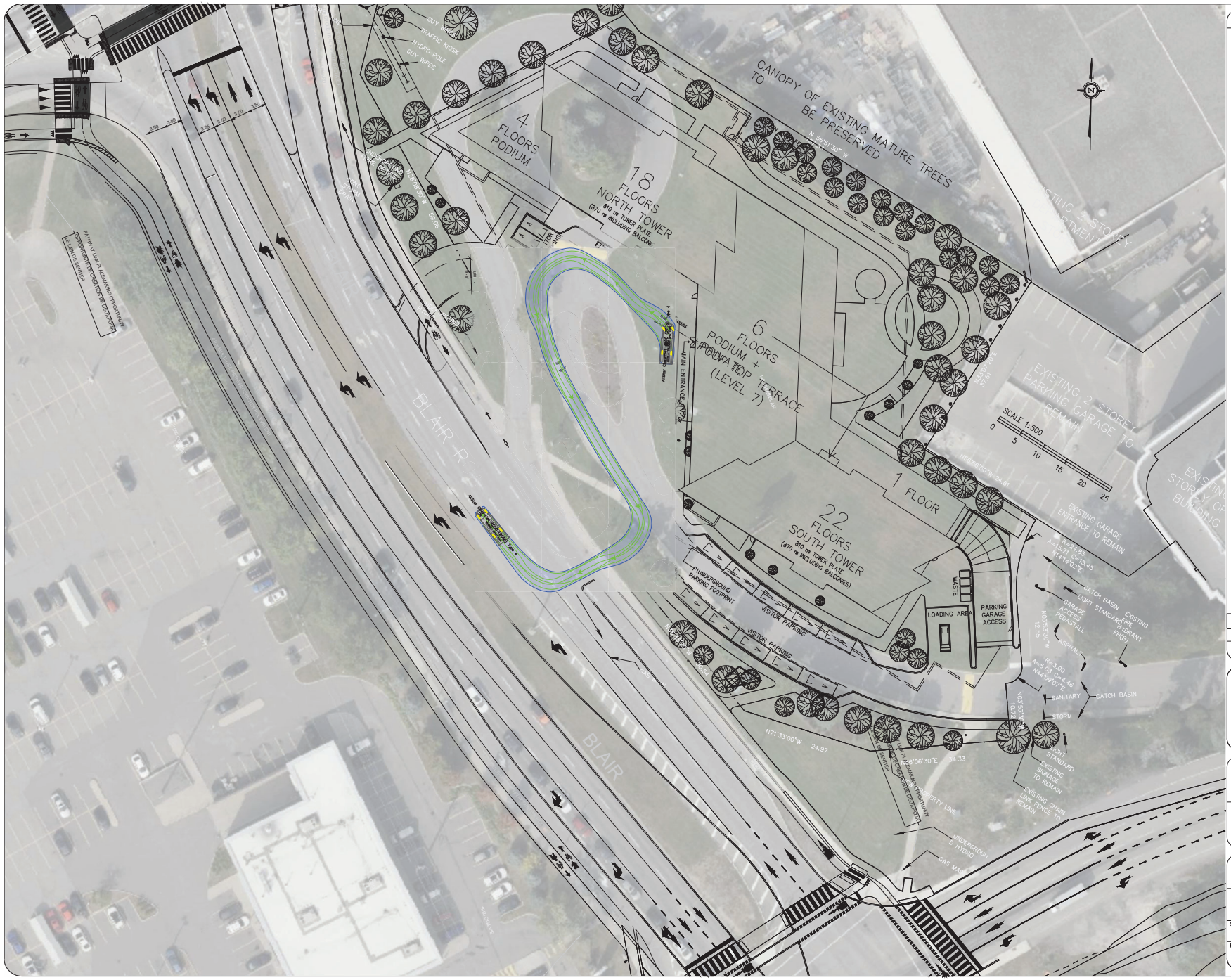
ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Para Transpo Movements (2)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	010	03



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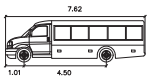

AllStar Chevrolet 4500 (2016) Type 4

	meters
Width	: 2.44
Track	: 1.96
Lock to Lock Time	: 6.0
Steering Angle	: 34.2

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review	AN	2024-12-19

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6 Plaza Court
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CLIENT: Le Groupe Maurice

ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Ultimate Condition
Para Transpo Movements (3)

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	011	03

Appendix G

MMLOS Analysis

CGH TRANSPORTATION

Multi-Modal Level of Service - Segments Form

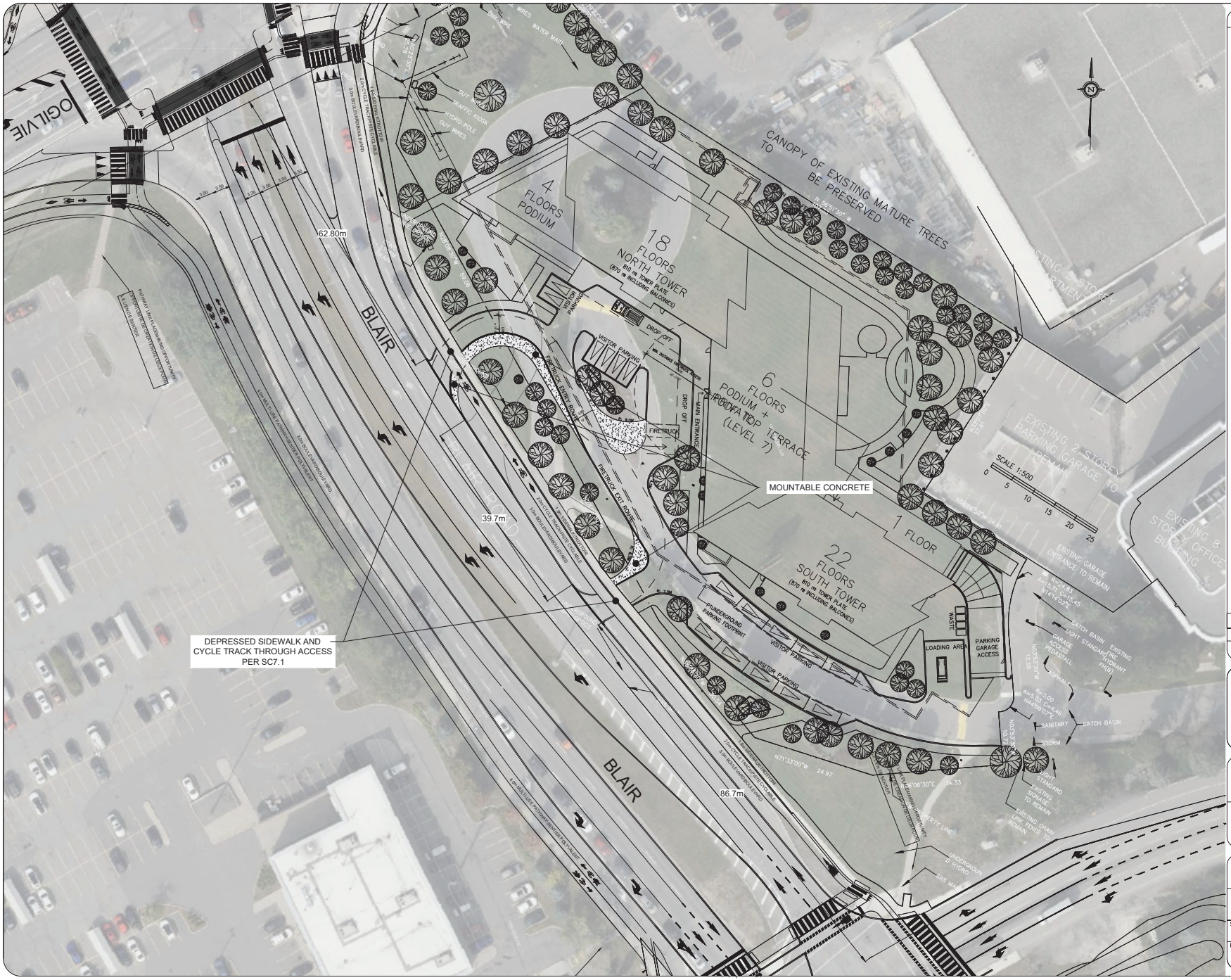
Consultant	**CGH Transportation Inc.**	**Project**	**2023-096**
Scenario	**Existing/Future**	**Date**	**2023-11-23**
Comments			

SEGMENTS			Blair Rd Existing	Ogilvie Rd Existing/Future	Blair Rd Future
Pedestrian	Sidewalk Width Boulevard Width	-	≥ 2 m < 0.5	≥ 2 m > 2 m	≥ 2 m > 2 m
	Avg Daily Curb Lane Traffic Volume		> 3000	> 3000	> 3000
	Operating Speed On-Street Parking		> 60 km/h no	> 60 km/h no	> 60 km/h no
	Exposure to Traffic PLoS		**F**	**D**	**D**
	Effective Sidewalk Width				
	Pedestrian Volume				
	Crowding PLoS		-	-	-
	Level of Service		**-**	**-**	**-**
Bicycle	Type of Cycling Facility	**F**	Mixed Traffic	Physically Separated	Physically Separated
	Number of Travel Lanes		≥ 6 lanes total		
	Operating Speed		≥ 60 km/h		
	# of Lanes & Operating Speed LoS		**F**	-	-
	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		≥ 65 km/h		
	Unsignalized Crossing - Lowest LoS		**E**	~~A~~	~~A~~
	Level of Service		**F**	**A**	**A**
Transit	Facility Type	-			
	Friction or Ratio Transit:Posted Speed				
	Level of Service		**-**	**-**	**-**
Truck	Truck Lane Width	**A**	≤ 3.5 m	> 3.7 m	≤ 3.5 m
	Travel Lanes per Direction		> 1	> 1	> 1
	Level of Service		**A**	**A**	**A**

Appendix H

Site Access Layout – Ultimate Conditions

CGH TRANSPORTATION



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CLIENT: Le Groupe Maurice

ARCHITECT:

SITE: 1440 Blair Towers Place

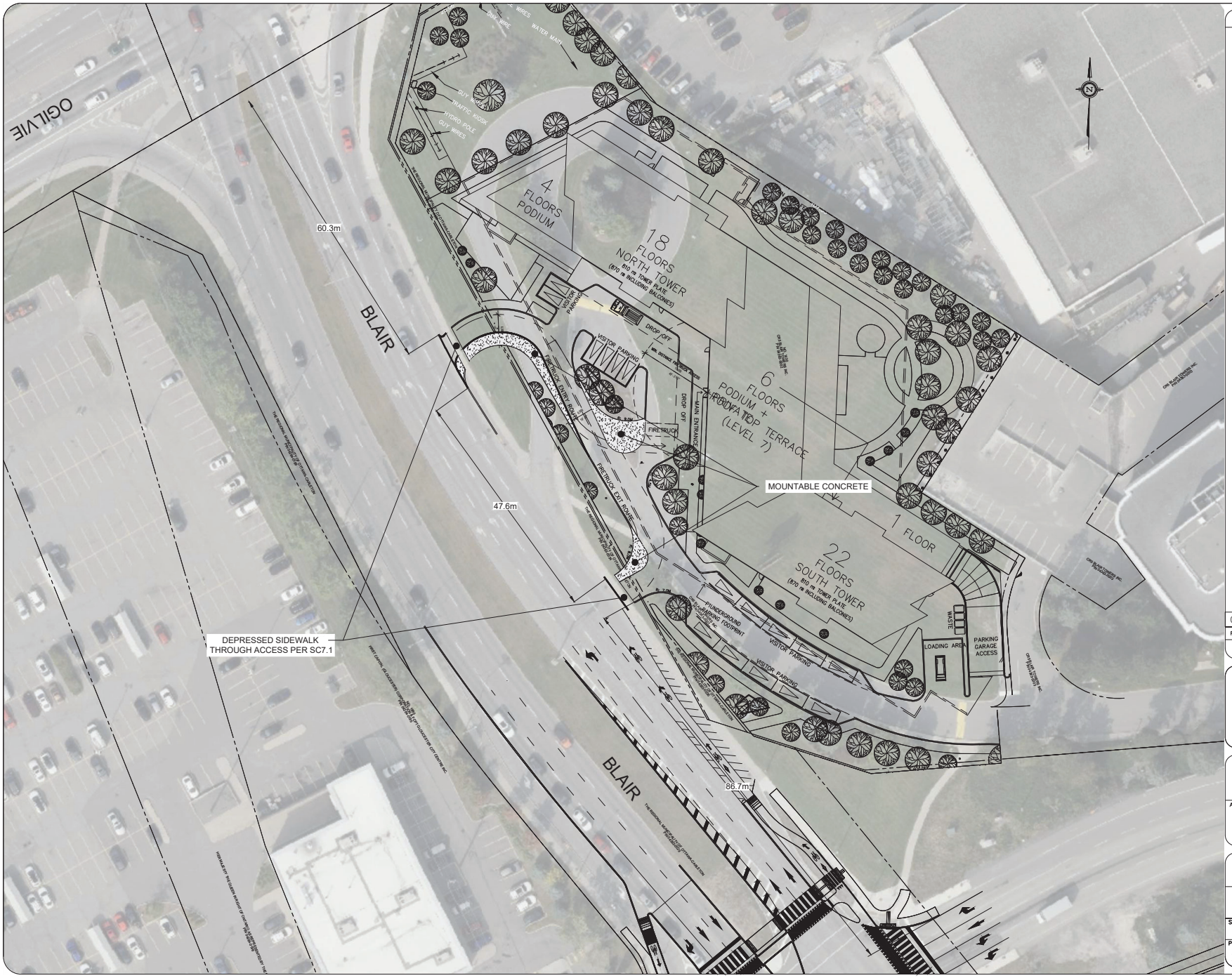
TITLE: Ultimate Condition
Site Access Sketch

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	002	03

Appendix I

Site Access – Interim Conditions



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6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Le Groupe Maurice

ARCHITECT:

SITE: 1440 Blair Towers Place

TITLE: Interim Condition
Site Access Sketch

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-12-19	AN	JK

PROJECT NO:	DRAWING NO:	REVISION:
2023-096	001	03