

Heron Gate Master Plan

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report

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July 2025

PN: 2024-103

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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 zoning by-law amendment and supporting draft plan of subdivision applications.

2 Existing and Planned Conditions

2.1 Proposed Development

The proposed redevelopment, encompassing 2851, 2881, 2898 Baycrest Drive, 2820 and 2831 Cedarwood Drive, and 2816 Sandalwood Drive, is currently zoned as Arterial Mainstreet Zone (AM10) and Residential Fifth Density Zone (R5B H(18)). The existing lands currently include townhouses, stacked townhouses, mid-range apartments, high-rise apartments, live-work units, commercial space, and amenity space. Existing towers on the site to be retained include 2040, 2851, and 2861 Baycrest Drive, 2850 Cedarwood Drive, and 2870 Cedarwood Drive. The development will include approximately 5,740 residential units and 6,308 parking spaces across the five blocks. The existing driveways to the redeveloping lands along Baycrest Drive, Sandalwood Drive and Cedarwood Drive will be removed and new accesses will be provided per the redevelopment of each block.

The first block, named HG7, is constructed and is located on the east side of Sandalwood Drive on Heron Road (2816 Sandalwood Drive). This study documents the transportation impacts supporting the ZBA/draft plan of subdivision process. Separate TIAs will be required as each additional block proceeds to site plan application.

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: November 1, 2024

2.2 Existing Conditions

2.2.1 Area Road Network

Heron Road: Heron Road is a City of Ottawa arterial road with a divided, four-lane urban cross-section. Sidewalks are provided on both sides of the road and a cycletrack is located along the south side of the roadway between Heron-Walkley Park and Jefferson Street. The posted speed limit is 50 km/h within the study area, and the existing right-of-way varies between 25.0 and 34.5 metres within the study area. Heron Road is designated as a truck route.

Walkley Road: Walkley Road is a City of Ottawa arterial road with a four-lane urban cross-section. West of Banff Avenue, the cross-section is divided, and East of Banff Avenue, it is undivided. Sidewalks are provided on both sides of the road. The posted speed limit is 50 km/h within the study area. The Ottawa Official Plan reserves a right-of-way of 26.0 metres west of Bank Street, 37.5 metres between Bank Street and Heron Road, and 44.5 metres east of Heron Road. Walkley Road is designated as a truck route.

Bank Street: Bank Street is a City of Ottawa arterial road with an urban cross-section that varies between four and six lanes. North of Alta Vista Drive includes two lanes in each direction and a two-way left-turn lane, between Alta Vista Drive and Walkley Road provides three lanes in each direction, and south of Walkley Road has a four-lane cross-section that adds a third northbound lane at Surrey Avenue and alternating left-turn lanes to the south of Surrey Avenue. Sidewalks are provided on both sides of the road. The posted speed limit is 50 km/h, and the Official Plan reserves a right-of-way of 37.5 metres within the study area. Bank Street is designated as a truck route.

Alta Vista Drive: Alta Vista Drive is a City of Ottawa major collector road with a two-lane urban cross-section. Asphalt pathways are present on both sides of the road, and bike lanes are present on both sides of the road east of the 2679 Alta Vista Drive access. The posted speed limit is 40 km/h, and the existing right-of-way is 30.0 within the study area.

Baycrest Drive: Baycrest Drive is a City of Ottawa collector road with a two-lane urban cross-section. Asphalt pathways are provided on both sides of the road. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres. On-street parking is restricted on the east side of the road.

Albion Road North: Albion Road North is a City of Ottawa collector road north of Kitchner Avenue with a two-lane urban cross-section. Sidewalk is present on the west side of the road north of Kitchner Avenue, while asphalt pathway on the east side north of Ahlul-Bayt Islamic School access. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres.

Heatherington Road: Heatherington Road is a City of Ottawa collector road with a two-lane urban cross-section. Sidewalks are present on both sides of the road. The unposted speed limit is assumed to be 50 km/h with a posted 40km/h during school hours. The existing right-of-way is 20.0 metres.

Finn Court: Finn Court is a City of Ottawa local road with a two-lane urban cross-section. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 18.0 metres.

Sandalwood Drive: Sandalwood Drive is a City of Ottawa local road with a two-lane urban cross-section. Asphalt pathways are provided on both sides of the road. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres. On-street parking is restricted on the east side of the road.

Jefferson Street: Jefferson Street is a City of Ottawa local road with a two-lane urban cross-section. Asphalt pathway is provided on the east side of the road. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres.

Hampstead Place: Hampstead Place is a City of Ottawa local road with a two-lane urban cross-section with a posted speed limit of 40 km/h. The existing right-of-way is 15.0 metres.

Colliston Crescent: Colliston Crescent is a City of Ottawa local road with a two-lane urban cross-section. The road is shaped like a U, with travel directions-oriented north-south (N-S) along both the west and east sections, and east-west (E-W) in the middle. Sidewalks are provided on both sides of the road in the N-S direction along the west section, on the south side of the road in the E-W direction, and on the west side of the road in the N-S direction along the east section. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres.

Cedarwood Drive: Cedarwood Drive is a City of Ottawa local road with a two-lane urban cross-section. Asphalt pathways are provided on both sides of the road. The unposted speed limit is assumed to be 50 km/h, and the existing right of way is 20.0 metres. On-street parking is restricted on the west side of the road.

Reardon Private: Reardon Private is a private access with a two-lane urban cross-section. Asphalt pathway is provided on the east side of the road. The unposted speed limit is assumed to be 50 km/h.

2.2.2 Existing Intersections

The existing signalized area key intersections within one kilometre of the site have been summarized below:

Heron Road at Baycrest Drive

The intersection of Heron Road and Baycrest Drive is a signalized intersection. The northbound approach consists of a shared all movement lane, and the southbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. The cycletrack on the eastbound approach transitions to a curbside bike lane for an at grade crossing of the intersection. No turn restrictions were noted.

Heron Road at Sandalwood Drive/Briar Hill Drive

The intersection of Heron Road and Sandalwood Drive/ Briar Hill Drive is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane, and the southbound approach consists of an auxiliary shared through/left-turn lane and a right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. The cycletrack on the eastbound approach transitions to a curbside bike lane for an at grade crossing of the intersection. No turn restrictions were noted.

Walkley Road at Cedarwood Drive

The intersection of Walkley Road at Cedarwood Drive is a signalized intersection. The southbound approach consists of an auxiliary left-turn lane and a right-turn lane. The eastbound approach consists of an auxiliary left-turn lane and two through lanes, and the westbound approach consists of a through lane and a shared through/right-turn lane. No turn restrictions were noted.

<i>Walkley Road at Baycrest Drive/Reardon Private</i>	The intersection of Walkley Road and Baycrest Drive/Reardon Private is a signalized intersection. The northbound approach consists of a shared all-movement lane from a private approach, and the southbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. No turn restrictions were noted.
<i>Baycrest Drive at Cedarwood Drive</i>	The intersection of Baycrest Drive at Cedarwood Drive is a three-leg intersection with an all-way stop-control. All approaches consist of a shared all-movement lane. No turn restrictions were noted.
<i>Baycrest Drive at Sandalwood Drive</i>	The intersection of Baycrest Drive and Sandalwood Drive is a stop-controlled intersection on the minor approach of Sandalwood Drive. All approaches consist of a shared all movement lane, and the westbound approach is a private access. No turn restrictions were noted.
<i>Heron Road at Walkley Road</i>	The intersection of Heron Road at Walkley Road is a signalized intersection. The southbound approach consists of a left-turn lane and a shared left-turn/channelized right-turn lane. The eastbound approach consists of an auxiliary bus lane and two through lane. The westbound approach consists of two through lanes, a channelized right-turn lane, and an auxiliary channelized right-turn lane. Eastbound left-turn is prohibited expect for the authorized vehicles.
<i>Heron Road at Jefferson Street/HG Mall</i>	The intersection of Heron Road and Jefferson Street/HG Mall is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane, a through lane and an auxiliary right-turn lanes, and the southbound approach consists of a shared all-movement lane. The eastbound approach consists of an auxiliary left-turn lane, two through lane, and an auxiliary channelized right-turn lane. The westbound approach consists of an auxiliary left-turn lane, a through lane and a shared trough/right-turn lane. No turn restrictions were noted.
<i>Walkley Road at Heatherington Road/HG Mall</i>	The intersection of Walkley Road and Heatherington Road/HG Mall is a signalized intersection. The northbound and southbound approaches each consist of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a through lanes, and a shared through/right-turn lane. The westbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary channelized right-turn lane. No turn restrictions were noted.
<i>Walkley Road at Albion Road North/Colliston Crescent</i>	The intersection of Walkley Road and Albion Road North/Colliston Crescent is a signalized intersection. The northbound and southbound approaches each consist of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary

channelized right-turn lane. The westbound approach consists of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. No turn restrictions were noted.

Heron Road at Finn Court

The intersection of Heron Road and Finn Court is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane and a right-turn lane. The eastbound approaches consist of a through lane and shared through/right-turn lane, and the westbound approach consists of an auxiliary left-turn lane and two through lanes. No turn restrictions were noted.

Heron Road at Alta Vista Drive

The intersection of Heron Road and Alta Vista Drive is a signalized intersection. The northbound and southbound approaches each consist of an auxiliary left-turn lane, and a shared through/channelized right-turn lane. Bike lanes are provided in the northbound and southbound directions. The eastbound approach consists of an auxiliary left-turn lane, a through lane, and a shared through/channelized right-turn lane, and the westbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary channelized right-turn lane. No turn restrictions were noted.

Walkley Road at Hampstead Place/Jim Durrell RC

The intersection of Walkley Road and Hampstead Place/Jim Durrell RC is a signalized intersection. The northbound approach consists of a shared all-movement lane, and the southbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. No turn restrictions were noted.

Heron Road at Bank Street

The intersection of Heron Road and Bank Street is a signalized intersection. The northbound approach consists of dual auxiliary left-turn lanes, a through lane, and a shared through/channelized right-turn lane, and the southbound approach consists of an auxiliary left-turn lane, a through lane, and a shared through/channelized right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary channelized right-turn lane, and westbound approach consists of an auxiliary left-turn lane, two through lanes, and an auxiliary right-turn. No turn restrictions were noted.

Walkley Road at Bank Street

The intersection of Walkley Road and Bank Street is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane, three through lanes and an auxiliary channelized right-turn lane. The southbound and eastbound approaches each consist of dual auxiliary left-turn lanes, two through lanes, and a channelized auxiliary right-turn lane. The westbound approach consists of dual auxiliary left-turn lanes, a through lane, and a shared through/channelized right-turn lane. No turn restrictions were noted.

2.2.3 Existing Driveways

Within 200 metres of the proposed development along Heron Road, driveways to a school, a temple, and residential dwellings are present on the north. Driveways to a community centre, residential complexes, and a mall are present on the south side.

Within the redevelopment area, existing driveways access Baycrest Drive, Sandalwood Drive, and Cedarwood Drive. Existing driveways that will retain access to the City roads include 2040, 2851, and 2861 Baycrest Drive, 2850 Cedarwood Drive, and 2870 Cedarwood Drive, and the new access for the HG 7 block at 2816 Sandalwood Drive.

Within 200 metres of the proposed development along Walkley Road, driveways to a retail plaza, residential complexes, and a driving school are present on the south side. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: November 5, 2024

2.2.4 Cycling and Pedestrian Facilities

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

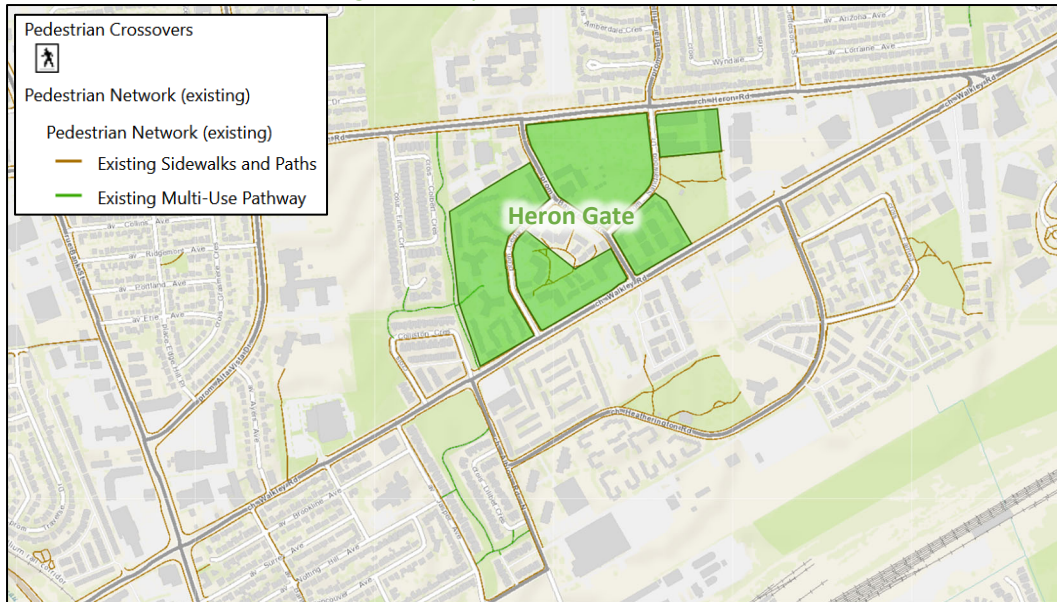
Sidewalks are provided along both sides of Heron Road, Walkley Road, Bank Street, and Heatherington Road, on the west side of Albion Road North north of Kitchener Avenue, and both sides of Colliston Crescent on the west leg of the loop and on the inside of the loop for the remainder of the roadway.

Asphalt pathways are present on both sides of Alta Vista Drive, Baycrest Drive, Sandalwood Drive, Cedarwood Drive, and on the east side of Jefferson Street and Reardon Private.

The cycling network consists of a cycletrack along the south side of the roadway between Heron-Walkley Park and Jefferson Street, a multi-use pathway (MUP) between Heron Road and Walkley Road in Heron-Walkley Park, two MUPs on Featherston Drive between Wyndale Crescent and Jefferson Street, and bike lanes on both sides of the Alta Vista Drive east of the 2679 Alta Vista Drive access.

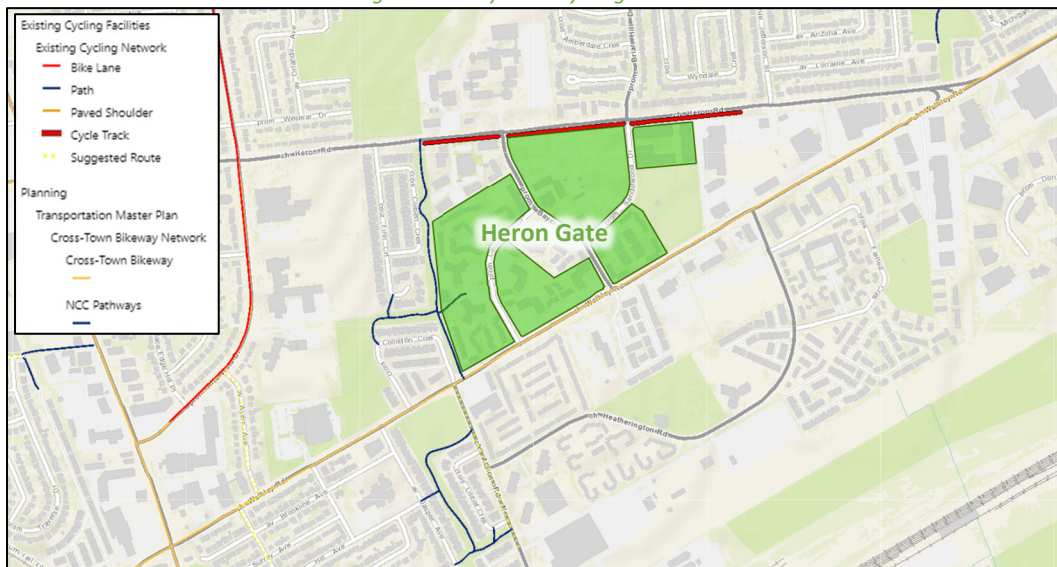
Walkley Road, Bank Street, and Alta Vista Drive are designated as crosstown bikeways.

Figure 4: Study Area Pedestrian Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: November 1, 2024

Figure 5: Study Area Cycling Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: November 1, 2024

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

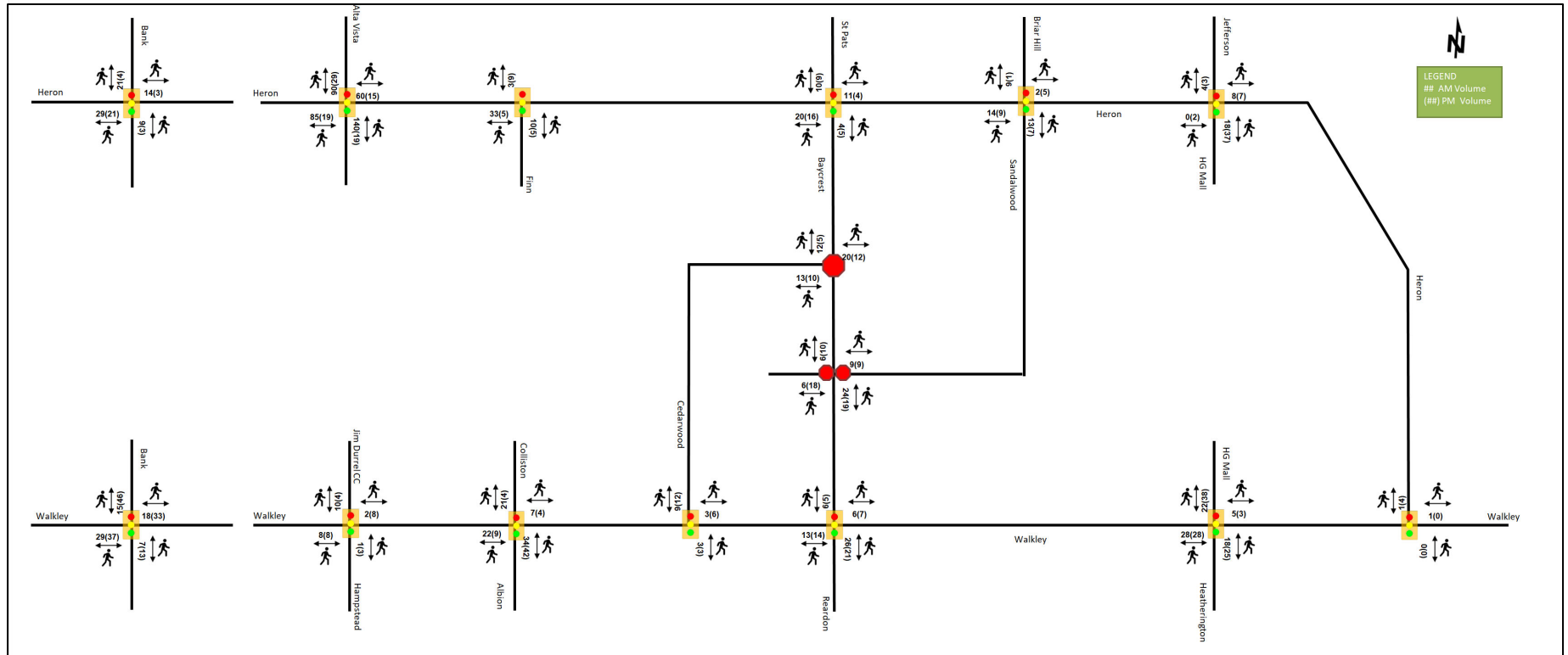
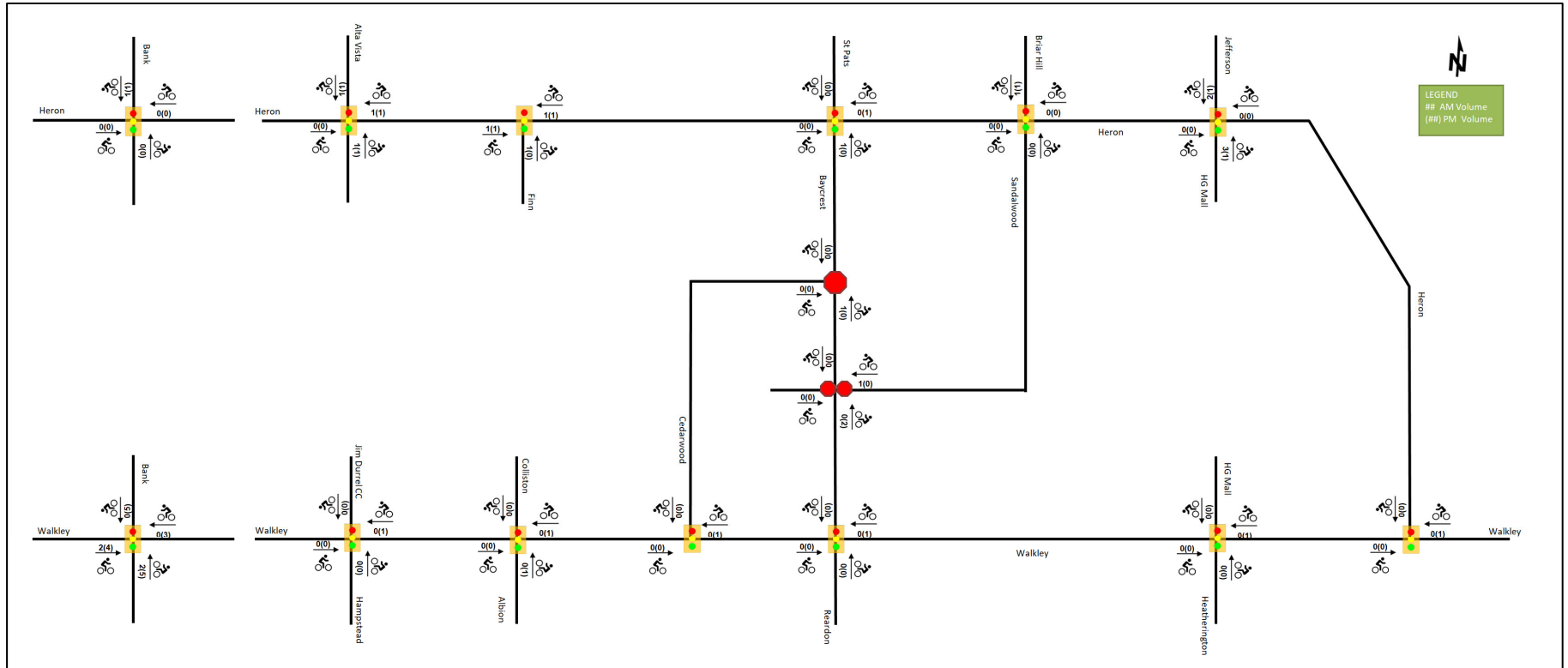


Figure 7: Existing Cyclist Volumes



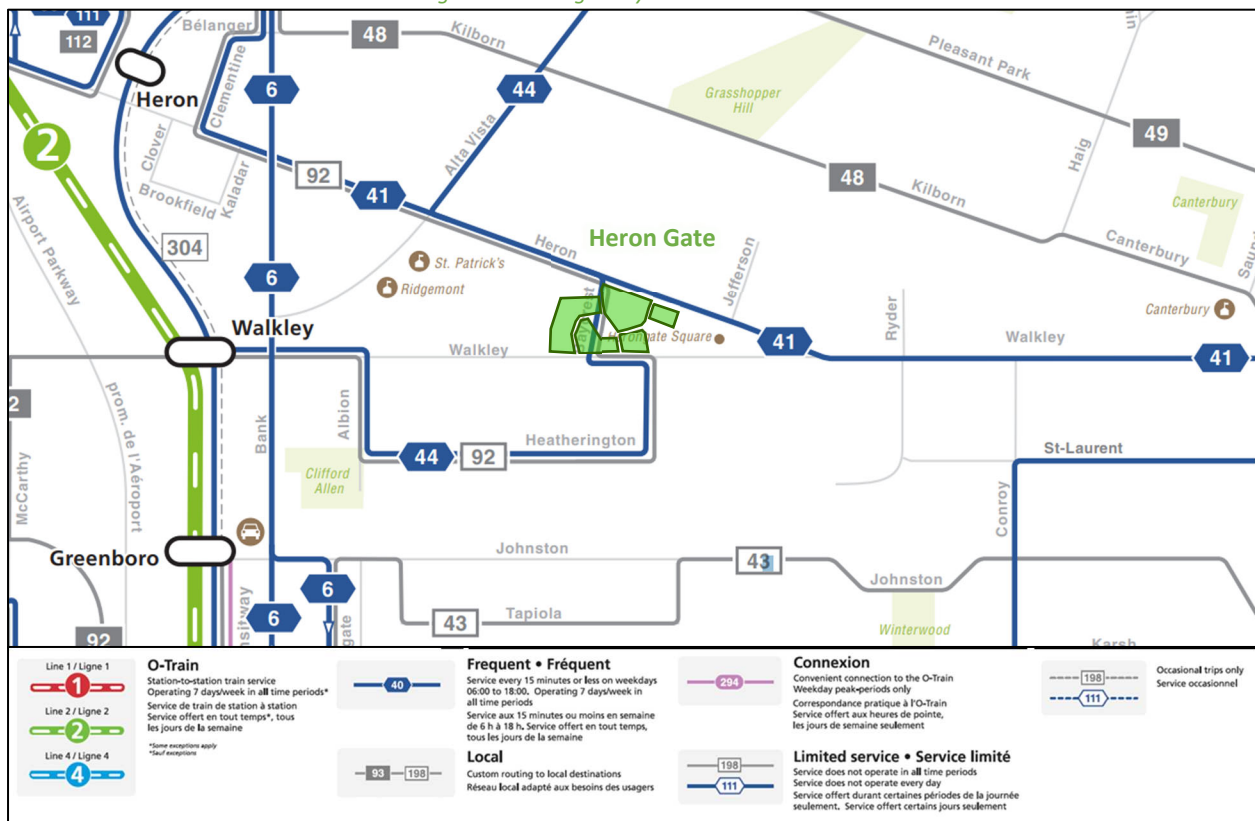
2.2.5 Existing Transit

Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates nearby transit stops. All transit information is from May 21, 2025 and is included for general information purposes and context to the surrounding area.

Within the study area, routes #41, #44, and #92 travel along Heron Road, Baycrest Drive, and continuing along Walkley Road. The frequency of these routes within proximity of the proposed site based on May 21, 2025 service levels are:

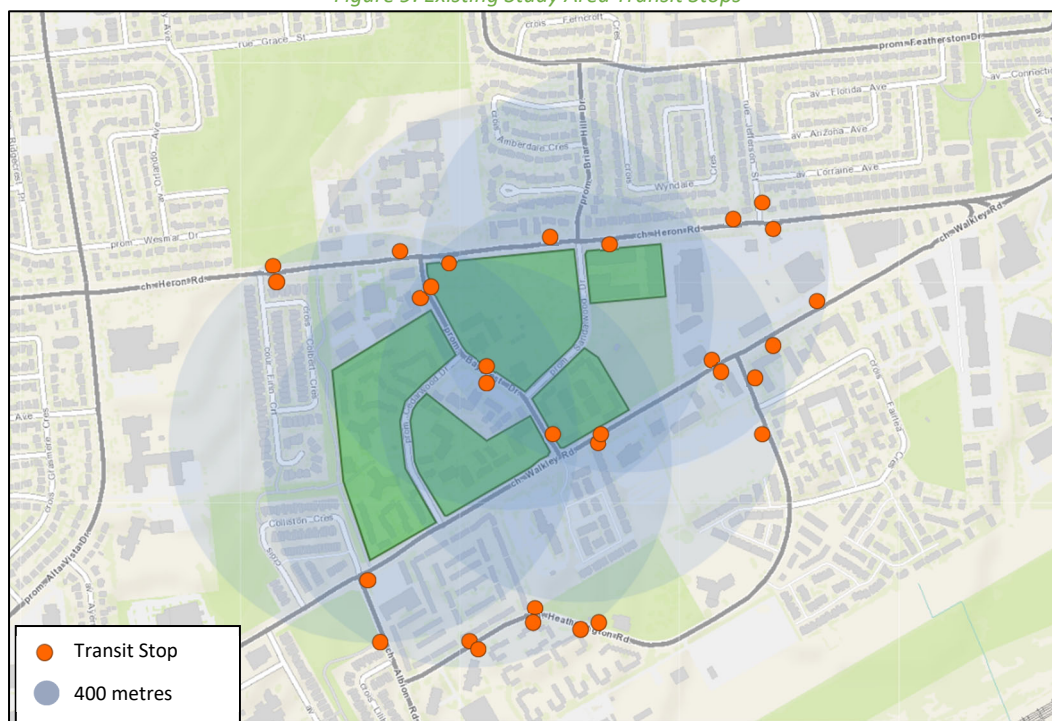
- Route #41 – 15-minute service all day, 30-minute service during the off-peak times
- Route # 44 – 15-minute service all day, 30-minute service after 7 PM
- Route # 92– 30-minute service in the peak period/direction, one hour service all day

Figure 8: Existing Study Area Transit Service



Source: <http://www.octranspo.com/> Accessed: May 21, 2025

Figure 9: Existing Study Area Transit Stops



Source: <http://www.octranspo.com/> Accessed: November 5, 2024

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, and third-party counts were collected by Accu-Traffic Inc. and The Traffic Specialist. Table 1 summarizes the intersection count dates and sources.

Table 1: Intersection Count Date

Intersection	Count Date	Source
Heron Road at Bank Street	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Alta Vista Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Finn Court	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Baycrest Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Sandalwood Drive/Briar Hill Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Jefferson Street/HG Mall	Thursday, November 21, 2024	Accu-Traffic Inc.
Heron Road at Walkley Road	Thursday, November 21, 2024	Accu-Traffic Inc.
Baycrest Drive at Cedarwood Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Baycrest Drive at Sandalwood Drive	Wednesday, November 1, 2023	City of Ottawa
Walkley Road at Bank Street	Wednesday, November 15, 2023	The Traffic Specialist
Walkley Road at Hampstead Place/Jim Durrell RC	Thursday, November 21, 2024	Accu-Traffic Inc.
Walkley Road at Albion Road/Colliston Crescent	Thursday, November 21, 2024	Accu-Traffic Inc.
Walkley Road at Cedarwood Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Walkley Road at Baycrest Drive	Thursday, November 21, 2024	Accu-Traffic Inc.
Walkley Road at Heatherington Road/HG Mall	Thursday, November 21, 2024	Accu-Traffic Inc.

Figure 10 illustrates the existing traffic counts and Table 2 summarizes the existing intersection operations. It is noted that HG7 has been completed in summer 2020 and captured in the counts. 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. Detailed turning movement count data is included in Appendix B and the Synchro worksheets are provided in Appendix C.

Figure 10: Existing Traffic Counts

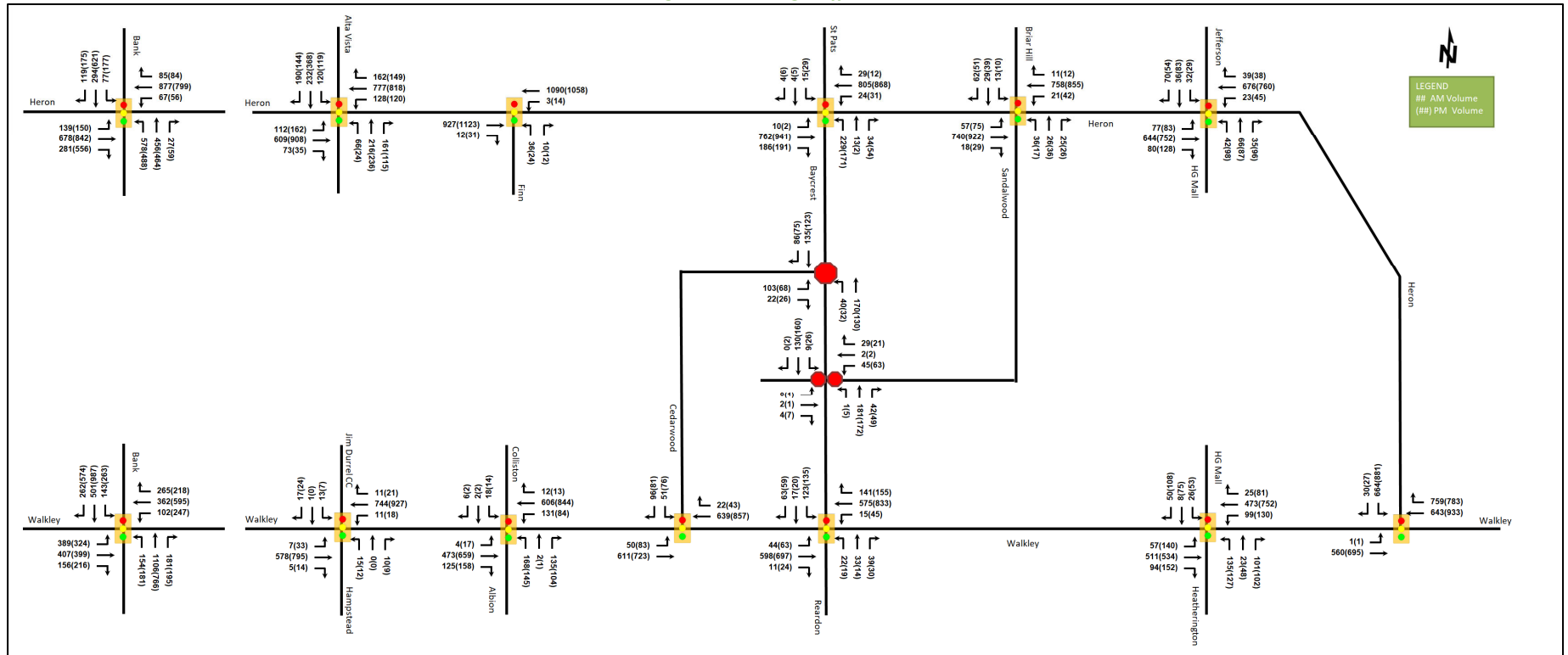


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Baycrest Drive <i>Signalized</i>	EBL	A	0.05	10.1	m1.5	A	0.01	9.0	m0.2
	EBT/R	A	0.57	10.0	33.1	B	0.63	9.2	41.0
	WBL	A	0.14	14.2	6.0	A	0.19	12.4	8.5
	WBT/R	A	0.50	12.4	49.7	A	0.47	11.6	60.2
	NB	D	0.84	48.3	71.9	C	0.79	46.0	57.7
	SBL	A	0.07	20.6	6.2	A	0.12	24.6	10.2
	SBT/R	A	0.02	15.0	3.2	A	0.04	16.2	4.6
	Overall	B	0.66	16.1	-	B	0.67	14.0	-
Heron Road & Sandalwood Drive/Briar Hill Drive <i>Signalized</i>	EBL	A	0.15	8.9	m8.5	A	0.22	8.5	m17.4
	EBT/R	A	0.34	7.8	43.0	A	0.42	8.5	116.0
	WBL	A	0.06	4.8	m3.0	A	0.15	7.6	8.8
	WBT/R	A	0.35	4.0	27.7	A	0.38	5.6	56.7
	NBL	A	0.21	33.1	11.9	A	0.10	30.2	7.1
	NBT/R	A	0.23	20.0	11.7	A	0.26	22.0	13.9
	SBL/T	A	0.19	32.4	13.1	A	0.22	32.9	14.7
	SBR	A	0.25	9.2	8.7	A	0.21	9.5	7.9
	Overall	A	0.35	7.7	-	A	0.41	8.5	-
Baycrest Drive at Cedarwood Drive <i>Unsignalized</i>	EB	A	0.20	9.3	5.3	A	0.14	8.6	3.8
	NB	A	0.30	9.6	9.8	A	0.22	8.8	6.8
	SB	A	0.30	9.4	9.8	A	0.26	8.8	8.3
	Overall	A	-	9.5	-	A	-	8.8	-
Baycrest Drive at Sandalwood Drive <i>Unsignalized</i>	EB	B	0.01	10.2	0.0	B	0.02	10.3	0.0
	WB	B	0.14	12.2	3.8	B	0.20	14.1	5.3
	NB	A	0.00	7.5	0.0	A	0.00	7.6	0.0
	SB	A	0.01	8.1	0.0	A	0.02	7.9	0.8
	Overall	A	-	2.4	-	A	-	3.1	-
Walkley Road & Albion Road/Colliston Crescent <i>Signalized</i>	EBL	A	0.04	40.0	3.8	A	0.16	41.4	9.6
	EBT	A	0.36	19.5	53.3	A	0.42	16.8	69.9
	EBR	A	0.21	4.8	12.1	A	0.22	5.7	16.8
	WBL	B	0.65	49.3	41.6	A	0.49	45.1	28.5
	WBT/R	A	0.33	10.4	58.8	A	0.47	12.7	85.2
	NBL	C	0.74	49.6	47.5	B	0.66	46.2	42.6
	NBT/R	A	0.38	7.5	13.4	A	0.33	8.5	12.5
	SBL	A	0.09	26.3	7.7	A	0.08	27.9	7.0
	SBT/R	A	0.03	15.8	3.6	A	0.02	21.8	2.7
	Overall	A	0.54	19.5	-	A	0.58	17.3	-
Walkley Road & Cedarwood Drive <i>Signalized</i>	EBL	A	0.13	7.4	10.3	A	0.26	8.7	18.1
	EBT	A	0.29	6.0	40.1	A	0.32	5.6	47.5
	WBT/R	A	0.31	9.6	53.0	A	0.40	6.1	62.9
	SBL	A	0.19	23.5	11.7	A	0.31	30.8	19.3
	SBR	A	0.30	6.8	8.8	A	0.29	8.2	9.5
	Overall	A	0.31	8.4	-	A	0.41	7.1	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Walkley Road & Baycrest Drive <i>Signalized</i>	EBL	A	0.15	7.2	3.9	A	0.29	15.0	16.7
	EBT/R	A	0.32	5.8	15.2	A	0.38	9.5	50.6
	WBL	A	0.04	6.7	m2.6	A	0.14	10.7	10.0
	WBT/R	A	0.40	6.9	22.5	A	0.53	11.0	76.8
	NB	A	0.26	13.2	14.7	A	0.19	11.8	10.7
	SBL	A	0.45	25.4	25.5	A	0.53	28.2	28.3
	SBT/R	A	0.21	7.7	9.8	A	0.21	8.0	10.1
	Overall	A	0.44	8.2	-	A	0.57	11.6	-
Heron Road & Walkley Road <i>Signalized</i>	EBL	A	0.00	14.0	1.0	A	0.01	15.0	1.0
	EBT	A	0.40	18.0	53.0	A	0.49	21.1	74.4
	WBT	A	0.47	19.1	62.8	B	0.66	24.4	108.7
	WBR	A	0.52	2.4	10.4	A	0.52	2.4	10.7
	SBL/R	B	0.62	26.9	79.4	C	0.79	34.0	121.0
	Overall	A	0.54	16.2	-	C	0.72	21.1	-
Heron Road & Jefferson Street/HG Mall <i>Signalized</i>	EBL	A	0.23	12.2	18.5	A	0.30	6.9	7.1
	EBT	A	0.33	9.9	53.1	A	0.41	4.3	21.7
	EBR	A	0.09	5.3	11.1	A	0.15	0.9	0.0
	WBL	A	0.07	8.8	6.0	A	0.15	11.2	10.5
	WBT/R	A	0.38	8.7	54.2	A	0.43	10.8	61.4
	NBL	A	0.22	28.8	13.7	A	0.44	32.2	28.2
	NBT	A	0.21	28.2	18.5	A	0.23	25.9	23.1
	NBR	A	0.13	8.4	6.7	A	0.25	6.2	10.8
	SB	A	0.47	21.8	26.6	A	0.47	26.4	37.4
	Overall	A	0.37	11.3	-	A	0.43	10.4	-
Walkley Road & Heatherington Road/HG Mall <i>Signalized</i>	EBL	A	0.14	7.2	7.2	A	0.44	12.8	21.8
	EBT	A	0.36	7.7	40.6	A	0.40	9.6	46.5
	WBL	A	0.30	12.7	20.4	A	0.56	32.0	#45.4
	WBT	A	0.29	9.1	31.5	B	0.61	22.3	78.5
	WBR	A	0.03	0.1	0.0	A	0.13	1.0	2.1
	NBL	A	0.55	29.3	29.1	B	0.69	44.0	35.1
	NBT/R	A	0.31	7.6	12.8	A	0.36	10.3	18.6
	SB	A	0.25	10.6	12.2	B	0.68	29.7	47.4
	Overall	A	0.43	10.3	-	B	0.65	18.9	-
Heron Road & Finn Court <i>Signalized</i>	EBT/R	A	0.39	3.0	m37.7	A	0.47	5.2	80.1
	WBL	A	0.01	5.7	m0.5	A	0.06	2.3	m0.8
	WBT	A	0.45	5.2	73.4	A	0.43	1.6	21.2
	NBL	A	0.18	34.7	13.4	A	0.12	33.4	10.2
	NBR	A	0.06	16.5	4.1	A	0.08	15.9	4.5
	Overall	A	0.46	4.7	-	A	0.47	3.8	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Alta Vista Drive <i>Signalized</i>	EBL	E	0.93	104.0	#54.1	F	1.37	252.4	#106.6
	EBT/R	C	0.76	33.2	81.6	E	0.94	58.4	#181.0
	WBL	F	1.06	129.3	#63.8	D	0.82	92.6	#66.6
	WBT	D	0.86	41.4	#106.0	C	0.77	42.3	132.9
	WBR	A	0.37	12.2	30.8	A	0.28	5.7	15.2
	NBL	A	0.36	32.9	22.9	A	0.16	37.4	13.4
	NBT/R	E	1.00	76.9	#126.6	C	0.77	51.3	#135.2
	SBL	A	0.60	29.0	#26.8	A	0.48	28.9	34.1
	SBT/R	B	0.70	26.0	93.7	C	0.79	40.4	169.1
	Overall	E	0.95	45.9	-	E	0.93	58.0	-
Walkley Road & Hampstead Place/Jim Durrell RC <i>Signalized</i>	EBL	A	0.02	7.1	2.5	A	0.10	6.7	7.6
	EBT/R	A	0.26	5.6	38.3	A	0.34	5.3	55.4
	WBL	A	0.02	7.1	3.3	A	0.05	6.2	4.4
	WBT/R	A	0.33	6.0	52.2	A	0.40	5.8	68.6
	NB	A	0.11	3.6	2.9	A	0.09	4.0	2.8
	SBL	A	0.06	21.1	4.6	A	0.04	25.3	3.8
	SBT/R	A	0.07	9.9	4.1	A	0.09	0.6	0.0
	Overall	A	0.32	6.0	-	A	0.38	5.6	-
Heron Road & Bank Street <i>Signalized</i>	EBL	D	0.85	62.5	#57.5	C	0.74	48.0	50.4
	EBT	A	0.56	29.1	89.2	B	0.70	35.8	127.8
	EBR	A	0.41	4.2	16.7	C	0.71	11.5	68.8
	WBL	A	0.41	41.9	29.2	A	0.51	58.9	#32.3
	WBT	E	1.00	71.7	#166.1	E	1.00	76.5	#172.3
	WBR	A	0.19	3.0	5.7	A	0.19	4.1	7.7
	NBL	E	0.96	73.0	#113.1	D	0.89	69.3	#97.2
	NBT/R	A	0.46	32.8	73.4	B	0.61	43.0	91.2
	SBL	A	0.54	63.6	34.8	C	0.77	71.8	72.2
	SBT/R	B	0.65	43.4	64.9	F	1.05	90.1	#170.8
	Overall	D	0.88	48.0	-	E	0.97	55.7	-
Walkley Road & Bank Street <i>Signalized</i>	EBL	E	0.95	82.8	#100.2	F	1.20	165.2	#88.0
	EBT	B	0.61	44.5	63.2	A	0.60	47.7	68.9
	EBR	A	0.36	4.3	9.6	A	0.49	10.9	27.3
	WBL	A	0.23	48.8	22.1	C	0.71	67.0	#60.4
	WBT/R	D	0.85	44.3	84.4	F	1.09	100.3	#173.3
	NBL	C	0.75	70.0	61.6	F	1.16	168.8	#109.3
	NBT	C	0.79	40.8	113.5	A	0.56	39.2	84.7
	NBR	A	0.35	7.8	20.8	A	0.36	6.2	18.7
	SBL	B	0.70	71.1	#33.0	B	0.69	62.7	50.4
	SBT	B	0.65	44.2	83.5	E	0.96	61.6	#189.6
	SBR	A	0.49	7.4	22.6	E	1.00	61.4	#194.9
	Overall	D	0.86	43.5	-	F	1.08	70.0	-

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

The study area intersections in the vicinity of the Heron Gate Master Plan are expected to operate satisfactorily. The Bank Street intersections for Heron Road and at Walkley Road are noted to have queuing and capacity issues. No mitigation will be discussed for the Bank Street intersections as the Heron Road intersection is undergoing reconstruction and the Walkley Road intersection is within the next phase of the project. While the timeline has

not been confirmed, the current operations will be subject to the ongoing construction activities and are monitored through that project. Similarly, the Heron Road at Alta Vista Drive will also be impacted by this project and not mitigation is discussed.

During the PM peak hour, the westbound left movement at Walkley Road at Heatherington Road/HG Mall intersection may be subject to extended queues.

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

Total Collisions		Number	%
		160	100%
Classification	Fatality	1	1%
	Non-Fatal Injury	39	24%
	Property Damage Only	119	74%
	Non-reportable	1	1%
Initial Impact Type	Approaching	3	2%
	Angle	37	23%
	Rear end	34	21%
	Sideswipe	22	14%
	Turning Movement	21	13%
	SMV Unattended	19	12%
	SMV Other	18	11%
	Other	6	4%
Road Surface Condition	Dry	119	74%
	Wet	19	12%
	Loose Snow	10	6%
	Slush	2	1%
	Packed Snow	6	4%
	Ice	4	3%
Pedestrian Involved		8	5%
Cyclists Involved		3	2%

Figure 11: Study Area Collision Records



Table 4: Summary of Collision Locations, 2018-2022

Intersections / Segments	Number	%
Intersections / Segments	160	100%
Baycrest Dr at Walkley Rd	28	18%
Heron Rd at Baycrest Dr	18	11%
Cedarwood Dr at Walkley Rd	15	9%
Walkley Rd between Baycrest Dr and Heatherington Rd	15	9%
Cedarwood Dr between Walkley Rd and Baycrest Dr	13	8%
Heron Rd at Briar Hill Dr/Sandalwood Dr	12	8%
Baycrest Dr between Heron Rd and Cedarwood Dr	8	5%
Baycrest Dr between Cedarwood Dr and Sandalwood Dr	8	5%
Heron Rd between Finn Crt & Baycrest Dr	8	5%
Heron Rd between Sandalwood Dr and Jefferson St	7	4%
Sandalwood Dr between Baycrest Dr and Heron Rd	7	4%
Walkley Rd between Cedarwood Dr and Colliston Cres	5	3%
Baycrest Dr between Sandalwood Dr and Walkley Rd	4	3%
Hampstead Pl at Walkley Rd	4	3%
Baycrest Dr at Cedarwood Dr	4	3%
Baycrest Dr at Sandalwood Dr	2	1%
Heron Rd between Baycrest Dr and Sandalwood Dr	1	1%
Walkley Rd between Cedarwood Dr and Baycrest Dr	1	1%

The intersections of Baycrest Drive at Walkley Road, Heron Road at Baycrest Drive, Cedarwood Drive at Walkley Road, Heron Road at Briar Hill Drive/Sandalwood Drive, and the segment of Cedarwood Drive between Walkley Road and Baycrest Drive and Walkley Road between Baycrest Drive and Heatherington Road are noted to have experienced higher collisions than other intersections or segments. Table 5, Table 6, Table 7, Table 8, Table 9, and Table 10 summarize the collision types and conditions for each of the locations.

Three cyclist collisions were noted during the 2018-2022 time period, one at the intersection of Heron Road at Baycrest Drive, one on the segment of Baycrest Drive between Sandalwood Drive and Walkley Road, and one on Walkley Road between Cedarwood Drive and Colliston Crescent.

One turning movement cyclist collision at the intersection of Heron Road and Baycrest Drive involved a school bus turning right while the cyclist was traveling straight in the westbound direction. One angled cyclist collision occurred on Baycrest Drive between Sandalwood Drive and Walkley Road while northbound cyclist collided with an eastbound left vehicle at/near private drive. One sideswipe cyclist collision occurred on Walkley Road between Cedarwood Drive and Colliston Crescent while eastbound vehicle changing lanes.

A total of eight pedestrian collisions were noted during the 2018-2022 time period. Two pedestrian collisions occurred at each of the intersections of Baycrest Drive at Walkley Road and Cedarwood Drive at Walkley Road and one at the intersection of Baycrest Drive at Cedarwood Drive, and each of the segments of Baycrest Drive between Cedarwood Drive and Sandalwood Drive, Heron Road between Finn Crescent and Baycrest Drive, and Walkley Road between Cedarwood Drive and Colliston Crescent.

The two pedestrian collisions occurred at the Baycrest Drive at Walkley Road were related to the northbound vehicle turning left. Two pedestrian collisions at the intersection of Cedarwood Drive at Walkley Road were related to the southbound vehicle turning left/right. The pedestrian collision at the Baycrest Drive and Cedarwood Drive intersection was noted in dark condition, however, the vehicle manoeuvre is unknown. The collision on Baycrest Drive between Cedarwood Drive and Sandalwood Drive is noted to involve with three pedestrians and a passenger van traveling northbound through, which is associated with pedestrians crossing in an area where no designated crossing is provided. The pedestrian collision on the segment of Heron Road between Finn Crescent and Baycrest Drive was related to the eastbound through vehicle in dark condition.

A fatal pedestrian collision was noted on Walkley Road between Cedarwood Drive and Colliston Crescent in September 2022 at 9:28 PM during clear conditions while westbound vehicle going through, and a major pedestrian collision was noted on Heron Road between Baycrest Drive and Finn Crescent in October 2021 at 4:02 AM during clear conditions while eastbound vehicle going through. These collisions are associated with pedestrians crossing in an area where no designated crossing is provided, indicating that the pedestrian should not have been crossing.

Table 5: Baycrest Drive at Walkley Road Collision Summary

		Number	%
Total Collisions		28	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	6	21%
	Property Damage Only	22	79%
Initial Impact Type	Angle	4	14%
	Rear end	8	29%
	Sideswipe	6	21%
	Turning Movement	5	18%
	SMV Other	5	18%
Road Surface Condition	Dry	20	71%
	Wet	1	4%
	Loose Snow	4	14%
	Slush	1	4%
	Packed Snow	1	4%
	Ice	1	4%

	Number	%
Total Collisions	28	100%
Pedestrian Involved	2	7%
Cyclists Involved	0	0%

The Baycrest Drive at Walkley Road intersection had a total of 28 collisions during the 2018-2022 time period, with 22 involving property damage only and the remaining six having non-fatal injuries. The collision types are most represented by the rear end with eight collisions, followed by six sideswipe collisions, five angle turning movement, and SMV other collision types, with the remaining four angle collisions.

From the latest detailed collision records for this intersection, the rear end collisions are predominantly involving eastbound and westbound movements (7 of 8) and on dry conditions (7 of 8). This is consistent with the congested conditions at arterial intersections. The sideswipe collisions are predominantly in the westbound direction (4 of 6), and no other patterns were noted. No specific pattern or cause were noted for other collision types.

Two pedestrian collision was noted during 2018-2022. As mentioned earlier, these were related to the northbound vehicle turning left. The inclusion of advanced pedestrian walk times may mitigate these collisions.

Table 6: Heron Road at Baycrest Drive Collision Summary

		Number	%
Total Collisions		18	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	3	17%
	Property Damage Only	15	83%
Initial Impact Type	Angle	6	33%
	Rear end	6	33%
	Sideswipe	2	11%
	Turning Movement	2	11%
	SMV Other	2	11%
Road Surface Condition	Dry	10	56%
	Wet	1	6%
	Loose Snow	4	22%
	Slush	1	6%
	Ice	2	11%
Pedestrian Involved		0	0%
Cyclists Involved		1	6%

The Heron Road at Baycrest Drive intersection had a total of 18 collisions during the 2018-2022 time period, with fifteen involving property damage only and the remaining three having non-fatal injuries. The collision types are most represented by the rear end and angle with six collisions, followed by two collisions each for sideswipe, turning movement, and SMV other collision types.

From the latest detailed collision records for this intersection, four of the six angle collisions were related to left-turn movements, with two involving northbound left turns and two involving southbound left turns. The permissive phase of the northbound and southbound left-turn movements may contribute to the turning movement collisions at this intersection. The City may explore signal timing adjustments, such as fully protected phases or increased red/yellow time, to mitigate these collisions.

As previously noted, a turning-movement cyclist collision at the intersection of Heron Road and Baycrest Drive involved a school bus turning right while the cyclist was traveling straight in the westbound direction.

Table 7: Cedarwood Drive at Walkley Road Collision Summary

Total Collisions		Number	%
		15	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	7	47%
	Property Damage Only	8	53%
Initial Impact Type	Angle	4	27%
	Rear end	4	27%
	Sideswipe	1	7%
	Turning Movement	3	20%
	SMV Other	3	20%
Road Surface Condition	Dry	12	80%
	Wet	1	7%
	Packed Snow	2	13%
Pedestrian Involved		2	13%
Cyclists Involved		0	0%

The Cedarwood Drive at Walkley Road intersection had a total of fifteen collisions during the 2018-2022 time period, with eight involving property damage only and the remaining seven having non-fatal injuries. The collision types are most represented by rear-end and angle with four collisions, followed by SMV other and turning movement each with three collisions, with the remaining one sideswipe collision. Weather conditions are not considered to affect collisions at this location.

From the latest detailed collision records for this intersection, the turning movement occurred while one vehicle making the eastbound left movements and the other traveling westbound through. The permissive phase of the eastbound left-turn movement may contribute to the turning movement collisions at this intersection. The City may explore signal timing adjustments, such as fully protected phases or increased red/yellow time, to mitigate these collisions. No specific pattern or cause were noted for other collision types.

Two pedestrian collision was noted during 2018-2022. As mentioned earlier, one was related to the southbound vehicle turning left and one tuning right. Restrictions of the right turn on red on the southbound approach or inclusion of advanced pedestrian walk times may mitigate these collisions.

Table 8: Cedarwood Drive between Walkley Road and Baycrest Drive Collision Summary

Total Collisions		Number	%
		13	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	1	8%
	Property Damage Only	12	92%
Initial Impact Type	Angle	3	23%
	Sideswipe	1	8%
	SMV Unattended	9	69%
Road Surface Condition	Dry	8	62%
	Wet	2	15%
	Packed Snow	2	15%
	Ice	1	8%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

The segment of Cedarwood Drive between Walkley Road and Baycrest Drive had a total of thirteen collisions during the 2018-2022 time period, with twelve involving property damage only and the remaining one having non-

fatal injuries. The collision types are most represented by SMV unattended with nine collisions, likely damage to parked cars, followed by three angle collisions, with the remaining one sideswipe collision. Weather conditions are not considered to affect collisions at this location.

Table 9: Walkley Road between Baycrest Drive and Heatherington Road Collision Summary

Total Collisions		Number	%
		15	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	3	20%
	Property Damage Only	11	73%
	Non-reportable	1	7%
Initial Impact Type	Angle	6	40%
	Rear end	6	40%
	Sideswipe	1	7%
	Turning Movement	1	7%
	SMV Unattended	1	7%
Road Surface Condition	Dry	14	93%
	Wet	1	7%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

The segment of Walkley Road between Baycrest Drive and Heatherington Road had a total of 15 collisions during the 2018-2022 time period, with eleven involving property damage only, one non-reportable, and the remaining three having non-fatal injuries. The collision types are most represented by angle and rear end each with six collisions, with the remaining one collision each for sideswipe, turning movement, and SMV Unattended types. Weather conditions are not considered to affect collisions at this location.

From the latest detailed collision records for this segment, the angle collisions were related to the private driveways on the south side of Walkley Road (5 out of 6). No specific pattern or cause were noted for other collision types.

Table 10: Heron Road at Sandalwood Drive/Briar Hill Drive Collision Summary

Total Collisions		Number	%
		12	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	6	50%
	Property Damage Only	6	50%
Initial Impact Type	Approaching	1	8%
	Angle	3	25%
	Rear end	1	8%
	Sideswipe	1	8%
	Turning Movement	5	42%
	Other	1	8%
Road Surface Condition	Dry	9	75%
	Wet	3	25%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

The Heron Road at Briar Hill Drive/Sandalwood Drive intersection had a total of 12 collisions during the 2018-2022 time period, with six involving property damage only and the remaining six having non-fatal injuries. The collision types are most represented by the turning movement with five collisions, followed by angle with three collisions,

with the remaining one collision each for approaching, rear end, sideswipe, and other collision types. Weather conditions are not considered to affect collisions at this location. Overall, the collisions do not denote a pattern at this intersection and no further review 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)*

The Transportation Master Plan's (2013) Rapid Transit and Transit Priority Network identify at Grade bus rapid transit corridor along Heron Road and isolated transit priority measure along Walkley Road within the Ultimate Network Concepts Network Concept diagram, however, these do not appear within the 2031 Affordable Network diagram.

2.3.1.2 *Transportation Master Plan Part 1 (2023)*

The Transportation Master Plan Part 1 provides the active transportation projects list, which includes the feasibility study of pedestrian crossings of Walkley Road at Heron Road and Canterbury High School, sidewalks along Evans Boulevard from Heron Road to Willowdale Avenue, the feasibility study of pedestrian facilities along the south side of Heron Road from Walkley Road to the existing sidewalk, separated cycling facilities on Walkley Road from Bank Street to the Airport Parkway, the feasibility study of cycling improvements to the Albion Road north corridor, including the Walkley Road intersection, and the multi-use pathway segment forming an east-west route within Alta Vista ward.

2.3.1.3 *Transportation Master Plan Part 2 (2025)*

The Transportation Master Plan Part 2 is still in public consultation, but a draft project list has been released for road and transit projects, along with the draft capital infrastructure plan.

Projects included within the draft Priority Active Transportation Project List include the feasibility study of pedestrian crossings of Walkley Road at Heron Road and Canterbury High School, sidewalks along Evans Boulevard from Heron Road to Willowdale Avenue, separated cycling facilities on Walkley Road from Bank Street to the Airport Parkway, the feasibility study of cycling improvements to the Albion Road north corridor, including the Walkley Road intersection, and the multi-use pathway segment forming an east-west route within Alta Vista ward.

Draft road projects anticipated to impact the wider area include a road widening along Airport Parkway and Walkley Road west of Airport Parkway, a new arterial road extension of Conroy Road to Hospital Link Road known as the Alta Vista Transportation Corridor. Of these road projects, only the widenings of Airport Parkway north of Hunt Club Road and widening of Walkley Road west of Airport Parkway, along with an integrated road renewal project that meets the Mainstreet improvements criteria along Bank Street between Collins Avenue and Ledbury Avenue are noted in the draft Priority Road Network.

Draft transit projects include bus rapid transit (BRT) along Heron Road continuing to St-Laurent Boulevard, continuous bus lanes on Conroy Road, and transit priority corridor along Bank Street, Walkley Road, Alta Vista Road north of Heron Road, and along the Alta Vista Transportation Corridor extension of Conroy Road. All projects are included within the draft Priority Transit Network.

2.3.1.4 *Bank Street Renewal, Riverside Drive (westbound) to Ledbury Avenue*

Bank Street renewal including cycle tracks along both sides of Bank Street and protected intersection at Walkley Road. Phase One includes Bank Street from Riverside Drive westbound to Collins Avenue, and Phase Two includes Collins Avenue to Ledbury Avenue. The full completion of Phase 1 is expected in 2027, and Phase Two will begin

following the completion of Phase 1. The functional design plan for Bank Street renewal is included in Appendix E.

2.3.1.5 Alta Vista Drive Functional Planning Study

The Alta Vista Drive Functional Planning Study was completed in 2019 and includes a mid-block road width of 11.0m, including a 3.5m general traffic lane and 2.0m buffered bike lane in each direction, elevate buffered bike lanes into cycle tracks and bend out at intersections, widen sidewalks to 2.0m on both sides of the road, reduce curb radii to assist with traffic calming, “protected intersection” layout at signalized intersections, enhance bus stops to improve transit efficiency, and replace right turn channels at Heron Road with right turn lanes. As no date is set of implementations of the project, it will not be included in the analysis.

2.3.2 Other Study Area Developments

1495 Heron Road

The proposed development includes a plan of subdivision to construct high-rise multi-family housing with 1079 units, 20 stacked townhouses, 18,000 ft² of strip retail plaza, an elementary school, 37,000 ft² of recreational community centre, and an 18,000 ft² office. The anticipated full build-out and occupancy horizon is 2032 and is anticipated to generate 394 new AM and 337 PM peak hour two-way auto trips (Stantec, 2024).

1770 Heatherington Road

The proposed development includes zoning bylaw amendment and plan of subdivision applications to construct 90 apartment units, 62 townhomes, and 6 semi-detached housing units. The anticipated full build-out and occupancy horizon is 2027 and is anticipated to generate 30 new AM and 34 PM peak hour two-way auto trips (Parsons, 2024).

1822 Bank Street

The proposed development includes official plan, zoning bylaw amendment, and plan of subdivision applications for construction of up to 1,426 residential units and approximately 750 m² (8,073 ft²) of ground floor retail space. The anticipated full build-out and occupancy horizon is 2035 and is anticipated to generate 55 new AM and 1 PM peak hour two-way auto trips (CGH, 2024).

2510 St. Laurent Boulevard

The proposed development includes zoning by-law amendment, site plan control, and draft plan of condominium applications to construct 192 back-to-back townhouse units, 36 standard townhouse units, and 175 retirement home units, for a total of 403 dwellings. The anticipated full build-out and occupancy horizon was initially anticipated to be 2024, however is not yet under construction, and the development is anticipated to generate 69 new AM and 86 PM peak hour two-way auto trips (Novatech, 2022).

3 Study Area and Time Periods

3.1 Study Area

The following study area intersections are included within the study area:

- Heron Road at:
 - Bank Street (*informational only*)
 - Alta Vista Drive
 - Finn Court
 - Baycrest Drive
 - Sandalwood Drive/Briar Hill Drive
 - Jefferson Street/HG Mall

- Walkley Road
- Baycrest Drive at:
 - Cedarwood Drive
 - Sandalwood Drive
- Walkley Road at:
 - Bank Street (*informational only*)
 - Hampstead Place/Jim Durrell RC
 - Albion Road/Colliston Crescent
 - Baycrest Drive
 - Cedarwood Drive
 - Heatherington Road/HG Mall

The boundary road will be Heron Road, Walkley Road, Baycrest Drive, Sandalwood Drive and Cedarwood Drive and no screenlines are considered as part of this analysis.

The Bank Street intersections have been included for informational purposes only.

3.2 Time Periods

The proposed redevelopment is composed residential units the AM and PM peak hours will be examined. Minimal community-oriented commercial may ultimately been included on the ground floor of the buildings along Heron Road and will need to be confirmed during the TIA reports for the site plan applications.

3.3 Horizon Years

The anticipated build-out year of the Heron Gate Official Plan Amendment build-out horizon is 2040.

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 Alta Vista have been summarized in Table 11.

Table 11: TRANS Trip Generation Manual Recommended Mode Shares – Alta Vista

Travel Mode	Multi-Unit (Low-Rise)		Multi-Unit (High-Rise)	
	AM	PM	AM	PM
Auto Driver	38%	38%	38%	45%
Auto Passenger	15%	19%	12%	16%
Transit	35%	31%	42%	28%
Cycling	1%	2%	2%	2%
Walking	10%	10%	7%	9%
Total	100%	100%	100%	100%

4.2 Trip Generation

This TIA has been prepared using the vehicle and person trip rates for the residential dwellings using the TRANS Trip Generation Manual (2020). Table 12 summarizes the person trip rates for the proposed residential land uses for each peak period.

Table 12: Trip Generation Person Trip Rates by Peak Period

Land Use	Land Use Code	Peak Period	Person Trip Rates
Multi-Unit (Low-Rise)	220 (TRANS)	AM	1.35
		PM	1.58
Multi-Unit (High-Rise)	221 & 222 (TRANS)	AM	0.80
		PM	0.90

Using the above person trip rates, the total person trip generation has been estimated. Table 13 summarizes the total person trip generation.

Table 13: Person Trip Generation by Peak Period

Land Use	Units	AM Peak Period			PM Peak Period		
		In	Out	Total	In	Out	Total
Multi-Unit (High-Rise)	5,740	1,424	3,168	4,592	2,996	2,170	5,166

Using the above mode share targets and the person trip rates, the person trips by mode have been projected. Trip generation by peak hour has been forecasted using the prescribed peak period conversion factors presented in the TRANS Trip Generation Manual (2020) for the residential component. Table 14 summarizes the residential trip generation by mode and peak hour.

Table 14: Trip Generation by Mode

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Multi-Unit (High-Rise)	Auto Driver	38%	251	587	838	45%	573	450	1,023
	Auto Passenger	12%	79	185	264	16%	204	160	364
	Transit	42%	318	743	1,061	28%	381	299	680
	Cycling	2%	16	37	53	2%	27	22	49
	Walking	7%	56	130	186	9%	136	106	242
	Total	100%	720	1,682	2,402	100%	1,321	1,037	2,358

As shown above, a total of 838 AM and 1,023 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 for the residential component, and these patterns were applied based on the build-out of Alta Vista. Table 15 below summarizes the distributions.

Table 15: OD Survey Distribution – Alta Vista

To/From	Residential % of Trips
North	35%
South	25%
East	20%
West	20%
Total	100%

4.4 Trip Assignment

Trip assignment for the 2040 full-build out is based on the previous approved Heron Gate Official Plan Amendment Transportation Impact Assessment (CGH Transportation, 2021). Table 16 summarizes the proportional assignment to the study area roadways, and Figure 12

illustrates the new site generated volumes.

Similar to the approved Heron Gate Official Plan Amendment TIA, the redevelopment is replacing the existing residential area and not a direct increase to the existing, the existing pedestrian and cycling volumes illustrated in Figure 6 and Figure 7 will be carried forward within the modeling exercise to provide a potential impact of the pedestrian crossing and bike volumes on the study area intersections. Similar to the approved Heron Gate Official Plan Amendment TIA, the redevelopment is replacing the existing residential area and not a direct increase to the existing, the existing pedestrian and cycling volumes illustrated in Figure 6 and Figure 7 will be carried forward within the modeling exercise to provide a potential impact of the pedestrian crossing and bike volumes on the study area intersections.

Table 16: Trip Assignment

To/From	Via
North	30% Heron Road (W), 5% Walkley Road (E)
South	15% Walkley Road (W), 10% Walkley Road (E)
East	10% via Heron Road, 10% via Walkley Road
West	10% Heron Road, 10% Walkley Road
Total	100%

4.4.1 Heron Gate Trip Reduction

As the Heron Gate area is redeveloped, the various phases will be demolished in advance of construction. The existing traffic for each of these areas will be removed for the full build-out 2040. Table 17 compares the existing auto trips and forecasted site-generated auto trips. Figure 13 illustrates existing auto trip reductions and Figure 14 illustrates net auto trips.

Table 17: Existing Auto Trip Volumes vs Forecasted Auto Trip Volumes

Scenario	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Existing Auto Trips	-87	-201	-288	-189	-148	-337
Proposed Auto Trips	251	587	838	573	450	1023
Difference	+164	+386	+550	+384	+302	+686

Figure 12: New Site Generation Auto Volumes

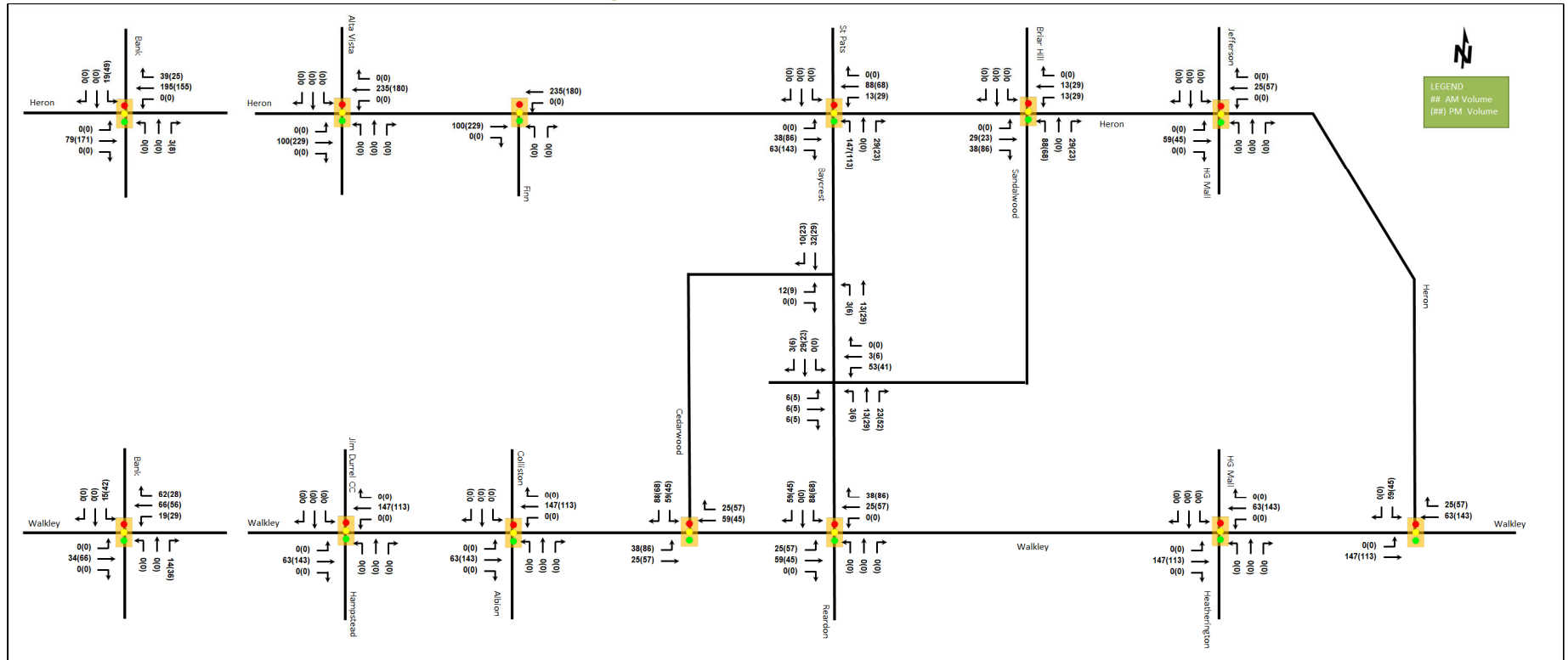


Figure 13: Existing Auto Trip Reductions

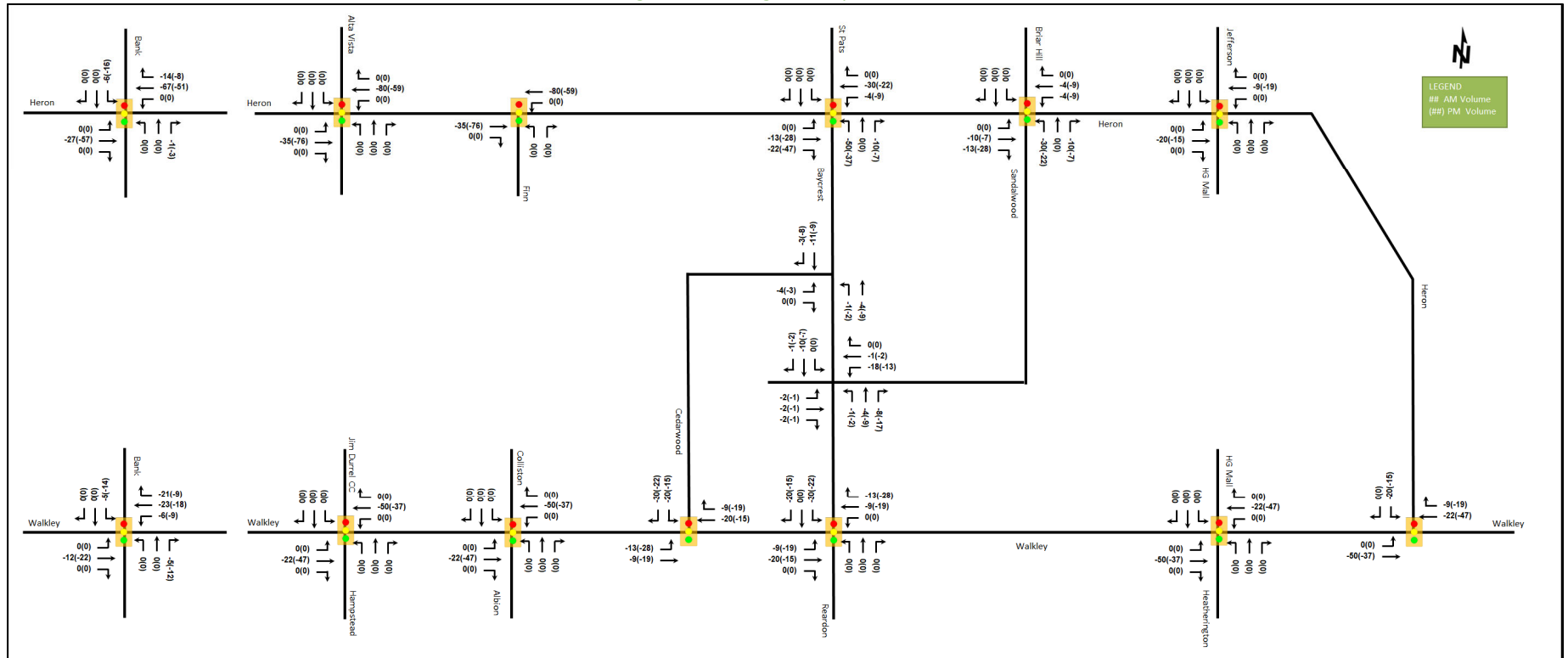
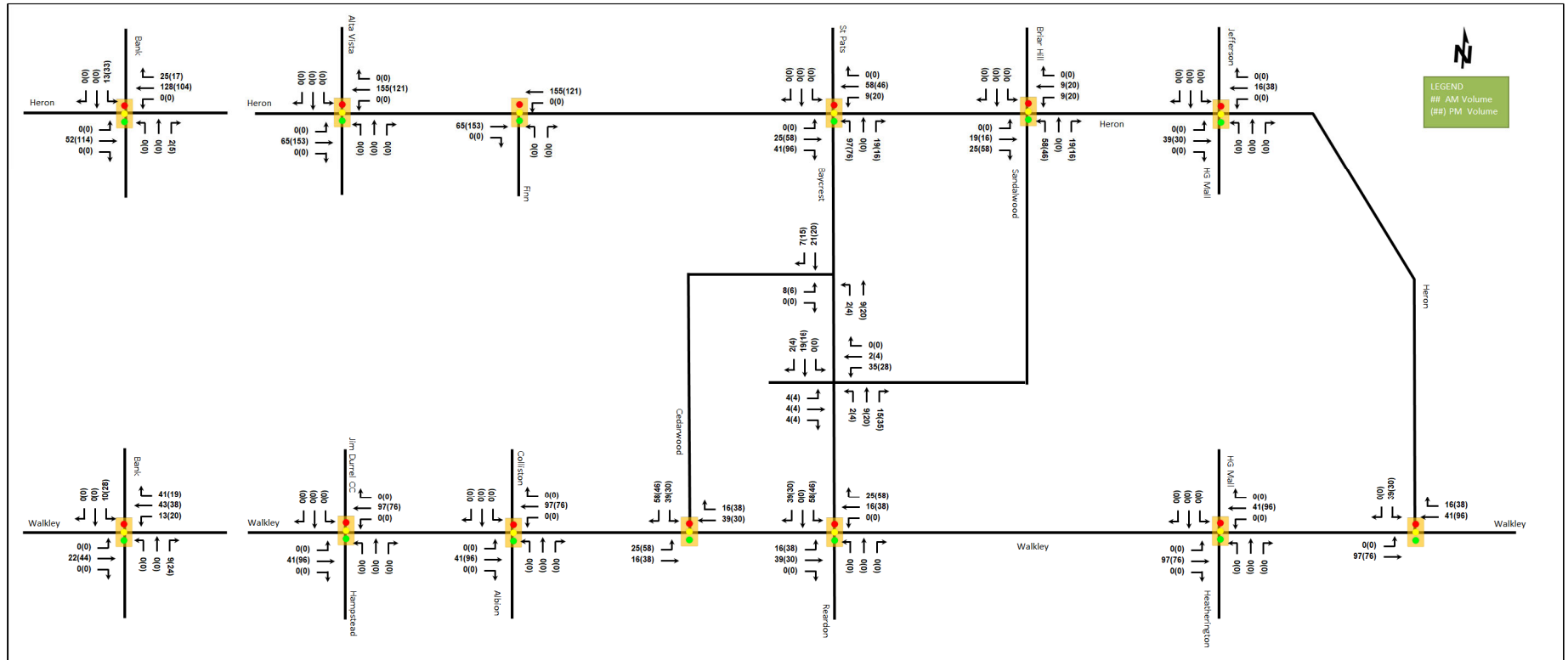


Figure 14: Forecasted Net Auto Volumes for the Redevelopment



5 Exemption Review

Table 18 summarizes the exemptions for this TIA.

Table 18: 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	Exempt
	4.1.3 New Street Networks	Only required for plans of subdivision	Required
Parking	4.2.1 Parking Supply	Only required for site plan and zoning by-law applications	Required
Boundary Street Design		All applications	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	Required
Demand Rationalization		Only required when one or more other Network Impact Modules when the development generates more than 75 auto trips	Required
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	Exempt

Module	Element	Explanation	Exempt/Required
		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.	
Transit	4.7.1 Transit Route Capacity	Only required when the development generates more than 75 transit trips	Required
	4.7.2 Transit Priority Requirements	Only required when the development generates more than 75 auto trips	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	Required
Intersection Design	4.4.1-2/4.9.1 Intersection Control	Only required when the development generates more than 75 auto trips	Required
	4.4.3/4.9.2 Intersection Design	Only required when the development generates more than 75 auto trips	Required

6 Development Design

6.1 Design for Sustainable Modes

The sustainable modes design is typically assessed during individual site plan application submissions and deal with features and design elements for the buildings' interface with onsite transportation elements and the surrounding transportation network. As the plan of subdivision and zoning applications constitute a higher-level planning exercise for the Master Plan area, the general layouts and types of facilities provided throughout the development area will be assessed. The facilities will need to align with the most recent City standards and design guidance documents at the time of the future applications. Proposed site frontage improvements, road rehabilitation for new installed services, transportation demand management measures and other high level transportation considerations are included in the subsequent sections.

Further to the Official Plan Amendment, the Master Plan considers the redevelopment areas of the Heron Gate community as a multi-modal urban community. The land use contexts that support this philosophy include the high density of existing commercial development immediately east of the site area, and the schools and recreation facilities within a 900-metre radius for the site area, and the density of residential-supportive land uses along Bank Street within a 1.3-kilometre radius of the site area.

The Heron Gate Master Plan proposes a 2-metre-wide unidirectional cycletrack and a 2-metre-wide sidewalk along both sides of Baycrest Drive from Heron Road in the north to Walkley Road in the south. The cross-section is being proposed is an adaptation of the 22A Compact "Main" Street from the Designing Neighbourhood Collector Streets guidance, which increases the existing right-of-way by 2 metres. At bus stops, local right-of-way widenings will be

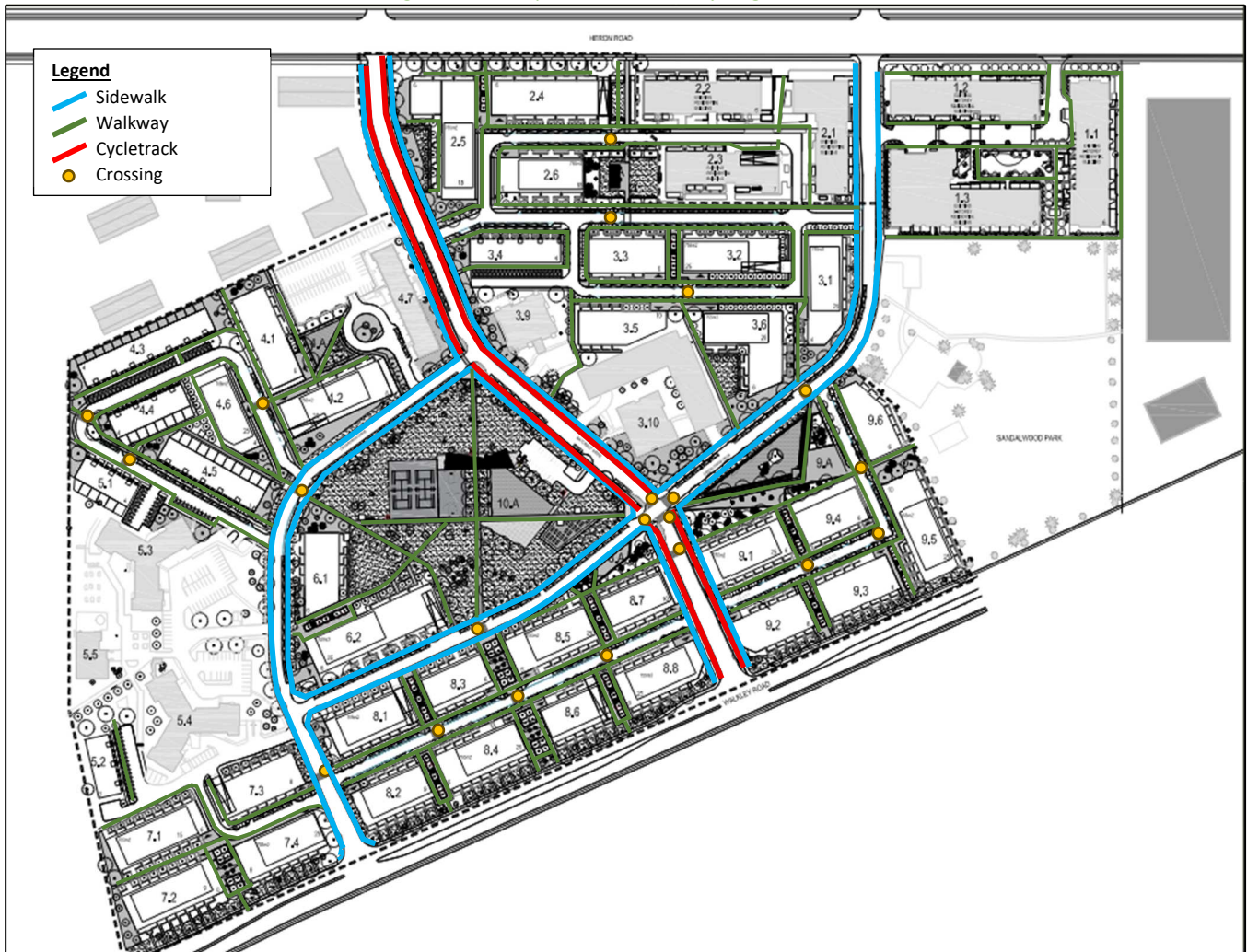
required to accommodate the incorporation of active transportation and bus stop infrastructure. Pedestrian crossings are proposed at the intersection of Baycrest Drive and Sandalwood Drive and approximately 25 metres south of the intersection linking the pedestrian corridor through the Heron Gate area. The selection of the 22A cross-section will permit the implementation of continuous facilities without the need to introduce gaps due to residual parcels not undergoing redevelopment, where a larger cross-section would not be a longer time frame improvement with no viable path to improving the community to support the phased build-out. The shift the sidewalk and cycletrack locations have been proposed to permit trees to be included within the cross-section.

The existing local roads of Sandalwood Drive and Cedarwood Drive are proposed to be formalized to standard 2 metre sidewalks and on both sides of the roadways. No change to the existing right-of-way widths is proposed. Similar to Baycrest Drive, crossings are provided on Sandalwood Drive and Cedarwood Drive where the proposed pathways intersect the roadways.

Hard surface walkways are also provided along on both sides of internal drive aisles where proposed development areas are on each side of the aisle. Widened pathways through the internal park areas and along buildings 8.7, 9.1, 9.4, and 9.6 connecting to Sandalwood Park are also proposed with a pedestrian crossing for this pathway across Baycrest Drive.

The high-level active mode network is provided in Figure 15, illustrating the elements noted above. This concept is intended to serve as a guiding illustration for future development applications and improvements within the overall development area. The timings of the improvements are envisioned to coincide with any major infrastructure upgrades and the associated reinstatement activities, and during the reconstruction of the individual site frontages as the area redevelops.

Figure 15: Concept Pedestrian and Cycling Network



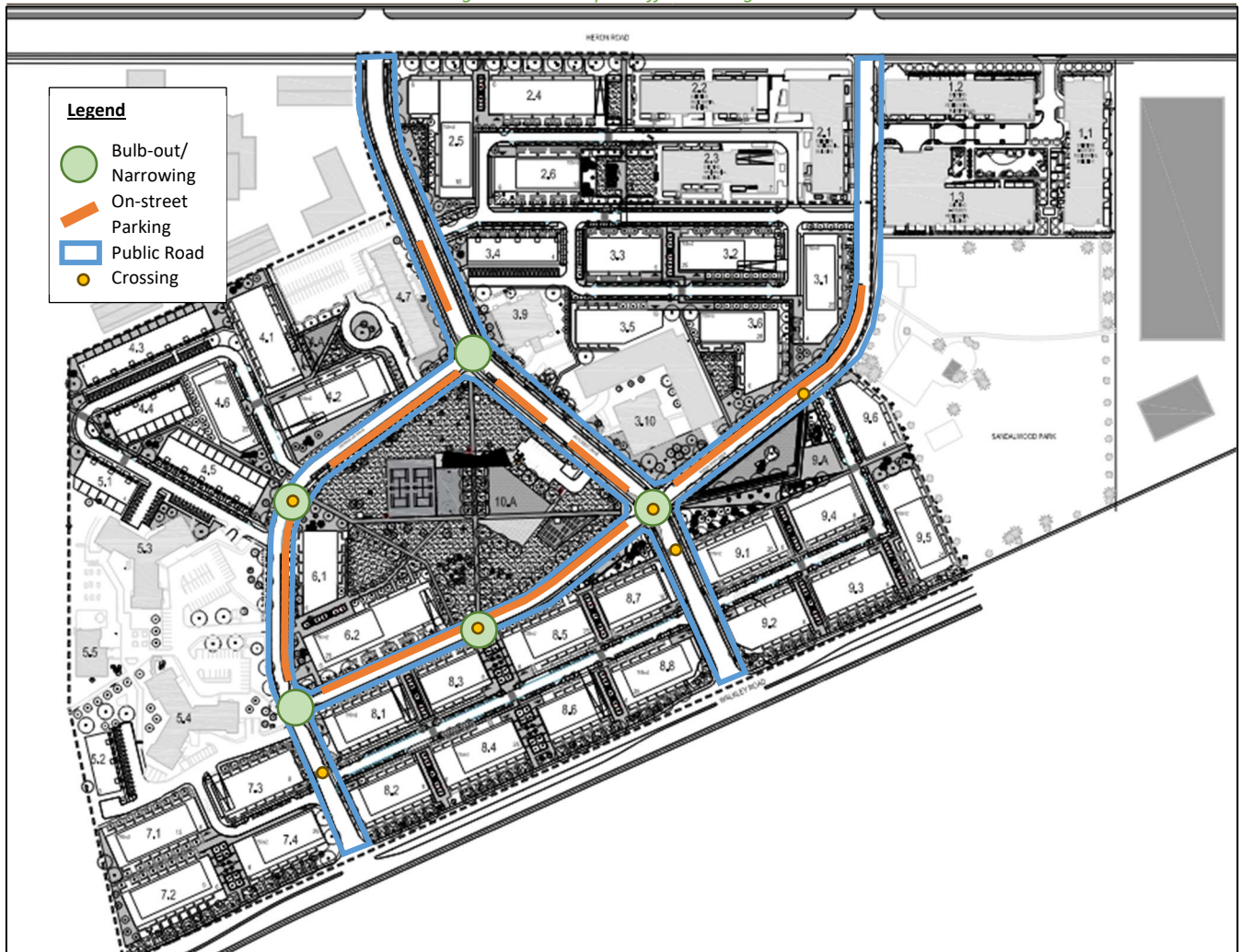
6.2 New Street Networks

Existing public roads through the redevelopment area include Baycrest Drive, Cedarwood Drive, and Sandalwood Drive east of Baycrest Drive. The existing road network throughout the study area is to be functionally conserved by the redevelopment, however the 20.0 metre public right-of-way of Sandalwood Drive is proposed to be extended through Baycrest Drive to intersect with Cedarwood Drive. The cross-section is proposed to be consistent with the City standard 20.0 metre cross-section, with sidewalks on both sides of the road.

In general, the roadway concepts have incorporated traffic calming elements such as narrowing at local road intersections, pedestrian crossings, enhanced bus stops and the inclusion of on-street parking. These elements are intended to form the basis of meeting the 30 km/h speed policy. Future roadway modification approvals may be required prior to implementation.

A generalized road concept is illustrated in Figure 16 and the improvements are envisioned to coincide with any major infrastructure upgrades during reinstatement and along site-specific frontages during construction. The timelines of the individual improvements will be determined through the individual TIAs and servicing studies as redevelopment occurs.

Figure 16: Concept Traffic Calming Plan



6.3 Circulation and Access

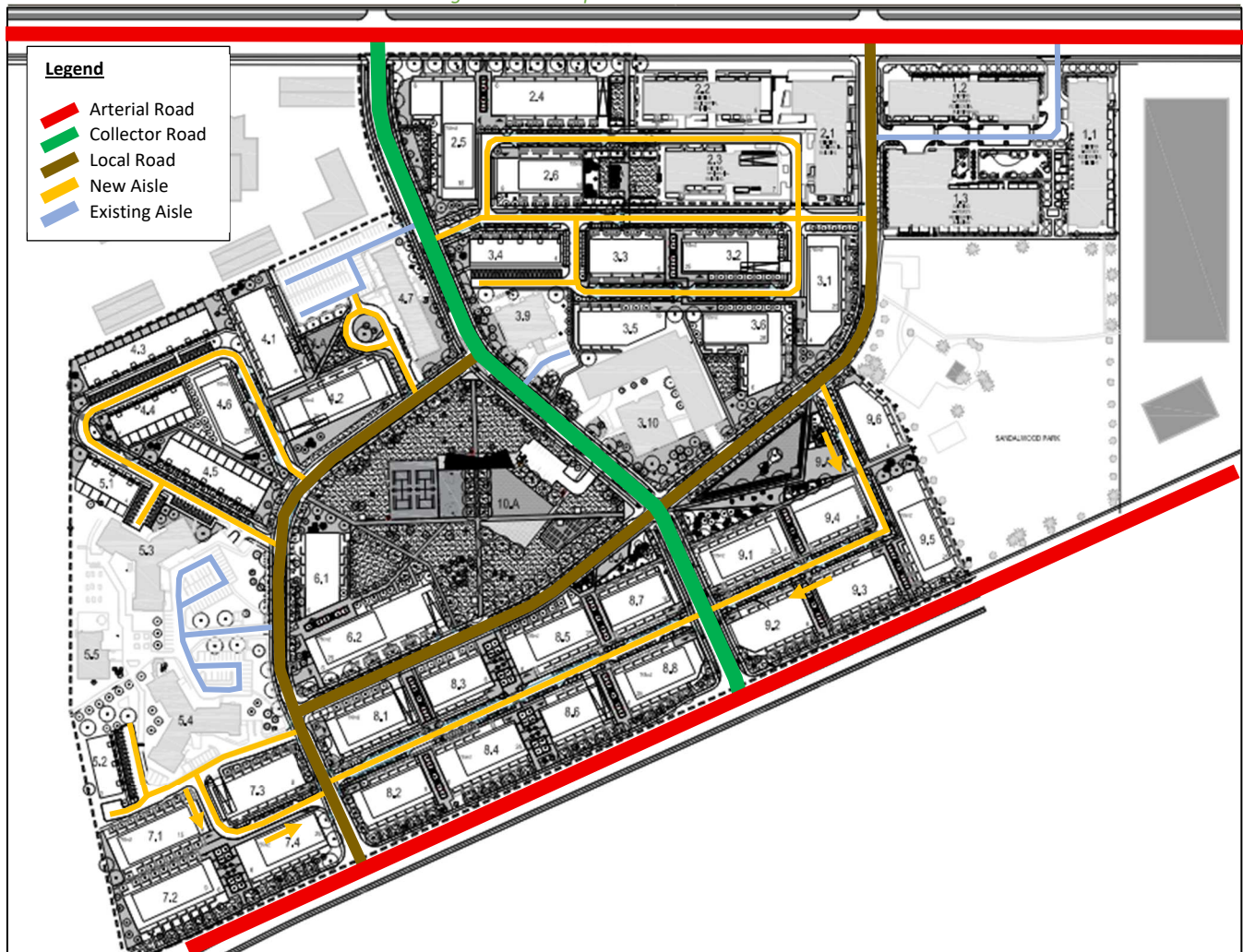
Access to the arterial Heron Road is provided via the collector road of Baycrest Drive and local road of Sandalwood Drive. Access to the arterial Walkley Road is provided via the local road of Cedarwood Drive and collector road of Baycrest Drive. As noted in Section 6.1, surface parking is located along the public roadways. New private drive aisles for the various buildings and phases of development are proposed to connect to these public roads, along with those existing drive aisle connections to be retained. Two of the drive aisles accessing Cedarwood Drive and Baycrest Drive between Walkley Road and Sandalwood Drive are proposed to be one-way, outbound at these intersections, limiting queueing on the public roads in proximity to the arterial Walkley Road.

Parallel parking and limited bay parking comprising small surface parking lots will be provided along most internal drive aisles. Underground parking, of which most of the site parking provision is comprised, is accessed by ramps onto the public roads and private drive aisles. Ramps to underground parking are recommended to provide a main slope of 10% or less where possible where they provide access to bike parking. If cycle-friendly grades cannot be provided due to geometric constraints, an absolute maximum main slope of 20% is recommended, or 15% where feasible. Transition slopes at least three metres in length are recommended to be employed to ensure grade breaks do not exceed 8% between any two ramp segments or landings.

Excluding parking lanes, the new drive aisles are proposed to be a minimum of 6.0 metres in width, with widths of 6.5 metres and 6.7 metres selectively employed throughout the development area. Fire services are anticipated to access the site buildings that front public roads via those rights-of-way, and via the network of drive aisles for buildings away from the public roads. All fire routes are recommended to meet the minimum fire lane geometry including a width of 6.0 metres and with centreline radii of 12.0-metres. Waste collection details will be determined through the future site plan applications.

The conceptual layout of drive aisles and the public roads they access is illustrated in Figure 17.

Figure 17: Concept Access and Circulation



7 Parking

7.1 Parking Supply

A total of 6,308 vehicle parking spaces are proposed within the development. The estimated parking requirement from the Zoning By-Law is 6,888 residential parking spaces and 1,148 visitor parking spaces for a total of 8,036 vehicle parking spaces, along with 2,870 bicycle parking spaces. The site is proposed to be 1,728 vehicle parking spaces below this theoretical provision; however this target is noted not to be consistent with the evolution of the area, and recent parking provision directions within the city. The draft Zoning By-Law proposes the elimination

of vehicle parking minima in the city and thus any minimum rate proposed is not anticipated to be applicable for the majority and possibly all of the future development applications for the area considered. In the interim, the proposed parking rate of 1.1 spaces per unit is a reasonable target for the combined residential and visitor parking spaces for the development.

Beyond the zoning considerations, overall site parking will be determined through future site plans based on market conditions for the demand of offering residents the flexibility of owning a car for periodic use, rather than relying on one for commuting, consistent with the forecasted vehicle trip generation.

It is recommended that the minimum bicycle parking rate from the zoning by-law be met.

8 Boundary Street Design

Table 19 summarizes the MMLOS analysis for the boundary streets of Heron Road, Walkley Road, Baycrest Drive, Sandalwood Drive and Cedarwood Drive. The existing and widening/future conditions are split into separate rows. The widening conditions are conceptual only and use the assumed Baseline BRT as a proxy condition along Heron Road and standard arterial road cross-section and protected intersection along Walkley Road, collector road guidelines and conceptual cross-sections for Baycrest Drive and current local road cross-sections for Sandalwood Drive and Cedarwood Drive. The boundary street analysis is based on the policy area for within 300m of a school to the west of Baycrest Drive on both Heron Road and Walkley Road, and the policy area of General Urban along Heron Road and Arterial Mainstreet along Walkley Road to the area east of Baycrest Drive. The MMLOS worksheets has been provided in Appendix F.

Table 19: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Heron Road east of Baycrest Drive	Ex.	D	C	E	C	E	B	A	D
	Fut.	C	C	A	C	A	B	C	D
Heron Road west of Baycrest Drive	Ex.	D	A	E	C	E	A	A	D
	Fut.	C	A	A	C	A	A	C	D
Walkley Road east of Baycrest Drive	Ex.	F	C	E	B	D	D	A	D
	Fut.	C	C	A	B	D	D	A	D
Walkley Road west of Baycrest Drive	Ex.	F	A	E	A	D	D	A	D
	Fut.	C	A	A	A	D	D	A	D
Baycrest Drive	Ex.	C	A	D	D	-	-	-	-
	Fut.	B	A	A	D	-	-	-	-
Sandalwood Drive	Ex.	B	C	D	D	-	-	-	-
	Fut.	B	C	A	D	-	-	-	-
Cedarwood Drive	Ex.	C	A	D	D	-	-	-	-
	Fut.	B	A	A	D	-	-	-	-

Heron Road, Walkley Road, Baycrest Drive, and Cedarwood Drive do not meet the pedestrian LOS targets in the existing conditions and Heron Road west of Baycrest Drive, Walkley Road west of Baycrest Drive, Baycrest Drive and Cedarwood Drive will not meet the pedestrian LOS targets in the future conditions due to the proximity to school zones requiring a target of A. To meet the pedestrian targets, the sidewalks would need to be widened to more than two meters and boulevards wider than two meters would need to be provided.

Heron Road and Walkley Road do not meet the bicycle LOS targets in the existing conditions. Dedicated facilities would need to be provided in both directions to meet the cycling targets. It is anticipated that the future City widening/revitalization projects would upgrade the corridor to meet the targets.

Heron Road does not meet the transit LOS in the existing conditions due to the mixed traffic lanes. The inclusion of bus lanes in the future conditions along Heron Road will address this mode.

Heron Road and Walkley Road will meet the truck LOS targets in the existing and future conditions.

9 Transportation Demand Management

9.1 Context for TDM

The implementation of the Heron Road widening/future BRT have no confirmed date. Therefore, the mode shares used within the TIA represent the unmodified district mode shares. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided to encourage shifts towards sustainable modes.

Beyond the transportation network context, the Heron Gate community is well situated from a supporting land use perspective with Heron Gate Mall to the east, a number of schools located in the area, employment areas to the east, and commercial/retail services provided along Bank Street. It is also expected that Walkley Road will redevelop as well to match the arterial mainstreet zoning and provide additional supporting services.

On-site tenant vehicle parking is proposed at an approximate rate of 1.1 spaces per unit, which is reduced from the typical required values from the current Zoning By-Law.

While no design priority areas are within the Heron Gate area, Walkley Road borders the site and is designated as an Arterial Mainstreet design area. Bank Street is also an Arterial Mainstreet design area and falls within the Bank Street Community Design Plan area.

The total bedroom count within the development is subject to the final unit count and product styles. No age restrictions are noted.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on auto travel and transit, and those assumptions have been carried through the analysis. Most study area intersections are anticipated to have the residual capacity, and as the unmodified district mode shares have been applied, risks to other network users from failing to meet mode share targets are low.

9.3 TDM Program

The “suite of post occupancy TDM measures” has been summarized in the TDM checklists for the residential land uses and is provided in Appendix G. The key TDM measures recommended to be carried forward within the Heron Gate zoning by-law amendment and plan of subdivision include:

- Building Component Measures:
 - Reduction of minimum parking ratio, where possible and supported by future market conditions
 - Bike parking ratio of 0.5-1.0 spaces per unit
 - Provide low grade underground garage ramps (<10%), if bike parking is located underground
 - Provide secure bike parking, with easy access from outside
 - Provide bike repair station in secure bike storage areas
 - Provide real-time transit arrival information display at entrances/building lobbies
 - Where adjacent to transit routes, integrate transit stops into building design
 - Posting of pedestrian, cycling, and transit information and maps at primary entrances/exits
 - Inclusion of a 1-year or 6-month Presto card for initial occupancy of rental units, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site

- Unbundle parking cost from purchase or rental costs
- Exterior/Community Component Measures:
 - Provide bike repair station public/park space
 - Contract with provider to install on-site bikeshare station (or other applicable micromobility options)
 - Contract with provider to install on-site carshare vehicles and promote their use by residents
 - Integration of transit stops with adjacent buildings, or improvement of existing stops to City standards for waiting area and shelters
- Monitoring Measures:
 - Conduct travel survey prior to move-in to establish baseline behaviours
 - Conduct travel survey 1 year after move-in to track effectiveness of TDM measures
 - Coordinate survey results with City TDM Coordinator

The above measures are not considered to be mandatory for all areas within Heron Gate but should be used as a toolbox of solutions within the site/building design to achieve the desired modal shifts beyond the shares assumed within this study.

10 Background Network Travel Demands

10.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3, and Bank Street Renewal will be incorporated into the analysis. No timeline is available on the Heron Road continuous transit priority lanes or the Walkley Road and Airport Parkway widenings, and thus effects from these projects will not be incorporated into the analysis.

10.2 Background Growth

A review of the background projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the forecasted background growth context for each of the study area roadways. As growth within the City is not a linear process, a comparison of the existing volumes to the forecasted 2031 volumes has been included to determine how regional development has occurred and the impact on the study area. Table 20 summarizes the results of the model, and the projections are provided in Appendix H.

Table 20: TRANS Regional Model Projections – Study Area Growth Rates (AM Peak)

Street	Direction Growth % from 2011 to 2031		Direction Growth % from Existing to 2031	
	Eastbound	Westbound	Eastbound	Westbound
Heron Road	0.39%	-0.21%	0.17%	-0.04%
Heron Road at Bank Street	0.31%	-0.32%	-0.30%	-1.09%
Walkley Road	1.43%	0.52%	-1.82%	-3.37%
Walkley Road at Bank Street	1.12%	0.82%	0.08%	-2.18%
	Northbound	Southbound	Northbound	Southbound
Briar Hill Drive	-0.27%	-1.04%	0.70%	6.41%
Baycrest Drive at Heron Road	-0.41%	-0.89%	-1.95%	-6.92%
Baycrest Drive at Walkley Road	0.57%	-0.51%	1.84%	-0.65%
Alta Vista Drive	1.06%	-1.23%	1.30%	-4.44%
Heatherington Road	0.40%	-0.28%	15.14%	12.30%
Albion Road	0.93%	-3.27%	-4.65%	-9.51%
Bank Street at Heron Road	0.20%	0.18%	1.52%	-0.52%
Bank Street at Walkley Road	0.18%	-0.29%	0.52%	-2.38%

In general, the TRANS forecasted volumes illustrate minimal or negative growth rates from 2011 to 2031. When compared to the existing volumes, the background growth in the area has not proceeded in a linear rate. Heron Road and Walkley Road have grown higher than the forecasted volumes and the various intersection roadways have similarly grown higher than the forecasted volumes. Given that roadways have a finite capacity and cannot grow unconstrained, the growth rates from the existing volumes to 2031 will be used to generate the study area growth rates. Table 21 summarizes the applied growth rates.

Table 21: Study Area Growth Rates

Street	Direction Growth %	
	Eastbound	Westbound
Heron Road	0.25%(0.00%)	0.00%(0.25%)
Walkley Road	0.00%(0.00%)	0.00%(0.00%)
	Northbound	Southbound
Baycrest Drive	0.00%(0.00%)	0.00%(0.00%)
Albion Road		
Briar Hill Drive	0.75%(5.00%)	5.00%(0.75%)
Heatherington Road	0.50%(0.00%)	0.00%(0.50%)
Alta Vista Drive	1.25%(0.00%)	0.00%(1.25%)
Bank Street	1.50%(0.00%)	0.00%(1.50%)

Format: AM (PM) growth percentage

10.3 Other Developments

The background developments explicitly considered in the background conditions (Section 10.2) include:

- 1495 Heron Road
- 1770 Heatherington Road
- 1822 Bank Street
- 2510 St. Laurent Boulevard

The background development volumes within the study area have been provided in Appendix I.

11 Demand Rationalization

11.1 2040 Future Background Intersection Operations

Figure 18 illustrates the 2040 background volumes and Table 22 summarizes the 2040 background intersection operations. The existing vehicle counts have been balanced throughout the network before the application of the background growth and development volumes to arrive at the future background volumes. Signal timing optimizations were made at various study area intersections. The level of service for signalized intersections is based on v/c calculations for individual lane movements and HCM v/c calculations for the overall intersection, and average delay for unsignalized intersections. The synchro worksheets for the 2040 future background horizon are provided in Appendix J.

Figure 18: 2040 Future Background Volumes

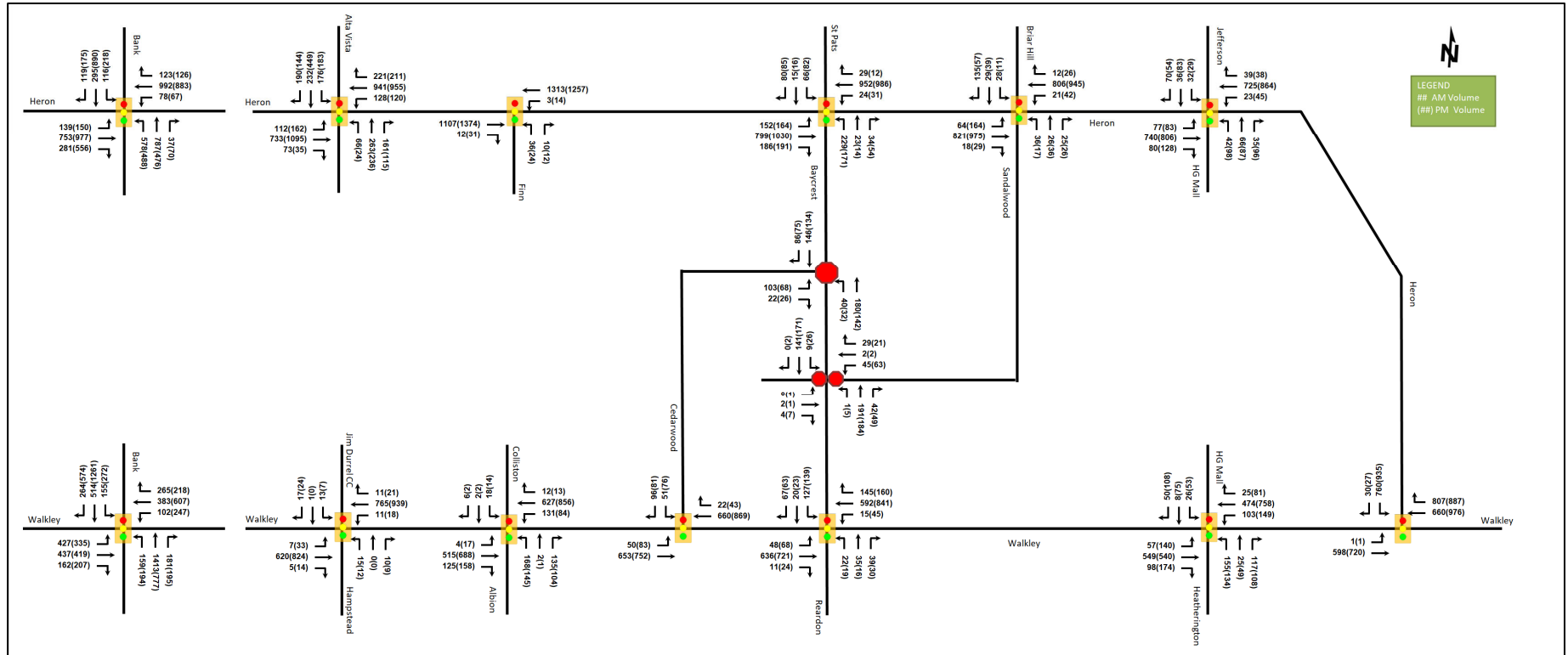


Table 22: 2040 Future Background Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Baycrest Drive <i>Signalized</i>	EBL	B	0.68	32.3	#54.8	B	0.61	21.2	#53.6
	EBT/R	A	0.54	10.4	33.7	B	0.61	9.4	45.8
	WBL	A	0.11	13.5	m5.7	A	0.16	11.6	7.6
	WBT/R	A	0.53	12.5	54.3	A	0.48	11.6	60.7
	NB	D	0.84	49.9	68.8	C	0.79	47.4	56.0
	SBL	A	0.26	24.8	17.3	A	0.32	29.1	21.3
	SBT/R	A	0.19	7.4	11.1	A	0.25	8.7	12.3
	Overall	C	0.78	17.1	-	B	0.64	14.7	-
Heron Road & Sandalwood Drive/Briar Hill Drive <i>Signalized</i>	EBL	A	0.16	8.4	m9.7	A	0.44	14.7	#49.7
	EBT/R	A	0.36	8.4	44.1	A	0.40	7.8	107.1
	WBL	A	0.05	4.8	m2.7	A	0.12	7.5	m7.9
	WBT/R	A	0.36	4.4	26.0	A	0.38	5.8	57.6
	NBL	A	0.19	32.6	11.0	A	0.09	29.9	6.6
	NBT/R	A	0.21	19.7	10.9	A	0.23	21.9	13.0
	SBL/T	A	0.26	34.0	15.5	A	0.21	32.7	14.1
	SBR	A	0.40	8.7	11.8	A	0.21	9.5	7.9
	Overall	A	0.37	8.2	-	A	0.38	8.5	-
Baycrest Drive at Cedarwood Drive <i>Unsignalized</i>	EB	A	0.18	9.1	4.5	A	0.13	8.5	3.0
	NB	A	0.28	9.4	8.3	A	0.21	8.6	6.0
	SB	A	0.28	9.2	9.0	A	0.25	8.7	7.5
	Overall	A	-	9.3	-	A	-	8.6	-
Baycrest Drive at Sandalwood Drive <i>Unsignalized</i>	EB	B	0.01	10.1	0.0	B	0.01	10.2	0.0
	WB	B	0.13	11.8	3.0	B	0.17	13.5	4.5
	NB	A	0.00	7.5	0.0	A	0.00	7.6	0.0
	SB	A	0.01	8.1	0.0	A	0.02	7.9	0.8
	Overall	A	-	2.2	-	A	-	2.8	-
Walkley Road & Cedarwood Drive <i>Signalized</i>	EBL	A	0.11	7.1	9.2	A	0.21	7.7	15.3
	EBT	A	0.28	6.0	38.4	A	0.30	5.4	43.9
	WBT/R	A	0.29	9.3	48.4	A	0.37	5.8	55.5
	SBL	A	0.17	23.1	10.9	A	0.29	30.2	17.7
	SBR	A	0.28	6.9	8.4	A	0.27	8.3	8.9
	Overall	A	0.29	8.1	-	A	0.36	6.8	-
Walkley Road & Baycrest Drive <i>Signalized</i>	EBL	A	0.13	6.9	3.8	A	0.24	13.2	14.8
	EBT/R	A	0.30	5.6	14.4	A	0.35	9.1	46.4
	WBL	A	0.03	7.0	m2.5	A	0.11	10.2	9.0
	WBT/R	A	0.36	6.8	22.3	A	0.48	10.2	66.9
	NB	A	0.25	13.4	14.0	A	0.18	11.9	10.2
	SBL	A	0.41	24.6	23.7	A	0.50	27.2	26.3
	SBT/R	A	0.21	7.9	9.8	A	0.21	8.3	10.1
	Overall	A	0.37	8.1	-	A	0.48	11.0	-
Heron Road & Walkley Road <i>Signalized</i>	EBL	A	0.00	14.0	1.0	A	0.01	15.0	1.0
	EBT	A	0.38	17.8	50.7	A	0.46	20.5	68.4
	WBT	A	0.44	18.6	57.3	B	0.62	23.5	100.0
	WBR	A	0.51	2.3	10.2	A	0.53	2.4	10.7
	SBL/R	B	0.64	27.3	81.7	C	0.75	32.5	113.2
	Overall	A	0.57	16.2	-	B	0.68	20.1	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Jefferson Street/HG Mall <i>Signalized</i>	EBL	A	0.20	11.7	17.1	A	0.28	6.6	5.1
	EBT	A	0.34	9.9	54.9	A	0.39	4.4	16.3
	EBR	A	0.08	5.2	9.4	A	0.13	0.5	1.9
	WBL	A	0.06	8.8	5.5	A	0.13	10.6	9.4
	WBT/R	A	0.36	8.5	51.9	A	0.43	10.7	62.4
	NBL	A	0.19	28.1	12.4	A	0.38	30.6	25.4
	NBT	A	0.19	28.0	17.1	A	0.21	25.8	21.4
	NBR	A	0.12	8.6	6.3	A	0.23	6.5	10.2
	SB	A	0.42	19.9	23.1	A	0.43	25.4	33.8
	Overall	A	0.37	10.9	-	A	0.43	10.1	-
Walkley Road & Heatherington Road/HG Mall <i>Signalized</i>	EBL	A	0.12	6.8	5.6	A	0.36	11.2	18.8
	EBT	A	0.35	7.6	36.6	A	0.37	8.8	40.1
	WBL	A	0.27	12.2	18.8	A	0.54	30.0	#45.9
	WBT	A	0.26	9.0	28.1	A	0.54	20.6	69.0
	WBR	A	0.03	0.1	0.0	A	0.12	0.5	0.7
	NBL	A	0.56	29.5	30.1	B	0.64	40.2	33.7
	NBT/R	A	0.32	7.4	12.9	A	0.35	10.4	18.4
	SB	A	0.23	10.5	11.4	B	0.62	27.0	42.8
	Overall	A	0.40	10.3	-	A	0.53	17.5	-
Walkley Road & Albion Road/Colliston Crescent <i>Signalized</i>	EBL	A	0.04	40.0	3.8	A	0.14	41.2	8.9
	EBT	A	0.34	18.6	52.1	A	0.39	15.6	62.3
	EBR	A	0.18	4.1	10.1	A	0.20	4.9	13.9
	WBL	A	0.60	46.7	36.7	A	0.46	45.0	26.4
	WBT/R	A	0.31	9.6	52.2	A	0.42	11.7	72.8
	NBL	B	0.70	48.4	44.0	B	0.62	44.4	39.2
	NBT/R	A	0.36	8.0	13.1	A	0.32	8.8	12.2
	SBL	A	0.08	27.0	7.4	A	0.07	28.4	6.6
	SBT/R	A	0.03	17.0	3.4	A	0.02	22.2	2.8
	Overall	A	0.46	18.5	-	A	0.44	16.3	-
Heron Road & Finn Court <i>Signalized</i>	EBT/R	A	0.42	2.9	m40.1	A	0.51	5.6	93.4
	WBL	A	0.01	5.7	m0.5	A	0.06	2.8	m0.9
	WBT	A	0.49	5.2	79.9	A	0.46	2.0	30.1
	NBL	A	0.16	34.3	12.4	A	0.11	33.0	9.5
	NBR	A	0.06	16.7	4.0	A	0.07	16.4	4.2
	Overall	A	0.48	4.6	-	A	0.50	4.2	-
Heron Road & Alta Vista Drive <i>Signalized</i>	EBL	E	0.97	119.9	#51.6	D	0.90	101.8	#81.9
	EBT/R	C	0.75	31.4	85.1	D	0.84	41.0	163.7
	WBL	E	0.96	100.5	#55.9	E	0.92	118.0	#68.3
	WBT	D	0.85	36.6	#106.8	C	0.76	39.7	136.5
	WBR	A	0.40	10.8	33.0	A	0.33	5.4	16.8
	NBL	A	0.31	31.1	20.7	A	0.27	45.3	13.3
	NBT/R	E	1.00	76.7	#128.1	C	0.72	48.5	112.0
	SBL	E	0.96	82.2	#55.8	D	0.82	62.1	#65.6
	SBT/R	B	0.67	25.8	84.0	E	0.94	61.8	#215.1
	Overall	E	0.91	45.0	-	D	0.88	48.9	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Walkley Road & Hampstead Place/Jim Durrell RC Signalized	EBL	A	0.01	7.0	2.3	A	0.08	5.7	6.6
	EBT/R	A	0.25	5.5	36.8	A	0.30	4.3	50.5
	WBL	A	0.02	7.1	3.1	A	0.04	5.6	4.2
	WBT/R	A	0.31	5.9	47.4	A	0.34	4.6	60.3
	NB	A	0.09	3.1	2.4	A	0.09	3.6	2.5
	SBL	A	0.06	21.0	4.4	A	0.03	25.1	3.5
	SBT/R	A	0.06	10.3	3.8	A	0.07	0.5	0.0
	Overall	A	0.30	5.9	-	A	0.33	4.5	-
Heron Road & Bank Street Signalized	EBL	D	0.86	64.7	#51.0	F	1.03	115.5	#68.0
	EBT	A	0.52	26.2	84.5	C	0.78	40.7	141.2
	EBR	A	0.36	3.8	15.2	B	0.70	14.2	75.5
	WBL	A	0.39	36.6	28.7	C	0.72	82.5	#41.2
	WBT	D	0.89	48.1	#152.1	D	0.90	56.7	#149.5
	WBR	A	0.21	1.4	2.0	A	0.24	8.0	15.7
	NBL	E	1.00	85.7	#107.4	F	1.01	98.6	#101.4
	NBT/R	D	0.81	45.6	118.8	A	0.55	40.0	81.7
	SBL	C	0.78	86.5	#55.9	C	0.80	73.5	79.6
	SBT/R	A	0.59	41.2	57.8	F	1.02	76.1	#192.5
	Overall	D	0.86	45.3	-	E	0.98	56.9	-
Walkley Road & Bank Street Signalized	EBL	D	0.88	70.2	#97.9	F	1.02	111.1	#77.0
	EBT	A	0.59	44.2	61.0	A	0.57	47.1	65.0
	EBR	A	0.34	3.6	7.1	A	0.44	9.8	22.8
	WBL	A	0.21	48.5	20.3	A	0.56	59.5	46.0
	WBT/R	D	0.83	43.3	77.5	E	0.97	69.1	#147.4
	NBL	A	0.53	58.0	28.8	F	1.03	133.1	#52.1
	NBT	F	1.23	147.4	#258.8	C	0.75	46.4	121.4
	NBR	A	0.29	3.1	9.1	A	0.34	6.3	17.1
	SBL	E	0.92	108.4	#39.3	B	0.70	64.4	48.5
	SBT	A	0.51	36.9	72.0	F	1.02	70.4	#221.6
	SBR	A	0.42	5.7	17.5	D	0.84	32.0	#146.9
	Overall	F	1.06	75.8	-	E	1.00	60.0	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00

Delay = average vehicle delay in seconds
m = metered queue
= volume for the 95th %ile cycle exceeds capacity

The study area intersections in the vicinity of the Heron Gate Master Plan are expected to operate satisfactorily. Extended queuing may occur at the eastbound left movement at the intersection of Heron Road at Baycrest Drive during both peak hours and the eastbound left movement at the intersection of Heron Road at Sandalwood Drive/Briar Hill Drive during the PM peak hour.

Capacity issues continue to be noted at the intersections of Heron Road at Bank Street and Walkley Road at Bank Street. The peak direction demands will become more prominent at both intersections and impact the capacity of opposing turning movement phases. The post construction conditions will require continued City operational monitoring and adaptation to travel demands/changes.

11.2 Demand Rationalization Conclusion

The adjacent study area intersections and roadways have residual capacity and not changes to the forecasted trips are required.

While the existing conditions require a balancing of vehicular demands at the Bank Street intersections, the future geometric changes for Bank Street will also balance all modes with reductions expected in vehicular capacity. The signal timing monitoring and operational updates by the City will be required to optimize the conditions as they develop in the future. Heron Road at Alta Vista Drive will also be undergoing future geometric changes and operational adjustments would also be required to the signal timing.

In relation to the vehicular demands, the northbound AM peak hour volumes along Bank Street are identified as a key movement that will need to be considered by the City in the various infrastructure implementation timelines. Widening of the Airport Parkway or bus lane implementation along Conroy Road and Heron Road are two nearby projects that could alleviate this flow, through additional vehicular capacity or transition from car to bus travel. Given the City objectives for increases to sustainable travel, the bus lanes may be of higher priority.

12 Transit

12.1 Route Capacity

In Section 4.2 the trip generation by mode was estimated, including an estimate of the number of transit trips that will be generated by the proposed development. Table 23 summarizes the transit trip generation.

Table 23: Trip Generation by Transit Mode

Travel Mode	Mode Share AM (PM)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Transit	42% (28%)	318	743	1,061	381	299	680

The proposed development is anticipated to generate an additional 1,061 AM peak hour transit trips and 680 PM peak hour transit trips.

Based on these forecasted numbers, Table 24 summarizes the theoretical service times required to meet the demand for the Heron Gate redevelopment area in 2040.

Table 24: Heron Gate Forecasted Transit Service – Minimum Bus Requirements

Travel Mode	Peak Direction Trips	Bus and Service Type		
		Single Capacity: 45 passengers	Articulated Capacity: 70 passengers	Double Decker Capacity: 90 passengers
Transit	743 outbound AM trips	17-21 buses 3-4-minute service	11-13 buses 5-6-minute service	8-10 buses 6-7-minute service
	381 inbound PM trips	8-11 buses 6-7-minute service	5-7 buses 9-11-minute service	4-5 buses 11-14-minute service

Note: Bus and service time ranges assume 100% to 80% capacity

Thus, based on the current servicing provided within the Heron Gate area, the service demands would be approximately one and a half to two times the existing service for the area depending on bus types used.

From the trip distribution found in Section 4.3, these values can be further broken down to identify the total transit increase and help plan for future OC Transpo route implementation to service the area. Table 25 summarizes forecasted site-generated transit ridership trips by direction and the equivalent bus loads.

Table 25: Forecasted Site-Generated Transit Ridership

Direction	AM Peak Hour		PM Peak Hour		Service Type	Approximate Equivalent Peak Hour/Direction Bus Loads
	In	Out	In	Out		
North	111	260	133	105	Bus	Four and three-fourths of standard buses
South	79	186	95	75	Bus	Three and two-fifths of standard buses
East	64	149	76	60	Bus	Two and three-fourths of standard buses
West	64	149	76	60	Bus	Two and three-fourths of standard buses

12.2 Transit Priority

Examining the study area's intersection operations, the following movements are expected to experience a change in the transit level of service (TLOS) due to the Heron Gate redevelopment traffic are summarized below. The full TLOS results, including changes from existing to the future background and future total conditions, have been summarized in Appendix K.

- Westbound through movement at the intersection of Heron Road and Bank Street during AM peak hour increased delay of 19.7 seconds (TLOS changes from Level D in the 2040 future background to Level E in the 2040 future total horizon)
- Eastbound through movement at the intersection of Heron Road and Alta Vista Drive during AM peak hour increased delay of 5.4 seconds (TLOS changes from Level C in the 2040 future background to Level D in the 2040 future total horizon)
- Westbound through movement at the intersection of Walkley Road and Bank Street during PM peak hour increased delay of 14.3 seconds (TLOS changes from Level E in the 2040 future background to Level F in the 2040 future total horizon)

The transit level of service is directly related to the signal timing and balancing of operations at the intersection various intersections noted. Infrastructure improvements at the Bank Street intersections, Alta Vista Drive and the future Heron Road widening and dedicated transit facilities will serve as an improvement for transit operating conditions although the same constraints dictated by the signal timings will remain independent of the Heron Gate redevelopment occurring. This study serves as a highlight of future constraints that may arise and should be reviewed during infrastructure implementation or long term operational monitoring.

13 Network Concept

The future network conditions and forecasted capacity issues have been documented in Sections 11 and 15.2.1 in addition to a summary of transit impacts in Section 12. The background capacity issues will remain in absence of the implementation of the planned area infrastructure projects. Alleviating the background conditions would also support the continued redevelopment of the Heron Gate area.

The forecasted transit demand will be in the range of continuous transit lanes to dedicated BRT facilities, as planned for the future along Heron Road between the draft Priority and Needs Based Transit Networks. The gap between concept and implementation will need to be resolved by the City through the finalization of the Transportation Master Plan (TMP) update.

As noted, the priority and potential implementation timeline of the Conroy Road extension should be reviewed as part of the TMP update in light of the forecasted northbound capacity issues on Bank Street at Walkley Road

during the AM peak hour at the 2040 future background horizon. No network concept modifications are required to support the subject redevelopment beyond the planned projects.

14 Access Intersections Design

14.1 Location and Design of Access

No changes to the existing intersection locations are proposed as part of the Official Plan Amendment. An additional local road connection is proposed as an extension of Sandalwood Drive west of Baycrest Drive to connect at Cedarwood Drive. The intersections on Heron Road and Walkley Road will be reviewed in the subsequent section to outline potential turn lane requirements. Any individual site plan application accesses are expected to meet the private approach bylaw and current design guidance for accesses with the City of Ottawa.

14.2 Intersection Control

No changes to the intersection control are required for the Heron Gate area, except for the assumption of minor stop control for the internal Cedarwood Drive at Baycrest Drive intersection as part of the road modifications.

The new private approaches to each of Baycrest Drive, Sandalwood Drive and Cedarwood Drive will be stop-controlled on the private approach.

14.3 Access Intersection Design

14.3.1 2040 Future Total Access Intersection Operations

The 2040 future total intersection volumes are illustrated in Figure 19 and the access intersection operations are summarized below in Table 26. Signal timing optimizations were made at various study area intersections. The level of service for signalized intersections is based on v/c calculations for individual lane movements and HCM 2000 v/c calculations for the overall intersection, and average delay for unsignalized intersections. The synchro worksheets have been provided in Appendix L.

Figure 19: 2040 Future Total Volumes

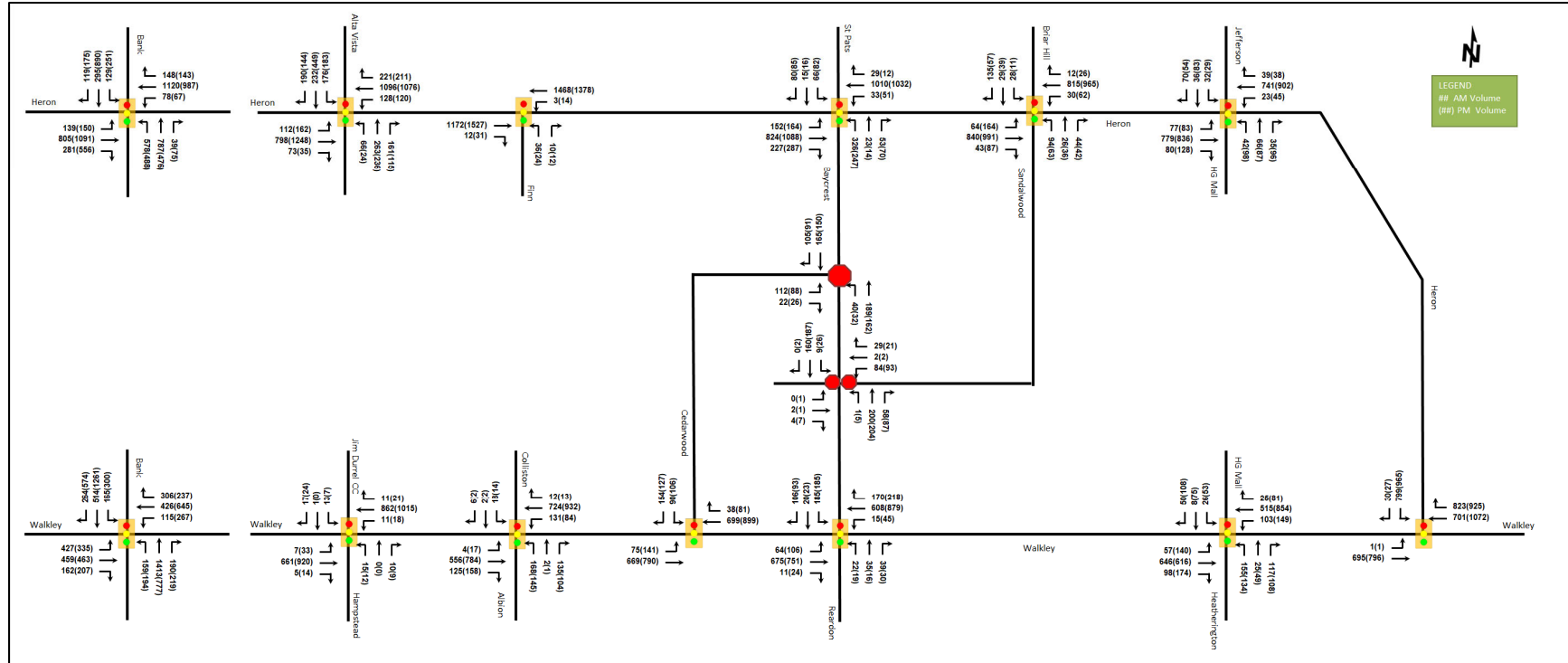


Table 26: 2040 Future Total Access Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay	Q (95th)	LOS	V/C	Delay	Q (95th)
Heron Road & Baycrest Drive Signalized	EBL	E	0.96	82.5	#61.4	C	0.78	39.8	#59.8
	EBT/R	B	0.65	14.7	36.3	C	0.76	14.6	59.9
	WBL	A	0.22	17.0	7.8	A	0.45	28.1	#22.2
	WBT/R	B	0.63	16.1	61.6	A	0.56	14.3	62.8
	NB	E	0.97	66.1	#122.6	D	0.90	57.4	#95.9
	SBL	A	0.22	22.2	17.5	A	0.26	25.1	21.3
	SBT/R	A	0.16	8.0	12.2	A	0.21	8.0	12.6
	Overall	E	0.97	26.1	-	D	0.86	20.6	-
Heron Road & Sandalwood Drive/Briar Hill Drive Signalized	EBL	A	0.17	8.9	m8.1	A	0.46	13.2	m38.0
	EBT/R	A	0.39	8.9	m47.2	A	0.43	6.5	113.4
	WBL	A	0.08	5.3	3.7	A	0.20	9.0	12.5
	WBT/R	A	0.37	4.8	26.1	A	0.39	6.3	60.5
	NBL	A	0.45	38.8	m23.3	A	0.32	36.0	m17.2
	NBT/R	A	0.25	15.8	m11.5	A	0.28	18.9	m14.5
	SBL/T	A	0.24	32.0	15.5	A	0.20	32.2	14.1
	SBR	A	0.38	8.0	11.8	A	0.21	9.3	7.9
	Overall	A	0.40	9.3	-	A	0.42	8.6	-
Baycrest Drive at Cedarwood Drive Unsignalized	EB	B	0.26	14.3	7.5	B	0.17	12.4	4.5
	NB	A	0.03	7.9	0.8	A	0.03	7.8	0.8
	SB	-	-	-	-	-	-	-	-
	Overall	A	0.00	3.6	-	A	0.00	2.8	-
Baycrest Drive at Sandalwood Drive Unsignalized	EB	B	0.03	11.2	0.8	B	0.04	11.8	0.8
	WB	B	0.21	13.4	6.0	C	0.27	16.1	8.3
	NB	A	0.00	7.6	0.0	A	0.01	7.7	0.0
	SB	A	0.01	8.1	0.0	A	0.02	8.0	0.8
	Overall	A	0.00	3.2	-	A	0.00	3.7	-
Walkley Road & Cedarwood Drive Signalized	EBL	A	0.19	8.2	13.5	A	0.43	12.7	32.3
	EBT	A	0.31	6.6	39.5	A	0.34	6.2	46.5
	WBT/R	A	0.35	9.8	52.3	A	0.43	6.8	61.0
	SBL	A	0.30	25.3	16.9	A	0.39	32.0	23.4
	SBR	A	0.39	6.8	10.4	A	0.37	8.9	11.8
	Overall	A	0.36	9.0	-	A	0.41	8.3	-
Walkley Road & Baycrest Drive Signalized	EBL	A	0.22	8.6	5.3	A	0.50	23.0	#33.0
	EBT/R	A	0.36	7.0	17.6	A	0.40	9.6	48.6
	WBL	A	0.04	7.0	m2.3	A	0.13	10.0	9.1
	WBT/R	A	0.44	8.0	21.8	A	0.59	11.4	76.2
	NB	A	0.23	12.7	14.0	A	0.18	12.4	10.2
	SBL	B	0.65	32.8	35.8	B	0.66	34.6	35.0
	SBT/R	A	0.27	6.6	11.3	A	0.27	8.9	12.4
	Overall	A	0.48	10.1	-	A	0.60	13.0	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00

Delay = average vehicle delay in seconds
m = metered queue
= volume for the 95th %ile cycle exceeds capacity

The boundary intersection operations for the Heron Gate area are anticipated to operate similar to the 2040 future background conditions, with an expected reduction in LOS due to development traffic.

At the intersection of Heron Road and Baycrest Drive, the northbound movement during both peak hours, and the westbound left-turn movement during the PM peak hour may all exhibit extended queues. At the intersection

of Walkley Road and Baycrest Drive, the eastbound left-turn may also exhibit extended queues during the PM peak hour.

All-way stop control warrant analysis was performed for the intersections of Baycrest Drive at Sandalwood Drive and Baycrest Drive at Cedarwood Drive and neither intersection met the warrants. The implementation of an all-way stop should be considered for the intersection of Baycrest Drive at Cedarwood Drive to facilitate pedestrian crossings and form a node within the community. All-way stop control warrant calculation sheets are provided in Appendix M.

14.3.2 Access Intersection MMLOS

Table 27 summarizes the MMLOS analysis for the Heron Gate intersections with Heron Road and Walkley Road. The existing conditions and conceptual future widening conditions have been assessed. The widening conditions are conceptual only and use the Baseline BRT as a proxy condition along Heron Road and standard arterial road cross-section and protected intersection along Walkley Road. The intersection analysis is based on the policy area for within 300m of a school for the intersections of Heron Road at Baycrest Drive and Walkley Road at Cedarwood Drive. The analysis is based on the land use designations of General Urban Area for the intersection of Heron Road at Sandalwood Drive and Arterial Mainstreet for the intersection of Walkley Road at Baycrest Drive. It is noted that the analysis framework is based on the previous Official Plan and the 2013 Transportation Master Plan. No map of cycling network “local routes” within this framework is available at present. Therefore, cross-town bikeways from the new TMP will be considered within this analysis and all routes that are not spine routes or cross-town bikeways will be considered as the “elsewhere” categorization from the MMLOS framework. Transit network from the new TMP is also considered within this analysis. The MMLOS worksheets have been provided in Appendix F.

Table 27: Access Intersection MMLOS Analysis

Intersection		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS		Auto LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target	ALOS	Target
Heron Road at Baycrest Drive	Ex.	F	A	D	C	F	A	D	D	B	E
	Fut.	F	A	A	C	F	A	D	D	E	E
Heron Road at Sandalwood Drive	Ex.	F	C	D	C	B	B	D	D	A	D
	Fut.	F	C	A	C	B	B	D	D	A	D
Walkley Road at Cedarwood Drive	Ex.	E	A	D	A	-	D	D	D	A	E
	Fut.	E	A	A	A	B	D	D	D	A	E
Walkley Road at Baycrest Drive	Ex.	F	A	D	A	D	D	D	D	A	E
	Fut.	E	A	A	A	E	D	D	D	A	E

The pedestrian LOS targets are not met at all study area access intersections during the existing and future conditions. As is typical for arterial roads, the crossing distance does not permit the targets to be met. To meet pedestrian LOS targets, the maximum crossing distance on all pedestrian crossings would need to be reduced to three lane-widths at the intersection of Heron Road at Sandalwood Drive and two lane-widths at the other study area access intersections. The reduction of lanes is not a feasible solution. The protected intersection elements, while they do not alter the MMLOS framework results, would provide a practical improvement in the future at the study area intersections.

The bicycle LOS targets are not met in the existing conditions. The implementation of cycle tracks and protected intersections will meet the bicycle LOS targets at all study area access intersections in the future conditions.

The transit LOS targets are not met at the intersection of Heron Road at Baycrest Drive in the existing and future conditions for the northbound left-turn movement and at the intersection of Walkley Road at Baycrest Drive in

the future conditions for the southbound left-turn movement. The intersection delay will be facilitating auto travel and delays of 30 seconds (TLOS D) or greater than 40 seconds (TLOS F) are reasonable from that perspective. No new timings have been proposed to mitigate these conditions as they will be unreasonable for network operations. In the case of the intersection of Walkley Road at Cedarwood Drive, no bus routes presently rely on this intersection, however, given it is an isolated transit priority measures route, the eastbound through and westbound through movements have been scored in the future conditions and meet the targets.

The truck LOS targets are met at all study area access intersections in the existing and future conditions.

14.3.3 Recommended Design Elements

14.3.3.1 Intersection Spacing

The drive aisle between the blocks 7, 8, and 9 are approximately 38 metres north from the future right-of-way line of Walkley Road along each Baycrest Drive and Cedarwood Drive, equating to a minimum of 42 metres from the future edge of the roadway assuming the future provision of a sidewalk and cycletrack along the arterial. The spacing between the accesses and the intersection is largely focused on operational concern for entry movements and queuing spillback impacting the adjacent signalized intersection. Given the private drive aisle for blocks 7 and 9 are one-way outlets onto the public road, the impacts to the adjacent arterial road would be negligible from these legs. Therefore, the private drive aisle between Cedarwood Drive and Baycrest Drive will be discussed further below with respect to the corner clearance requirements.

The Geometric Design Guide for Canadian Roads (TAC, 2017) suggests minimum corner clearance values for driveways of 15 metres along local road and 55 metres along collector roads from signalized intersections. The corner clearance would be met the private drive aisle on Cedarwood Drive (a local road) and is considered acceptable.

The 42 metres noted above would not meet the suggested corner clearance for the private drive aisle on the west side of Baycrest Drive (a collector road). Should the proximity not be acceptable to the City, a possible mitigation could be the designation of the drive aisle to be one-way eastbound from Cedarwood Drive to Baycrest Drive, and the corner clearance conditions would be met.

Beyond the suggested minimum values from TAC, the spacing requirements would be subject to Private Approach By-Law provision 25(1)(m), which would be subject to the number of parking stalls/underground garage spaces that could be accessed from the drive aisle. A site that accesses 199 or fewer vehicle parking spaces would meet the required spacing outlined previous, where access to 200 to 299 vehicle parking spaces would require a 45-metre spacing and over 300 spaces would require a 60-metre spacing. The ultimate parking allocation will be determined through individual site plan applications, the private drive aisle through block 8 will need to be re-assessed once the final parking numbers and underground configuration are developed.

14.3.3.2 Turn Lane Review

A review of the forecasted 2040 total volumes was completed to provide a conceptual impact of the proposed redevelopment in Heron Gate on the adjacent turn lane storage requirements. The Ottawa TIA Guidelines Minimum Storage Lengths and the TAC Storage Length were used to determine possible storage length requirements based on the 2040 forecasted AM and PM volumes. The Appendix N provides the summary of the turn lane storage length review.

Based on the forecasted 240 future total operations, permitted movements/shared lane groups at various intersections and the available property, the following turn lane storage lengths are proposed:

- Heron Road at Baycrest Drive – northbound left turn with 60 metre storage length

- Walkley Road at Baycrest Drive – southbound left-turn with 45 metre storage length

Future site plan TIAs should review the need for the storage lengths noted above and it is anticipated that these improvements will be constructed with the adjacent development phases.

15 Intersection Design

15.1 Intersection Control

No change to the existing signalized control is recommended for the network intersections.

15.2 Intersection Design

15.2.1 2040 Future Total Intersection Operations

The 2040 future total intersection volumes are illustrated in Figure 19 and the intersection operations are summarized below in Table 28. Signal timing optimizations were made at various study area intersections. The level of service for signalized intersections is based on v/c calculations for individual lane movements and HCM 2000 v/c calculations for the overall intersection. The synchro worksheets have been provided in Appendix L.

Table 28: 2040 Future Total Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Walkley Road <i>Signalized</i>	EBL	A	0.00	14.0	1.0	A	0.01	15.0	1.0
	EBT	A	0.45	18.7	60.3	A	0.51	21.4	77.3
	WBT	A	0.46	19.0	61.5	B	0.68	25.0	113.7
	WBR	A	0.52	2.4	10.3	A	0.55	2.4	10.9
	SBL/R	B	0.67	28.1	87.0	C	0.77	33.4	118.0
	Overall	A	0.59	16.9	-	C	0.72	20.9	-
Heron Road & Jefferson Street/HG Mall <i>Signalized</i>	EBL	A	0.20	11.2	17.7	A	0.29	7.6	7.0
	EBT	A	0.36	9.2	59.2	A	0.40	4.8	23.5
	EBR	A	0.08	4.6	9.2	A	0.13	1.0	4.0
	WBL	A	0.06	8.9	5.5	A	0.13	10.8	9.5
	WBT/R	A	0.37	8.6	53.3	A	0.45	11.0	65.9
	NBL	A	0.19	28.1	12.4	A	0.38	30.6	25.4
	NBT	A	0.19	28.0	17.1	A	0.21	25.8	21.4
	NBR	A	0.12	8.6	6.3	A	0.23	6.5	10.2
	SB	A	0.42	19.9	23.1	A	0.43	25.4	33.8
	Overall	A	0.38	10.6	-	A	0.45	10.4	-
Walkley Road & Heatherington Road/HG Mall <i>Signalized</i>	EBL	A	0.12	8.4	m8.2	A	0.40	11.9	18.8
	EBT	A	0.40	9.6	23.0	A	0.41	9.4	46.5
	WBL	A	0.31	13.3	19.9	A	0.58	33.1	#48.4
	WBT	A	0.28	9.1	30.7	B	0.61	21.9	79.7
	WBR	A	0.03	0.1	0.0	A	0.12	0.5	0.7
	NBL	A	0.56	29.5	30.1	B	0.64	40.2	33.7
	NBT/R	A	0.32	7.4	12.9	A	0.35	10.4	18.4
	SB	A	0.23	10.5	11.4	B	0.62	27.0	42.8
	Overall	A	0.43	11.1	-	A	0.59	18.1	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Heron Road & Finn Court <i>Signalized</i>	EBT/R	A	0.44	2.9	m40.0	A	0.57	6.3	113.1
	WBL	A	0.02	5.7	m0.4	A	0.07	3.4	m0.9
	WBT	A	0.54	5.8	m88.6	A	0.50	2.4	39.2
	NBL	A	0.16	34.3	12.4	A	0.11	33.0	9.5
	NBR	A	0.06	16.7	4.0	A	0.07	16.4	4.2
	Overall	A	0.53	4.9	-	A	0.56	4.7	-
Walkley Road & Albion Road/Colliston Crescent <i>Signalized</i>	EBL	A	0.04	40.0	3.8	A	0.14	41.2	8.9
	EBT	A	0.37	18.9	56.4	A	0.44	16.3	72.8
	EBR	A	0.18	4.1	10.1	A	0.20	4.9	13.9
	WBL	A	0.60	46.7	36.7	A	0.46	45.0	26.4
	WBT/R	A	0.35	10.0	61.6	A	0.46	12.2	81.3
	NBL	B	0.70	48.4	44.0	B	0.62	44.4	39.2
	NBT/R	A	0.36	8.0	13.1	A	0.32	8.8	12.2
	SBL	A	0.08	27.0	7.4	A	0.07	28.4	6.6
	SBT/R	A	0.03	17.0	3.4	A	0.02	22.2	2.8
	Overall	A	0.47	18.3	-	A	0.48	16.6	-
Heron Road & Alta Vista Drive <i>Signalized</i>	EBL	E	0.97	119.9	#51.6	D	0.90	101.8	#81.9
	EBT/R	D	0.84	36.8	#103.1	E	0.95	51.9	#212.0
	WBL	D	0.84	70.3	#51.9	E	0.92	118.0	#68.3
	WBT	E	0.98	53.4	#141.6	D	0.85	44.8	160.8
	WBR	A	0.40	10.5	34.6	A	0.33	7.3	21.8
	NBL	A	0.31	31.1	20.7	A	0.27	45.3	13.3
	NBT/R	E	1.00	76.7	#128.1	C	0.72	48.5	112.0
	SBL	E	0.96	82.2	#55.8	D	0.82	62.1	#65.6
	SBT/R	B	0.67	25.8	84.0	E	0.94	61.8	#215.1
	Overall	E	0.98	49.9	-	E	0.94	53.2	-
Walkley Road & Hampstead Place/Jim Durrell RC <i>Signalized</i>	EBL	A	0.02	7.1	2.3	A	0.08	5.9	6.7
	EBT/R	A	0.26	5.6	39.6	A	0.33	4.5	58.3
	WBL	A	0.02	7.1	3.1	A	0.04	5.7	4.2
	WBT/R	A	0.35	6.1	55.1	A	0.37	4.8	66.9
	NB	A	0.09	3.1	2.4	A	0.09	3.6	2.5
	SBL	A	0.06	21.0	4.4	A	0.03	25.1	3.5
	SBT/R	A	0.06	10.3	3.8	A	0.08	0.5	0.0
	Overall	A	0.34	6.1	-	A	0.37	4.7	-
Heron Road & Bank Street <i>Signalized</i>	EBL	E	0.91	76.4	#55.9	F	1.06	124.6	#70.1
	EBT	A	0.56	26.9	91.9	D	0.87	46.2	164.5
	EBR	A	0.36	3.8	15.2	B	0.70	14.2	75.5
	WBL	A	0.42	38.8	29.6	F	1.05	172.2	#48.9
	WBT	E	1.00	67.2	#186.1	E	1.00	75.0	#179.4
	WBR	A	0.25	2.7	7.0	A	0.28	10.2	20.1
	NBL	E	1.00	85.7	#107.4	F	1.01	98.6	#101.4
	NBT/R	D	0.82	46.2	119.2	A	0.58	41.6	82.6
	SBL	D	0.85	95.0	#63.8	D	0.85	77.3	#99.2
	SBT/R	A	0.59	41.2	57.8	F	1.02	76.1	#192.5
	Overall	E	0.92	50.7	-	F	1.02	62.7	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Walkley Road & Bank Street Signalized	EBL	E	0.99	92.5	#97.9	F	1.03	113.7	#77.0
	EBT	B	0.61	44.6	64.2	B	0.62	48.3	72.1
	EBR	A	0.34	3.6	7.1	A	0.44	9.7	22.8
	WBL	A	0.24	48.9	22.4	B	0.62	61.3	#51.4
	WBT/R	D	0.88	46.9	91.5	F	1.03	83.4	#163.7
	NBL	A	0.53	58.0	28.8	F	1.03	133.1	#52.1
	NBT	F	1.23	147.4	#258.8	C	0.77	47.4	121.4
	NBR	A	0.31	3.7	10.9	A	0.38	8.7	23.9
	SBL	E	0.98	121.9	#42.5	C	0.74	65.6	53.1
	SBT	A	0.51	36.9	72.0	F	1.02	70.4	#221.6
	SBR	A	0.42	5.7	17.5	D	0.85	32.6	#148.2
	Overall	F	1.08	78.1	-	F	1.03	62.8	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00

Delay = average vehicle delay in seconds
m = metered queue
= volume for the 95th %ile cycle exceeds capacity

During both the AM and PM peak hours, the capacity and queues issues at the study area intersections noted in the 2040 future background conditions remain, with an expected reduction in LOS due to development traffic.

The intersection of Heron Road and Alta Vista Drive may exhibit additional queuing on the eastbound through/right-turn movement during both peak hours. This is subject to signal timing and balancing intersection operations.

Capacity issues continue to be noted at the intersections of Heron Road at Bank Street and Walkley Road at Bank Street. The peak direction demands will become more prominent at both intersections and impact the capacity of opposing turning movement phases. The post construction conditions will require continued City operational monitoring and adaptation to travel demands/changes.

15.2.2 Intersection MMLOS

Table 29 summarizes the MMLOS analysis for the signalized intersections along Heron Road and Walkley Road, with the exception of the Bank Street intersections. The Bank Street intersections are assumed to be assessed through the City's design project. The existing conditions and conceptual future widening conditions have been assessed. The widening conditions are conceptual only and use the Baseline BRT as a proxy condition along Heron Road and standard arterial road cross-section and protected intersection along Walkley Road. The intersection analysis is based on the policy area for within 300m of a school for the intersections of Walkley Road at Albion Road, Walkley Road at Hamstead Place, Heron Road at Finn Court, and Heron Road at Alta Vista Drive. The analysis is based on the land use designations of General Urban Area for the intersection of Heron Road at Walkley Road and Heron Road and Jefferson Road and Arterial Mainstreet for the intersection of Walkley Road at Heatherington Road. It is noted that the analysis framework is based on the previous Official Plan and the 2013 Transportation Master Plan. No map of cycling network "local routes" within this framework is available at present. Therefore, cross-town bikeways from the new TMP will be considered within this analysis and all routes that are not spine routes or cross-town bikeways will be considered as the "elsewhere" categorization from the MMLOS framework. Transit network from the new TMP is also considered within this analysis. The MMLOS worksheets has been provided in Appendix F.

Table 29: Study Area Intersection MMLOS Analysis

Intersection		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS		Auto LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target	ALOS	Target
Heron Road at Walkley Road	Ex.	E	C	D	B	E	B	B	D	C	D
	Fut.	E	C	A	B	E	B	D	D	C	D
Heron Road at Jefferson Street	Ex.	F	C	E	B	B	B	D	D	A	D
	Fut.	F	C	A	B	B	B	D	D	A	D
Walkley Road at Heatherington Road	Ex.	F	C	D	B	F	D	D	D	B	D
	Fut.	E	C	A	B	F	D	D	D	A	D
Walkley Road at Albion Road	Ex.	E	A	D	A	F	D	B	D	A	E
	Fut.	E	A	A	A	F	D	D	D	A	E
Walkley Road at Hampstead Place	Ex.	E	A	D	A	B	D	B	D	A	E
	Fut.	E	A	A	A	B	D	D	D	A	E
Heron Road at Finn Court	Ex.	E	A	D	C	B	A	B	D	A	E
	Fut.	F	A	A	C	B	A	D	D	A	E
Heron Road at Alta Vista Drive	Ex.	E	A	E	C	F	A	A	D	E	E
	Fut.	E	A	A	C	F	A	D	D	E	E

The pedestrian LOS targets are not met at all study area intersections and will not be in the future. As is typical for arterial roads, the crossing distance does not permit the targets to be met. To meet pedestrian LOS targets, the maximum crossing distance on all pedestrian crossings would need to be reduced to three lane-widths at the intersection of Heron Road at Sandalwood Drive and two lane-widths at the other study area access intersections. The reduction of lanes is not a feasible solution. The protected intersection elements, while they do not alter the MMLOS framework results, would provide a practical improvement in the future at the study area intersections.

The bicycle LOS are not met at all study area intersections in the existing conditions. The implementation of cycle tracks and protected intersections will meet the bicycle LOS targets at all study area intersections in the future conditions.

The transit LOS targets are only met at the intersection of Heron Road and Jefferson Street and Walkley Road at Hampstead Place in the existing and future conditions. To meet transit LOS targets, the delay on transit movements would need to be reduced to 0 seconds at the intersections of Heron Road at Finn Court and Heron Road at Alta Vista Drive due to the proximity to schools, 10 seconds or below at the intersection of Heron Road at Walkley Road, 30 seconds or below at the intersections of Walkley Road at Albion Road, and Walkley Road at Heatherington Road. The intersection delay will be facilitating auto travel and delays of 30-40 seconds (TLOS E) or greater than 40 seconds (TLOS F) are reasonable from that perspective. No new timings have been proposed to mitigate these conditions as they will be unreasonable for network operations.

The truck LOS targets are met at all study area intersections in the existing and future conditions.

15.2.3 Recommended Design Elements

No study area intersection design elements are proposed for the network intersections as part of this study.

16 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 5,740 residential units and 6,308 parking spaces

- Existing towers on the site to be retained include 2040, 2851, and 2861 Baycrest Drive, 2850 Cedarwood Drive, and 2870 Cedarwood Drive
- The existing driveways along Baycrest Drive, Sandalwood Drive and Cedarwood Drive will be removed and new accesses will be provided per the redevelopment of each block
- The HG7 is constructed and is located on the east side of Sandalwood Drive on Heron Road
- The development is proposed to be completed by 2040
- The Trip Generation, Location, and Safety triggers were met for the TIA Screening and required this TIA to support the ZBA/draft plan of subdivision process

Existing Conditions

- Heron Road, Walkley Road and Bank Street are arterial roads, Alta Vista Drive is a major collector road, and Baycrest Drive, Albion Road North, and Heatherington Road are collector roads and Finn Court, Sandalwood Drive, Jefferson Street, Hampstead Place, Colliston Crescent, and Cedarwood Drive are local roads, and Reardon Private is a private access in the study area
- Sidewalks are provided along both sides of Heron Road, Walkley Road, Bank Street, and Heatherington Road, on the west side of Albion Road North north of Kitchener Avenue, and both sides of Colliston Crescent on the west leg of the loop and on the inside of the loop for the remainder of the roadway
- Asphalt pathways are present on both sides of Alta Vista Drive, Baycrest Drive, Sandalwood Drive, Cedarwood Drive, and on the east side of Jefferson Street and Reardon Private
- Cycletracks exist along the south side of Heron Road between Heron-Walkley Park and Jefferson Street, a MUP is present between Heron Road and Walkley Road in Heron-Walkley Park, two MUPs are present on Featherston Drive between Wyndale Crescent and Jefferson Street, and bike lanes exist on both sides of Alta Vista Drive east of the 2679 Alta Vista Drive access
- The study area intersections generally operate satisfactorily, with the exception of the intersections of Bank Street at Heron Road, Bank Street at Walkley Road, and Heron Road at Alta Vista Drive, which may experience capacity issues and extended queues
- A total of eight pedestrian collisions were noted, including two collisions occurred at each of the intersections of Baycrest Drive at Walkley Road and Cedarwood Drive at Walkley Road and one at the intersection of Baycrest Drive at Cedarwood Drive, and each of the segments of Baycrest Drive between Cedarwood Drive and Sandalwood Drive, Heron Road between Finn Crescent and Baycrest Drive, and a fatal pedestrian collision on Walkley Road between Cedarwood Drive and Colliston Crescent
- Three cyclist collisions were noted, including one at the intersection of Heron Road at Baycrest Drive, one on the segment of Baycrest Drive between Sandalwood Drive and Walkley Road, and one on Walkley Road between Cedarwood Drive and Colliston Crescent

Planned Conditions

- Feasibility study of pedestrian facilities along the south side of Heron Road from Walkley Road to the existing sidewalk is identified in the TMP - Part 1 and feasibility study of pedestrian crossings of Walkley Road at Heron Road and Canterbury High School and sidewalks along Evans Boulevard from Heron Road to Willowdale Avenue are identified in both TMP - Part 1 and Part 2
- Separated cycling facilities on Walkley Road from Bank Street to the Airport Parkway, the feasibility study of cycling improvements to the Albion Road north corridor, including the Walkley Road intersection, and the multi-use pathway segment forming an east-west route within Alta Vista ward are also identified in the TMP- Part 1 and Part 2

- Widenings of Airport Parkway north of Hunt Club Road, widening of Walkley Road west of Airport Parkway, and an integrated road renewal project along Bank Street between Collins Avenue and Ledbury Avenue are identified in the draft Priority Road Network in the TMP - Part 2
- Bank Street renewal Phase One includes Bank Street from Riverside Drive westbound to Collins Avenue and is expected to be completed by 2027, and Phase Two including Collins Avenue to Ledbury Avenue will begin following the completion of Phase One
- Bus rapid transit along Heron Road continuing to St-Laurent Boulevard, continuous bus lanes on Conroy Road, and transit priority corridor along Bank Street, Walkley Road, Alta Vista Road north of Heron Road, and along the Alta Vista Transportation Corridor extension of Conroy Road are included within the draft Priority Transit Network in TMP – Part 2

Development Generated Travel Demand

- The proposed development is forecasted produce 4,592 two-way people trips during the AM peak hour and 5,166 two-way people trips during the PM peak hour
- Of the forecasted people trips, 838 two-way trips will be vehicle trips during the AM peak hour and 1,023 two-way trips will be vehicle trips during the PM peak hour
- Of the forecasted people trips, 1,061 two-way transit trips during the AM peak hour and 680 two-way transit trips during the PM peak hour were noted
- The proposed development is anticipated to generate 550 new additional AM peak hour vehicles and 686 new additional PM peak hour vehicles from the existing use
- Of the forecasted trips, 35 % are anticipated to travel north, 25 % to the south, and 20 % to both the east and west

Development Design

- A 2-metre-wide unidirectional cycletrack and a 2-metre-wide sidewalk along both sides of Baycrest Drive from Heron Road in the north to Walkley Road in the south are proposed
- Proposed cross-section is an adaptation of the 22A Compact “Main” Street from the Designing Neighbourhood Collector Streets guidance, increasing the existing right-of-way by 2 metres
- A pedestrian crossing is proposed across Baycrest Drive approximately 25 metres south of its intersection with Sandalwood Drive
- The existing local roads of Sandalwood Drive and Cedarwood Drive are proposed to be formalized to standard 2 metre sidewalks and on both sides of the roadways
- Hard surface walkways are also provided along both sides of internal drive aisles
- Widened pathways through the internal park areas and along buildings 8.7, 9.1, 9.4, and 9.6 connecting to Sandalwood Park are also proposed with a pedestrian crossing for this pathway across Baycrest Drive
- Traffic calming elements including narrowing at local road intersections, pedestrian crossings, enhanced bus stops and the inclusion of on-street parking are recommended
- Access to the arterial Heron Road is provided via the collector road of Baycrest Drive and local road of Sandalwood Drive and access to the arterial Walkley Road is provided via the local road of Cedarwood Drive and collector road of Baycrest Drive
- Surface parking is located along the public roadways and new private drive aisles for the various buildings and phases of development are proposed to connect to these public roads, along with those existing drive aisle connections to be retained

- Two of the drive aisles accessing Cedarwood Drive and Baycrest Drive between Walkley Road and Sandalwood Drive are proposed to be one-way, outbound at these intersections
- Underground parking is accessed by ramps onto the public roads and private drive aisles

Parking

- The development is proposed to include a total of 6,308 vehicle parking spaces
- The Zoning By-Law requires 6,888 residential parking spaces and 1,148 visitor parking spaces for a total of 8,036 vehicle parking spaces, along with 2,870 bicycle parking spaces
- The site is proposed to be 1,728 vehicle parking spaces below the theoretical provision
- The draft Zoning By-Law proposes the elimination of vehicle parking minima in the city and thus any minimum rate proposed is not anticipated to be applicable for the majority and possibly all of the future development applications

Boundary Street Design

- The boundary streets, including Heron Road, Walkley Road, Baycrest Drive, and Cedarwood Drive do not meet the pedestrian MMLOS targets in the existing conditions
- Baycrest Drive and Cedarwood Drive, and Heron Road and Walkley Road west of Baycrest Drive will not meet the pedestrian LOS targets in the future conditions
- To meet the pedestrian targets, the sidewalks would need to be widened to more than two meters and boulevards wider than two meters
- Heron Road and Walkley Road do not meet the bicycle LOS targets in the existing conditions. Dedicated facilities would need to be provided in both directions to meet the cycling targets
- Heron Road does not meet the transit LOS in the existing conditions
- Heron Road and Walkley Road will meet the truck LOS targets in the existing and future conditions

TDM

- Supportive TDM measures to be included within the proposed development should include:
- Building Component Measures:
 - Reduction of minimum parking ratio, where possible and supported by future market conditions
 - Bike parking ratio of 0.5-1.0 spaces per unit
 - Provide low grade underground garage ramps (<10%), if bike parking is located underground
 - Provide secure bike parking, with easy access from outside
 - Provide bike repair station in secure bike storage areas
 - Provide real-time transit arrival information display at entrances/building lobbies
 - Where adjacent to transit routes, integrate transit stops into building design
 - Posting of pedestrian, cycling, and transit information and maps at primary entrances/exits
 - Inclusion of a 1-year or 6-month Presto card for initial occupancy of rental units, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site
 - Unbundle parking cost from purchase or rental costs
- Exterior/Community Component Measures:
 - Provide bike repair station public/park space
 - Contract with provider to install on-site bikeshare station (or other applicable micromobility options)
 - Contract with provider to install on-site carshare vehicles and promote their use by residents

- Integration of transit stops with adjacent buildings, or improvement of existing stops to City standards for waiting area and shelters
- Monitoring Measures:
 - Conduct travel survey prior to move-in to establish baseline behaviours
 - Conduct travel survey 1 year after move-in to track effectiveness of TDM measures
 - Coordinate survey results with City TDM Coordinator

Background Conditions

- Growth rates derived from the 2011 and 2031 TRANS models have been applied to mainline volumes and major turning movements throughout the study area along with explicit background development volumes
- Signal timing optimizations were made at various study area intersections in the 2040 future background horizon
- The study area intersections at the 2040 future background horizon are forecast to operate satisfactorily
- Capacity issues continue to be noted at the intersections of Heron Road at Bank Street and Walkley Road at Bank Street in the 2040 future background horizon
- Extended queuing may occur at the eastbound left movement at the intersection of Heron Road at Baycrest Drive during both peak hours and the eastbound left movement at the intersection of Heron Road at Sandalwood Drive/Briar Hill Drive during the PM peak hour
- The future geometric changes for Bank Street will balance all modes with reductions expected in vehicular capacity
- The signal timing monitoring and operational updates by the City will be required to optimize the conditions as they develop in the future
- The northbound AM peak hour volumes along Bank Street are identified as a key movement that will need to be considered by the City in the various infrastructure implementation timelines
- Widening of the Airport Parkway or bus lane implementation along Conroy Road and Heron Road are two nearby projects that could alleviate this flow

Transit

- The proposed development is anticipated to generate ridership increases on the order of two and three-fourths of standard buses to four and three-fourths of standard buses
- Examining the study area's intersection operations, increases in delay are anticipated for the westbound through movement at the intersection of Heron Road and Bank Street and the eastbound through movement at the intersection of Heron Road and Alta Vista Drive during AM peak hour and the westbound through movement at the intersection of Walkley Road and Bank Street during PM peak hour
- The transit impacts are directly related to the signal timing and balancing of operations at the intersections
- The future Heron Road widening and dedicated transit facilities will serve as an improvement over the existing conditions and need the timings assessed at the time of implementation
- It is expected that north-south operations will remain a priority for Bank Street and additional timing provided for the protected intersection design. Mitigation of the westbound delays may not be possible as part of the trade off solution for the ultimate design

Network Concept

- No network concept modifications are required to support the subject redevelopment beyond the planned projects

Intersection Design

- No changes to the existing intersection locations are proposed
- An additional local road connection is proposed as an extension of Sandalwood Drive west of Baycrest Drive to connect at Cedarwood Drive
- No changes to the intersection control is required for the Heron Gate area, except for the assumption of minor stop control for the internal Cedarwood Drive at Baycrest Drive intersection as part of the road modifications
- The new private approaches to each of Baycrest Drive, Sandalwood Drive and Cedarwood Drive will be stop-controlled on the private approach
- The boundary intersection operations for the Heron Gate area are anticipated to operate similar to the 2040 future background conditions, with an expected reduction in LOS due to development traffic
- All-way stop control warrant analysis was performed for the intersections of Baycrest Drive at Sandalwood Drive and Baycrest Drive at Cedarwood Drive and neither intersection met the warrants
- The implementation of an all-way stop should be considered for the intersection of Baycrest Drive at Cedarwood Drive to facilitate pedestrian crossings and form a node within the community
- The drive aisle between the blocks 7, 8, and 9 are approximately 38 metres north from the future right-of-way line of Walkley Road along each Baycrest Drive and Cedarwood Drive, equating to a minimum of 42 metres from the future edge of the roadway
- The 42 metres noted above would not meet the suggested corner clearance for the private drive aisle on the west side of Baycrest Drive (a collector road)
- A possible mitigation could be the designation of the drive aisle to be one-way eastbound from Cedarwood Drive to Baycrest Drive, and the corner clearance conditions would be met
- Based on the forecasted 240 future total operations, permitted movements/shared lane groups at various intersections and the available property, the following turn lane storage lengths are proposed:
 - Heron Road at Baycrest Drive – northbound left turn with 60 metre storage length
 - Walkley Road at Baycrest Drive – southbound left-turn with 45 metre storage length
- During both the AM and PM peak hours, the capacity and queues issues at the study area intersections noted in the 2040 future background conditions remain in the 2040 future total conditions, with an expected reduction in LOS due to development traffic
- The intersection of Heron Road and Alta Vista Drive may exhibit additional queuing on the eastbound through/right-turn movement during both peak hours and this is subject to signal timing and balancing intersection operations
- The pedestrian LOS targets are not met at all study area intersections and will not be in the future as is typical for arterial roads, the crossing distance does not permit the targets to be met
- The bicycle LOS targets are not met at all study area intersections in the existing conditions. The implementation of cycle tracks and protected intersections will meet the bicycle LOS targets in the future conditions

- The transit LOS targets are not met at the intersection of Heron Road at Baycrest Drive in the existing and future conditions for the northbound left-turn movement and at the intersection of Walkley Road at Baycrest Drive in the future conditions for the southbound left-turn movement
- The transit LOS targets are only met at the intersection of Heron Road and Jefferson Street and Walkley Road at Hampstead Place in the existing and future conditions. To meet transit LOS targets, the delay on transit movements would need to be reduced at the other intersections
- The truck LOS targets are met at all study area intersections in the existing and future conditions

17 Conclusion

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

Prepared By:



John Kingsley, B.Eng.
Transportation Engineering-Intern

Reviewed By:



Andrew Harte, P.Eng.
Senior Transportation Engineer

Appendix A

TIA Screening Form and PM Certification Form

City of Ottawa 2023 Revisions to 2017 TIA Guidelines
Step 1 - Screening Form

Date: 11-Oct-24
Project Number: 2024-103
Project Reference: Heron Gate Mater Plan

1.1 Description of Proposed Development	
Municipal Address	2851, 2881, 2898 Baycrest Drive, 2820 & 2831, Cedarwood Drive, and 2816 Sandalwood Drive
Description of Location	Bounded by Heron Road, Walkley Road, and Heron-Walkley Park
Land Use Classification	Arterial Mainstreet Zone (AM10), Residential Fifth Density Zone (R5B H(18))
Development Size	Approximately 6,400 units
Accesses	Onto Baycrest Drive, Cedarwood Drive, Cedarwood Drive, Heron Road and Walkley Road
Phase of Development	Multiple
Buildout Year	2030
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger	
Land Use Type	Multi-Family (High-Rise)
Development Size	6400 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	Walkley Road is a Cross-Town Bikeway, and Heron Road is designated as part of the rapid Transit network
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	Yes	Design Priority Area
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?	No	
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?	Yes	High collisions (23) at the intersections of Walkley Road at Baycrest Drive
Does the development include a drive-thru facility?	No	
Safety Trigger	Yes	



Certification Form for TIA Study PM

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

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 they meet the four criteria listed below.

CERTIFICATION



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; (Update effective July 2023)



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;



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



I am either a licensed or registered¹ professional in good standing, whose field of expertise



is either transportation engineering



or transportation planning.

¹ 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.

Dated at Ottawa this 17 day of August, 20 23.
(City)

Name : Andrew Harte

Professional title: Senior Transportation Engineer / Vice-President Ottawa



Signature of individual certifier that s/he/they meet the above criteria

Office Contact Information (Please Print)
Address: <u>6 Plaza Court</u>
City / Postal Code: <u>Ottawa, K2H 7W1</u>
Telephone / Extension: <u>613-697-3797</u>
Email Address: <u>andrew.harte@cghtransportation.com</u>

Stamp



Revision Date: June 2023

Appendix B

Turning Movement Counts



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00		One Hour Peak From: 8:00:00 To: 9:00:00	
Municipality: Ottawa Site #: 2422000001 Intersection: Heron Rd & Bank St TFR File #: 1 Count date: 21-Nov-24			Weather conditions: Person counted: Person prepared: Person checked:		
** Signalized Intersection **			Major Road: Heron Rd runs W/E		

North Leg Total: 1171 North Entering: 491 North Peds: 14 Peds Cross:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cyclists</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr> <td>Trucks</td><td>4</td><td>12</td><td>3</td><td>19</td></tr> <tr> <td>Cars</td><td>115</td><td>282</td><td>74</td><td>471</td></tr> <tr> <td>Totals</td><td>119</td><td>295</td><td>77</td><td></td></tr> </table>	Cyclists	0	1	0	1	Trucks	4	12	3	19	Cars	115	282	74	471	Totals	119	295	77			Cyclists 0 Trucks 21 Cars 659 Totals 680	East Leg Total: 1811 East Entering: 1029 East Peds: 9 Peds Cross:
Cyclists	0	1	0	1																				
Trucks	4	12	3	19																				
Cars	115	282	74	471																				
Totals	119	295	77																					

Cyclists Trucks Cars Totals 0 72 1502 1574	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cyclists</td><td>0</td><td>2</td><td>137</td><td>139</td></tr> <tr> <td>Trucks</td><td>0</td><td>19</td><td>659</td><td>678</td></tr> <tr> <td>Cars</td><td>0</td><td>6</td><td>275</td><td>281</td></tr> <tr> <td>Totals</td><td>0</td><td>27</td><td>1071</td><td></td></tr> </table>	Cyclists	0	2	137	139	Trucks	0	19	659	678	Cars	0	6	275	281	Totals	0	27	1071			Cyclists Trucks Cars Totals 0 2 137 139 0 19 659 678 0 6 275 281 0 27 1071	Cyclists Trucks Cars Totals 76 9 0 85 835 42 0 877 63 4 0 67 974 55 0
Cyclists	0	2	137	139																				
Trucks	0	19	659	678																				
Cars	0	6	275	281																				
Totals	0	27	1071																					

Peds Cross: West Peds: 21 West Entering: 1098 West Leg Total: 2672	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>620</td><td>552</td><td>446</td><td>25</td><td>1023</td></tr> <tr> <td>Trucks</td><td>22</td><td>26</td><td>10</td><td>2</td><td>38</td></tr> <tr> <td>Cyclists</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Totals</td><td>643</td><td>578</td><td>456</td><td>27</td><td></td></tr> </table>	Cars	620	552	446	25	1023	Trucks	22	26	10	2	38	Cyclists	1	0	0	0	0	Totals	643	578	456	27			Peds Cross: South Peds: 29 South Entering: 1061 South Leg Total: 1704
Cars	620	552	446	25	1023																						
Trucks	22	26	10	2	38																						
Cyclists	1	0	0	0	0																						
Totals	643	578	456	27																							

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 15:30:00 To: 17:30:00 One Hour Peak From: 15:45:00 To: 16:45:00
Municipality: Ottawa Site #: 2422000001 Intersection: Heron Rd & Bank St TFR File #: 1 Count date: 21-Nov-24	Weather conditions: Person counted: Person prepared: Person checked:
** Signalized Intersection **	Major Road: Heron Rd runs W/E

North Leg Total: 1672 North Entering: 974 North Peds: 3 Peds Cross:	<table style="width: 100%; border-collapse: collapse;"><tr><td style="text-align: right;">Cyclists</td><td style="text-align: right;">0</td><td style="text-align: right;">1</td><td style="text-align: right;">0</td><td style="text-align: right;">1</td></tr><tr><td style="text-align: right;">Trucks</td><td style="text-align: right;">3</td><td style="text-align: right;">6</td><td style="text-align: right;">4</td><td style="text-align: right;">13</td></tr><tr><td style="text-align: right;">Cars</td><td style="text-align: right;">172</td><td style="text-align: right;">615</td><td style="text-align: right;">173</td><td style="text-align: right;">960</td></tr><tr><td style="text-align: right;">Totals</td><td style="text-align: right;">175</td><td style="text-align: right;">622</td><td style="text-align: right;">177</td><td style="text-align: right;">960</td></tr></table>	Cyclists	0	1	0	1	Trucks	3	6	4	13	Cars	172	615	173	960	Totals	175	622	177	960		Cyclists 0 Trucks 8 Cars 690 Totals 698	East Leg Total: 2017 East Entering: 939 East Peds: 3 Peds Cross:
Cyclists	0	1	0	1																				
Trucks	3	6	4	13																				
Cars	172	615	173	960																				
Totals	175	622	177	960																				

Cyclists	Trucks	Cars	Totals
0	23	1439	1462

W

N

S

E

Cars	Trucks	Cyclists	Totals
83	1	0	84
785	14	0	799
56	0	0	56
924	15	0	939

Cyclists	Trucks	Cars	Totals
0	2	148	150
0	23	819	842
0	11	545	556
0	36	1512	1548

W

N

S

E

Cars	Trucks	Cyclists	Totals
1050	28	0	1078

Peds Cross: West Peds: 4 West Entering: 1548 West Leg Total: 3010	Cars 1216 Trucks 17 Cyclists 1 Totals 1234		Cars 482 Trucks 6 Cyclists 0 Totals 488		459 5 0 464		58 1 0 59		999 12 0	Peds Cross: South Peds: 21 South Entering: 1011 South Leg Total: 2245
--	--	--	---	--	---	--	---	--	---	--

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000001			
Intersection: Heron Rd & Bank St		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 5594 North Entering: 2956 North Peds: 31 Peds Cross:	Cyclists 0 2 0 2 Trucks 12 39 11 62 Cars 555 1808 529 2892 Totals 567 1849 540	 Cyclists 0 Trucks 54 Cars 2584 Totals 2638	East Leg Total: 7335 East Entering: 3681 East Peds: 26 Peds Cross:
Cyclists Trucks Cars Totals 0 164 5470 5634	 	 	Cars Trucks Cyclists Totals 319 17 0 336 3028 106 0 3134 203 8 0 211 3550 131 0
Cyclists Trucks Cars Totals 0 9 600 609 0 91 2880 2971 0 27 1640 1667 0 127 5120	 	 	Cars Trucks Cyclists Totals 3548 106 0 3654
Peds Cross: West Peds: 47 West Entering: 5247 West Leg Total: 10881	Cars 3651 Trucks 74 Cyclists 2 Totals 3727	Cars 1887 1665 139 3691 Trucks 46 28 4 78 Cyclists 0 0 0 0 Totals 1933 1693 143	Peds Cross: South Peds: 78 South Entering: 3769 South Leg Total: 7496
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Heron Rd & Bank St					Count Date: 21-Nov-24		Municipality: Ottawa						
North Approach Totals						North/South Total Approaches	South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
8:00:00	34	143	51	228	6	698	8:00:00	274	188	8	470	7	
9:00:00	77	295	119	491	14	1552	9:00:00	578	456	27	1061	29	
16:00:00	136	501	160	797	9	1638	16:00:00	414	388	39	841	17	
17:00:00	182	611	167	960	2	1910	17:00:00	448	448	54	950	18	
Totals:						5798	S Totals:	1714	1480	128	3322	71	
East Approach Totals						East/West Total Approaches	West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
8:00:00	22	391	35	448	8	945	8:00:00	49	319	129	497	7	
9:00:00	67	877	85	1029	9	2127	9:00:00	139	678	281	1098	21	
16:00:00	45	715	83	843	7	2084	16:00:00	152	696	393	1241	16	
17:00:00	59	802	85	946	2	2541	17:00:00	154	850	591	1595	3	
Totals:						7697	W Totals:	494	2543	1394	4431	47	
Calculated Values for Traffic Crossing Major Street													
Hours Ending:		8:00	9:00	16:00	17:00	0:00	0:00	0:00	0:00	0:00	0:00		
Crossing Values:		511	1141	1074	1246	0	0	0	0	0	0		



Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left			Thru			Right			Left			Thru			Right			South Cross	
	Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	130	130	91	91	3	3	4	4	1	1	0	0	0	0	0	0	0	0	3	3
8:00:00	268	138	185	94	8	5	6	2	3	2	0	0	0	0	0	0	0	0	7	4
8:15:00	424	156	300	115	16	8	12	6	5	2	0	0	0	0	0	0	0	0	14	7
8:30:00	558	134	416	116	23	7	17	5	22	3	1	1	0	0	0	0	0	0	23	9
8:45:00	699	141	509	93	28	5	20	3	9	1	1	0	0	0	0	0	0	0	31	8
9:00:00	820	121	631	122	33	5	32	12	13	4	2	1	0	0	0	0	0	0	36	5
9:15:00	914	94	728	97	42	9	35	3	15	2	3	1	0	0	0	0	0	0	42	6
9:30:00	981	67	809	81	48	6	37	2	19	4	3	0	0	0	0	0	0	0	45	3
9:45:00	981	0	809	0	48	0	37	0	19	0	3	0	0	0	0	0	0	0	45	0
15:30:00	981	0	809	0	48	0	37	0	19	0	3	0	0	0	0	0	0	0	45	0
15:45:00	1096	115	901	92	59	11	38	1	21	2	3	0	0	0	0	0	0	0	48	3
16:00:00	1227	131	1010	109	70	11	39	1	22	1	4	1	0	0	0	0	0	0	53	5
16:15:00	1356	129	1113	103	86	16	42	3	22	0	4	0	0	0	0	0	0	0	59	6
16:30:00	1468	112	1246	133	103	17	43	1	22	0	4	0	0	0	0	0	0	0	67	8
16:45:00	1578	110	1360	114	117	14	44	1	26	4	0	0	0	0	0	0	0	0	69	2
17:00:00	1669	91	1454	94	124	7	45	1	26	0	4	0	0	0	0	0	0	0	71	2
17:15:00	1776	107	1553	99	133	9	45	0	26	0	4	0	0	0	0	0	0	0	76	5
17:30:00	1887	111	1665	112	139	6	46	1	28	2	4	0	0	0	0	0	0	0	78	2
17:45:00	1887	0	1665	0	139	0	46	0	28	0	4	0	0	0	0	0	0	0	78	0
17:45:15	1887	0	1665	0	139	0	46	0	28	0	4	0	0	0	0	0	0	0	78	0

[illegible]



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Ottawa
Site #: 2422000002
Intersection: Heron Rd & Alta Vista Dr
TFR File #: 1
Count date: 21-Nov-24

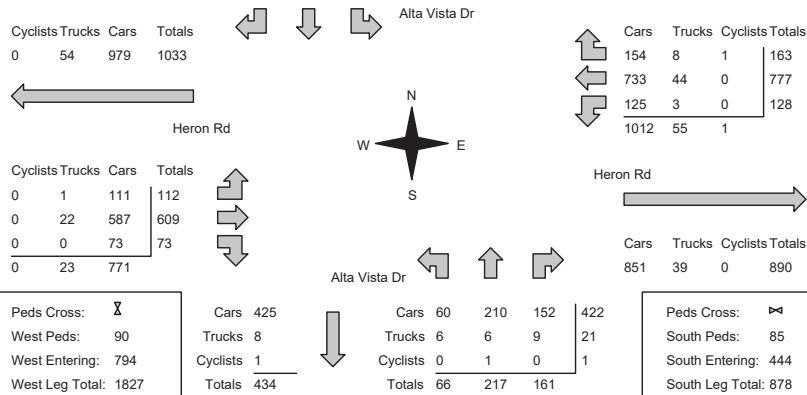
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 1035	Cyclists 0 1 0 1	Cyclists 2	East Leg Total: 1958
North Entering: 543	Trucks 4 5 8 17	Trucks 15	East Entering: 1068
North Peds: 60	Cars 186 227 112 525	Cars 475	East Peds: 140
Peds Cross: 1	Totals 190 233 120	Totals 492	Peds Cross: 1



Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 15:30:00

To: 16:30:00

Municipality: Ottawa
Site #: 2422000002
Intersection: Heron Rd & Alta Vista Dr
TFR File #: 1
Count date: 21-Nov-24

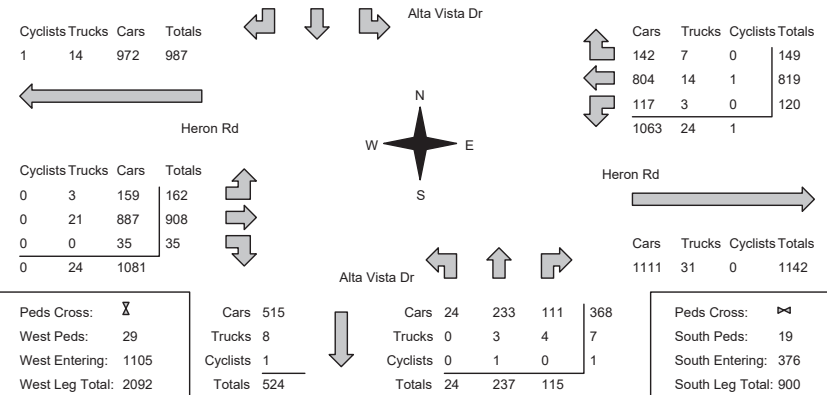
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 1180	Cyclists 0 1 0 1	Cyclists 1	East Leg Total: 2230
North Entering: 632	Trucks 0 5 6 11	Trucks 13	East Entering: 1088
North Peds: 15	Cars 144 363 113 620	Cars 534	East Peds: 19
Peds Cross: 1	Totals 144 369 119	Totals 548	Peds Cross: 1



Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000002			
Intersection: Heron Rd & Alta Vista Dr		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 4285 North Entering: 2241 North Peds: 90 Peds Cross:	Cyclists 0 5 1 6 Trucks 6 15 23 44 Cars 611 1141 439 2191 Totals 617 1161 463	 Cyclists 6 Trucks 45 Cars 1993 Totals 2044	East Leg Total: 8080 East Entering: 4121 East Peds: 193 Peds Cross:
Cyclists Trucks Cars Totals 2 134 3708 3844	 	Alta Vista Dr 	Cars Trucks Cyclists Totals 586 24 3 613 2980 121 2 3103 395 10 0 405 3961 155 5
Heron Rd 		N W S E	Heron Rd
Cyclists Trucks Cars Totals 0 5 511 516 0 103 2959 3062 0 0 164 164 0 108 3634	 	Alta Vista Dr 	Cars Trucks Cyclists Totals 3816 142 1 3959
Peds Cross: West Peds: 147 West Entering: 3742 West Leg Total: 7586	Cars 1700 Trucks 25 Cyclists 5 Totals 1730	Cars 117 896 418 1431 Trucks 7 16 16 39 Cyclists 0 3 0 3 Totals 124 915 434	Peds Cross: South Peds: 130 South Entering: 1473 South Leg Total: 3203
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Heron Rd & Alta Vista Dr						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	43	97	67	207	4		380	8:00:00	6	133	34	173	5
9:00:00	120	233	190	543	60		987	9:00:00	66	217	161	444	85
16:00:00	117	321	146	584	14		912	16:00:00	23	209	96	328	23
17:00:00	127	354	144	625	8		973	17:00:00	16	239	93	348	13
Totals:	407	1005	547	1959	86		3252	S Totals:	111	798	384	1293	126
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	29	391	86	506	13		874	8:00:00	55	290	23	368	1
9:00:00	128	777	163	1068	140		1862	9:00:00	112	609	73	794	90
16:00:00	117	735	155	1007	18		1889	16:00:00	130	734	18	882	47
17:00:00	97	805	136	1038	20		2177	17:00:00	143	958	38	1139	8
Totals:	371	2708	540	3619	191		6802	W Totals:	440	2591	152	3183	146
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	196	649	526	525				0	0	0	0		



Count Date: 21-Nov-24	Site #: 2422000002
-----------------------	--------------------

Count Date: 21-Nov-24 Site #: 2422000002



Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians
	Left			Thru			Right			Left			Thru			Right			South Cross
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45:00	1	1	70	70	8	8	0	0	1	1	2	2	0	0	0	0	0	2	
8:00:00	5	4	130	60	31	23	1	1	2	1	3	1	0	0	1	1	0	5	
8:15:00	17	12	174	44	57	26	2	1	3	1	8	5	0	0	1	0	0	40	
8:30:00	40	23	233	59	104	47	3	1	3	0	8	0	0	0	1	0	0	58	
8:45:00	53	13	281	48	149	45	5	2	6	3	9	1	0	0	2	1	0	73	
9:00:00	65	12	340	59	183	34	7	2	8	2	12	3	0	0	2	0	0	90	
9:15:00	68	3	352	52	205	22	7	0	9	1	12	0	0	0	2	0	0	98	
9:30:00	73	5	436	44	214	9	7	0	9	0	12	0	0	0	2	0	0	104	
9:45:00	73	0	436	0	214	0	7	0	9	0	12	0	0	0	2	0	0	104	
15:30:00	73	0	436	0	214	0	7	0	9	0	12	0	0	0	2	0	0	104	
15:45:00	83	10	495	59	244	30	7	0	10	1	13	1	0	0	3	1	0	107	
16:00:00	88	5	545	50	276	32	7	0	11	1	15	2	0	0	3	0	0	113	
16:15:00	91	3	595	50	304	28	7	0	11	0	16	1	0	0	3	0	0	119	
16:30:00	97	6	669	74	325	21	7	0	12	1	16	0	0	0	3	0	0	123	
16:45:00	103	6	725	56	350	25	7	0	12	0	16	0	0	0	3	0	0	126	
17:00:00	104	1	781	56	368	18	7	0	14	2	16	0	0	0	3	0	0	128	
17:15:00	107	3	846	65	397	29	7	0	16	2	16	0	0	0	3	0	0	127	
17:30:00	117	10	896	50	418	21	7	0	16	0	16	0	0	0	3	0	0	130	
17:45:00	117	0	896	0	418	0	7	0	16	0	16	0	0	0	3	0	0	130	
17:45:15	117	0	896	0	418	0	7	0	16	0	16	0	0	0	3	0	0	130	

[illegible]



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00	One Hour Peak From: 8:00:00 To: 9:00:00																																																																																																
Municipality: Ottawa Site #: 2422000003 Intersection: Heron Rd & Finn Court TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:																																																																																																	
** Signalized Intersection **		Major Road: Heron Rd runs W/E																																																																																																	
East Leg Total: 2031 East Entering: 1094 East Peds: 10 Peds Cross: X																																																																																																			
<table border="0"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th><th></th><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>2</td><td>50</td><td>1076</td><td>1128</td><td></td><td>1041</td><td>49</td><td>1</td><td>1091</td></tr><tr><td colspan="4"></td><td>←</td><td>1</td><td>2</td><td>0</td><td>3</td></tr><tr><td colspan="4"></td><td></td><td>1042</td><td>51</td><td>1</td><td></td></tr></tbody></table> Heron Rd N W —+— E S <table border="0"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th><th></th><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>0</td><td>37</td><td>890</td><td>927</td><td>→</td><td>898</td><td>39</td><td>0</td><td>937</td></tr><tr><td>1</td><td>1</td><td>11</td><td>13</td><td>↘</td><td colspan="4"></td></tr><tr><td>1</td><td>38</td><td>901</td><td></td><td></td><td colspan="4"></td></tr></tbody></table> Finn Court <table border="0"><tbody><tr><td>Peds Cross: X</td><td>Cars 12</td><td>Cars 35</td><td>8</td><td>43</td><td>Peds Cross: X</td></tr><tr><td>West Peds: 3</td><td>Trucks 3</td><td>Trucks 1</td><td>2</td><td>3</td><td>South Peds: 33</td></tr><tr><td>West Entering: 940</td><td>Cyclists 1</td><td>Cyclists 1</td><td>0</td><td>1</td><td>South Entering: 47</td></tr><tr><td>West Leg Total: 2068</td><td>Totals 16</td><td>Totals 37</td><td>10</td><td></td><td>South Leg Total: 63</td></tr></tbody></table>				Cyclists	Trucks	Cars	Totals		Cars	Trucks	Cyclists	Totals	2	50	1076	1128		1041	49	1	1091					←	1	2	0	3						1042	51	1		Cyclists	Trucks	Cars	Totals		Cars	Trucks	Cyclists	Totals	0	37	890	927	→	898	39	0	937	1	1	11	13	↘					1	38	901							Peds Cross: X	Cars 12	Cars 35	8	43	Peds Cross: X	West Peds: 3	Trucks 3	Trucks 1	2	3	South Peds: 33	West Entering: 940	Cyclists 1	Cyclists 1	0	1	South Entering: 47	West Leg Total: 2068	Totals 16	Totals 37	10		South Leg Total: 63
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Comments																																																																																																			



Accu-Traffic Inc.

Afternoon Peak Diagram		Specified Period From: 15:30:00 To: 17:30:00	One Hour Peak From: 15:30:00 To: 16:30:00																																																																																																
Municipality: Ottawa Site #: 2422000003 Intersection: Heron Rd & Finn Court TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:																																																																																																	
** Signalized Intersection **		Major Road: Heron Rd runs W/E																																																																																																	
East Leg Total: 2208 East Entering: 1073 East Peds: 5 Peds Cross: X																																																																																																			
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Cyclists	Trucks	Cars	Totals		Cars	Trucks	Cyclists	Totals																																																																																											
1	24	1058	1083		1034	24	1	1059																																																																																											
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Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa Site #: 2422000003 Intersection: Heron Rd & Finn Court TFR File #: 1 Count date: 21-Nov-24	Weather conditions: Person counted: Person prepared: Person checked:																																
** Signalized Intersection **																																	
Major Road: Heron Rd runs W/E																																	
East Leg Total: 8100 East Entering: 4108 East Peds: 25 Peds Cross: X																																	
<table border="1"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th></tr></thead><tbody><tr><td>4</td><td>151</td><td>4029</td><td>4184</td></tr></tbody></table> Heron Rd ←	Cyclists	Trucks	Cars	Totals	4	151	4029	4184	<table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>3934</td><td>146</td><td>3</td><td>4083</td></tr><tr><td>22</td><td>3</td><td>0</td><td>25</td></tr><tr><td>3956</td><td>149</td><td>3</td><td></td></tr></tbody></table> Heron Rd →	Cars	Trucks	Cyclists	Totals	3934	146	3	4083	22	3	0	25	3956	149	3									
Cyclists	Trucks	Cars	Totals																														
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Cyclists	Trucks	Cars	Totals																														
2	134	3813	3949																														
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133	10	1																															
<table border="1"><tr><td>Peds Cross: X</td></tr><tr><td>West Peds: 17</td></tr><tr><td>West Entering: 4039</td></tr><tr><td>West Leg Total: 8223</td></tr></table>	Peds Cross: X	West Peds: 17	West Entering: 4039	West Leg Total: 8223	<table border="1"><tr><td>Cars 103</td></tr><tr><td>Trucks 10</td></tr><tr><td>Cyclists 2</td></tr><tr><td>Totals 115</td></tr></table>	Cars 103	Trucks 10	Cyclists 2	Totals 115																								
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Totals 115																																	
Comments																																	



Accu-Traffic Inc.

Traffic Count Summary

Intersection: Heron Rd & Finn Court					Count Date: 21-Nov-24		Municipality: Ottawa				
North Approach Totals						North/South Total Approaches	South Approach Totals				
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists			
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total
8:00:00	0	0	0	0	0	18	8:00:00	13	0	5	18
9:00:00	0	0	0	0	0	47	9:00:00	37	0	10	47
16:00:00	0	0	0	0	0	27	16:00:00	19	0	8	27
17:00:00	0	0	0	0	0	38	17:00:00	25	0	13	38
Totals:	0	0	0	0	0	130	S Totals:	94	0	36	130
East Approach Totals						East/West Total Approaches	West Approach Totals				
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists			
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total
8:00:00	2	498	0	500	2	863	8:00:00	0	355	8	363
9:00:00	3	1091	0	1094	10	2034	9:00:00	0	927	13	940
16:00:00	9	976	0	985	6	1950	16:00:00	0	940	25	965
17:00:00	10	1022	0	1032	6	2216	17:00:00	0	1154	30	1184
Totals:	24	3587	0	3611	24	7063	W Totals:	0	3376	76	3452
Calculated Values for Traffic Crossing Major Street											
Hours Ending:	8:00	9:00	16:00	17:00			0:00	0:00	0:00	0:00	
Crossing Values:	18	50	29	38			0	0	0	0	

[illegible]

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	1	226	226	0	0	1	1	13	13	0	0	0	0	0	0	0	0	0	0
8:00:00	1	0	475	249	0	0	1	0	23	10	0	0	0	0	0	0	0	0	2	2
8:15:00	1	0	720	245	0	0	1	0	37	14	0	0	0	0	0	0	0	0	5	3
8:30:00	1	0	1004	284	0	0	2	1	50	13	0	0	0	0	1	1	0	0	7	2
8:45:00	1	0	1265	261	0	0	2	0	63	13	0	0	0	0	1	0	0	0	10	3
9:00:00	2	1	1516	251	0	0	3	1	72	9	0	0	0	1	0	0	0	0	12	2
9:15:00	3	1	1738	222	0	0	3	0	88	16	0	0	0	2	1	0	0	0	14	2
9:30:00	5	2	1939	201	0	0	3	0	98	10	0	0	0	2	0	0	0	0	15	1
9:45:00	5	0	1939	0	0	0	3	0	98	0	0	0	0	2	0	0	0	0	15	0
15:30:00	5	0	1939	0	0	0	3	0	98	0	0	0	0	2	0	0	0	0	15	0
15:45:00	9	4	2218	279	0	0	3	0	106	8	0	0	0	2	0	0	0	0	15	0
16:00:00	11	2	2450	232	0	0	3	0	113	7	0	0	0	2	0	0	0	0	18	3
16:15:00	16	5	2722	272	0	0	3	0	117	4	0	0	0	2	0	0	0	0	19	1
16:30:00	19	3	2973	251	0	0	3	0	122	5	0	0	0	3	1	0	0	0	20	1
16:45:00	20	1	3215	242	0	0	3	0	126	4	0	0	0	3	0	0	0	0	23	3
17:00:00	21	1	3446	231	0	0	3	0	138	12	0	0	0	3	0	0	0	0	24	1
17:15:00	21	0	3712	266	0	0	3	0	141	3	0	0	0	3	0	0	0	0	24	0
17:30:00	22	1	3934	222	0	0	3	0	146	5	0	0	0	3	0	0	0	0	25	1
17:45:00	22	0	3934	0	0	0	3	0	146	0	0	0	0	3	0	0	0	0	25	0
17:45:15	22	0	3934	0	0	0	3	0	146	0	0	0	0	3	0	0	0	0	25	0



Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	7	7	0	0	3	3	1	1	0	0	0	0	0	0	0	0	0	0	2	2
8:00:00	11	4	0	0	5	2	2	1	0	0	0	0	0	0	0	0	0	0	4	2
8:15:00	17	6	0	0	6	1	2	0	0	0	0	0	0	0	0	0	0	0	9	5
8:30:00	28	11	0	0	8	2	2	0	0	0	0	0	0	0	0	0	0	0	19	10
8:45:00	39	11	0	0	11	3	2	0	0	0	1	1	0	0	0	0	0	0	29	10
9:00:00	46	7	0	0	13	2	3	1	0	0	2	1	1	1	0	0	0	0	37	8
9:15:00	51	5	0	0	16	3	3	0	0	0	2	0	1	0	0	0	0	0	38	1
9:30:00	57	6	0	0	18	2	3	0	0	0	2	0	1	0	0	0	0	0	41	3
9:45:00	57	0	0	0	18	0	3	0	0	0	2	0	1	0	0	0	0	0	41	0
15:30:00	57	0	0	0	18	0	3	0	0	0	2	0	1	0	0	0	0	0	41	0
15:45:00	64	7	0	0	19	1	3	0	0	0	2	0	1	0	0	0	0	0	41	0
16:00:00	65	1	0	0	20	1	3	0	0	0	3	1	1	0	0	0	0	0	42	1
16:15:00	71	6	0	0	22	2	3	0	0	0	4	1	1	0	0	0	0	0	44	2
16:30:00	81	10	0	0	27	5	3	0	0	0	5	1	1	0	0	0	0	0	46	2
16:45:00	84	3	0	0	28	1	4	1	0	0	5	1	0	0	0	0	0	0	49	3
17:00:00	89	5	0	0	31	3	4	0	0	0	5	0	1	0	0	0	0	0	49	0
17:15:00	91	2	0	0	33	2	4	0	0	0	5	0	1	0	0	0	0	0	50	1
17:30:00	95	4	0	0	38	5	5	1	0	0	5	0	1	0	0	0	0	0	50	0
17:45:00	95	0	0	0	38	0	5	0	0	0	5	0	1	0	0	0	0	0	50	0
17:45:15	95	0	0	0	38	0	5	0	0	0	5	0	1	0	0	0	0	0	50	0



Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	165	165	5	5	0	0	8	8	1	1	0	0	1	1	0	0	3	3
8:00:00	0	0	340	175	7	2	0	0	14	6	1	0	0	0	1	0	0	0	3	0
8:15:00	0	0	540	200	9	2	0	0	26	12	1	0	0	0	1	0	0	0	3	0
8:30:00	0	0	772	232	13	4	0	0	35	9	1	0	0	0	1	0	0	0	3	0
8:45:00	0	0	994	222	16	3	0	0	42	7	1	0	0	0	1	0	0	0	5	2
9:00:00	0	0	1230	236	18	2	0	0	51	9	2	1	0	0	1	0	1	1	6	1
9:15:00	0	0	1442	212	21	3	0	0	63	12	2	0	0	0	1	0	1	0	6	0
9:30:00	0	0	1599	157	26	5	0	0	69	6	2	0	0	0	1	0	1	0	8	2
9:45:00	0	0	1599	0	26	0	0	0	69	0	2	0	0	0	1	0	1	0	8	0
15:30:00	0	0	1599	0	26	0	0	0	69	0	2	0	0	0	1	0	1	0	8	0
15:45:00	0	0	1857	258	32	6	0	0	74	5	2	0	0	0	1	0	1	0	8	0
16:30:00	0	0	2141	284	41	9	0	0	80	6	3	1	0	0	1	0	2	1	10	2
16:15:00	0	0	2417	276	50	9	0	0	89	9	4	1	0	0	1	0	2	0	15	5
16:30:00	0	0	2695	278	53	3	0	0	96	7	6	2	0	0	1	0	2	0	17	2
16:45:00	0	0	2975	280	59	6	0	0	107	11	6	0	0	0	1	0	2	0	17	0
17:30:00	0	0	3257	282	68	9	0	0	117	10	6	0	0	0	2	1	2	0	17	0
17:15:00	0	0	3537	280	71	3	0	0	125	8	6	0	0	0	2	0	2	0	17	0
17:30:00	0	0	3813	276	81	10	0	0	134	9	7	1	0	0	2	0	2	0	17	0
17:45:00	0	0	3813	0	81	0	0	0	134	0	7	0	0	0	2	0	2	0	17	0
17:45:15	0	0	3813	0	81	0	0	0	134	0	7	0	0	0	2	0	2	0	17	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:15:00

To: 9:15:00

Municipality: Ottawa
Site #: 2422000004
Intersection: Heron Rd & Baycrest Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 75
North Entering: 23
North Peds: 11
Peds Cross: 1

Cyclists	0	0	0	0
Trucks	0	0	5	5
Cars	4	4	10	18
Totals	4	4	15	

Cyclists 0
Trucks 5
Cars 47
Totals 52

East Leg Total: 1669
East Entering: 858
East Peds: 4
Peds Cross: 1

Cyclists	Trucks	Cars	Totals
1	51	987	1039

Heron Rd



Cars	Trucks	Cyclists	Totals
27	2	0	29
767	38	0	805
21	3	0	24
815	43	0	

Heron Rd

Cyclists	Trucks	Cars	Totals
0	1	9	10
0	25	737	762
0	10	176	186
0	36	922	

Baycrest Dr

Cars	Trucks	Cyclists	Totals
779	32	0	811

Peds Cross: 1
West Peds: 10
West Entering: 958
West Leg Total: 1997

Cars 201
Trucks 13
Cyclists 0
Totals 214

Cars	216	11	32	259
Trucks	13	2	2	17
Cyclists	1	0	0	1
Totals	230	13	34	

Peds Cross: 1
South Peds: 20
South Entering: 277
South Leg Total: 491

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 15:30:00

To: 16:30:00

Municipality: Ottawa
Site #: 2422000004
Intersection: Heron Rd & Baycrest Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 56
North Entering: 40
North Peds: 4
Peds Cross: 1

Cyclists	0	0	0	0
Trucks	0	2	3	5
Cars	6	3	26	35
Totals	6	5	29	

Cyclists 0
Trucks 0
Cars 16
Totals 16

East Leg Total: 1936
East Entering: 912
East Peds: 5
Peds Cross: 1

Cyclists	Trucks	Cars	Totals
1	24	1021	1046

Heron Rd



Cars	Trucks	Cyclists	Totals
12	0	0	12
853	15	1	869
30	1	0	31
895	16	1	

Heron Rd

Cyclists	Trucks	Cars	Totals
0	0	2	2
0	17	924	941
0	11	180	191
0	28	1106	

Baycrest Dr

Cars	Trucks	Cyclists	Totals
1002	22	0	1024

Peds Cross: 1
West Peds: 9
West Entering: 1134
West Leg Total: 2180

Cars 213
Trucks 14
Cyclists 0
Totals 227

Cars	162	2	52	216
Trucks	9	0	2	11
Cyclists	0	0	0	0
Totals	171	2	54	

Peds Cross: 1
South Peds: 16
South Entering: 227
South Leg Total: 454

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000004			
Intersection: Heron Rd & Baycrest Dr		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 164 North Entering: 73 North Peds: 23 Peds Cross:	Cyclists 0 0 0 0 Trucks 0 2 9 11 Cars 11 9 42 62 Totals 11 11 51 62	 Cyclists 0 Trucks 6 Cars 85 Totals 91	East Leg Total: 6848 East Entering: 3434 East Peds: 12 Peds Cross:
Cyclists Trucks Cars Totals 3 146 3893 4042	 Driveway	Cars Trucks Cyclists Totals 54 2 0 56 3167 106 2 3275 96 7 0 103 3317 115 2	 Heron Rd
Cyclists Trucks Cars Totals 0 2 16 18 2 92 3126 3220 0 44 715 759 2 138 3857	 Baycrest Dr	 Heron Rd	Cars Trucks Cyclists Totals 3304 108 2 3414
Peds Cross: West Peds: 35 West Entering: 3997 West Leg Total: 8039	Cars 820 Trucks 53 Cyclists 0 Totals 873	Cars 715 15 136 866 Trucks 40 2 7 49 Cyclists 1 0 0 1 Totals 756 17 143	Peds Cross: South Peds: 55 South Entering: 916 South Leg Total: 1789
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Heron Rd & Baycrest Dr						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	1	1	0	2	2			8:00:00	91	1	11	103	2
9:00:00	13	3	4	20	10			9:00:00	237	11	30	278	19
16:00:00	20	4	2	26	8			16:00:00	180	2	43	225	14
17:00:00	16	2	5	23	3			17:00:00	170	3	42	215	15
Totals:	50	10	11	71	23		892	S Totals:	678	17	126	821	50
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	16	401	8	425	0		786	8:00:00	1	299	61	361	2
9:00:00	20	826	29	875	1		1802	9:00:00	11	745	171	927	11
16:00:00	25	776	8	809	6		1777	16:00:00	2	775	191	968	10
17:00:00	32	851	10	893	4		2049	17:00:00	4	948	204	1156	8
Totals:	93	2854	55	3002	11		6414	W Totals:	18	2767	627	3412	31
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	95	273	220	201				0	0	0	0		

[illegible]

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	10	10	184	184	4	4	2	2	11	11	0	0	0	0	0	0	0	0	0	0
8:00:00	13	3	381	197	8	4	3	1	20	9	0	0	0	0	0	0	0	0	0	0
8:15:00	15	2	570	189	13	5	3	0	31	11	0	0	0	0	0	0	0	0	0	0
8:30:00	23	8	773	203	19	6	4	1	40	9	0	0	0	0	0	0	0	0	1	1
8:45:00	27	4	974	201	26	7	6	2	51	11	1	1	0	0	0	0	0	0	1	1
9:00:00	30	3	1168	194	35	9	6	0	59	8	2	1	0	0	0	0	0	0	1	0
9:15:00	36	6	1337	169	40	5	6	0	69	10	2	0	0	0	0	0	0	0	4	3
9:30:00	40	4	1499	162	40	0	6	0	76	7	2	0	0	0	0	0	0	0	4	0
9:45:00	40	0	1499	0	40	0	6	0	76	0	2	0	0	0	0	0	0	0	4	0
15:30:00	40	0	1499	0	40	0	6	0	76	0	2	0	0	0	0	0	0	0	4	0
15:45:00	44	4	1723	224	42	2	6	0	81	5	2	0	0	0	0	0	0	0	4	0
16:00:00	55	11	1918	195	43	1	6	0	85	4	2	0	0	0	0	0	0	0	7	3
16:15:00	64	9	2152	234	45	2	7	1	89	4	2	0	0	0	0	0	0	0	9	2
16:30:00	70	6	2352	200	52	7	7	0	91	2	2	0	0	0	1	1	0	0	9	0
16:45:00	78	8	2557	205	52	0	7	0	94	3	2	0	0	0	2	1	0	0	10	1
17:00:00	86	8	2751	194	53	1	7	0	101	1	2	0	0	0	2	2	0	0	11	1
17:15:00	92	6	2977	228	53	0	7	0	102	1	2	0	0	0	2	2	0	0	11	0
17:30:00	96	4	3167	190	54	1	7	0	106	4	2	0	0	0	2	2	0	0	12	1
17:45:00	96	0	3167	0	54	0	7	0	106	0	2	0	0	0	2	0	0	0	12	0
17:45:15	96	0	3167	0	54	0	7	0	106	0	2	0	0	0	2	0	0	0	12	0



Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	42	42	1	1	3	3	3	3	0	0	0	0	0	0	0	0	0	0	1	1
8:00:00	87	45	1	0	10	7	4	1	0	0	1	1	0	0	0	0	0	0	2	1
8:15:00	140	53	1	0	15	5	7	3	0	0	1	0	0	0	0	0	0	4	2	
8:30:00	209	69	2	1	25	10	12	5	0	0	1	0	1	1	0	0	0	0	13	9
8:45:00	265	56	4	2	29	4	14	2	1	1	1	0	1	0	0	0	0	0	18	5
9:00:00	309	44	10	6	38	9	18	4	2	1	3	2	1	0	0	0	0	0	21	3
9:15:00	356	47	12	2	47	9	20	2	2	0	3	0	1	0	0	0	0	0	24	3
9:30:00	398	42	12	0	53	6	23	4	2	0	3	0	1	1	0	0	0	0	26	2
9:45:00	398	0	12	0	53	0	23	0	2	0	3	0	1	0	0	0	0	0	26	0
15:30:00	398	0	12	0	53	0	23	0	2	0	3	0	1	0	0	0	0	0	26	0
15:45:00	440	42	12	0	67	14	26	3	2	0	3	0	1	0	0	0	0	0	30	4
16:00:00	479	39	12	0	81	14	28	2	2	0	3	0	1	0	0	0	0	0	35	5
16:15:00	514	35	14	2	92	11	29	1	2	0	3	0	1	0	0	0	0	0	37	2
16:30:00	560	46	14	0	105	13	32	3	2	0	5	2	1	0	0	0	0	0	42	5
16:45:00	598	38	14	0	111	6	32	0	2	0	6	1	1	0	0	0	0	0	47	5
17:00:00	640	42	15	1	120	9	37	5	2	0	6	0	1	0	0	0	0	0	50	3
17:15:00	680	40	15	0	126	6	39	2	2	0	7	1	1	0	0	0	0	0	52	2
17:30:00	715	35	15	0	136	10	40	1	2	0	7	0	1	0	0	0	0	0	55	3
17:45:00	715	0	15	0	136	0	40	0	2	0	7	0	1	0	0	0	0	0	55	0
17:45:15	715	0	15	0	136	0	40	0	2	0	7	0	1	0	0	0	0	0	55	0



Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	1	137	137	29	29	0	0	4	4	3	3	0	0	1	1	0	0	0	1
8:00:00	1	0	289	152	56	27	0	0	9	5	5	2	0	0	1	0	0	0	2	1
8:15:00	4	3	448	159	84	28	0	0	18	9	8	3	0	0	1	0	0	0	5	3
8:30:00	5	1	637	189	130	46	0	0	24	6	11	3	0	0	1	0	0	0	5	0
8:45:00	7	2	824	187	167	37	0	0	29	5	13	2	0	0	1	0	0	0	9	4
9:00:00	11	4	1009	185	215	48	1	1	34	5	17	4	0	0	1	0	0	0	13	4
9:15:00	13	2	1185	176	260	45	1	0	43	9	18	1	0	0	1	0	0	0	15	2
9:30:00	13	0	1309	124	298	38	1	0	48	5	21	3	0	0	1	0	0	0	17	2
9:45:00	13	0	1309	0	298	0	1	0	48	0	21	0	0	0	1	0	0	0	17	0
15:30:00	13	0	1309	0	298	0	1	0	48	0	21	0	0	0	1	0	0	0	17	0
15:45:00	13	0	1529	220	340	42	1	0	53	5	22	1	0	0	1	0	0	0	23	6
16:00:00	13	0	1761	232	398	58	1	0	57	4	25	3	0	0	1	1	0	0	23	0
16:15:00	14	1	1999	238	437	39	1	0	62	5	30	5	0	0	1	1	0	0	25	2
16:30:00	15	1	2233	234	478	41	1	0	65	3	32	2	0	0	1	1	0	0	26	1
16:45:00	16	1	2452	219	529	51	1	0	73	8	37	5	0	0	1	0	0	0	30	4
17:00:00	16	0	2634	232	588	59	2	1	81	8	39	2	0	0	2	1	0	0	31	1
17:15:00	16	0	2903	219	651	63	2	0	86	5	41	2	0	0	2	0	0	0	34	3
17:30:00	16	0	3126	223	715	64	2	0	92	6	44	3	0	0	2	0	0	0	35	1
17:45:00	16	0	3126	0	715	0	2	0	92	0	44	0	0	0	2	0	0	0	35	0
17:45:15	16	0	3126	0	715	0	2	0	92	0	44	0	0	0	2	0	0	0	35	0



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00	One Hour Peak From: 8:15:00 To: 9:15:00
Municipality: Ottawa Site #: 2422000005 Intersection: Heron Rd & Sandalwood Dr TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 198 North Entering: 104 North Peds: 2 Peds Cross:	Cyclists 1 0 0 1 Trucks 1 1 0 2 Cars 60 28 13 101 Totals 62 29 13	Cyclists 0 Trucks 5 Cars 89 Totals 94	East Leg Total: 1568 East Entering: 790 East Peds: 13 Peds Cross:
Cyclists Trucks Cars Totals 1 44 811 856 Cars Trucks Cyclists Totals 11 0 0 11 716 42 0 758 20 1 0 21 747 43 0 Cars Trucks Cyclists Totals 0 3 54 57 0 29 711 740 0 1 17 18 0 33 782 Cars Trucks Cyclists Totals 35 24 22 81 Trucks 1 2 3 6 Cyclists 0 0 0 0 Totals 36 26 25 Cars Trucks Cyclists Totals 17 34 26 77 Trucks 0 2 0 2 Cyclists 0 0 0 0 Totals 17 36 26 Peds Cross: West Peds: 9 West Entering: 815 West Leg Total: 1671 Peds Cross: South Peds: 14 South Entering: 87 South Leg Total: 155			
Comments			



Accu-Traffic Inc.

Afternoon Peak Diagram		Specified Period From: 15:30:00 To: 17:30:00	One Hour Peak From: 15:30:00 To: 16:30:00
Municipality: Ottawa Site #: 2422000005 Intersection: Heron Rd & Sandalwood Dr TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 224 North Entering: 101 North Peds: 5 Peds Cross:	Cyclists 1 0 0 1 Trucks 2 1 0 3 Cars 49 38 10 97 Totals 52 39 10	Cyclists 0 Trucks 2 Cars 121 Totals 123	East Leg Total: 1867 East Entering: 909 East Peds: 7 Peds Cross:
Cyclists Trucks Cars Totals 1 16 907 924 Cars Trucks Cyclists Totals 12 0 0 12 841 14 0 855 40 2 0 42 893 16 0 Cars Trucks Cyclists Totals 0 0 75 75 0 23 899 922 0 0 29 29 0 23 1003 Cars Trucks Cyclists Totals 935 23 0 958 Cars Trucks Cyclists Totals 107 3 0 110 Trucks 3 0 0 3 Cyclists 0 0 0 0 Totals 107 3 0 Peds Cross: West Peds: 1 West Entering: 1026 West Leg Total: 1950 Peds Cross: South Peds: 9 South Entering: 79 South Leg Total: 189			
Comments			



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000005			
Intersection: Heron Rd & Sandalwood Dr		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 744 North Entering: 372 North Peds: 8 Peds Cross:	Cyclists 2 0 0 2 Trucks 3 2 0 5 Cars 199 116 50 365 Totals 204 118 50	 Cyclists 0 Trucks 9 Cars 363 Totals 372	East Leg Total: 6579 East Entering: 3317 East Peds: 29 Peds Cross:
Cyclists Trucks Cars Totals 3 119 3336 3458	 	 	Cars Trucks Cyclists Totals 51 0 0 51 3041 115 1 3157 103 6 0 109 3195 121 1
Cyclists Trucks Cars Totals 0 4 217 221 2 102 3012 3116 0 4 82 86 2 110 3311	 	Cars Trucks Cyclists Totals 3153 107 2 3262	Cars Trucks Cyclists Totals 96 95 91 282 Trucks 1 5 5 11 Cyclists 0 0 0 0 Totals 97 100 96
Peds Cross: West Peds: 14 West Entering: 3423 West Leg Total: 6881	Cars 301 Trucks 12 Cyclists 0 Totals 313	Cars 96 95 91 282 Trucks 1 5 5 11 Cyclists 0 0 0 0 Totals 97 100 96	Peds Cross: South Peds: 32 South Entering: 293 South Leg Total: 606
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Heron Rd & Sandalwood Dr						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	5	12	30	47	0			8:00:00	18	7	11	36	2
9:00:00	7	22	56	85	2			9:00:00	37	23	22	82	13
16:00:00	18	47	60	125	1			16:00:00	16	30	24	70	7
17:00:00	14	26	39	79	5			17:00:00	19	24	29	72	4
Totals:	44	107	185	336	8		596	S Totals:	90	84	86	260	26
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	11	380	6	397	4		707	8:00:00	13	289	8	310	1
9:00:00	20	785	14	819	6		1605	9:00:00	49	721	16	786	9
16:00:00	25	745	14	784	16		1623	16:00:00	71	751	17	839	0
17:00:00	37	835	7	879	2		1895	17:00:00	55	930	31	1016	3
Totals:	93	2745	41	2879	28		5830	W Totals:	188	2691	72	2951	13
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	40	82	97	64				0	0	0	0		

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Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians
	Left			Thru			Right			Left			Thru			Right			South Cross
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45:00	10	10	1	1	4	4	0	0	0	0	0	0	0	0	0	0	0	1	
8:00:00	18	8	7	6	11	7	0	0	0	0	0	0	0	0	0	0	0	2	
8:15:00	24	6	8	1	16	5	0	0	0	1	1	0	0	0	0	0	0	3	
8:30:00	35	11	16	8	23	7	1	1	0	0	1	0	0	0	0	0	0	5	
8:45:00	44	9	19	3	27	4	1	0	1	1	1	0	0	0	0	0	0	9	
9:00:00	54	10	29	10	30	3	1	0	1	0	3	2	0	0	0	0	0	15	
9:15:00	59	5	32	3	38	8	1	0	2	1	4	1	0	0	0	0	0	17	
9:30:00	62	3	34	2	41	3	1	0	2	0	4	0	0	0	0	0	0	17	
9:45:00	62	0	34	0	41	0	1	0	2	0	4	0	0	0	0	0	0	17	
15:30:00	62	0	34	0	41	0	1	0	2	0	4	0	0	0	0	0	0	17	
15:45:00	67	5	48	14	46	5	1	0	2	0	4	0	0	0	0	0	0	20	
16:00:00	70	3	58	10	53	7	1	0	2	0	4	0	0	0	0	0	0	22	
16:15:00	74	4	62	4	63	10	1	0	4	2	4	0	0	0	0	0	0	22	
16:30:00	79	5	68	6	67	4	1	0	4	0	4	0	0	0	0	0	0	26	
16:45:00	84	5	74	6	74	7	1	0	4	0	4	0	0	0	0	0	0	26	
17:00:00	89	5	80	6	82	8	1	0	4	0	4	0	0	0	0	0	0	26	
17:15:00	94	5	86	6	85	3	1	0	5	1	5	1	0	0	0	0	0	27	
17:30:00	96	2	95	9	91	6	1	0	5	0	5	0	0	0	0	0	0	32	
17:45:00	96	0	95	0	91	0	1	0	5	0	5	0	0	0	0	0	0	32	
17:45:15	96	0	95	0	91	0	1	0	5	0	5	0	0	0	0	0	0	32	



Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	5	5	133	133	3	3	0	0	3	3	0	0	0	0	1	1	0	0	1	1
8:00:00	12	7	279	146	8	5	1	1	9	6	0	0	0	0	1	0	0	0	1	0
8:15:00	22	10	432	153	9	1	1	0	16	7	2	2	0	0	1	0	0	0	1	0
8:30:00	32	10	616	184	14	5	1	0	23	7	2	0	0	0	1	0	0	0	3	2
8:45:00	44	12	790	174	19	5	2	1	27	4	2	0	0	0	1	0	0	0	3	0
9:00:00	59	15	975	185	21	2	3	1	34	7	3	1	0	0	1	0	0	0	10	7
9:15:00	76	17	1143	168	26	5	4	1	45	11	3	0	0	0	1	0	0	0	10	0
9:30:00	85	9	1263	120	27	1	4	0	50	5	3	0	0	0	1	0	0	0	10	0
9:45:00	85	0	1263	0	27	0	4	0	50	0	3	0	0	0	1	0	0	0	10	0
15:30:00	85	0	1263	0	27	0	4	0	50	0	3	0	0	0	1	0	0	0	10	0
15:45:00	109	24	1476	213	30	3	4	0	58	8	3	0	0	0	1	0	0	0	10	0
16:00:00	129	20	1698	222	38	8	4	0	62	4	3	0	0	0	1	0	0	0	10	0
16:15:00	145	16	1931	233	46	8	4	0	68	6	3	0	0	0	1	0	0	0	10	0
16:30:00	160	15	2162	231	56	10	4	0	73	5	3	0	0	0	1	0	0	0	11	1
16:45:00	177	17	2372	210	60	4	4	0	82	9	3	0	0	0	1	0	0	0	12	1
17:00:00	184	7	2600	228	68	8	4	0	89	7	4	1	0	0	2	1	0	0	13	1
17:15:00	196	12	2805	205	75	7	4	0	96	7	4	0	0	0	2	0	0	0	14	1
17:30:00	217	21	3012	207	82	7	4	0	102	6	4	0	0	0	2	0	0	0	14	0
17:45:00	217	0	3012	0	82	0	4	0	102	0	4	0	0	0	2	0	0	0	14	0
17:45:15	217	0	3012	0	82	0	4	0	102	0	4	0	0	0	2	0	0	0	14	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:15:00

To: 9:15:00

Municipality: Ottawa
Site #: 2422000006
Intersection: Heron Rd & Jefferson St
TFR File #: 1
Count date: 21-Oct-24

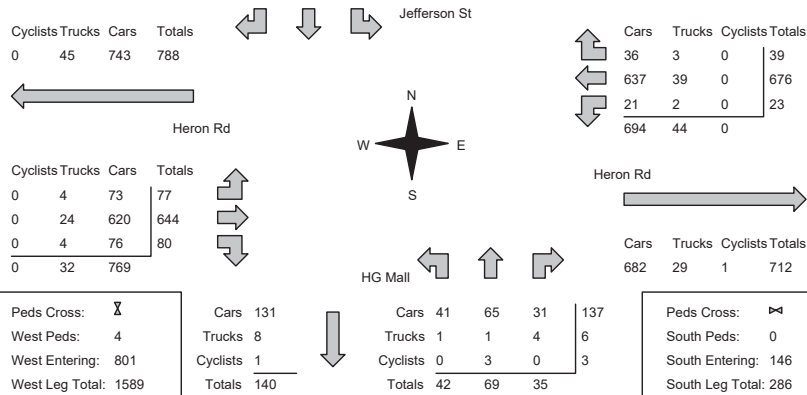
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 325	Cyclists 0	1	1	2	Cyclists 3	East Leg Total: 1450
North Entering: 140	Trucks 5	2	1	8	Trucks 8	East Entering: 738
North Peds: 8	Cars 65	34	31	130	Cars 174	East Peds: 18
Peds Cross: 0	Totals 70	37	33		Totals 185	Peds Cross: 0



Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 15:30:00

To: 16:30:00

Municipality: Ottawa
Site #: 2422000006
Intersection: Heron Rd & Jefferson St
TFR File #: 1
Count date: 21-Oct-24

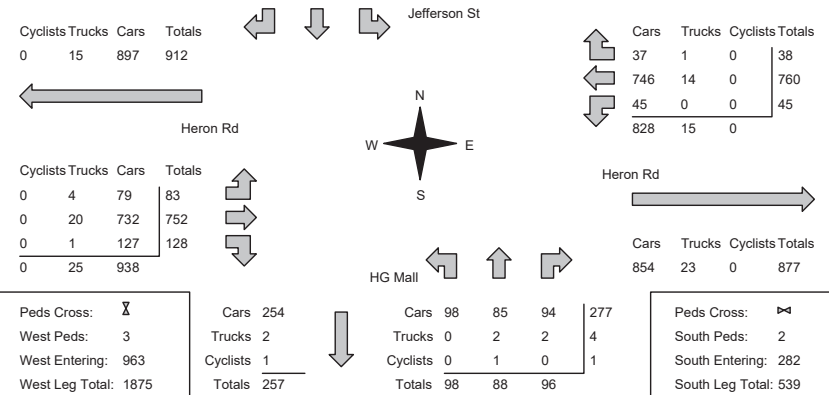
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Heron Rd runs W/E

North Leg Total: 376	Cyclists 0	1	0	1	Cyclists 1	East Leg Total: 1720
North Entering: 167	Trucks 1	1	1	3	Trucks 7	East Entering: 843
North Peds: 7	Cars 53	82	28	163	Cars 201	East Peds: 37
Peds Cross: 0	Totals 54	84	29		Totals 209	Peds Cross: 0



Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000006			
Intersection: Heron Rd & Jefferson St		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Oct-24		Person checked:	
** Signalized Intersection **		Major Road: Heron Rd runs W/E	
North Leg Total: 1223 North Entering: 546 North Peds: 19 Peds Cross:	Cyclists 0 2 1 3 Trucks 9 3 4 16 Cars 214 200 113 527 Totals 223 205 118	 Cyclists 4 Trucks 24 Cars 649 Totals 677	East Leg Total: 6071 East Entering: 3079 East Peds: 71 Peds Cross:
Cyclists Trucks Cars Totals 1 121 3191 3313	 	Jefferson St	Cars Trucks Cyclists Totals 124 5 0 129 2713 110 1 2824 123 3 0 126 2960 118 1
Heron Rd		N W S E	Heron Rd
Cyclists Trucks Cars Totals 0 15 252 267 2 88 2528 2618 0 7 411 418 2 110 3191	 	HG Mall	Cars Trucks Cyclists Totals 2888 101 3 2992
Peds Cross: West Peds: 15 West Entering: 3303 West Leg Total: 6616	Cars 734 Trucks 13 Cyclists 2 Totals 749	Cars 264 273 247 784 Trucks 2 4 9 15 Cyclists 0 4 0 4 Totals 266 281 256	Peds Cross: South Peds: 6 South Entering: 803 South Leg Total: 1552
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Heron Rd & Jefferson St						Count Date: 21-Oct-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	17	11	31	59	2		103	8:00:00	21	13	10	44	3
9:00:00	30	29	75	134	7		264	9:00:00	37	55	38	130	0
16:00:00	28	66	51	145	8		376	16:00:00	71	93	67	231	1
17:00:00	30	69	47	146	2		414	17:00:00	92	78	98	268	2
Totals:	105	175	204	484	19		1157	S Totals:	221	239	213	673	6
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	4	344	11	359	0		670	8:00:00	14	276	21	311	1
9:00:00	21	719	37	777	10		1545	9:00:00	65	627	76	768	7
16:00:00	35	659	36	730	38		1520	16:00:00	78	608	104	790	2
17:00:00	45	728	33	806	16		1798	17:00:00	65	775	152	992	2
Totals:	105	2450	117	2672	64		5533	W Totals:	222	2286	353	2861	12
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	52	139	232	218				0	0	0	0		

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Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left			Thru			Right			Left			Thru			Right			South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr		
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45:00	13	13	6	6	3	3	1	1	0	0	1	1	0	0	0	0	0	3	3	
8:00:00	20	7	13	7	8	5	1	0	0	0	2	1	0	0	0	0	0	3	0	
8:15:00	26	6	21	8	10	11	1	0	0	0	3	1	0	0	0	0	0	3	0	
8:30:00	38	12	36	15	22	3	1	0	0	0	4	1	0	0	1	1	0	0	3	0
8:45:00	48	10	48	12	34	12	2	1	0	0	6	2	0	0	1	0	0	0	3	0
9:00:00	56	8	65	17	41	7	2	0	0	0	7	1	0	0	3	2	0	0	3	0
9:15:00	67	11	86	21	50	9	2	0	1	1	7	0	0	0	3	0	0	0	3	0
9:30:00	77	10	100	14	61	11	2	0	2	1	7	0	0	0	3	0	0	0	3	0
9:45:00	77	0	100	0	61	0	2	0	2	0	7	0	0	0	3	0	0	0	3	0
15:30:00	77	0	100	0	61	0	2	0	2	0	7	0	0	0	3	0	0	0	3	0
15:45:00	105	28	134	34	86	25	2	0	2	0	7	0	0	0	3	0	0	0	3	0
16:00:00	127	22	155	21	107	21	2	0	3	1	8	1	0	0	3	0	0	0	4	1
16:15:00	152	25	168	13	126	19	2	0	4	1	8	0	0	0	3	0	0	0	4	0
16:30:00	175	23	185	17	155	29	2	0	4	0	9	1	0	0	4	1	0	0	5	1
16:45:00	196	21	214	29	178	23	2	0	4	0	9	0	0	0	4	0	0	0	6	1
17:00:00	219	23	231	17	204	26	2	0	4	0	9	0	0	0	4	0	0	0	6	0
17:15:00	249	30	251	20	228	24	2	0	4	0	9	0	0	0	4	0	0	0	6	0
17:30:00	264	15	273	22	247	19	2	0	4	0	9	0	0	0	4	0	0	0	6	0
17:45:00	264	0	273	0	247	0	2	0	4	0	9	0	0	0	4	0	0	0	6	0
17:45:15	264	0	273	0	247	0	2	0	4	0	9	0	0	0	4	0	0	0	6	0



Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	4	4	125	125	9	9	0	0	3	3	0	0	0	0	1	1	0	0	0	0
8:00:00	13	9	268	143	20	11	1	1	7	4	1	0	0	0	1	0	0	0	1	1
8:15:00	24	11	398	130	35	15	3	2	13	6	1	0	0	0	1	0	0	0	4	3
8:30:00	38	14	571	173	57	22	3	0	19	6	2	1	0	0	1	0	0	0	4	0
8:45:00	54	16	716	145	72	15	3	0	22	3	3	1	0	0	1	0	0	0	7	3
9:00:00	75	21	873	157	93	21	4	1	29	7	4	1	0	0	1	0	0	0	8	1
9:15:00	97	22	1018	145	111	18	7	3	37	8	5	1	0	0	1	0	0	0	8	0
9:30:00	105	8	1115	97	136	25	7	0	42	5	5	0	0	0	1	0	0	0	8	0
9:45:00	105	0	1115	0	136	0	7	0	42	0	5	0	0	0	1	0	0	0	8	0
15:30:00	105	0	1115	0	136	0	7	0	42	0	5	0	0	0	1	0	0	0	8	0
15:45:00	131	26	1272	157	165	29	8	1	48	6	5	0	0	0	1	0	0	0	8	0
16:00:00	148	17	1458	186	196	31	9	1	52	4	5	0	0	0	1	0	0	0	10	2
16:15:00	171	23	1651	193	228	32	9	0	58	6	6	1	0	0	1	0	0	0	11	1
16:30:00	184	13	1847	196	263	35	11	2	62	4	6	0	0	0	1	0	0	0	11	0
16:45:00	198	14	2018	171	309	46	11	0	71	9	6	0	0	0	1	0	0	0	12	1
17:00:00	210	12	2207	189	346	37	12	1	77	6	7	1	0	0	2	1	0	0	12	0
17:15:00	232	22	2370	163	377	31	14	2	83	6	7	0	0	0	2	0	0	0	15	3
17:30:00	252	20	2528	158	411	34	15	1	88	5	7	0	0	0	2	0	0	0	15	0
17:45:00	252	0	2528	0	411	0	15	0	88	0	7	0	0	0	2	0	0	0	15	0
17:45:15	252	0	2528	0	411	0	15	0	88	0	7	0	0	0	2	0	0	0	15	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Ottawa
Site #: 2422000007
Intersection: Walkley Rd & Heron Rd
TFR File #: 1
Count date: 21-Nov-24

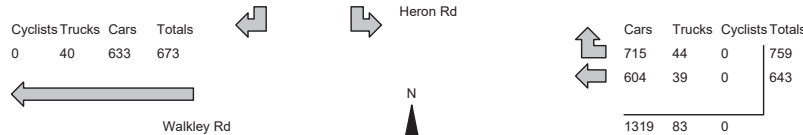
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 1454	Cyclists 0	0	0	Cyclists 0	East Leg Total: 2626
North Entering: 694	Trucks 1	25	26	Trucks 44	East Entering: 1402
North Peds: 1	Cars 29	639	668	Cars 716	East Peds: 0
Peds Cross: 0	Totals 30	664		Totals 760	Peds Cross: 0



Cyclists 0	Trucks 0	Cars 1	Totals 1
0	18	542	560
0	18	543	

Cars 1181	Trucks 43	Cyclists 0	Totals 1224
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Peds Cross: 0
West Peds: 1
West Entering: 561
West Leg Total: 1234

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 16:00:00

To: 17:00:00

Municipality: Ottawa
Site #: 2422000007
Intersection: Walkley Rd & Heron Rd
TFR File #: 1
Count date: 21-Nov-24

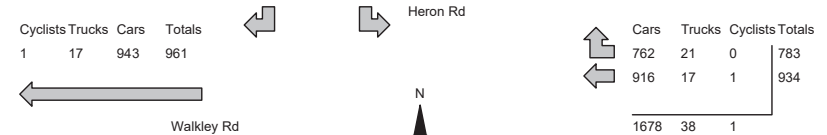
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 1692	Cyclists 0	0	0	Cyclists 0	East Leg Total: 3293
North Entering: 908	Trucks 0	25	25	Trucks 21	East Entering: 1717
North Peds: 0	Cars 27	856	883	Cars 763	East Peds: 0
Peds Cross: 0	Totals 27	881		Totals 784	Peds Cross: 0



Cyclists 0	Trucks 0	Cars 1	Totals 1
0	21	674	695
0	21	675	

Cars 1530	Trucks 46	Cyclists 0	Totals 1576
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Peds Cross: 0
West Peds: 4
West Entering: 696
West Leg Total: 1657

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000007			
Intersection: Walkley Rd & Heron Rd		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 5981 North Entering: 2991 North Peds: 2 Peds Cross:	Cyclists 0 Trucks 3 Cars 88 Totals 91	1 95 2804 2900	1 98 2892
Cyclists 0 Trucks 117 Cars 2873 Totals 2990			East Leg Total: 11406 East Entering: 6038 East Peds: 0 Peds Cross:
Cyclists Trucks Cars Totals 1 116 3024 3141 Cars Trucks Cyclists Totals 2871 117 0 2988 2936 113 1 3050 5807 230 1 Cars Trucks Cyclists Totals 5183 183 2 5368 Cyclists Trucks Cars Totals 0 0 2 2 1 88 2379 2468 1 88 2381			
Peds Cross: West Peds: 10 West Entering: 2470 West Leg Total: 5611			
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Walkley Rd & Heron Rd						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	293	0	10	303	0		303	8:00:00	0	0	0	0	0
9:00:00	664	0	30	694	1		694	9:00:00	0	0	0	0	0
16:00:00	685	0	19	704	0		704	16:00:00	0	0	0	0	0
17:00:00	881	0	27	908	0		908	17:00:00	0	0	0	0	0
Totals:	2523	0	86	2609	1		2609	S Totals:	0	0	0	0	0
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	0	314	352	666	0		926	8:00:00	0	260	0	260	0
9:00:00	0	643	759	1402	0		1963	9:00:00	1	560	0	561	1
16:00:00	0	708	700	1408	0		2044	16:00:00	0	636	0	636	5
17:00:00	0	934	783	1717	0		2413	17:00:00	1	695	0	696	4
Totals:	0	2599	2594	5193	0		7346	W Totals:	2	2151	0	2153	10
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	293	665	690	885				0	0	0	0		



Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	126	126	0	0	3	3	3	3	0	0	0	0	1	1	0	0	0	0	0	0
8:00:00	283	157	0	0	10	7	9	6	0	0	0	0	1	0	0	0	0	0	0	0
8:15:00	437	154	0	0	14	4	15	6	0	0	0	0	1	0	0	0	0	0	0	0
8:30:00	608	171	0	0	21	7	24	9	0	0	0	0	1	0	0	0	0	0	0	0
8:45:00	753	145	0	0	30	9	28	4	0	0	0	0	1	0	0	0	0	0	1	1
9:00:00	922	169	0	0	39	9	34	6	0	0	1	1	1	0	0	0	0	0	1	0
9:15:00	1078	156	0	0	47	8	42	8	0	0	2	1	1	0	0	0	0	0	1	0
9:30:00	1194	116	0	0	51	4	47	5	0	0	2	0	1	0	0	0	0	0	1	0
9:45:00	1194	0	0	0	51	0	47	0	0	0	2	0	1	0	0	0	0	0	1	0
15:30:00	1194	0	0	0	51	0	47	0	0	0	2	0	1	0	0	0	0	0	1	0
15:45:00	1377	183	0	0	52	1	53	6	0	0	3	1	1	0	0	0	0	0	1	0
16:00:00	1562	205	0	0	56	4	59	6	0	0	3	0	1	0	0	0	0	0	1	0
16:15:00	1795	213	0	0	67	11	62	3	0	0	3	0	1	0	0	0	0	0	1	0
16:30:00	2115	220	0	0	75	8	66	4	0	0	3	0	1	0	0	0	0	0	1	0
16:45:00	2220	205	0	0	79	4	77	11	0	0	3	0	1	0	0	0	0	0	1	0
17:00:00	2438	218	0	0	83	4	84	7	0	0	3	0	1	0	0	0	0	0	1	0
17:15:00	2620	182	0	0	84	1	90	6	0	0	3	0	1	0	0	0	0	0	2	1
17:30:00	2804	184	0	0	88	4	95	5	0	0	3	0	1	0	0	0	0	0	2	0
17:45:00	2804	0	0	0	88	0	95	0	0	0	3	0	1	0	0	0	0	0	2	0
17:45:15	2804	0	0	0	88	0	95	0	0	0	3	0	1	0	0	0	0	0	2	0



Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	133	133	158	158	0	0	13	13	10	10	0	0	0	0	0	0	0	0
8:00:00	0	0	286	153	333	175	0	0	28	15	19	9	0	0	0	0	0	0	0	0
8:15:00	0	0	464	178	523	190	0	0	34	6	32	13	0	0	0	0	0	0	0	0
8:30:00	0	0	600	136	697	174	0	0	43	9	42	10	0	0	0	0	0	0	0	0
8:45:00	0	0	747	147	861	164	0	0	57	14	56	14	0	0	0	0	0	0	0	0
9:00:00	0	0	890	143	1048	187	0	0	67	10	63	7	0	0	0	0	0	0	0	0
9:15:00	0	0	1018	128	1194	146	0	0	77	10	75	12	0	0	0	0	0	0	0	0
9:30:00	0	0	1162	144	1322	128	0	0	83	6	83	8	0	0	0	0	0	0	0	0
9:45:00	0	0	1162	0	1322	0	0	0	83	0	83	0	0	0	0	0	0	0	0	0
15:30:00	0	0	1162	0	1322	0	0	0	83	0	83	0	0	0	0	0	0	0	0	0
15:45:00	0	0	1360	198	1540	218	0	0	87	4	90	7	0	0	0	0	0	0	0	0
16:00:00	0	0	1574	214	1719	179	0	0	91	4	92	2	0	0	0	0	0	0	0	0
16:15:00	0	0	1777	203	1934	215	0	0	94	3	96	4	0	0	0	0	0	0	0	0
16:30:00	0	0	2022	245	2121	187	0	0	100	6	98	2	0	0	1	1	0	0	0	0
16:45:00	0	0	2237	215	2303	162	0	0	104	4	105	7	0	0	1	0	0	0	0	0
17:00:00	0	0	2490	253	2481	178	0	0	108	4	113	8	0	0	1	0	0	0	0	0
17:15:00	0	0	2713	223	2683	202	0	0	111	3	114	1	0	0	1	0	0	0	0	0
17:30:00	0	0	2936	223	2871	188	0	0	113	2	117	3	0	0	1	0	0	0	0	0
17:45:00	0	0	2936	0	2871	0	0	0	113	0	117	0	0	0	1	0	0	0	0	0
17:45:15	0	0	2936	0	2871	0	0	0	113	0	117	0	0	0	1	0	0	0	0	0

[illegible]

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	116	116	0	0	0	0	8	8	0	0	0	0	1	1	0	0	0	0
8:00:00	0	0	243	127	0	0	0	0	16	8	0	0	0	1	0	0	0	0	0	0
8:15:00	0	0	383	140	0	0	0	0	18	2	0	0	0	1	0	0	0	1	1	1
8:30:00	0	0	501	118	0	0	0	0	21	3	0	0	0	1	0	0	0	1	0	1
8:45:00	0	0	641	140	0	0	0	0	26	5	0	0	0	1	0	0	0	1	0	0
9:00:00	1	1	785	144	0	0	0	0	34	8	0	0	0	1	0	0	0	1	0	1
9:15:00	1	0	923	138	0	0	0	0	41	7	0	0	0	1	0	0	0	3	2	0
9:30:00	1	0	1026	103	0	0	0	0	44	3	0	0	0	1	0	0	0	4	1	0
9:45:00	1	0	1026	0	0	0	0	0	44	0	0	0	0	1	0	0	0	4	0	0
15:30:00	1	0	1026	0	0	0	0	0	44	0	0	0	0	1	0	0	0	4	0	0
15:45:00	1	0	1209	183	0	0	0	0	54	10	0	0	0	1	0	0	0	5	1	1
16:00:00	1	0	1392	183	0	0	0	0	63	9	0	0	0	1	0	0	0	6	1	0
16:15:00	1	0	1558	166	0	0	0	0	68	5	0	0	0	1	0	0	0	6	0	0
16:30:00	2	1	1742	184	0	0	0	0	75	7	0	0	0	1	0	0	0	8	2	0
16:45:00	2	0	1909	167	0	0	0	0	79	4	0	0	0	1	0	0	0	9	1	0
17:00:00	2	0	2066	157	0	0	0	0	84	5	0	0	0	1	0	0	0	10	1	0
17:15:00	2	0	2228	162	0	0	0	0	86	2	0	0	0	1	0	0	0	10	0	0
17:30:00	2	0	2379	151	0	0	0	0	88	2	0	0	0	1	0	0	0	10	0	0
17:45:00	2	0	2379	0	0	0	0	0	88	0	0	0	0	1	0	0	0	10	0	0
17:45:15	2	0	2379	0	0	0	0	0	88	0	0	0	0	1	0	0	0	10	0	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 10:00:00

One Hour Peak

From: 8:15:00

To: 9:15:00

Municipality: Ottawa
Site #: 2422000013
Intersection: Baycrest Dr & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Non-Signalized Intersection **

Major Road: Baycrest Dr runs N/S

North Leg Total: 495	Cyclists 0	0	0	Cyclists 1
North Entering: 221	Trucks 1	12	13	Trucks 17
North Peds: 20	Cars 85	123	208	Cars 256
Peds Cross:	Totals 86	135		Totals 274

Cyclists	Trucks	Cars	Totals
0	2	124	126

← Cedarwood Dr

Cyclists	Trucks	Cars	Totals
0	1	102	103
0	1	21	22
0	2	123	

Peds Cross:	Cars 144	Cars 39	154	193
West Peds: 12	Trucks 13	Trucks 1	16	17
West Entering: 125	Cyclists 0	Cyclists 0	1	1
West Leg Total: 251	Totals 157	Totals 40	171	

Peds Cross:
South Peds: 13
South Entering: 211
South Leg Total: 368

Comments



Accu-Traffic Inc.

Mid-day Peak Diagram

Specified Period

From: 11:30:00

To: 13:30:00

One Hour Peak

From: 12:30:00

To: 13:30:00

Municipality: Ottawa
Site #: 2422000013
Intersection: Baycrest Dr & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Non-Signalized Intersection **

Major Road: Baycrest Dr runs N/S

North Leg Total: 396	Cyclists 0	0	0	Cyclists 0
North Entering: 198	Trucks 1	12	13	Trucks 12
North Peds: 12	Cars 74	111	185	Cars 186
Peds Cross:	Totals 75	123		Totals 198

Cyclists	Trucks	Cars	Totals
0	1	106	107

← Cedarwood Dr

Cyclists	Trucks	Cars	Totals
0	0	68	68
0	1	25	26
0	1	93	

Peds Cross:	Cars 136	Cars 32	118	150
West Peds: 5	Trucks 13	Trucks 0	12	12
West Entering: 94	Cyclists 0	Cyclists 0	0	0
West Leg Total: 201	Totals 149	Totals 32	130	

Peds Cross:
South Peds: 10
South Entering: 162
South Leg Total: 311

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 15:00:00

To: 16:00:00

Municipality: Ottawa
Site #: 2422000013
Intersection: Baycrest Dr & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Non-Signalized Intersection **

Major Road: Baycrest Dr runs N/S

North Leg Total: 477	Cyclists 0 0 0	Trucks 3 13 16	Cars 116 130 246	Totals 119 143 246
North Entering: 262				
North Peds: 45				
Peds Cross: 0				

Cyclists 0	Trucks 7	Cars 169	Totals 176
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Cyclists 0	Trucks 2	Cars 70	Totals 72
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Cyclists 0	Trucks 0	Cars 22	Totals 22
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Cyclists 0	Trucks 2	Cars 92	Totals 94
------------	----------	---------	-----------

Peds Cross: 0	Cars 152	Trucks 13	Cyclists 0	Totals 165
West Peds: 11				
West Entering: 94				
West Leg Total: 270				

Peds Cross: 0	Cars 53	Trucks 4	Cyclists 0	Totals 57
South Peds: 17				
South Entering: 200				
South Leg Total: 365				

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa
Site #: 2422000013
Intersection: Baycrest Dr & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Non-Signalized Intersection **

Major Road: Baycrest Dr runs N/S

North Leg Total: 3264	Cyclists 0 0 0	Trucks 11 89 100	Cars 624 901 1525	Totals 635 990 1525
North Entering: 1625				
North Peds: 145				
Peds Cross: 0				

Cyclists 0	Trucks 23	Cars 934	Totals 957
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Cyclists 1	Trucks 7	Cars 595	Totals 603
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Cyclists 0	Trucks 5	Cars 167	Totals 172
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Cyclists 1	Trucks 12	Cars 762	Totals 775
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Peds Cross: 0	Cars 1068	Trucks 94	Cyclists 0	Totals 1162
West Peds: 78				
West Entering: 775				
West Leg Total: 1732				

Peds Cross: 0	Cars 310	Trucks 12	Cyclists 0	Totals 322
South Peds: 95				
South Entering: 1358				
South Leg Total: 2520				

Comments

5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

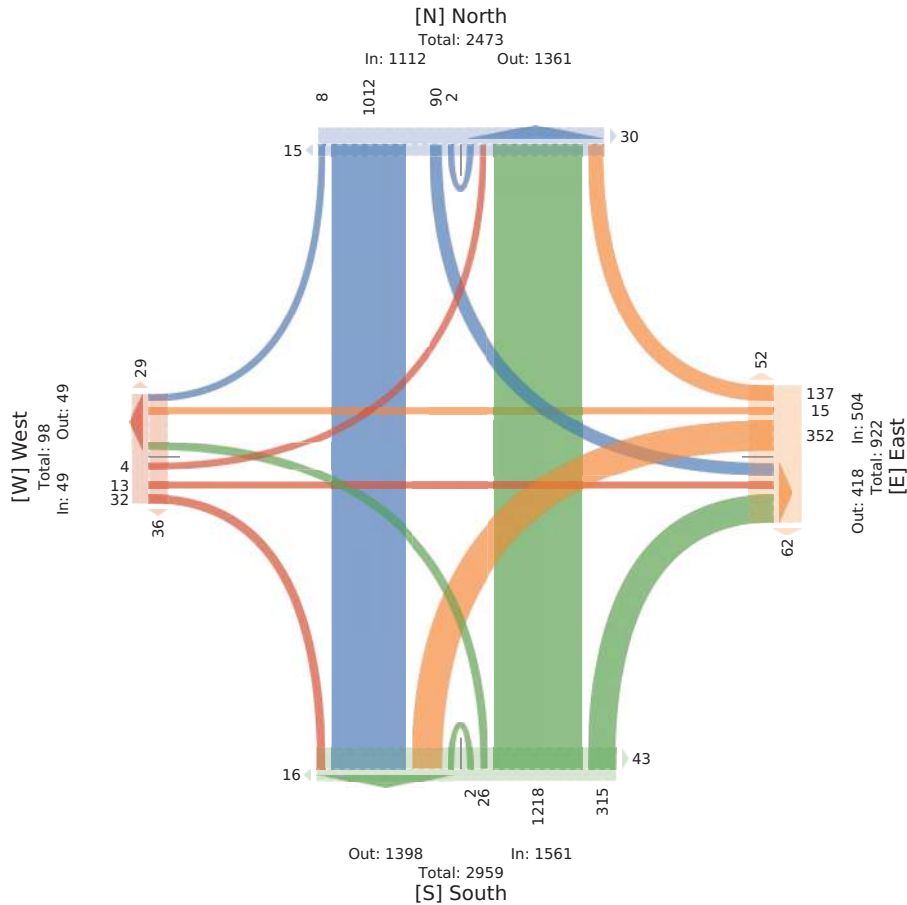
Wed Nov 1, 2023

Full Length (11:30 AM-1:30 PM, 7 AM-10 AM, 3 PM-6 PM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

Wed Nov 1, 2023

AM Peak (8:15 AM - 9:15 AM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound										
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int	
2023-11-01 8:15AM	0	29	1	0	30	0	9	0	10	0	19	8	18	36	0	0	54	0	0	0	0	0	0	2	103	
8:30AM	0	32	5	0	37	8	7	1	10	0	18	9	5	55	1	0	61	0	0	0	0	0	0	2	116	
8:45AM	0	40	3	0	43	1	9	1	13	0	23	6	10	45	0	0	55	5	2	1	0	0	3	0	124	
9:00AM	0	29	0	0	29	0	4	0	12	0	16	2	9	45	0	0	54	1	2	1	0	0	3	2	102	
Total	0	130	9	0	139	9	29	2	45	0	76	25	42	181	1	0	224	6	4	2	0	0	6	6	445	
% Approach	0%	93.5%	6.5%	0%	-	-	38.2%	2.6%	59.2%	0%	-	-	18.8%	80.8%	0.4%	0%	-	-	66.7%	33.3%	0%	0%	-	-	-	-
% Total	0%	29.2%	2.0%	0%	31.2%	-	6.5%	0.4%	10.1%	0%	17.1%	-	9.4%	40.7%	0.2%	0%	50.3%	-	0.9%	0.4%	0%	0%	1.3%	-	-	-
PHF	-	0.813	0.450	-	0.808	-	0.806	0.500	0.865	-	0.826	-	0.583	0.823	0.250	-	0.918	-	0.500	0.500	-	-	0.500	-	0.897	-
Lights and Motorcycles	0	119	7	0	126	-	27	2	44	0	73	-	40	167	1	0	208	-	4	2	0	0	6	-	413	-
% Lights and Motorcycles	0%	91.5%	77.8%	0%	90.6%	-	93.1%	100%	97.8%	0%	96.1%	-	95.2%	92.3%	100%	0%	92.9%	-	100%	100%	0%	0%	100%	-	92.8%	-
Heavy	0	11	2	0	13	-	2	0	1	0	3	-	2	14	0	0	16	-	0	0	0	0	0	-	32	-
% Heavy	0%	8.5%	22.2%	0%	9.4%	-	6.9%	0%	2.2%	0%	3.9%	-	4.8%	7.7%	0%	0%	7.1%	-	0%	0%	0%	0%	0%	-	7.2%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	-
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	24	-	-	-	-	6	-	-	-	-	-	6	-	-	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	96.0%	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	4.0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

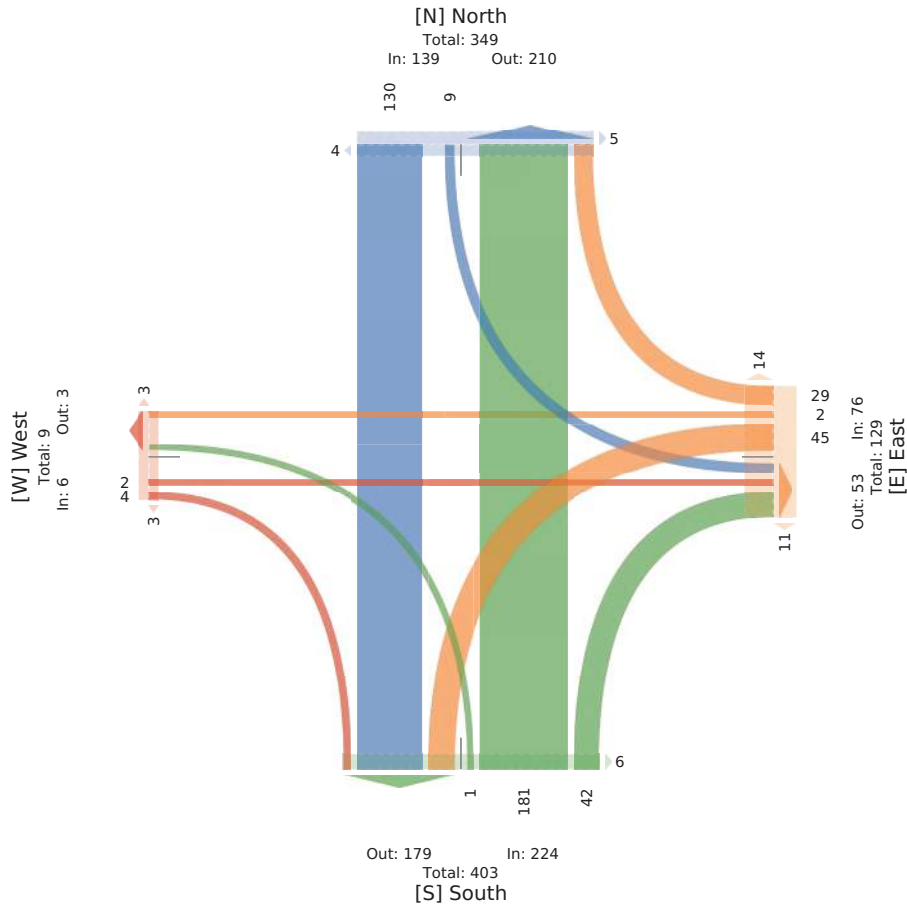
Wed Nov 1, 2023

AM Peak (8:15 AM - 9:15 AM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

Wed Nov 1, 2023

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-11-01 11:45AM	0	32	5	0	37	0	3	0	13	0	16	4	6	40	0	1	47	2	0	0	0	0	0	0	100
12:00PM	0	34	3	0	37	0	6	0	6	0	12	3	8	27	0	0	35	0	1	1	0	0	2	0	86
12:15PM	1	29	2	0	32	0	0	1	9	0	10	1	9	39	0	0	48	0	3	0	0	0	3	0	93
12:30PM	0	29	1	0	30	0	6	0	11	0	17	1	5	36	0	0	41	1	2	0	0	0	2	2	90
Total	1	124	11	0	136	0	15	1	39	0	55	9	28	142	0	1	171	3	6	1	0	0	7	2	369
% Approach	0.7%	91.2%	8.1%	0%	-	-	27.3%	1.8%	70.9%	0%	-	-	16.4%	83.0%	0%	0.6%	-	-	85.7%	14.3%	0%	0%	-	-	-
% Total	0.3%	33.6%	3.0%	0%	36.9%	-	4.1%	0.3%	10.6%	0%	14.9%	-	7.6%	38.5%	0%	0.3%	46.3%	-	1.6%	0.3%	0%	0%	1.9%	-	-
PHF	0.250	0.912	0.550	-	0.919	-	0.625	0.250	0.750	-	0.809	-	0.778	0.888	-	0.250	0.891	-	0.500	0.250	-	-	0.583	-	0.923
Lights and Motorcycles	1	116	11	0	128	-	13	1	39	0	53	-	28	132	0	1	161	-	5	1	0	0	6	-	348
% Lights and Motorcycles	100%	93.5%	100%	0%	94.1%	-	86.7%	100%	100%	0%	96.4%	-	100%	93.0%	0%	100%	94.2%	-	83.3%	100%	0%	0%	85.7%	-	94.3%
Heavy	0	8	0	0	8	-	2	0	0	0	2	-	0	10	0	0	10	-	1	0	0	0	1	-	21
% Heavy	0%	6.5%	0%	0%	5.9%	-	13.3%	0%	0%	0%	3.6%	-	0%	7.0%	0%	0%	5.8%	-	16.7%	0%	0%	0%	14.3%	-	5.7%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	3	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

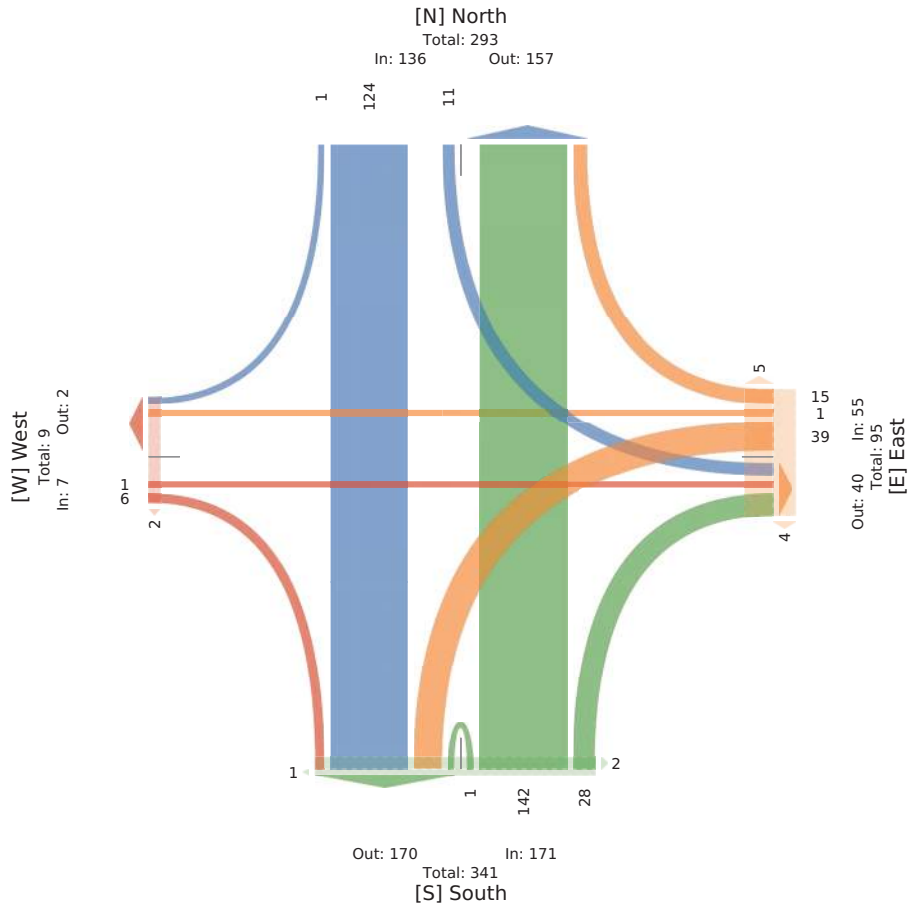
Wed Nov 1, 2023

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

Wed Nov 1, 2023

PM Peak (3:30 PM - 4:30 PM) - Overall Peak Hour

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



Leg Direction	North Southbound						East Westbound						South Northbound						West Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-11-01 3:30PM	1	39	4	0	44	7	6	0	11	0	17	3	16	50	0	0	66	6	2	1	0	0	3	3	130
3:45PM	0	40	5	0	45	0	4	1	27	0	32	3	13	34	3	1	51	1	2	0	0	0	2	1	130
4:00PM	1	43	8	0	52	2	4	1	12	0	17	10	8	36	0	0	44	8	2	0	1	0	3	6	116
4:15PM	0	38	9	0	47	0	7	0	13	0	20	3	12	52	1	0	65	5	1	0	0	0	1	0	133
Total	2	160	26	0	188	9	21	2	63	0	86	19	49	172	4	1	226	20	7	1	1	0	9	10	509
% Approach	1.1%	85.1%	13.8%	0%	-	-	24.4%	2.3%	73.3%	0%	-	-	21.7%	76.1%	1.8%	0.4%	-	-	77.8%	11.1%	11.1%	0%	-	-	-
% Total	0.4%	31.4%	5.1%	0%	36.9%	-	4.1%	0.4%	12.4%	0%	16.9%	-	9.6%	33.8%	0.8%	0.2%	44.4%	-	1.4%	0.2%	0.2%	0%	1.8%	-	-
PHF	0.500	0.930	0.722	-	0.904	-	0.750	0.500	0.583	-	0.672	-	0.766	0.827	0.333	0.250	0.856	-	0.875	0.250	0.250	-	0.750	-	0.957
Lights and Motorcycles	2	149	25	0	176	-	19	2	60	0	81	-	47	158	4	1	210	-	7	1	1	0	9	-	476
% Lights and Motorcycles	100%	93.1%	96.2%	0%	93.6%	-	90.5%	100%	95.2%	0%	94.2%	-	95.9%	91.9%	100%	100%	92.9%	-	100%	100%	100%	0%	100%	-	93.5%
Heavy	0	11	1	0	12	-	2	0	3	0	5	-	2	14	0	0	16	-	0	0	0	0	0	-	33
% Heavy	0%	6.9%	3.8%	0%	6.4%	-	9.5%	0%	4.8%	0%	5.8%	-	4.1%	8.1%	0%	0%	7.1%	-	0%	0%	0%	0%	0%	-	6.5%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	19	-	-	-	-	-	18	-	-	-	-	-	10	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	90.0%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	10.0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5638822 - BAYCREST DR @ SANDALWOOD DR - NOV ... - TMC

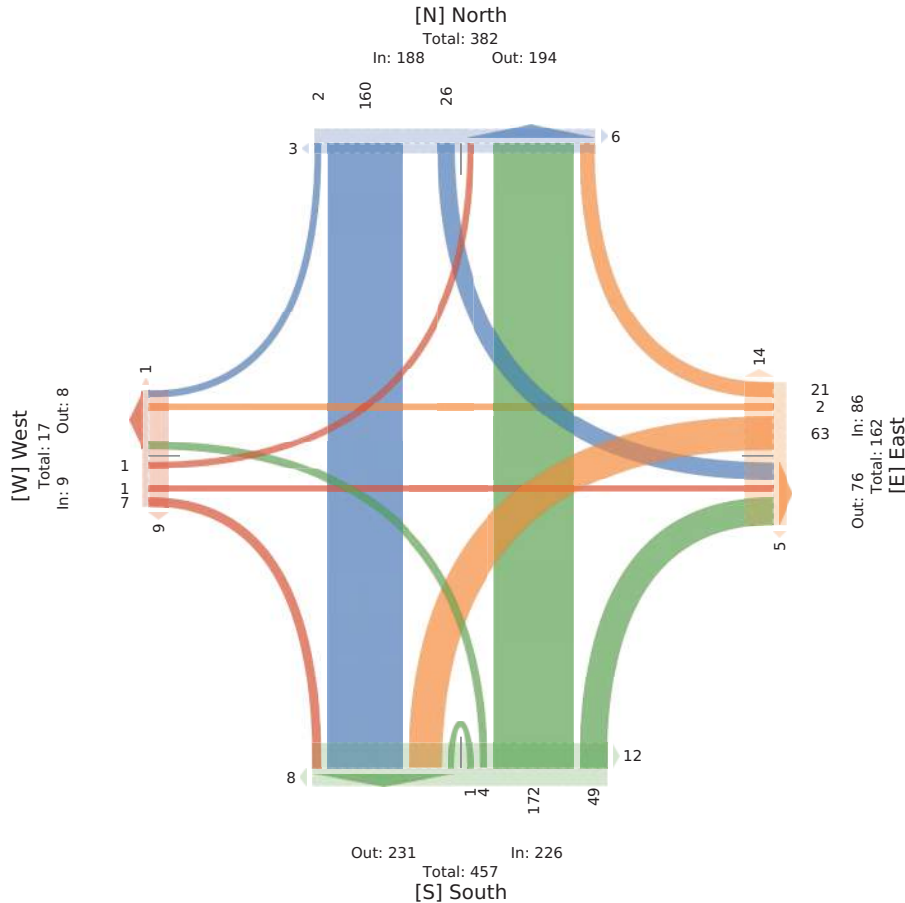
Wed Nov 1, 2023

PM Peak (3:30 PM - 4:30 PM) - Overall Peak Hour

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1129825, Location: 45.377134, -75.650286, Site Code: 41246103



Turning Movement Count Summary Report Including Peak Hours, AADT and Expansion Factors All Vehicles Except Bicycles



Bank Street & Walkley Road Ottawa, ON

Survey Date: Wednesday, November 15, 2023 Start Time: 0700 AADT Factor: 0.9
Weather AM: Mostly Cloudy +2° C Survey Duration: 8 Hrs. Survey Hours: 0700-1000, 1130-1330 & 1500-1800
Weather PM: Mostly Cloudy +8° C Surveyor(s): T. Carmody

Time Period	Walkley Rd.					Walkley Rd.					Bank St.					Bank St.					Street Total	Grand Total	
	Eastbound					Westbound					Northbound					Southbound							
	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot			
0700-0800	328	298	103	0	729	87	334	144	0	565	1294	89	734	105	0	928	81	345	165	7	598	1526	2820
0800-0900	389	407	156	0	952	101	362	265	1	729	1681	152	1106	181	2	1441	126	501	262	17	906	2347	4028
0900-1000	294	356	116	1	767	132	301	187	0	620	1387	108	693	133	1	935	146	582	247	27	1002	1937	3324
1130-1230	263	332	170	0	765	169	352	218	1	740	1505	147	741	192	4	1084	151	739	357	47	1294	2378	3883
1230-1330	282	307	174	0	763	161	371	204	3	739	1502	157	735	182	5	1079	177	771	351	47	1346	2425	3927
1500-1600	301	381	218	0	900	210	545	243	1	999	1899	200	769	198	4	1171	208	963	504	42	1717	2888	4787
1600-1700	324	399	216	0	939	243	595	218	4	1060	1999	178	766	195	3	1142	224	987	574	39	1824	2966	4965
1700-1800	277	370	205	1	853	189	469	227	1	866	1739	178	704	195	0	1077	231	1003	469	36	1739	2816	4555
Totals	2458	2850	1358	2	6668	1292	3329	1706	11	6338	13006	1209	6248	1381	19	8857	1344	5891	2929	262	10426	19283	32289

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	3417	3962	1888	3	9269	1796	4627	2371	15	8810	18078	1681	8685	1920	26	12311	1868	8188	4071	364	14492	26803	44882

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	3075	3565	1699	3	8342	1616	4165	2134	14	7929	16271	1512	7816	1728	24	11080	1681	7370	3664	328	13043	24123	40394

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	4028	4671	2226	3	10928	2117	5456	2796	18	10387	21314	1981	10239	2263	31	14515	2203	9654	4800	429	17086	31601	52916

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➔ 0.99												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. Tot.
0800-0900	389	407	156	0	952	101	362	265	1	729	1681	152	1106	181	2	1441	126	501	262	17	906	2347	4028
OFF Peak Hour Factor ➔ 0.96												Highest Hourly Vehicle Volume Between 1130h & 1330h											
OFF 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.
1200-1300	286	328	170	0	784	163	383	207	0	753	1537	164	776	181	5	1126	165	726	379	50	1320	2446	3983
PM Peak Hour Factor ➔ 0.99												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	324	399	216	0	939	243	595	218	4	1060	1999	178	766	195	3	1142	224	987	574	39	1824	2966	4965

Comments:

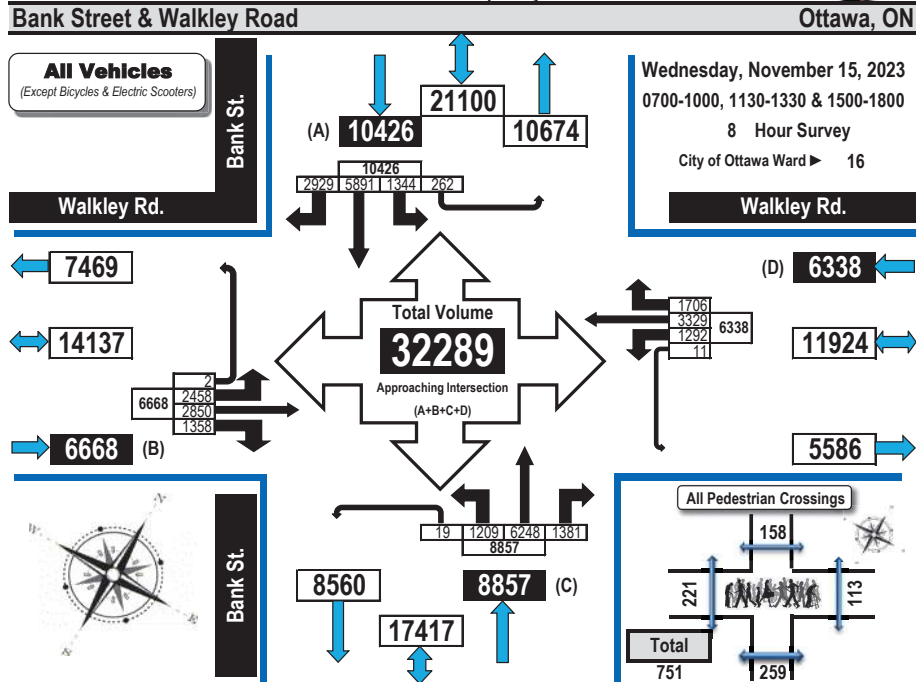
OC Transpo & Para Transpo buses, private buses and school buses comprise 32.46% of the heavy vehicle traffic. This intersection is on the boundaries of Wards 16, 17 & 18.

Notes:

- Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
- 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



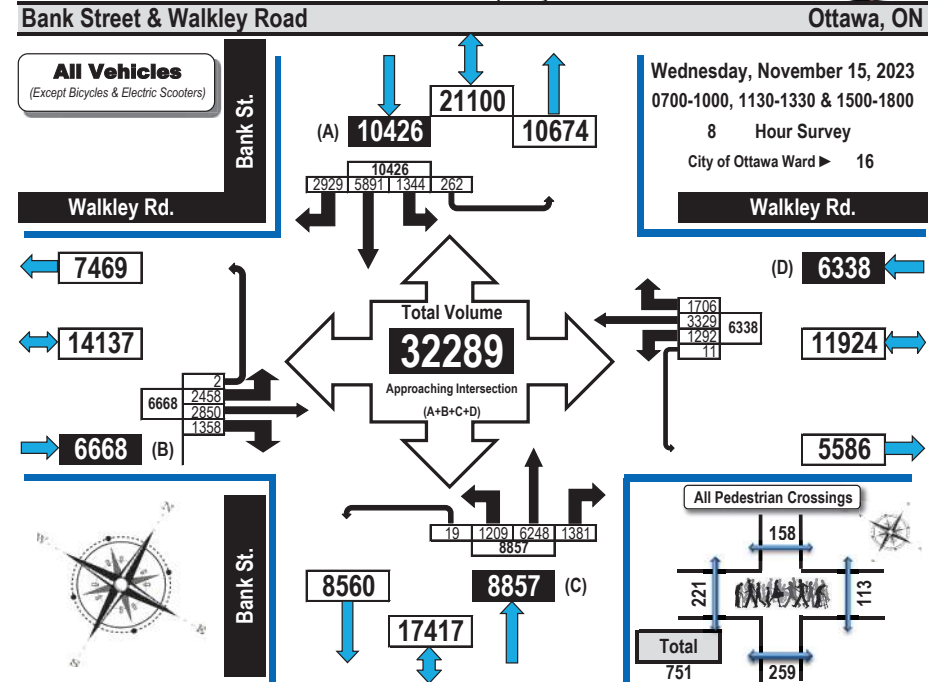
Printed on: 11/26/2023

Prepared by: thetrafficsspecialist@gmail.com

Flow Diagrams: AM PM Peak



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



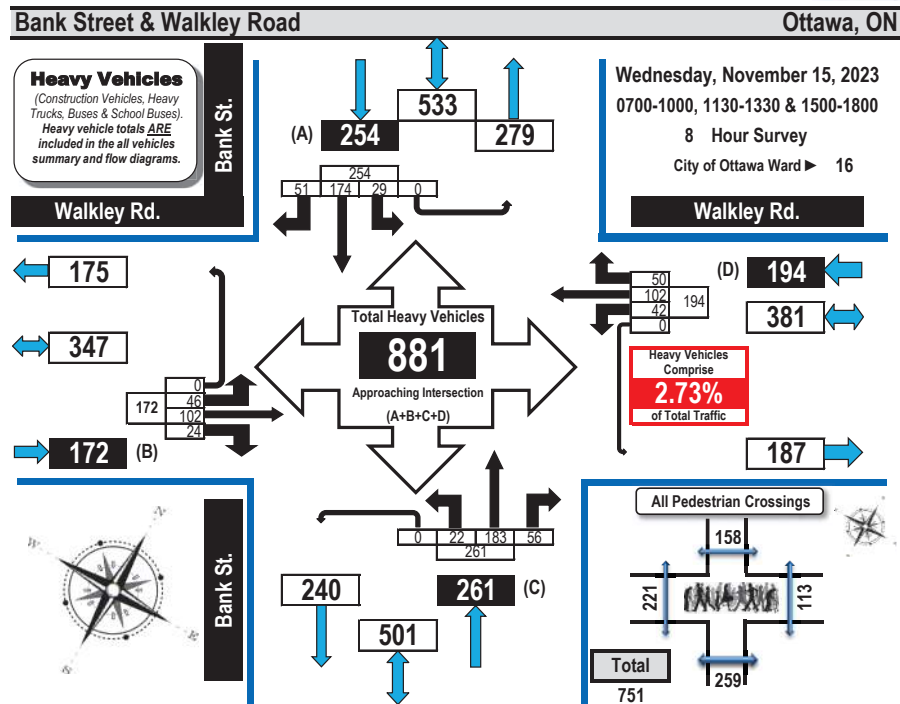
Printed on: 11/26/2023

Prepared by: thetrafficsspecialist@gmail.com

Flow Diagrams: OFF Peak



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

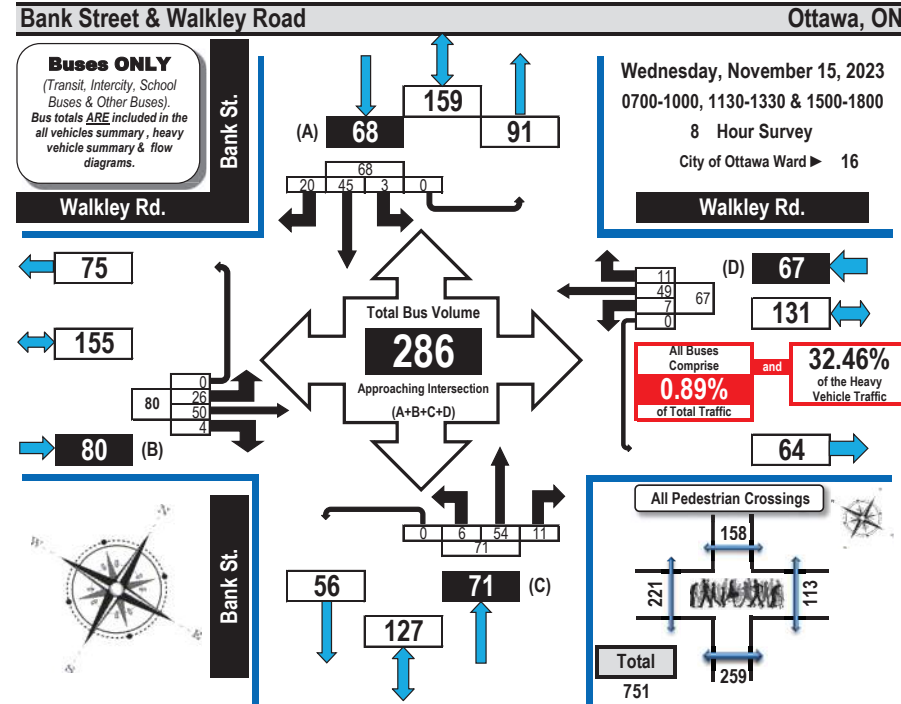


Time Period	Walkley Rd. Eastbound				Walkley Rd. Westbound				Bank St. Northbound				Bank St. Southbound				GR Tot
	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	
0700-0800	9	13	2	0	24	3	19	3	0	25	1	26	8	0	35	5	111
0800-0900	16	8	1	0	25	4	17	10	0	31	4	29	12	0	45	2	131
0900-1000	5	14	2	0	21	15	14	7	0	36	6	35	5	0	46	8	139
1130-1230	3	18	4	0	25	6	13	8	0	27	2	26	14	0	42	2	132
1230-1330	6	9	3	0	18	5	14	5	0	24	3	20	7	0	30	3	107
1500-1600	3	13	5	0	21	4	12	11	0	27	0	25	5	0	30	5	120
1600-1700	3	20	4	0	27	4	9	4	0	17	3	15	3	0	21	0	85
1700-1800	1	7	3	0	11	1	4	2	0	7	3	7	2	0	12	4	56
Totals	46	102	24	0	172	42	102	50	0	194	22	183	56	0	261	29	881

Comments:
OC Transpo & Para Transpo buses, private buses and school buses comprise 32.46% of the heavy vehicle traffic. This intersection is on the boundaries of Wards 16, 17 & 18.



Turning Movement Count All Buses Summary (FHWA Class 4 ONLY) Flow Diagram



Time Period	Walkley Rd. Eastbound				Walkley Rd. Westbound				Bank St. Northbound				Bank St. Southbound				GR Tot
	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	
0700-0800	4	7	0	0	11	1	10	0	0	11	1	5	0	0	6	2	36
0800-0900	16	4	1	0	21	1	8	6	0	15	2	12	1	0	15	0	64
0900-1000	2	8	1	0	11	3	9	1	0	13	1	9	3	0	13	0	44
1130-1230	1	5	0	0	6	0	5	1	0	6	0	4	0	0	4	0	21
1230-1330	0	4	0	0	4	1	3	0	0	4	0	3	3	0	6	0	25
1500-1600	1	5	1	0	7	0	5	3	0	8	0	13	2	0	15	1	44
1600-1700	2	12	1	0	15	1	6	0	0	7	1	6	2	0	9	0	38
1700-1800	0	5	0	0	5	0	3	0	0	3	1	2	0	0	3	0	14
Totals	26	50	4	0	80	7	49	11	0	67	6	54	11	0	71	3	286

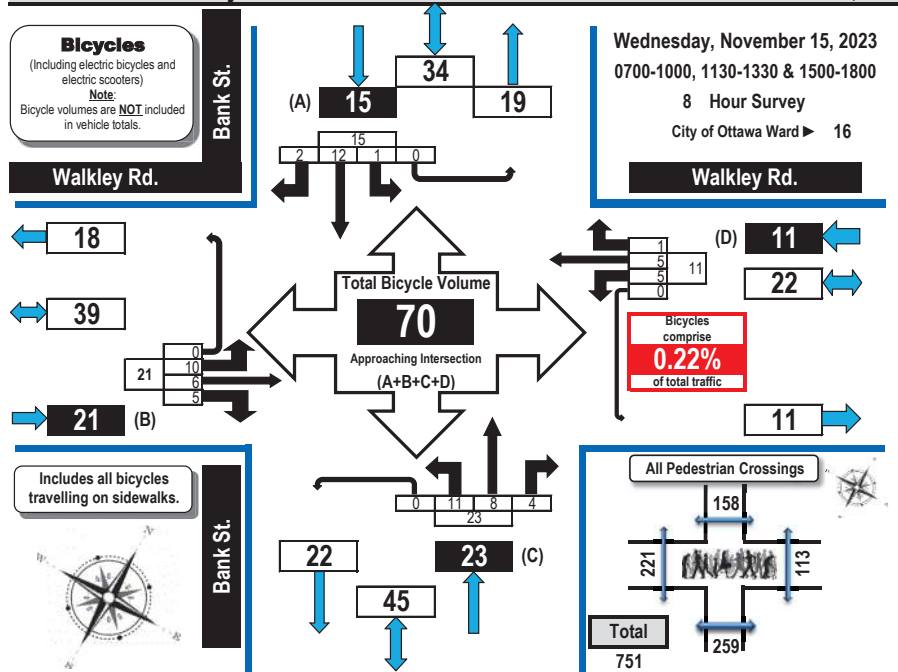
Comments:
OC Transpo & Para Transpo buses, private buses and school buses comprise 32.46% of the heavy vehicle traffic. This intersection is on the boundaries of Wards 16, 17 & 18.



Turning Movement Count Bicycle Summary Flow Diagram



Bank Street & Walkley Road Ottawa, ON



Time Period	Walkley Rd. Eastbound					Walkley Rd. Westbound					Bank St. Northbound					Bank St. Southbound					GR Tot
	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	
0700-0800	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1	1	0	0	0	1	5
0800-0900	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
0900-1000	2	0	1	0	3	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	6
1130-1230	1	1	1	0	3	2	0	0	0	2	0	0	0	0	0	3	1	0	0	4	9
1230-1330	3	0	0	0	3	0	0	0	0	0	3	0	2	0	5	0	1	0	0	1	9
1500-1600	1	1	0	0	2	0	2	0	0	2	1	3	1	0	5	0	3	0	0	3	12
1600-1700	1	1	2	0	4	3	0	0	0	3	5	0	0	0	5	0	4	1	0	5	17
1700-1800	1	0	1	0	2	0	2	0	0	2	1	2	1	0	4	0	0	0	0	0	8
Totals	10	6	5	0	21	5	5	1	0	11	11	8	4	0	23	1	12	2	0	15	70

Comments:

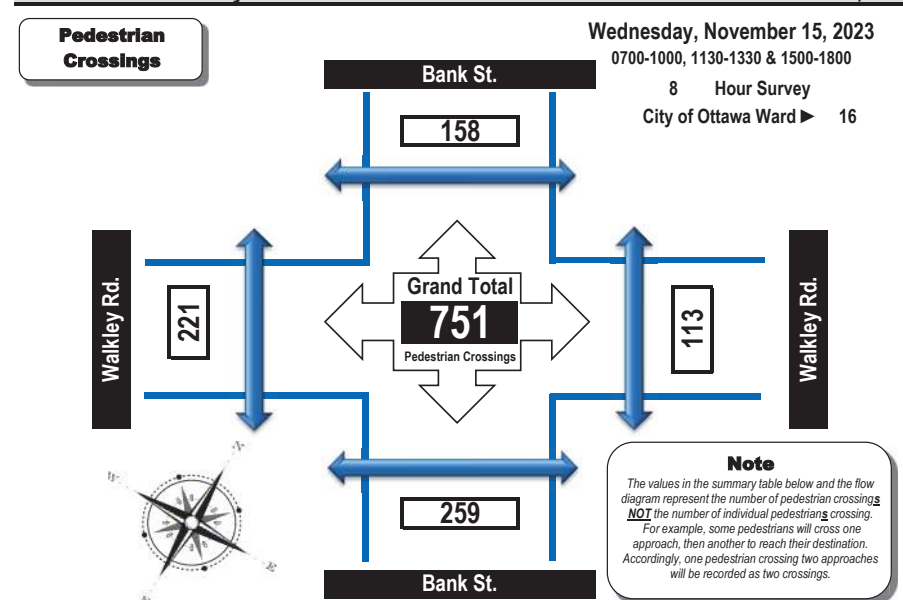
OC Transpo & Para Transpo buses, private buses and school buses comprise 32.46% of the heavy vehicle traffic. This intersection is on the boundaries of Wards 16, 17 & 18.



Turning Movement Count Pedestrian Crossings Summary and Flow Diagram



Bank Street & Walkley Road Ottawa, ON



Time Period	West Side Crossing Walkley Rd.	East Side Crossing Walkley Rd.	Street Total	South Side Crossing Bank St.	North Side Crossing Bank St.	Street Total	Grand Total
0700-0800	12	4	16	14	10	24	40
0800-0900	15	7	22	29	18	47	69
0900-1000	12	7	19	25	6	31	50
1130-1230	32	32	64	43	27	70	134
1230-1330	36	18	54	33	17	50	104
1500-1600	40	21	61	42	18	60	121
1600-1700	46	13	59	37	33	70	129
1700-1800	28	11	39	36	29	65	104
Totals	221	113	334	259	158	417	751

Comments:

OC Transpo & Para Transpo buses, private buses and school buses comprise 32.46% of the heavy vehicle traffic. This intersection is on the boundaries of Wards 16, 17 & 18.



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00	One Hour Peak From: 8:00:00 To: 9:00:00																																																																																								
Municipality: Ottawa Site #: 2422000008 Intersection: Walkley Rd & Hampstead Place TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:																																																																																									
** Signalized Intersection **		Major Road: Walkley Rd runs W/E																																																																																									
North Leg Total: 49 North Entering: 31 North Peds: 2 Peds Cross: 2	Cyclists 0 0 0 0 Trucks 0 0 0 0 Cars 17 1 13 31 Totals 17 1 13 31	Cyclists 0 Trucks 0 Cars 18 Totals 18	East Leg Total: 1367 East Entering: 766 East Peds: 1 Peds Cross: 1																																																																																								
<table border="1"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th></tr></thead><tbody><tr><td>0</td><td>26</td><td>750</td><td>776</td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>11</td><td>0</td><td>0</td><td>11</td></tr><tr><td>719</td><td>25</td><td>0</td><td>744</td></tr><tr><td>10</td><td>1</td><td>0</td><td>11</td></tr><tr><td>740</td><td>26</td><td>0</td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>7</td><td>7</td></tr><tr><td>0</td><td>17</td><td>561</td><td>578</td></tr><tr><td>0</td><td>1</td><td>4</td><td>5</td></tr><tr><td>0</td><td>18</td><td>572</td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>15</td><td>2</td><td>0</td><td>17</td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>14</td><td>1</td><td>0</td><td>15</td></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>9</td><td>1</td><td>0</td><td>10</td></tr></tbody></table> <table border="1"><thead><tr><th>Peds Cross:</th><th>West Peds:</th><th>West Entering:</th><th>West Leg Total:</th></tr></thead><tbody><tr><td>1</td><td>10</td><td>590</td><td>1366</td></tr></tbody></table> <table border="1"><thead><tr><th>Peds Cross:</th><th>South Peds:</th><th>South Entering:</th><th>South Leg Total:</th></tr></thead><tbody><tr><td>2</td><td>8</td><td>25</td><td>42</td></tr></tbody></table>				Cyclists	Trucks	Cars	Totals	0	26	750	776	Cars	Trucks	Cyclists	Totals	11	0	0	11	719	25	0	744	10	1	0	11	740	26	0		Cyclists	Trucks	Cars	Totals	0	0	7	7	0	17	561	578	0	1	4	5	0	18	572		Cars	Trucks	Cyclists	Totals	15	2	0	17	Cars	Trucks	Cyclists	Totals	14	1	0	15	0	0	0	0	9	1	0	10	Peds Cross:	West Peds:	West Entering:	West Leg Total:	1	10	590	1366	Peds Cross:	South Peds:	South Entering:	South Leg Total:	2	8	25	42
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Accu-Traffic Inc.

Afternoon Peak Diagram		Specified Period From: 15:30:00 To: 17:30:00	One Hour Peak From: 15:45:00 To: 16:45:00																																																																																								
Municipality: Ottawa Site #: 2422000008 Intersection: Walkley Rd & Hampstead Place TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:																																																																																									
** Signalized Intersection **		Major Road: Walkley Rd runs W/E																																																																																									
North Leg Total: 85 North Entering: 31 North Peds: 8 Peds Cross: 2	Cyclists 0 0 0 0 Trucks 1 0 0 0 Cars 23 0 7 30 Totals 24 0 7 30	Cyclists 0 Trucks 1 Cars 53 Totals 54	East Leg Total: 1778 East Entering: 967 East Peds: 3 Peds Cross: 1																																																																																								
<table border="1"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th></tr></thead><tbody><tr><td>1</td><td>17</td><td>946</td><td>964</td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>21</td><td>0</td><td>0</td><td>21</td></tr><tr><td>911</td><td>16</td><td>1</td><td>928</td></tr><tr><td>18</td><td>0</td><td>0</td><td>18</td></tr><tr><td>950</td><td>16</td><td>1</td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>Cyclists</th><th>Trucks</th><th>Cars</th><th>Totals</th></tr></thead><tbody><tr><td>0</td><td>1</td><td>32</td><td>33</td></tr><tr><td>0</td><td>15</td><td>780</td><td>795</td></tr><tr><td>0</td><td>1</td><td>13</td><td>14</td></tr><tr><td>0</td><td>17</td><td>825</td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>31</td><td>1</td><td>0</td><td>32</td></tr></tbody></table> <table border="1"><thead><tr><th>Cars</th><th>Trucks</th><th>Cyclists</th><th>Totals</th></tr></thead><tbody><tr><td>12</td><td>0</td><td>0</td><td>12</td></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>9</td><td>0</td><td>0</td><td>9</td></tr></tbody></table> <table border="1"><thead><tr><th>Peds Cross:</th><th>West Peds:</th><th>West Entering:</th><th>West Leg Total:</th></tr></thead><tbody><tr><td>1</td><td>4</td><td>842</td><td>1806</td></tr></tbody></table> <table border="1"><thead><tr><th>Peds Cross:</th><th>South Peds:</th><th>South Entering:</th><th>South Leg Total:</th></tr></thead><tbody><tr><td>21</td><td>8</td><td>21</td><td>53</td></tr></tbody></table>				Cyclists	Trucks	Cars	Totals	1	17	946	964	Cars	Trucks	Cyclists	Totals	21	0	0	21	911	16	1	928	18	0	0	18	950	16	1		Cyclists	Trucks	Cars	Totals	0	1	32	33	0	15	780	795	0	1	13	14	0	17	825		Cars	Trucks	Cyclists	Totals	31	1	0	32	Cars	Trucks	Cyclists	Totals	12	0	0	12	0	0	0	0	9	0	0	9	Peds Cross:	West Peds:	West Entering:	West Leg Total:	1	4	842	1806	Peds Cross:	South Peds:	South Entering:	South Leg Total:	21	8	21	53
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Municipality: Ottawa Site #: 2422000008 Intersection: Walkley Rd & Hampstead Place TFR File #: 1 Count date: 21-Nov-24	Weather conditions: Person counted: Person prepared: Person checked:
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Major Road: Walkley Rd runs W/E

Diagram illustrating the intersection of Walkley Rd and Jim Durrell RC, showing traffic flow and vehicle counts.

North Arrow: N

Walkley Rd: (Horizontal road, indicated by a long arrow pointing left)

Jim Durrell RC: (Vertical road, indicated by a vertical line)

Traffic Flow Indicators:

- Left: Cyclists (1), Trucks (92), Cars (3281), Totals (3374)
- Down: Cyclists (44), Trucks (0), Cars (0), Totals (44)
- Right: Cyclists (3167), Trucks (88), Cars (1), Totals (3256)
- Up: Cyclists (50), Trucks (3), Cars (0), Totals (53)
- Bottom: Cyclists (3261), Trucks (91), Cars (1), Totals (3256)

Peds Cross: 8	Cars 90	Cars 48	0	37	85	Peds Cross: 8
West Peds: 16	Trucks 6	Trucks 2	0	1	3	South Peds: 29
West Entering: 2724	Cyclists 0	Cyclists 0	0	0	0	South Entering: 88
West Leg Total: 6098	Totals 96	Totals 50	0	38		South Leg Total: 184

Comments



East Approach Totals					East/West Total Approaches	West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists			Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists			Total Peds		
	Left	Thru	Right				Grand Total	Left	Thru		Right	Grand Total
8:00:00	2	321	3	326	0	590	8:00:00	3	253	8	264	1
9:00:00	11	744	1	766	1	1356	9:00:00	7	578	5	590	10
16:00:00	17	807	8	832	0	1500	16:00:00	9	651	8	668	0
17:00:00	11	925	19	955	3	1792	17:00:00	33	788	16	837	4

Totals:	41	2797	41	2879	4	5238	W Totals:	52	2270	37	2359	15
---------	----	------	----	------	---	------	-----------	----	------	----	------	----

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	16:00	17:00	0:00	0:00	0:00	0:00
Crossing Values:	16	40	14	25	0	0	0	0

[illegible][illegible]

[illegible][illegible]



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00		One Hour Peak From: 7:45:00 To: 8:45:00	
Municipality: Ottawa Site #: 2422000009 Intersection: Walkley Rd & Albion Rd TFR File #: 1 Count date: 21-Nov-24			Weather conditions: Person counted: Person prepared: Person checked:		
** Signalized Intersection **			Major Road: Walkley Rd runs W/E		

North Leg Total: 44 North Entering: 26 North Peds: 7 Peds Cross:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cyclists</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Trucks</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Cars</td> <td>6</td> <td>2</td> <td>18</td> <td>26</td> </tr> <tr> <td>Totals</td> <td>6</td> <td>2</td> <td>18</td> <td></td> </tr> </table>	Cyclists	0	0	0	0	Trucks	0	0	0	0	Cars	6	2	18	26	Totals	6	2	18			Cyclists 0 Trucks 1 Cars 17 Totals 18	East Leg Total: 1375 East Entering: 749 East Peds: 34 Peds Cross:
Cyclists	0	0	0	0																				
Trucks	0	0	0	0																				
Cars	6	2	18	26																				
Totals	6	2	18																					

Cyclists	Trucks	Cars	Totals
0	35	745	780

Walkley Rd

Cyclists	Trucks	Cars	Totals
0	0	4	4
0	12	461	473
0	6	119	125
0	18	584	

Colliston Cres

Albion Rd

Cars	Trucks	Cyclists	Totals
11	1	0	12
585	21	0	606
120	11	0	131
716	33	0	

Walkley Rd

Cars	Trucks	Cyclists	Totals
607	19	0	626

Peds Cross: West Peds: 21 West Entering: 602 West Leg Total: 1382	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td> <td>241</td> </tr> <tr> <td>Trucks</td> <td>17</td> </tr> <tr> <td>Cyclists</td> <td>0</td> </tr> <tr> <td>Totals</td> <td>258</td> </tr> </table>	Cars	241	Trucks	17	Cyclists	0	Totals	258		<table style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td> <td>154</td> <td>2</td> <td>128</td> <td>284</td> </tr> <tr> <td>Trucks</td> <td>14</td> <td>0</td> <td>7</td> <td>21</td> </tr> <tr> <td>Cyclists</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Totals</td> <td>168</td> <td>2</td> <td>135</td> <td></td> </tr> </table>	Cars	154	2	128	284	Trucks	14	0	7	21	Cyclists	0	0	0	0	Totals	168	2	135		Peds Cross: South Peds: 22 South Entering: 305 South Leg Total: 563
Cars	241																															
Trucks	17																															
Cyclists	0																															
Totals	258																															
Cars	154	2	128	284																												
Trucks	14	0	7	21																												
Cyclists	0	0	0	0																												
Totals	168	2	135																													

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 15:45:00

To: 16:45:00

Municipality: Ottawa

Site #: 2422000009

Intersection: Walkley Rd & Albion Rd

TFR File #: 1

Count date: 21-Nov-24

Weather conditions:

Person counted:

Person prepared:

Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 50

North Entering: 18

North Peds: 4

Peds Cross: 8

Cyclists 0

Trucks 0

Cars 2

Totals 2

0

0

1

2

0

1

14

2

0

1

17

↑

Colliston Cres

Cyclists 1

Trucks 0

Cars 31

Totals 32

East Leg Total: 1719

East Entering: 942

East Peds: 42

Peds Cross: 8

Cyclists Trucks Cars Totals

1 19 972 992

←

Walkley Rd

Cyclists Trucks Cars Totals

0 0 17 17

0 8 651 659

0 8 150 158

0 16 818

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↓

↘

Cyclists Trucks Cars Totals

13 0 0 13

831 13 1 845

82 2 0 84

926 15 1

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↓

Cyclists Trucks Cars Totals

0 0 17 17

0 8 651 659

0 8 150 158

0 16 818

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↓

↘

Cyclists Trucks Cars Totals

139 1 100 240

6 0 4 10

0 1 0 1

145 2 104

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↓

↘

Cyclists Trucks Cars Totals

13 0 0 13

831 13 1 845

82 2 0 84

926 15 1

↑

←

↓

Cyclists Trucks Cars Totals

765 12 0 777

↑

←

↓

Peds Cross: 8

West Peds: 4

West Entering: 834

West Leg Total: 1826

Cars 233

Trucks 11

Cyclists 0

Totals 244

↓

Albion Rd

Cyclists Trucks Cars Totals

139 1 100 240

6 0 4 10

0 1 0 1

145 2 104

↑

↓

↘

Cyclists Trucks Cars Totals

13 0 0 13

831 13 1 845

82 2 0 84

926 15 1

↑

←

↓

Cyclists Trucks Cars Totals

765 12 0 777

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↓

Peds Cross: 8

South Peds: 9

South Entering: 251

South Leg Total: 495

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000009			
Intersection: Walkley Rd & Albion Rd		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 191 North Entering: 78 North Peds: 28 Peds Cross:	Cyclists 0 1 0 1 Trucks 0 1 1 2 Cars 14 5 56 75 Totals 14 7 57 75	 Cyclists 1 Trucks 1 Cars 111 Totals 113	East Leg Total: 5948 East Entering: 3245 East Peds: 141 Peds Cross:
Cyclists Trucks Cars Totals 1 101 3275 3377	 	Colliston Cres 	Cars Trucks Cyclists Totals 66 1 0 67 2735 67 1 2803 362 13 0 375 3163 81 1 375
Walkley Rd 		Walkley Rd 	Cars Trucks Cyclists Totals 2635 67 1 2703
Cyclists Trucks Cars Totals 0 0 40 40 1 44 2201 2246 0 29 471 500 1 73 2712	 	Albion Rd 	Cars 838 Trucks 43 Cyclists 1 Totals 882
Peds Cross: West Peds: 46 West Entering: 2786 West Leg Total: 6163	Cars 526 5 378 909 Trucks 34 0 22 56 Cyclists 0 1 0 1 Totals 560 6 400 967	Peds Cross: South Peds: 56 South Entering: 966 South Leg Total: 1848	
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Walkley Rd & Albion Rd						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	9	1	4	14	3			8:00:00	69	0	44	113	2
9:00:00	16	2	4	22	7			9:00:00	153	2	127	282	23
16:00:00	15	2	2	19	7			16:00:00	145	1	80	226	15
17:00:00	11	1	2	14	6			17:00:00	141	2	96	239	10
Totals:	51	6	12	69	23			S Totals:	508	5	347	860	50
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	50	271	8	329	8			8:00:00	0	213	58	271	1
9:00:00	117	599	11	727	40			9:00:00	5	502	115	622	25
16:00:00	86	664	18	768	43			16:00:00	9	542	117	668	8
17:00:00	84	843	13	940	42			17:00:00	18	673	146	837	8
Totals:	337	2377	50	2764	133			W Totals:	32	1930	436	2398	42
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	88	236	213	204				0	0	0	0		



Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	3	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
8:00:00	9	6	1	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	3	1
8:15:00	13	4	2	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	5	2
8:30:00	18	5	2	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	6	1
8:45:00	21	3	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3
9:00:00	24	3	2	0	8	0	1	1	0	0	0	0	0	1	1	0	0	0	10	1
9:15:00	26	2	2	0	8	0	1	0	0	0	0	0	0	1	0	0	0	0	12	2
9:30:00	31	5	2	0	9	1	1	0	0	0	0	0	0	1	0	0	0	9	13	1
9:45:00	31	0	2	0	9	0	1	0	0	0	0	0	0	1	0	0	0	0	13	0
15:30:00	31	0	2	0	9	0	1	0	0	0	0	0	0	1	0	0	0	0	13	0
15:45:00	35	4	3	1	10	1	1	0	0	0	0	0	0	1	0	0	0	0	16	3
16:00:00	39	4	4	1	10	0	1	0	0	0	0	0	0	1	0	0	0	0	17	1
16:15:00	41	2	4	0	10	0	1	0	1	1	0	0	0	0	1	0	0	0	18	1
16:30:00	47	6	4	0	10	0	1	0	1	0	0	0	0	1	0	0	0	0	19	1
16:45:00	49	2	4	0	12	2	1	0	1	0	0	0	0	1	0	0	0	0	20	1
17:00:00	50	1	4	0	12	0	1	0	1	0	0	0	0	1	0	0	0	0	23	3
17:15:00	55	5	5	1	12	0	1	0	1	0	0	0	0	1	0	0	0	0	27	4
17:30:00	56	1	5	0	14	2	1	0	1	0	0	0	0	1	0	0	0	0	28	1
17:45:00	56	0	5	0	14	0	1	0	1	0	0	0	0	1	0	0	0	0	28	0
17:45:15	56	0	5	0	14	0	1	0	1	0	0	0	0	1	0	0	0	0	28	0



Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	19	19	117	117	5	5	0	0	7	7	0	0	0	0	0	0	0	0	5	5
8:00:00	46	27	256	139	8	3	4	4	15	8	0	0	0	0	0	0	0	0	8	3
8:15:00	86	40	400	144	11	3	5	1	16	1	0	0	0	0	0	0	0	0	17	9
8:30:00	112	26	538	138	15	4	8	3	21	5	1	1	0	0	0	0	0	0	34	11
8:45:00	139	27	702	164	16	1	11	3	28	7	1	0	0	0	0	0	0	0	39	5
9:00:00	156	17	835	133	18	2	11	0	35	7	1	0	0	0	0	0	0	0	48	9
9:15:00	175	19	964	129	22	4	11	0	39	4	1	0	0	0	0	0	0	0	55	7
9:30:00	190	15	1089	125	28	6	11	0	45	6	1	0	0	0	0	0	0	0	62	7
9:45:00	190	0	1089	0	28	0	11	0	45	0	1	0	0	0	0	0	0	0	62	0
15:30:00	190	0	1089	0	28	0	11	0	45	0	1	0	0	0	0	0	0	0	62	0
15:45:00	220	30	1279	190	31	3	11	0	48	3	1	0	0	0	0	0	0	0	80	18
16:00:00	241	21	1485	206	36	5	12	1	49	1	1	0	0	0	0	0	0	0	91	11
16:15:00	269	28	1685	200	38	2	13	1	53	4	1	0	0	0	0	0	0	0	105	14
16:30:00	285	16	1903	218	43	5	13	0	57	4	1	0	0	0	1	1	0	0	110	5
16:45:00	302	17	2110	207	44	1	13	0	61	4	1	0	0	0	1	0	0	0	122	12
17:00:00	324	22	2313	203	49	5	13	0	63	2	1	0	0	0	1	0	0	0	133	11
17:15:00	343	19	2524	211	60	11	13	0	65	2	1	0	0	0	1	0	0	0	136	3
17:30:00	362	19	2735	211	66	6	13	0	67	2	1	0	0	0	1	0	0	0	141	5
17:45:00	362	0	2735	0	66	0	13	0	67	0	1	0	0	0	1	0	0	0	141	0
17:45:15	362	0	2735	0	66	0	13	0	67	0	1	0	0	0	1	0	0	0	141	0

[illegible]

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	95	95	20	20	0	0	3	3	3	3	0	0	0	0	0	0	1	1
8:00:00	0	0	206	111	54	34	0	0	7	4	4	1	0	0	0	0	0	0	1	0
8:15:00	2	2	316	110	95	41	0	0	8	1	7	3	0	0	0	0	0	0	8	7
8:30:00	3	1	440	124	117	22	0	0	10	2	7	0	0	0	0	0	0	0	18	10
8:45:00	4	1	556	116	139	22	0	0	15	5	9	2	0	0	0	0	0	0	22	4
9:00:00	5	1	697	141	163	24	0	0	18	3	10	1	0	0	0	0	0	0	26	4
9:15:00	5	0	804	107	183	20	0	0	23	5	11	1	0	0	1	1	0	0	30	4
9:30:00	7	2	913	109	203	20	0	0	24	1	13	2	0	0	2	1	0	0	30	0
9:45:00	7	0	913	0	203	0	0	0	24	0	13	0	0	0	1	0	0	0	30	0
15:30:00	7	0	913	0	203	0	0	0	24	0	13	0	0	0	1	0	0	0	30	0
15:45:00	9	2	1057	144	233	30	0	0	31	7	15	2	0	0	1	0	0	0	33	3
16:00:00	14	5	1222	165	275	42	0	0	34	3	15	0	0	0	1	0	0	0	34	1
16:15:00	18	4	1373	151	314	39	0	0	34	0	17	2	0	0	1	0	0	0	35	1
16:30:00	23	5	1524	151	345	31	0	0	38	4	19	2	0	0	1	0	0	0	35	0
16:45:00	26	3	1708	184	383	38	0	0	39	1	23	4	0	0	1	0	0	0	37	2
17:00:00	32	6	1888	180	411	28	0	0	41	2	25	2	0	0	1	0	0	0	42	5
17:15:00	36	4	2046	158	439	28	0	0	44	3	28	1	0	0	1	0	0	0	45	3
17:30:00	40	4	2201	155	471	32	0	0	44	0	29	3	0	0	1	0	0	0	46	1
17:45:00	40	0	2201	0	471	0	0	0	44	0	29	0	0	0	1	0	0	0	46	0
17:45:15	40	0	2201	0	471	0	0	0	44	0	29	0	0	0	1	0	0	0	46	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Ottawa
Site #: 2422000010
Intersection: Walkley Rd & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

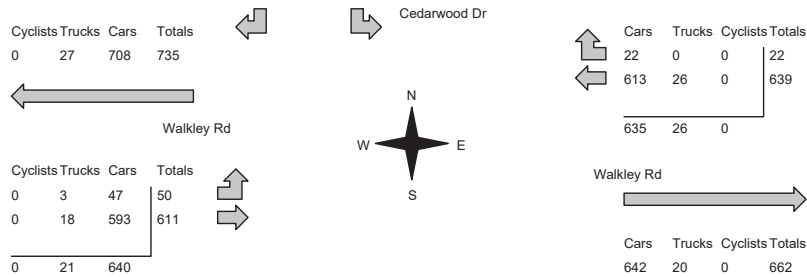
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 219	Cyclists 0	0	0	Cyclists 0	East Leg Total: 1323
North Entering: 147	Trucks 1	2	3	Trucks 3	East Entering: 661
North Peds: 3	Cars 95	49	144	Cars 69	East Peds: 3
Peds Cross: 0	Totals 96	51		Totals 72	Peds Cross: 0



Peds Cross: 0
West Peds: 9
West Entering: 661
West Leg Total: 1396

Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 15:45:00

To: 16:45:00

Municipality: Ottawa
Site #: 2422000010
Intersection: Walkley Rd & Cedarwood Dr
TFR File #: 1
Count date: 21-Nov-24

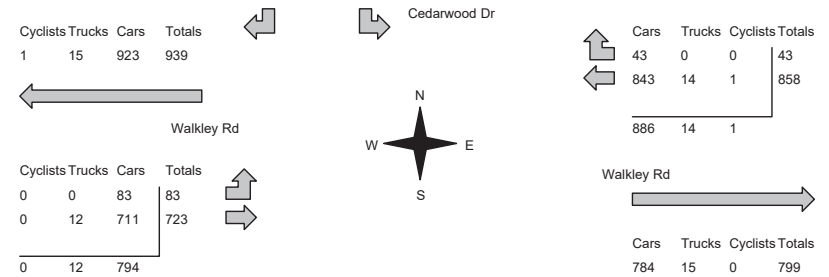
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 283	Cyclists 0	0	0	Cyclists 0	East Leg Total: 1700
North Entering: 157	Trucks 1	3	4	Trucks 0	East Entering: 901
North Peds: 6	Cars 80	73	153	Cars 126	East Peds: 3
Peds Cross: 0	Totals 81	76		Totals 126	Peds Cross: 0



Peds Cross: 0
West Peds: 12
West Entering: 806
West Leg Total: 1745

Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000010			
Intersection: Walkley Rd & Cedarwood Dr		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 946 North Entering: 565 North Peds: 14 Peds Cross: 14	Cyclists 0 Trucks 4 Cars 327 Totals 331	0 10 224 234	0 14 551 234
Cyclists 0 Trucks 5 Cars 376 Totals 381	0 14 551 234	0 14 551 234	0 14 551 234
East Leg Total: 5814 East Entering: 3061 East Peds: 11 Peds Cross: 11	0 14 551 234	0 14 551 234	0 14 551 234
Cyclists Trucks Cars Totals 1 80 3186 3267	Cyclists Trucks Cars Totals 123 2 0 125	Cyclists Trucks Cars Totals 2859 76 1 2936	Cyclists Trucks Cars Totals 2982 78 1 2936
Cyclists Trucks Cars Totals 0 3 253 256	Cyclists Trucks Cars Totals 1 63 2455 2519	Cyclists Trucks Cars Totals 1 66 2708	Cyclists Trucks Cars Totals 1 66 2708
Peds Cross: 11 West Peds: 32 West Entering: 2775 West Leg Total: 6042			
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Walkley Rd & Cedarwood Dr					Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
8:00:00	27	0	35	62	1	62	8:00:00	0	0	0	0	0
9:00:00	51	0	96	147	3	147	9:00:00	0	0	0	0	0
16:00:00	80	0	73	153	4	153	16:00:00	0	0	0	0	0
17:00:00	58	0	76	134	5	134	17:00:00	0	0	0	0	0
Totals:						496	S Totals:	0	0	0	0	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
8:00:00	0	305	10	315	0	581	8:00:00	21	245	0	266	3
9:00:00	0	639	22	661	3	1322	9:00:00	50	611	0	661	9
16:00:00	0	698	30	728	4	1395	16:00:00	68	599	0	667	6
17:00:00	0	858	44	902	3	1705	17:00:00	78	725	0	803	9
Totals:						5003	W Totals:	217	2180	0	2397	27
Calculated Values for Traffic Crossing Major Street												
Hours Ending:		8:00	9:00	16:00	17:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Crossing Values:		30	63	90	70	0	0	0	0	0	0	0

[illegible]

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	138	138	5	5	0	0	8	8	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	286	148	10	5	0	0	19	11	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	459	173	13	3	0	0	21	2	0	0	0	0	0	0	0	0	1	1
8:30:00	0	0	602	143	25	12	0	0	29	8	0	0	0	0	0	0	0	0	1	0
8:45:00	0	0	768	166	28	3	0	0	38	9	0	0	0	0	0	0	0	0	1	0
9:00:00	0	0	899	131	32	4	0	0	45	7	0	0	0	0	0	0	0	0	3	2
9:15:00	0	0	1031	132	36	4	0	0	49	4	1	1	0	0	0	0	0	0	3	0
9:30:00	0	0	1168	137	40	4	0	0	55	6	1	0	0	0	0	0	0	0	3	0
9:45:00	0	0	1168	0	40	0	0	0	55	0	1	0	0	0	0	0	0	0	3	0
15:30:00	0	0	1168	0	40	0	0	0	55	0	1	0	0	0	0	0	0	0	3	0
15:45:00	0	0	1381	213	52	12	0	0	56	1	1	0	0	0	0	0	0	0	7	4
16:00:00	0	0	1584	203	61	9	0	0	58	2	1	0	0	0	0	0	0	0	7	1
16:15:00	0	0	1787	203	69	8	0	0	62	4	1	0	0	0	0	0	0	0	8	1
16:30:00	0	0	2018	231	84	15	0	0	66	4	1	0	0	0	1	1	0	0	8	0
16:45:00	0	0	2224	206	95	11	0	0	70	4	1	0	0	0	1	0	0	0	10	2
17:00:00	0	0	2427	203	105	10	0	0	72	2	1	0	0	0	1	1	0	0	10	0
17:15:00	0	0	2638	211	115	10	0	0	75	3	1	0	0	0	1	0	0	0	11	1
17:30:00	0	0	2859	221	123	8	0	0	76	1	2	1	0	0	1	0	0	0	11	0
17:45:00	0	0	2859	0	123	0	0	0	76	0	2	0	0	0	1	0	0	0	11	0
17:45:15	0	0	2859	0	123	0	0	0	76	0	2	0	0	0	1	0	0	0	11	0

[illegible]

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	11	11	103	103	0	0	0	0	9	9	0	0	0	0	0	0	0	0	3	3
8:00:00	21	10	233	130	0	0	0	0	12	3	0	0	0	0	0	0	0	0	3	0
8:15:00	34	13	373	140	0	0	1	1	15	3	0	0	0	0	0	0	0	0	4	1
8:30:00	49	15	533	160	0	0	1	0	19	4	0	0	0	0	0	0	0	0	7	3
8:45:00	60	11	673	140	0	0	3	2	24	5	0	0	0	0	0	0	0	0	7	0
9:00:00	68	8	826	153	0	0	3	0	30	6	0	0	0	0	0	0	0	0	12	5
9:15:00	80	12	935	109	0	0	3	0	36	6	0	0	0	1	1	0	0	0	12	0
9:30:00	92	12	1058	123	0	0	3	0	38	2	0	0	0	1	1	0	0	2	13	1
9:45:00	92	0	1058	0	0	0	3	0	38	0	0	0	0	1	0	0	0	0	13	0
15:30:00	92	0	1058	0	0	0	3	0	38	0	0	0	0	1	0	0	0	0	13	0
15:45:00	112	20	1229	171	0	0	3	0	45	7	0	0	0	1	0	0	0	0	13	0
16:00:00	136	24	1405	176	0	0	3	0	49	4	0	0	0	1	0	0	0	0	16	5
16:15:00	153	17	1569	164	0	0	3	0	51	2	0	0	0	1	0	0	0	0	24	6
16:30:00	172	19	1743	174	0	0	3	0	56	5	0	0	0	1	0	0	0	0	25	1
16:45:00	195	23	1940	197	0	0	3	0	57	1	0	0	0	1	0	0	0	0	25	0
17:00:00	214	19	2119	179	0	0	3	0	60	3	0	0	0	1	0	0	0	0	27	2
17:15:00	235	21	2291	172	0	0	3	0	63	3	0	0	0	1	0	0	0	0	32	5
17:30:00	253	18	2455	164	0	0	3	0	63	0	0	0	0	1	0	0	0	0	32	0
17:45:00	253	0	2455	0	0	0	3	0	63	0	0	0	0	1	0	0	0	0	32	0
17:45:15	253	0	2455	0	0	0	3	0	63	0	0	0	0	1	0	0	0	0	32	0



Accu-Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:30:00

To: 9:30:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Ottawa
Site #: 2422000011
Intersection: Walkley Rd & Baycrest Dr
TFR File #: 1
Count date: 21-Nov-24

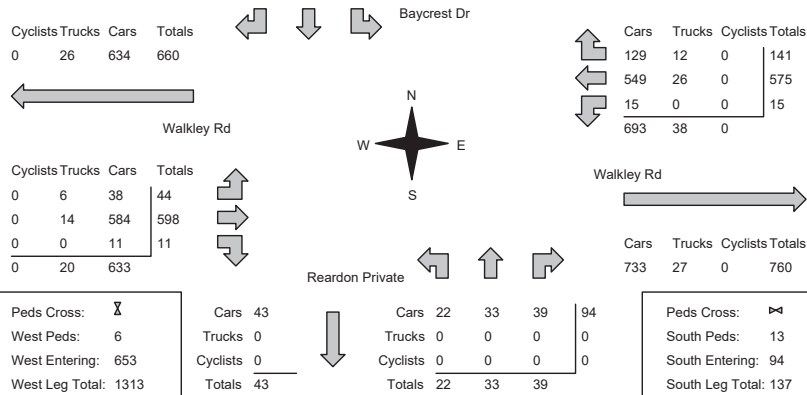
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 421	Cyclists 0	0	0	0	Cyclists 0	East Leg Total: 1491
North Entering: 203	Trucks 0	0	13	13	Trucks 18	East Entering: 731
North Peds: 6	Cars 63	17	110	190	Cars 200	East Peds: 26
Peds Cross: 0	Totals 63	17	123		Totals 218	Peds Cross: 0



Comments



Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 15:30:00

To: 17:30:00

One Hour Peak

From: 16:15:00

To: 17:15:00

Municipality: Ottawa
Site #: 2422000011
Intersection: Walkley Rd & Baycrest Dr
TFR File #: 1
Count date: 21-Nov-24

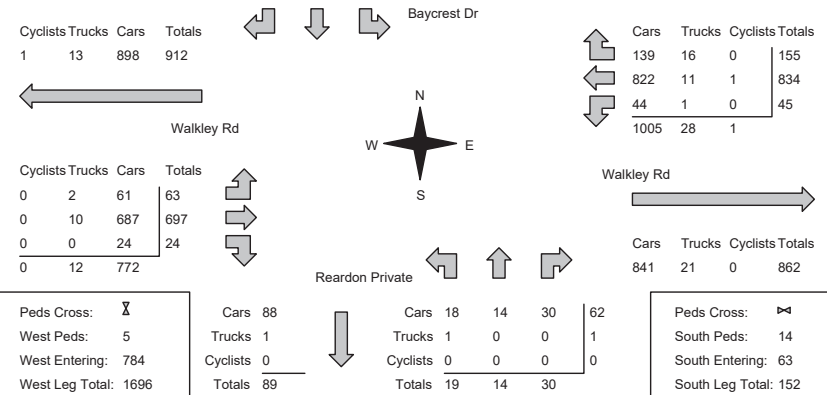
Weather conditions:

Person counted:
Person prepared:
Person checked:

** Signalized Intersection **

Major Road: Walkley Rd runs W/E

North Leg Total: 446	Cyclists 0	0	0	0	Cyclists 0	East Leg Total: 1896
North Entering: 214	Trucks 1	0	11	12	Trucks 18	East Entering: 1034
North Peds: 7	Cars 58	20	124	202	Cars 214	East Peds: 21
Peds Cross: 0	Totals 59	20	135		Totals 232	Peds Cross: 0



Comments



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000011			
Intersection: Walkley Rd & Baycrest Dr		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 1689 North Entering: 809 North Peds: 24 Peds Cross:	Cyclists 0 0 0 0 Trucks 4 0 47 51 Cars 252 64 442 758 Totals 256 64 489	 Cyclists 0 Trucks 58 Cars 822 Totals 880	East Leg Total: 6539 East Entering: 3430 East Peds: 65 Peds Cross:
Cyclists Trucks Cars Totals 1 80 2979 3060	 	 	Cars Trucks Cyclists Totals 550 43 0 593 2644 75 1 2720 114 3 0 117 3308 121 1
Cyclists Trucks Cars Totals 0 14 188 202 1 60 2426 2487 0 0 66 66 1 74 2680	 	 	Cars Trucks Cyclists Totals 3000 108 1 3109
Peds Cross: West Peds: 33 West Entering: 2755 West Leg Total: 5815	Cars 244 Trucks 3 Cyclists 0 Totals 247	Cars 83 84 132 299 Trucks 1 1 1 3 Cyclists 0 0 0 0 Totals 84 85 133	Peds Cross: South Peds: 55 South Entering: 302 South Leg Total: 549
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Walkley Rd & Baycrest Dr					Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
8:00:00	43	5	28	76	3	120	8:00:00	16	13	15	44	3
9:00:00	123	17	63	203	6	297	9:00:00	22	33	39	94	13
16:00:00	127	9	71	207	5	279	16:00:00	17	20	35	72	20
17:00:00	128	20	68	216	7	279	17:00:00	20	14	29	63	14
Totals:						975	S Totals:	75	80	118	273	50
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
8:00:00	8	273	55	336	7	606	8:00:00	15	250	5	270	5
9:00:00	15	575	141	731	26	1384	9:00:00	44	598	11	653	6
16:00:00	35	643	168	846	8	1530	16:00:00	49	616	19	684	9
17:00:00	35	806	166	1007	22	1795	17:00:00	61	704	23	788	10
Totals:						5315	W Totals:	169	2168	58	2395	30
Calculated Values for Traffic Crossing Major Street												
Hours Ending:		8:00	9:00	16:00	17:00		0:00	0:00	0:00	0:00		
Crossing Values:		84	210	181	200		0	0	0	0		

[illegible]

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	4	4	121	121	25	25	0	0	9	9	2	2	0	0	0	0	0	0	5	5
8:00:00	8	4	253	132	51	26	0	0	20	11	4	2	0	0	0	0	0	0	7	2
8:15:00	11	3	412	159	80	29	0	0	22	2	9	5	0	0	0	0	0	0	20	13
8:30:00	16	5	542	130	113	33	0	0	30	8	11	2	0	0	0	0	0	0	24	5
8:45:00	19	3	688	146	149	36	0	0	39	9	15	4	0	0	0	0	0	0	33	9
9:00:00	23	4	802	114	180	31	0	0	46	7	16	1	0	0	0	0	0	0	33	0
9:15:00	26	3	919	117	215	35	1	1	51	5	19	3	0	0	0	0	0	0	34	1
9:30:00	34	8	1043	124	252	37	1	0	57	6	20	1	0	0	0	0	0	0	36	2
9:45:00	34	0	1043	0	252	0	1	0	57	0	20	0	0	0	0	0	0	0	36	0
15:30:00	34	0	1043	0	252	0	1	0	57	0	20	0	0	0	0	0	0	0	36	0
15:45:00	40	6	1240	197	305	53	1	0	58	1	22	2	0	0	0	0	0	0	38	2
16:00:00	56	16	1451	191	339	34	2	1	60	2	25	3	0	0	0	0	0	0	41	3
16:15:00	62	6	1613	182	382	43	2	0	62	2	26	1	0	0	0	0	0	0	44	3
16:30:00	70	8	1837	224	423	41	3	1	66	4	32	6	0	0	1	1	0	0	51	7
16:45:00	77	7	2027	190	461	38	3	0	69	3	35	3	0	0	1	0	0	0	59	8
17:00:00	90	13	2225	198	491	30	3	0	71	2	39	4	0	0	1	0	0	0	63	4
17:15:00	106	16	2435	210	521	30	3	0	73	2	42	3	0	0	1	0	0	0	65	2
17:30:00	114	8	2644	209	550	29	3	0	75	2	43	1	0	0	1	0	0	0	65	0
17:45:00	114	0	2644	0	550	0	3	0	75	0	43	0	0	0	1	0	0	0	65	0
17:45:15	114	0	2644	0	550	0	3	0	75	0	43	0	0	0	1	0	0	0	65	0

[illegible][illegible]



Accu-Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:30:00 To: 9:30:00	One Hour Peak From: 8:00:00 To: 9:00:00
Municipality: Ottawa Site #: 2422000012 Intersection: Walkley Rd & Heatherington Rd TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 199 North Entering: 94 North Peds: 5 Peds Cross:	Cyclists 0 0 0 0 Trucks 0 0 0 1 Cars 50 18 25 93 Totals 50 18 26	Cyclists 0 Trucks 2 Cars 103 Totals 105	East Leg Total: 1235 East Entering: 597 East Peds: 18 Peds Cross:
Cyclists Trucks Cars Totals 0 39 619 658 Walkley Rd Heatherington Rd Cars Trucks Cyclists Totals 25 0 0 25 442 31 0 473 92 7 0 99 559 38 0 Cars Trucks Cyclists Totals 0 2 55 57 0 14 497 511 0 9 85 94 0 25 637 Cars Trucks Cyclists Totals 127 23 97 247 8 0 4 12 0 0 0 0 Totals 135 23 101 Peds Cross: West Peds: 22 West Entering: 662 West Leg Total: 1320 Cars 195 Trucks 16 Cyclists 0 Totals 211 Peds Cross: South Peds: 28 South Entering: 259 South Leg Total: 470			
Comments			



Accu-Traffic Inc.

Afternoon Peak Diagram		Specified Period From: 15:30:00 To: 17:30:00	One Hour Peak From: 16:15:00 To: 17:15:00
Municipality: Ottawa Site #: 2422000012 Intersection: Walkley Rd & Heatherington Rd TFR File #: 1 Count date: 21-Nov-24		Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 505 North Entering: 236 North Peds: 3 Peds Cross:	Cyclists 0 0 0 0 Trucks 1 0 0 0 Cars 107 75 53 235 Totals 108 75 53	Cyclists 0 Trucks 2 Cars 267 Totals 269	East Leg Total: 1653 East Entering: 964 East Peds: 25 Peds Cross:
Cyclists Trucks Cars Totals 1 27 960 988 Walkley Rd Heatherington Rd Cars Trucks Cyclists Totals 80 1 0 81 734 18 1 753 129 1 0 130 943 20 1 Cars Trucks Cyclists Totals 0 1 139 140 0 16 518 534 0 4 148 152 0 21 805 Cars Trucks Cyclists Totals 119 48 98 265 8 0 4 12 0 0 0 0 Totals 127 48 102 Peds Cross: West Peds: 38 West Entering: 826 West Leg Total: 1814 Cars 352 Trucks 5 Cyclists 0 Totals 357 Peds Cross: South Peds: 28 South Entering: 277 South Leg Total: 634			
Comments			



Accu-Traffic Inc.

Total Count Diagram

Municipality: Ottawa		Weather conditions:	
Site #: 2422000012			
Intersection: Walkley Rd & Heatherington Rd		Person counted:	
TFR File #: 1		Person prepared:	
Count date: 21-Nov-24		Person checked:	
** Signalized Intersection **		Major Road: Walkley Rd runs W/E	
North Leg Total: 1406 North Entering: 669 North Peds: 20 Peds Cross:	Cyclists 0 0 0 0 Trucks 5 1 3 9 Cars 335 169 156 660 Totals 340 170 159 660	 Cyclists 0 Trucks 10 Cars 727 Totals 737	East Leg Total: 5552 East Entering: 2980 East Peds: 65 Peds Cross:
Cyclists Trucks Cars Totals 1 128 3069 3198	 HG Mall	 Cars Trucks Cyclists Totals 207 2 0 209 2251 97 1 2349 406 16 0 422 2864 115 1	 Walkley Rd
Cyclists Trucks Cars Totals 0 6 381 387 1 71 1907 1979 0 36 451 487 1 113 2739	 Walkley Rd	 Heatherington Rd	Cars Trucks Cyclists Totals 2481 90 1 2572
Peds Cross: West Peds: 134 West Entering: 2853 West Leg Total: 6051	Cars 1026 Trucks 53 Cyclists 0 Totals 1079	Cars 483 139 418 1040 Trucks 26 2 16 44 Cyclists 0 0 0 0 Totals 509 141 434	Peds Cross: South Peds: 108 South Entering: 1084 South Leg Total: 2163
Comments			



Accu-Traffic Inc. Traffic Count Summary

Intersection: Walkley Rd & Heatherington Rd						Count Date: 21-Nov-24		Municipality: Ottawa					
North Approach Totals						North/South Total Approaches		South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	10	6	15	31	2			8:00:00	57	8	39	104	11
9:00:00	26	18	50	94	5			9:00:00	135	23	101	259	28
16:00:00	42	41	99	182	8			16:00:00	140	38	125	303	32
17:00:00	58	78	107	243	3			17:00:00	129	40	108	277	25
Totals:	136	143	271	550	18			S Totals:	461	109	373	943	96
East Approach Totals						East/West Total Approaches		West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds			Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total					Left	Thru	Right	Grand Total	
8:00:00	39	254	18	311	4			8:00:00	28	229	27	284	4
9:00:00	99	473	25	597	18			9:00:00	57	511	94	662	22
16:00:00	82	534	54	670	13			16:00:00	100	483	139	722	43
17:00:00	138	731	75	944	18			17:00:00	141	522	162	825	42
Totals:	358	1992	172	2522	53			W Totals:	326	1745	422	2493	111
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	16:00	17:00				0:00	0:00	0:00	0:00		
Crossing Values:	83	224	279	325				0	0	0	0		



Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	3	5	5	10	10	1	1	0	0	1	1	0	0	0	0	0	0	2	2
8:00:00	9	6	6	1	14	4	1	0	0	0	1	0	0	0	0	0	0	0	2	0
8:15:00	15	6	8	2	26	12	1	0	0	0	1	0	0	0	0	0	0	0	4	2
8:30:00	24	9	15	7	32	6	1	0	0	0	1	0	0	0	0	0	0	0	6	2
8:45:00	32	8	21	6	49	17	1	0	0	0	1	0	0	0	0	0	0	0	7	1
9:00:00	34	2	24	3	64	15	2	1	0	0	1	0	0	0	0	0	0	0	7	0
9:15:00	42	8	29	5	80	16	2	0	0	0	1	0	0	0	0	0	0	0	8	1
9:30:00	50	8	39	10	96	16	2	0	0	0	2	1	0	0	0	0	0	0	9	1
9:45:00	50	0	39	0	96	0	2	0	0	0	2	0	0	0	0	0	0	0	9	0
15:30:00	50	0	39	0	96	0	2	0	0	0	2	0	0	0	0	0	0	0	9	0
15:45:00	61	11	53	14	132	36	3	1	0	0	2	0	0	0	0	0	0	0	13	4
16:00:00	75	14	64	11	161	29	3	0	1	1	3	1	0	0	0	0	0	0	15	2
16:15:00	87	12	86	22	188	27	3	0	1	0	4	1	0	0	0	0	0	0	16	1
16:30:00	103	16	103	17	207	19	3	0	1	0	5	1	0	0	0	0	0	0	16	0
16:45:00	117	14	119	16	229	22	3	0	1	0	5	0	0	0	0	0	0	0	17	1
17:00:00	133	16	142	23	266	37	3	0	1	0	5	0	0	0	0	0	0	0	18	1
17:15:00	140	7	161	19	295	29	3	0	1	0	5	0	0	0	0	0	0	0	19	1
17:30:00	156	16	169	8	335	40	3	0	1	0	5	0	0	0	0	0	0	0	20	1
17:45:00	156	0	169	0	335	0	3	0	1	0	5	0	0	0	0	0	0	0	20	0
17:45:15	156	0	169	0	335	0	3	0	1	0	5	0	0	0	0	0	0	0	20	0



Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-00	14	14	108	108	6	6	3	3	9	9	1	1	0	0	0	0	0	0	1	1
8:00-00	36	22	231	123	17	11	3	0	23	14	1	0	0	0	0	0	0	0	4	3
8:15-00	58	22	370	139	20	3	4	1	28	5	1	0	0	0	0	0	0	0	5	1
8:30-00	77	19	474	104	26	6	4	0	35	7	1	0	0	0	0	0	0	0	10	5
8:45-00	101	24	582	108	32	6	8	4	45	10	1	0	0	0	0	0	0	0	19	9
9:00-00	128	27	673	91	42	10	10	2	54	9	1	0	0	0	0	0	0	0	22	3
9:15-00	141	13	764	91	50	8	13	3	62	8	1	0	0	0	0	0	0	0	27	5
9:30-00	158	17	871	107	64	14	13	0	68	6	1	0	0	0	0	0	0	0	30	3
9:45-00	158	0	871	0	64	0	13	0	68	0	1	0	0	0	0	0	0	0	30	0
15:30-00	158	0	871	0	64	0	13	0	68	0	1	0	0	0	0	0	0	0	30	0
15:45-00	181	23	1033	162	77	13	14	1	71	3	1	0	0	0	0	0	0	0	34	4
16:00-00	208	25	1185	152	96	19	14	0	76	5	1	0	0	0	0	0	0	0	35	1
16:15-00	247	41	1343	158	110	14	15	1	77	1	1	0	0	0	0	0	0	0	39	4
16:30-00	278	31	1538	195	129	19	15	0	83	6	1	0	0	0	1	1	0	0	44	5
16:45-00	303	25	1717	179	151	22	15	0	89	6	1	0	0	1	0	0	0	0	50	6
17:00-00	343	40	1898	181	171	20	15	0	93	4	1	0	0	1	1	0	0	0	53	3
17:15-00	376	33	2077	179	190	19	16	1	95	2	2	1	0	0	1	0	0	0	64	11
17:30-00	406	30	2251	174	207	17	16	0	97	2	2	0	0	0	1	0	0	0	65	1
17:45-00	406	0	2251	0	207	0	16	0	97	0	2	0	0	0	1	0	0	0	65	0
17:45-15	406	0	2251	0	207	0	16	0	97	0	2	0	0	0	1	0	0	0	65	0



Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left			Thru			Right			Left			Thru			Right			South Cross	
	Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr
7:30:00	0	0		0	0		0	0		0	0		0	0		0	0		0	0
7:45:00	23	23	3	3	15	15	2	2		0	0		0	0		0	0		8	8
8:00:00	53	30	3	5	39	24	4	2		0	0		0	0		0	0		11	3
8:15:00	86	33	10	2	67	28	6	2		0	0		0	0		0	0		22	11
8:30:00	122	36	14	4	87	20	7	1		0	0		1	1		0	0		0	32
8:45:00	162	40	19	5	107	20	11	4		0	0		2	1		0	0		0	35
9:00:00	180	18	31	12	136	29	12	1		0	0		4	2		0	0		0	39
9:15:00	212	32	38	7	167	31	12	0		2	2		4	0		0	0		0	49
9:30:00	241	29	46	8	184	17	13	1		2	0		6	2		0	0		0	58
9:45:00	241	0	46	0	184	0	13	0		2	0		6	0		0	0		0	58
15:30:00	241	0	46	0	184	0	13	0		2	0		6	0		0	0		0	58
15:45:00	275	34	55	9	218	34	15	2		0	0		8	2		0	0		0	64
16:00:00	317	42	67	12	255	37	15	0		2	0		10	2		0	0		0	71
16:15:00	345	28	78	11	286	31	16	1		2	0		12	2		0	0		0	78
16:30:00	384	39	91	13	318	32	19	3		2	0		14	2		0	0		0	85
16:45:00	411	27	102	11	335	17	19	0		2	0		15	1		0	0		0	93
17:00:00	440	29	107	5	357	22	21	2		2	0		16	1		0	0		0	96
17:15:00	464	24	126	19	384	27	24	3		2	0		16	0		0	0		0	106
17:30:00	483	19	139	13	418	34	26	2		2	0		16	0		0	0		0	108
17:45:00	483	0	139	0	418	0	26	0		2	0		16	0		0	0		0	108
17:45:15	483	0	139	0	418	0	26	0		2	0		16	0		0	0		0	108



Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians		
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross		
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	
7:30-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45-00	13	13	105	105	8	8	0	0	8	8	5	5	0	0	0	0	0	0	0	3	3
8:00-00	28	15	213	108	21	13	0	0	16	8	6	1	0	0	0	0	0	0	4	4	
8:15-00	40	12	340	127	38	17	0	0	17	1	9	3	0	0	0	0	0	0	10	6	
8:30-00	52	12	455	115	60	22	0	0	21	4	12	3	0	0	0	0	0	0	19	9	
8:45-00	66	14	584	129	82	22	1	1	25	4	14	2	0	0	0	0	0	0	23	4	
9:00-00	83	17	710	126	106	24	2	1	30	5	15	1	0	0	0	0	0	0	26	3	
9:15-00	101	18	813	103	146	40	2	0	35	5	19	4	0	0	1	1	0	0	33	7	
9:30-00	122	21	905	92	172	26	2	0	38	3	21	2	0	0	1	0	0	0	37	4	
9:45-00	122	0	905	0	172	0	2	0	38	0	21	0	0	0	1	0	0	0	37	0	
15:30-00	122	0	905	0	172	0	2	0	38	0	21	0	0	0	1	0	0	0	37	0	
15:45-00	151	29	1041	136	209	37	3	1	45	7	25	4	0	0	1	0	0	0	55	19	
16:00-00	181	30	1172	131	234	25	4	1	50	5	26	1	0	0	1	0	0	0	69	13	
16:15-00	211	30	1289	117	276	42	5	1	53	3	31	5	0	0	1	0	0	0	82	13	
16:30-00	236	25	1429	140	314	38	6	1	58	5	31	0	0	0	1	0	0	0	90	8	
16:45-00	275	39	1563	134	349	35	6	0	62	4	33	2	0	0	1	0	0	0	98	8	
17:00-00	320	45	1678	115	388	39	6	0	66	4	34	1	0	0	1	0	0	0	111	13	
17:15-00	350	30	1807	129	424	36	6	0	69	3	35	1	0	0	1	0	0	0	120	9	
17:30-00	381	31	1907	100	451	27	6	0	71	2	36	1	0	0	1	0	0	0	134	14	
17:45-00	381	0	1907	0	451	0	6	0	71	0	36	0	0	0	1	0	0	0	134	0	
17:45-15	381	0	1907	0	451	0	6	0	71	0	36	0	0	0	1	0	0	0	134	0	

Appendix C

Synchro Intersection Worksheets – Existing Conditions

Lanes, Volumes, Timings
1: Bank & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	139	678	281	67	877	85	578	456	27	77	294	119
Future Volume (vph)	139	678	281	67	877	85	578	456	27	77	294	119
Satd. Flow (prot)	1658	3283	1483	1595	3221	1363	3154	3276	0	1626	3084	0
Flt Permitted	0.099			0.360			0.950			0.950		
Satd. Flow (perm)	173	3283	1411	597	3221	1323	3074	3276	0	1616	3084	0
Satd. Flow (RTOR)			312			129		5			46	
Lane Group Flow (vph)	154	753	312	74	974	94	642	537	0	86	459	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	13.0	55.6	55.6	42.6	42.6	42.6	32.0	32.4		32.0	32.4	
Total Split (%)	10.8%	46.3%	46.3%	35.5%	35.5%	35.5%	26.7%	27.0%		26.7%	27.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	51.3	49.2	49.2	36.2	36.2	36.2	25.5	42.5		11.7	26.0	
Actuated g/C Ratio	0.43	0.41	0.41	0.30	0.30	0.30	0.21	0.35		0.10	0.22	
v/c Ratio	0.85	0.56	0.41	0.41	1.00	0.19	0.96	0.46		0.54	0.65	
Control Delay	62.5	29.1	4.2	41.9	71.7	3.0	73.0	32.8		63.6	43.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	62.5	29.1	4.2	41.9	71.7	3.0	73.0	32.8		63.6	43.4	
LOS	E	C	A	D	E	A	E	C		E	D	
Approach Delay		26.9			64.1			54.7			46.6	
Approach LOS		C			E			D			D	
Queue Length 50th (m)	22.5	70.3	0.0	13.9	~121.2	0.0	77.6	52.4		19.6	47.1	
Queue Length 95th (m)	#57.5	89.2	16.7	29.2	#166.1	5.7	#113.1	73.4		34.8	64.9	
Internal Link Dist (m)		118.5			157.2			173.2			94.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	181	1346	762	180	971	489	670	1163		345	704	
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	0.85	0.56	0.41	0.41	1.00	0.19	0.96	0.46		0.25	0.65	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

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CGH Transportation
Page 1

Lanes, Volumes, Timings
1: Bank & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 48.0

Intersection LOS: D

Intersection Capacity Utilization 92.5%

ICU Level of Service F

Analysis Period (min) 15

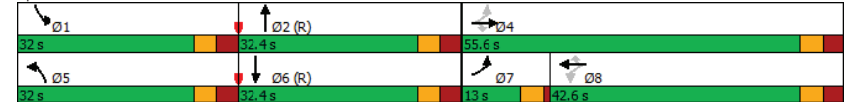
~ Volume exceeds capacity, queue is theoretically infinite.

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: Bank & Heron



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CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	112	609	73	128	777	162	66	216	161	120	232	190
Future Volume (vph)	112	609	73	128	777	162	66	216	161	120	232	190
Satd. Flow (prot)	1658	3119	0	1658	3191	1441	1551	1449	0	1580	1546	0
Fit Permitted	0.950			0.950			0.494			0.175		
Satd. Flow (perm)	1573	3119	0	1520	3191	1172	764	1449	0	291	1546	0
Satd. Flow (RTOR)		15				180		41			56	
Lane Group Flow (vph)	124	758	0	142	863	180	73	419	0	133	469	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.3	28.4		7.3	28.4	28.4	24.1	24.1		37.3	37.0	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.27	0.27		0.41	0.41	
v/c Ratio	0.93	0.76		1.06	0.86	0.37	0.36	1.00		0.60	0.70	
Control Delay	104.0	33.2		129.3	41.4	12.2	32.9	76.9		29.0	26.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	104.0	33.2		129.3	41.4	12.2	32.9	76.9		29.0	26.0	
LOS	F	C		F	D	B	C	E		C	C	
Approach Delay		43.1			47.5			70.3			26.6	
Approach LOS		D			D			E			C	
Queue Length 50th (m)	21.7	60.4		~28.0	56.4	5.6	10.2	~67.3		14.3	57.9	
Queue Length 95th (m)	#54.1	81.6		#63.8	#106.1	30.8	22.9	#126.6		#26.8	93.7	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	134	994		134	1006	493	204	418		225	668	
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	0.93	0.76		1.06	0.86	0.37	0.36	1.00		0.59	0.70	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 45.9

Intersection LOS: D

Intersection Capacity Utilization 84.7%

ICU Level of Service E

Analysis Period (min) 15

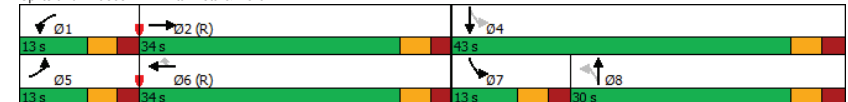
~ Volume exceeds capacity, queue is theoretically infinite.

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: 2: Alta Vista & Heron



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CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕		↕	↕↕	↕	↕
Traffic Volume (vph)	927	12	3	1090	36	10
Future Volume (vph)	927	12	3	1090	36	10
Satd. Flow (prot)	3241	0	1013	3252	1642	1261
Fit Permitted			0.264		0.950	
Satd. Flow (perm)	3241	0	278	3252	1635	1229
Satd. Flow (RTOR)	3					11
Lane Group Flow (vph)	1043	0	3	1211	40	11
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases			6		8	8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.39		0.01	0.45	0.18	0.06
Control Delay	3.0		5.7	5.2	34.7	16.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	3.0		5.7	5.2	34.7	16.5
LOS	A		A	A	C	B
Approach Delay	3.0			5.2	30.8	
Approach LOS	A			A	C	
Queue Length 50th (m)	17.4		0.1	41.6	6.4	0.0
Queue Length 95th (m)	m37.7		m0.5	73.4	13.4	4.1
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2695		231	2704	406	314
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.01	0.45	0.10	0.04
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 48 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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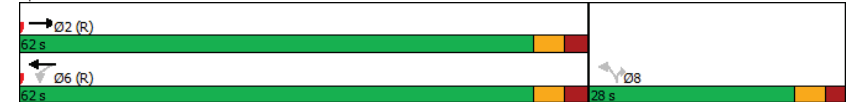
CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 4.7	Intersection LOS: A
Intersection Capacity Utilization 52.4%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: Finn & Heron



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CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖			↖		↖	↖	
Traffic Volume (vph)	10	762	186	24	805	29	229	13	34	15	4	4
Future Volume (vph)	10	762	186	24	805	29	229	13	34	15	4	4
Satd. Flow (prot)	1537	3142	0	1496	3198	0	0	1575	0	1271	1597	0
Flt Permitted	0.258			0.213				0.757		0.672		
Satd. Flow (perm)	416	3142	0	334	3198	0	0	1233	0	897	1597	0
Satd. Flow (RTOR)		48			6			9			4	
Lane Group Flow (vph)	11	1054	0	27	926	0	0	306	0	17	8	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	51.0	51.0		51.0	51.0		39.0	39.0		39.0	39.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.1	52.1		52.1	52.1		26.2	26.2		26.2	26.2	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.29	0.29		0.29	0.29	
v/c Ratio	0.05	0.57		0.14	0.50		0.84	0.07		0.07	0.02	
Control Delay	10.1	10.0		14.2	12.4		48.3	20.6		15.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.1	10.0		14.2	12.4		48.3	20.6		15.0		
LOS	B	B		B	B		D	C		B		
Approach Delay		10.0			12.4		48.3			18.8		
Approach LOS		B			B		D			B		
Queue Length 50th (m)	0.3	16.0		1.4	25.7		47.2	2.1		0.5		
Queue Length 95th (m)	m1.5	33.1		6.0	49.7		71.9	6.2		3.2		
Internal Link Dist (m)		288.4			285.4		192.7			17.6		
Turn Bay Length (m)	45.0			50.0				24.5				
Base Capacity (vph)	240	1838		193	1853		456	327		586		
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.57		0.14	0.50		0.67	0.05		0.01		

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 64 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 16.1

Intersection LOS: B

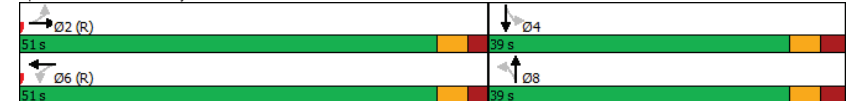
Intersection Capacity Utilization 61.8%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 4: Baycrest/St Pats & Heron



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CGH Transportation
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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	57	740	18	21	758	11	36	26	25	13	29	62
Future Volume (vph)	57	740	18	21	758	11	36	26	25	13	29	62
Satd. Flow (prot)	1610	3233	0	1610	3185	0	1642	1481	0	0	1707	1483
Flt Permitted	0.320			0.325			0.727				0.891	
Satd. Flow (perm)	542	3233	0	546	3185	0	1246	1481	0	0	1539	1452
Satd. Flow (RTOR)		4			2			28				69
Lane Group Flow (vph)	63	842	0	23	854	0	40	57	0	0	46	69
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	36.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	68.8	68.8		68.8	68.8		13.8	13.8		13.8	13.8	13.8
Actuated g/C Ratio	0.76	0.76		0.76	0.76		0.15	0.15		0.15	0.15	0.15
v/c Ratio	0.15	0.34		0.06	0.35		0.21	0.23		0.19	0.25	0.25
Control Delay	8.9	7.8		4.8	4.0		33.1	20.0		32.4	9.2	9.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.9	7.8		4.8	4.0		33.1	20.0		32.4	9.2	9.2
LOS	A	A		A	A		C	B		C	A	A
Approach Delay		7.9			4.0			25.4			18.5	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	5.4	40.0		0.7	12.7		6.5	4.6		7.4	0.0	0.0
Queue Length 95th (m)	m8.5	43.0		m3.0	27.7		11.9	11.7		13.1	8.7	8.7
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	414	2470		417	2434		412	509		509	526	526
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.15	0.34		0.06	0.35		0.10	0.11		0.09	0.13	0.13

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 7.7

Intersection LOS: A

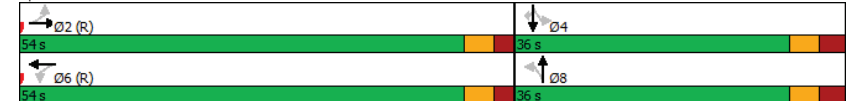
Intersection Capacity Utilization 63.8%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 5: Sandalwood/Briar Hill & Heron



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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	77	644	80	23	676	39	42	66	35	32	36	70
Future Volume (vph)	77	644	80	23	676	39	42	66	35	32	36	70
Satd. Flow (prot)	1610	3252	1441	1551	3156	0	1658	1745	1363	0	1536	0
Flt Permitted	0.332			0.365			0.621				0.908	
Satd. Flow (perm)	561	3252	1441	596	3156	0	1081	1745	1322	0	1406	0
Satd. Flow (RTOR)			89		10				39		61	
Lane Group Flow (vph)	86	716	89	26	794	0	47	73	39	0	154	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8		8	4	
Permitted Phases	2		2	6					8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	54.0	54.0	54.0	54.0	54.0		36.0	36.0	36.0	36.0	36.0	
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3	6.3	6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	60.2	60.2	60.2	60.2	60.2		17.9	17.9	17.9		17.9	
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.67		0.20	0.20	0.20		0.20	
v/c Ratio	0.23	0.33	0.09	0.07	0.38		0.22	0.21	0.13		0.47	
Control Delay	12.2	9.9	5.3	8.8	8.7		28.8	28.2	8.4		21.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	12.2	9.9	5.3	8.8	8.7		28.8	28.2	8.4		21.8	
LOS	B	A	A	A	A		C	C	A		C	
Approach Delay		9.7			8.7			23.5			21.8	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	6.8	29.8	2.5	1.0	20.1		7.5	11.7	0.0		15.2	
Queue Length 95th (m)	18.5	53.1	11.1	6.0	54.2		13.7	18.5	6.7		26.6	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	375	2175	993	398	2114		356	575	462		504	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.23	0.33	0.09	0.07	0.38		0.13	0.13	0.08		0.31	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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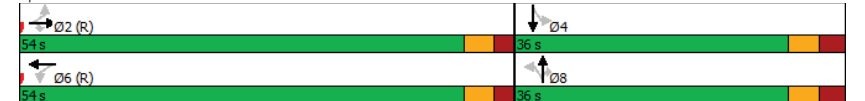
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1	560	643	759	664	30
Future Volume (vph)	1	560	643	759	664	30
Satd. Flow (prot)	1658	3283	3191	2512	3148	0
Flt Permitted	0.322				0.954	
Satd. Flow (perm)	562	3283	3191	2459	3148	0
Satd. Flow (RTOR)				843	5	
Lane Group Flow (vph)	1	622	714	843	771	0
Turn Type	Perm	NA	NA	Perm	Perm	
Protected Phases		2	6			
Permitted Phases	2			6	4	
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	54.0	54.0	54.0	54.0	46.0	
Total Split (%)	54.0%	54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	47.4	47.4	47.4	47.4	39.3	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.39	
v/c Ratio	0.00	0.40	0.47	0.52	0.62	
Control Delay	14.0	18.0	19.1	2.4	26.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.0	18.0	19.1	2.4	26.9	
LOS	B	B	B	A	C	
Approach Delay		18.0	10.1		26.9	
Approach LOS		B	B		C	
Queue Length 50th (m)	0.1	39.6	47.6	0.0	60.3	
Queue Length 95th (m)	1.0	53.0	62.8	10.4	79.4	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	266	1556	1512	1608	1240	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.00	0.40	0.47	0.52	0.62	
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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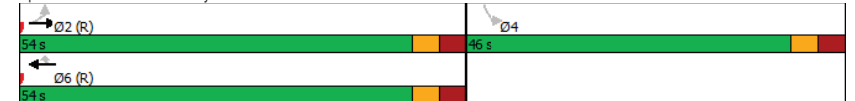
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Lanes, Volumes, Timings
7: Walkley & Heron

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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HCM 2010 AWSC
8: Baycrest

ExistingAM Peak Hour
Heron Gate Mater Plan

Intersection						
Intersection Delay, s/veh	9.5					
Intersection LOS	A					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	103	22	40	170	135	86
Future Vol, veh/h	103	22	40	170	135	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	5	3	9	9	2
Mvmt Flow	114	24	44	189	150	96
Number of Lanes	1	0	0	1	1	0
Approach	EB	NB		SB		
Opposing Approach		SB		NB		
Opposing Lanes	0	1		1		
Conflicting Approach Left	SB	EB				
Conflicting Lanes Left	1	1		0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay	9.3	9.6		9.4		
HCM LOS	A	A		A		
Lane	NBLn1	EBLn1	SBLn1			
Vol Left, %	19%	82%	0%			
Vol Thru, %	81%	0%	61%			
Vol Right, %	0%	18%	39%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	210	125	221			
LT Vol	40	103	0			
Through Vol	170	0	135			
RT Vol	0	22	86			
Lane Flow Rate	233	139	246			
Geometry Grp	1	1	1			
Degree of Util (X)	0.299	0.195	0.303			
Departure Headway (Hd)	4.619	5.064	4.445			
Convergence, Y/N	Yes	Yes	Yes			
Cap	777	707	808			
Service Time	2.652	3.108	2.477			
HCM Lane V/C Ratio	0.3	0.197	0.304			
HCM Control Delay	9.6	9.3	9.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	1.3	0.7	1.3			

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CGH Transportation
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HCM 2010 TWSC
9: Baycrest & Sandalwood

ExistingAM Peak Hour
Heron Gate Mater Plan

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		W			W			W			W	
Traffic Vol, veh/h	0	2	4	45	2	29	1	181	42	9	130	0
Future Vol, veh/h	0	2	4	45	2	29	1	181	42	9	130	0
Conflicting Peds, #/hr	9	0	6	6	0	9	6	0	24	24	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	7	2	8	5	22	8	2
Mvmt Flow	0	2	4	50	2	32	1	201	47	10	144	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	423	444	156	424	421	258	150	0	0	272	0	0
Stage 1	170	170	-	251	251	-	-	-	-	-	-	-
Stage 2	253	274	-	173	170	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.27	4.12	-	-	4.32	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.363	2.218	-	-	2.398	-	-
Pot Cap-1 Maneuver	541	508	890	540	524	769	1431	-	-	1184	-	-
Stage 1	832	758	-	753	699	-	-	-	-	-	-	-
Stage 2	751	683	-	829	758	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	506	491	882	519	506	749	1424	-	-	1162	-	-
Mov Cap-2 Maneuver	506	491	-	519	506	-	-	-	-	-	-	-
Stage 1	827	747	-	738	685	-	-	-	-	-	-	-
Stage 2	711	669	-	811	747	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.2		12.2		0		0.5					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1424	-	-	697	587	1162	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.01	0.144	0.009	-	-				
HCM Control Delay (s)	7.5	0	-	10.2	12.2	8.1	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0	-	-				

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CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	389	407	156	102	362	265	154	1106	181	143	501	262
Future Volume (vph)	389	407	156	102	362	265	154	1106	181	143	501	262
Satd. Flow (prot)	3154	3316	1483	3154	2990	0	1642	4718	1414	3216	3252	1469
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3131	3316	1417	3066	2990	0	1627	4718	1383	3207	3252	1424
Satd. Flow (RTOR)			209		153				178			291
Lane Group Flow (vph)	432	452	173	113	696	0	171	1229	201	159	557	291
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.3	27.0	27.0	18.5	28.2		16.6	39.7	39.7	8.5	31.6	31.6
Actuated g/C Ratio	0.14	0.22	0.22	0.15	0.24		0.14	0.33	0.33	0.07	0.26	0.26
v/c Ratio	0.95	0.61	0.36	0.23	0.85		0.75	0.79	0.35	0.70	0.65	0.49
Control Delay	82.8	44.5	4.3	48.8	44.3		70.0	40.8	7.8	71.1	44.2	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.8	44.5	4.3	48.8	44.3		70.0	40.8	7.8	71.1	44.2	7.4
LOS	F	D	A	D	D		E	D	A	E	D	A
Approach Delay		53.6			44.9			39.8			37.8	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	53.0	47.1	0.0	12.9	65.5		38.8	95.6	3.7	19.1	62.3	0.0
Queue Length 95th (m)	#100.2	63.2	9.6	22.1	84.4		61.6	113.5	20.8	#33.0	83.5	22.6
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0			95.0		60.0	110.0		
Base Capacity (vph)	455	920	544	487	940		268	1559	576	230	856	589
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.49	0.32	0.23	0.74		0.64	0.79	0.35	0.69	0.65	0.49

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 43.5

Intersection LOS: D

Intersection Capacity Utilization 89.5%

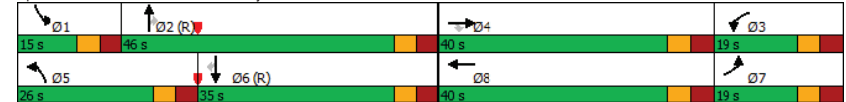
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

ExistingAM Peak Hour

Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖			↖		↖	↖	
Traffic Volume (vph)	7	578	5	11	744	11	15	0	10	13	1	17
Future Volume (vph)	7	578	5	11	744	11	15	0	10	13	1	17
Satd. Flow (prot)	1658	3274	0	1551	3276	0	0	1505	0	1658	1466	0
Flt Permitted	0.332			0.406				0.803		0.739		
Satd. Flow (perm)	579	3274	0	660	3276	0	0	1238	0	1289	1466	0
Satd. Flow (RTOR)		2			3			48			19	
Lane Group Flow (vph)	8	648	0	12	839	0	0	28	0	14	20	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Split (%)	57.1%	57.1%		57.1%	57.1%		42.9%	42.9%		42.9%	42.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1			5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	54.0	54.0		54.0	54.0			12.8		12.8	12.8	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.18		0.18	0.18	
v/c Ratio	0.02	0.26		0.02	0.33			0.11		0.06	0.07	
Control Delay	7.1	5.6		7.1	6.0			3.6		21.1	9.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.1	5.6		7.1	6.0			3.6		21.1	9.9	
LOS	A	A		A	A			A		C	A	
Approach Delay		5.6			6.0			3.6			14.5	
Approach LOS		A			A			A			B	
Queue Length 50th (m)	0.3	14.3		0.4	20.0			0.0		1.6	0.1	
Queue Length 95th (m)	2.5	38.3		3.3	52.2			2.9		4.6	4.1	
Internal Link Dist (m)		132.4			376.9			75.5			48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	447	2526		509	2528			457		443	517	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.02	0.26		0.02	0.33			0.06		0.03	0.04	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 44 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

ExistingAM Peak Hour

Heron Gate Mater Plan

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 6.0

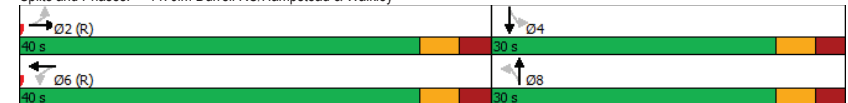
Intersection LOS: A

Intersection Capacity Utilization 43.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	
Traffic Volume (vph)	4	473	125	131	606	12	168	2	135	18	2	6
Future Volume (vph)	4	473	125	131	606	12	168	2	135	18	2	6
Satd. Flow (prot)	1658	3283	1441	1566	3269	0	1566	1360	0	1658	1491	0
Fit Permitted	0.950			0.950			0.752			0.645		
Satd. Flow (perm)	1649	3283	1354	1535	3269	0	1203	1360	0	1082	1491	0
Satd. Flow (RTOR)			139		2			150			7	
Lane Group Flow (vph)	4	526	139	146	686	0	187	152	0	20	9	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		25.1	25.1		25.1	25.1	
Total Split (s)	20.0	35.0	35.0	20.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	22.2%	38.9%	38.9%	22.2%	38.9%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	5.8	39.9	39.9	13.0	56.4		19.0	19.0		19.0	19.0	
Actuated g/C Ratio	0.06	0.44	0.44	0.14	0.63		0.21	0.21		0.21	0.21	
v/c Ratio	0.04	0.36	0.21	0.65	0.33		0.74	0.38		0.09	0.03	
Control Delay	40.0	19.5	4.8	49.3	10.4		49.6	7.5		26.3	15.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.0	19.5	4.8	49.3	10.4		49.6	7.5		26.3	15.8	
LOS	D	B	A	D	B		D	A		C	B	
Approach Delay	16.6				17.2		30.7			23.0		
Approach LOS		B			B			C			C	
Queue Length 50th (m)	0.7	31.1	0.0	23.9	24.1		30.4	0.3		2.8	0.3	
Queue Length 95th (m)	3.8	53.3	12.1	41.6	58.8		47.5	13.4		7.7	3.6	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0			25.0			30.0		
Base Capacity (vph)	257	1455	677	257	2050		326	478		294	410	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.36	0.21	0.57	0.33		0.57	0.32		0.07	0.02	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 14 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Fit Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.5

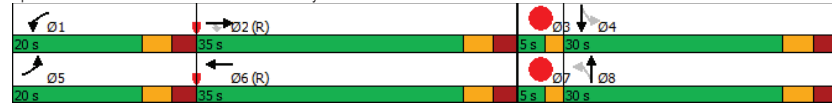
Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



Lanes, Volumes, Timings
13: Walkley & Cedarwood

ExistingAM Peak Hour
Heron Gate Mater Plan

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	50	611	639	22	51	96
Future Volume (vph)	50	611	639	22	51	96
Satd. Flow (prot)	1595	3283	3235	0	1626	1483
Flt Permitted	0.369				0.950	
Satd. Flow (perm)	619	3283	3235	0	1622	1455
Satd. Flow (RTOR)			7			107
Lane Group Flow (vph)	56	679	734	0	57	107
Turn Type	Perm	NA	NA		Perm	Perm
Protected Phases		2	6			
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	39.0	39.0	39.0		31.0	31.0
Total Split (%)	55.7%	55.7%	55.7%		44.3%	44.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	50.4	50.4	50.4		13.0	13.0
Actuated g/C Ratio	0.72	0.72	0.72		0.19	0.19
v/c Ratio	0.13	0.29	0.31		0.19	0.30
Control Delay	7.4	6.0	9.6		23.5	6.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.4	6.0	9.6		23.5	6.8
LOS	A	A	A		C	A
Approach Delay		6.1	9.6		12.6	
Approach LOS		A	A		B	
Queue Length 50th (m)	1.9	14.0	11.2		6.7	0.0
Queue Length 95th (m)	10.3	40.1	53.0		11.7	8.8
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	445	2365	2333		595	601
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.13	0.29	0.31		0.10	0.18

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 8 (11%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Lanes, Volumes, Timings
13: Walkley & Cedarwood

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 8.4

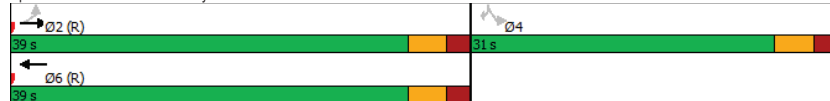
Intersection LOS: A

Intersection Capacity Utilization 52.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	44	598	11	15	575	141	22	33	39	123	17	63
Future Volume (vph)	44	598	11	15	575	141	22	33	39	123	17	63
Satd. Flow (prot)	1483	3303	0	1658	3082	0	0	1607	0	1523	1519	0
Fit Permitted	0.332			0.388				0.914		0.790		
Satd. Flow (perm)	517	3303	0	672	3082	0	0	1483	0	1243	1519	0
Satd. Flow (RTOR)		3			57			43			70	
Lane Group Flow (vph)	49	676	0	17	796	0	0	104	0	137	89	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	45.3	45.3		45.3	45.3		17.1	17.1		17.1	17.1	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.24	0.24		0.24	0.24	
v/c Ratio	0.15	0.32		0.04	0.40		0.26	0.45		0.45	0.21	
Control Delay	7.2	5.8		6.7	6.9		13.2	25.4		25.4	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.2	5.8		6.7	6.9		13.2	25.4		25.4	7.7	
LOS	A	A		A	A		B	C		C	A	
Approach Delay		5.9			6.9		13.2			18.4		
Approach LOS		A			A		B			B		
Queue Length 50th (m)	1.6	11.8		0.7	15.7		6.7	16.2		2.0		
Queue Length 95th (m)	3.9	15.2		2.6	22.5		14.7	25.5		9.8		
Internal Link Dist (m)		241.9			372.4		64.6			105.3		
Turn Bay Length (m)	48.0			40.0				20.0				
Base Capacity (vph)	334	2138		434	2014		575	459		606		
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.15	0.32		0.04	0.40		0.18	0.30		0.15		

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 8.2

Intersection LOS: A

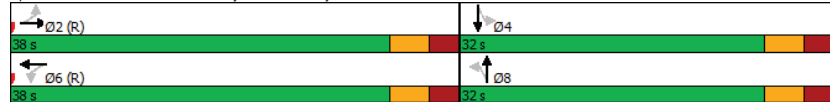
Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 14: Reardon/Baycrest & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↗	↘	↩	↗	↘	↩	↗	↘	↩	↗	↘
Traffic Volume (vph)	57	511	94	99	473	25	135	23	101	26	8	50
Future Volume (vph)	57	511	94	99	473	25	135	23	101	26	8	50
Satd. Flow (prot)	1626	3143	0	1580	3161	1483	1595	1475	0	0	1543	0
Flt Permitted	0.457			0.387			0.696				0.872	
Satd. Flow (perm)	779	3143	0	634	3161	1442	1149	1475	0	0	1361	0
Satd. Flow (RTOR)		36			83		112				56	
Lane Group Flow (vph)	63	672	0	110	526	28	150	138	0	0	94	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6		8			4		
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	28.2	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3	
Total Split (s)	34.7	34.7		34.7	34.7	34.7	30.3	30.3		30.3	30.3	
Total Split (%)	49.6%	49.6%		49.6%	49.6%	49.6%	43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.3	6.3		6.3	6.3	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	40.7	40.7		40.7	40.7	40.7	16.8	16.8		16.8	16.8	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58	0.24	0.24		0.24	0.24	
v/c Ratio	0.14	0.36		0.30	0.29	0.03	0.55	0.31		0.25	0.25	
Control Delay	7.2	7.7		12.7	9.1	0.1	29.3	7.6		10.6	10.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	7.2	7.7		12.7	9.1	0.1	29.3	7.6		10.6	10.6	
LOS	A	A		B	A	A	C	A		B	B	
Approach Delay		7.7			9.3			18.9			10.6	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	4.4	26.6		5.9	14.6	0.0	18.1	2.8		4.1	4.1	
Queue Length 95th (m)	7.2	40.6		20.4	31.5	0.0	29.1	12.8		12.2	12.2	
Internal Link Dist (m)		372.4			588.8			97.2			59.3	
Turn Bay Length (m)	46.0			37.0			25.0					
Base Capacity (vph)	452	1842		368	1837	873	393	579			503	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.36		0.30	0.29	0.03	0.38	0.24		0.19	0.19	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 64 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

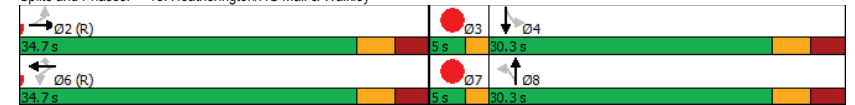
Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	7%	7%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Heatherington/HG Mall & Walkley



Lanes, Volumes, Timings
1: Bank & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	150	842	556	56	799	84	488	464	59	177	621	175
Future Volume (vph)	150	842	556	56	799	84	488	464	59	177	621	175
Satd. Flow (prot)	1658	3283	1483	1658	3316	1483	3216	3253	0	1658	3193	0
Flt Permitted	0.102			0.260			0.950			0.950		
Satd. Flow (perm)	178	3283	1423	450	3316	1459	3207	3253	0	1655	3193	0
Satd. Flow (RTOR)			493			119		10			26	
Lane Group Flow (vph)	167	936	618	62	888	93	542	582	0	197	884	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	54.7	52.6	52.6	35.0	35.0	35.0	24.6	38.0		20.1	33.5	
Actuated g/C Ratio	0.42	0.40	0.40	0.27	0.27	0.27	0.19	0.29		0.15	0.26	
v/c Ratio	0.74	0.70	0.71	0.51	1.00	0.19	0.89	0.61		0.77	1.05	
Control Delay	48.0	35.8	11.5	58.9	76.5	4.1	69.3	43.0		71.8	90.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	48.0	35.8	11.5	58.9	76.5	4.1	69.3	43.0		71.8	90.1	
LOS	D	D	B	E	E	A	E	D		E	F	
Approach Delay	28.2				69.0			55.7			86.8	
Approach LOS	C				E			E			F	
Queue Length 50th (m)	27.2	103.8	22.3	13.6	~122.7	0.0	69.8	66.8		48.8	~130.2	
Queue Length 95th (m)	50.4	127.8	68.8	#32.3	#172.3	7.7	#97.2	91.2		72.2	#170.8	
Internal Link Dist (m)		118.5			157.2			173.2			148.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	253	1328	869	121	892	480	630	957		325	842	
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	0.66	0.70	0.71	0.51	1.00	0.19	0.86	0.61		0.61	1.05	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 52 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

02/12/2025

CGH Transportation
Page 1

Lanes, Volumes, Timings
1: Bank & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 55.7

Intersection LOS: E

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

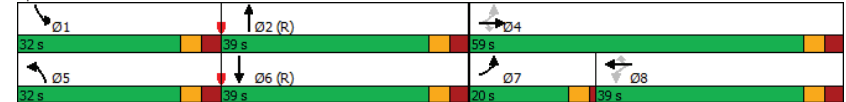
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Bank & Heron



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CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	162	908	35	120	818	149	24	236	115	119	368	144
Future Volume (vph)	162	908	35	120	818	149	24	236	115	119	368	144
Satd. Flow (prot)	1658	3284	0	1658	3316	1483	1658	1625	0	1610	1644	0
Fit Permitted	0.950			0.950			0.319			0.239		
Satd. Flow (perm)	1629	3284	0	1628	3316	1364	547	1625	0	405	1644	0
Satd. Flow (RTOR)		3				163		19			19	
Lane Group Flow (vph)	180	1048	0	133	909	166	27	390	0	132	569	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	16.0	49.0		19.0	52.0	52.0	44.0	44.0		18.0	62.0	
Total Split (%)	12.3%	37.7%		14.6%	40.0%	40.0%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	10.3	43.9		12.8	46.4	46.4	39.3	39.3		56.3	56.0	
Actuated g/C Ratio	0.08	0.34		0.10	0.36	0.36	0.30	0.30		0.43	0.43	
v/c Ratio	1.37	0.94		0.82	0.77	0.28	0.16	0.77		0.48	0.79	
Control Delay	252.4	58.4		92.6	42.3	5.7	37.4	51.3		28.9	40.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	252.4	58.4		92.6	42.3	5.7	37.4	51.3		28.9	40.4	
LOS	F	E		F	D	A	D	D		C	D	
Approach Delay		86.9			42.8			50.4			38.2	
Approach LOS		F			D			D			D	
Queue Length 50th (m)	~60.8	137.4		33.8	108.0	0.5	5.2	88.0		20.6	120.4	
Queue Length 95th (m)	#106.6	#181.0		#66.6	132.9	15.2	13.4	#135.2		34.1	169.1	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	131	1111		169	1183	591	165	504		289	719	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	1.37	0.94		0.79	0.77	0.28	0.16	0.77		0.46	0.79	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

02/12/2025

CGH Transportation
Page 3

Lanes, Volumes, Timings
2: Alta Vista & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 58.0

Intersection LOS: E

Intersection Capacity Utilization 92.9%

ICU Level of Service F

Analysis Period (min) 15

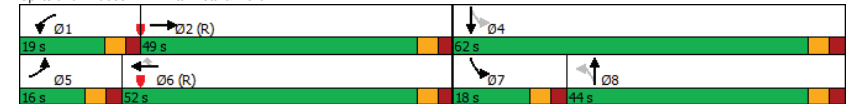
~ Volume exceeds capacity, queue is theoretically infinite.

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: 2: Alta Vista & Heron



02/12/2025

CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕		↕	↕↕	↕	↕
Traffic Volume (vph)	1123	31	14	1058	24	12
Future Volume (vph)	1123	31	14	1058	24	12
Satd. Flow (prot)	3290	0	1658	3316	1658	1210
Flt Permitted			0.198		0.950	
Satd. Flow (perm)	3290	0	345	3316	1639	1188
Satd. Flow (RTOR)	6					13
Lane Group Flow (vph)	1282	0	16	1176	27	13
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases			6		8	8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.47		0.06	0.43	0.12	0.08
Control Delay	5.2		2.3	1.6	33.4	15.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.2		2.3	1.6	33.4	15.9
LOS	A		A	A	C	B
Approach Delay	5.2			1.6	27.7	
Approach LOS	A			A	C	
Queue Length 50th (m)	36.2		0.1	3.7	4.3	0.0
Queue Length 95th (m)	80.1		m0.8	21.2	10.2	4.5
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2736		287	2757	407	305
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.47		0.06	0.43	0.07	0.04
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBTL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

02/12/2025

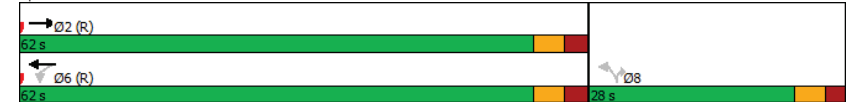
CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 3.8	Intersection LOS: A
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: Finn & Heron



02/12/2025

CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	2	941	191	31	868	12	171	2	54	29	5	6
Future Volume (vph)	2	941	191	31	868	12	171	2	54	29	5	6
Satd. Flow (prot)	1658	3185	0	1642	3308	0	0	1580	0	1537	1354	0
Fit Permitted	0.252			0.167				0.771		0.665		
Satd. Flow (perm)	439	3185	0	288	3308	0	0	1256	0	1073	1354	0
Satd. Flow (RTOR)		41			2			19			7	
Lane Group Flow (vph)	2	1258	0	34	977	0	0	252	0	32	13	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	56.4	56.4		56.4	56.4		21.9	21.9		21.9	21.9	
Actuated g/C Ratio	0.63	0.63		0.63	0.63		0.24	0.24		0.24	0.24	
v/c Ratio	0.01	0.63		0.19	0.47		0.79	0.12		0.12	0.04	
Control Delay	9.0	9.2		12.4	11.6		46.0	24.6		24.6	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.0	9.2		12.4	11.6		46.0	24.6		24.6	16.2	
LOS	A	A		B	B		D	C		C	B	
Approach Delay		9.2			11.6			46.0			22.2	
Approach LOS		A			B			D			C	
Queue Length 50th (m)	0.1	35.4		2.7	42.6		37.7	4.3		4.3	0.8	
Queue Length 95th (m)	m0.2	41.0		8.5	60.2		57.7	10.2		10.2	4.6	
Internal Link Dist (m)		288.4			285.4		192.7				17.6	
Turn Bay Length (m)	45.0			50.0				24.5				
Base Capacity (vph)	275	2010		180	2073		429	356		454		
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.63		0.19	0.47		0.59	0.09		0.09	0.03	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

02/12/2025

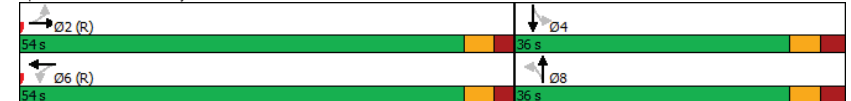
CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.79	Intersection LOS: B
Intersection Signal Delay: 14.0	ICU Level of Service C
Intersection Capacity Utilization 64.9%	
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Baycrest/St Pats & Heron



02/12/2025

CGH Transportation
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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	75	922	29	42	855	12	17	36	26	10	39	51
Future Volume (vph)	75	922	29	42	855	12	17	36	26	10	39	51
Satd. Flow (prot)	1658	3295	0	1610	3308	0	1658	1586	0	0	1714	1455
Flt Permitted	0.281			0.251			0.722				0.925	
Satd. Flow (perm)	489	3295	0	424	3308	0	1259	1586	0	0	1600	1435
Satd. Flow (RTOR)		5			2			29				57
Lane Group Flow (vph)	83	1056	0	47	963	0	19	69	0	0	54	57
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	54.8	54.8		54.8	54.8		35.2	35.2		35.2	35.2	35.2
Total Split (%)	60.9%	60.9%		60.9%	60.9%		39.1%	39.1%		39.1%	39.1%	39.1%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	68.8	68.8		68.8	68.8		13.8	13.8		13.8	13.8	13.8
Actuated g/C Ratio	0.76	0.76		0.76	0.76		0.15	0.15		0.15	0.15	0.15
v/c Ratio	0.22	0.42		0.15	0.38		0.10	0.26		0.22	0.21	0.21
Control Delay	8.5	8.5		7.6	5.6		30.2	22.0		32.9	9.5	9.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.5	8.5		7.6	5.6		30.2	22.0		32.9	9.5	9.5
LOS	A	A		A	A		C	C		C	A	A
Approach Delay		8.5			5.7			23.8			20.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	4.1	51.3		1.4	18.8		3.0	6.4		8.7	0.0	0.0
Queue Length 95th (m)	m17.4	116.0		8.8	56.7		7.1	13.9		14.7	7.9	7.9
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	373	2518		324	2528		405	530		515	501	501
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	0.22	0.42		0.15	0.38		0.05	0.13		0.10	0.11	0.11

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 5: Sandalwood/Briar Hill & Heron

→ Ø2 (R)	→ Ø4
54.8 s	35.2 s
← Ø6 (R)	← Ø8
54.8 s	35.2 s

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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖	↖		↖	↖
Traffic Volume (vph)	83	752	128	45	760	38	98	87	96	29	83	54
Future Volume (vph)	83	752	128	45	760	38	98	87	96	29	83	54
Satd. Flow (prot)	1610	3283	1483	1658	3286	0	1658	1745	1483	0	1642	0
Flt Permitted	0.286			0.305			0.587				0.932	
Satd. Flow (perm)	483	3283	1448	532	3286	0	1022	1745	1414	0	1536	0
Satd. Flow (RTOR)			142		9				107		29	
Lane Group Flow (vph)	92	836	142	50	886	0	109	97	107	0	184	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8		8	4	
Permitted Phases	2		2	6					8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	54.7	54.7	54.7	54.7	54.7		35.3	35.3	35.3	35.3	35.3	
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%		39.2%	39.2%	39.2%	39.2%	39.2%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3	6.3	6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	56.3	56.3	56.3	56.3	56.3		21.8	21.8	21.8		21.8	
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.63		0.24	0.24	0.24		0.24	
v/c Ratio	0.30	0.41	0.15	0.15	0.43		0.44	0.23	0.25		0.47	
Control Delay	6.9	4.3	0.9	11.2	10.8		32.2	25.9	6.2		26.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	6.9	4.3	0.9	11.2	10.8		32.2	25.9	6.2		26.4	
LOS	A	A	A	B	B		C	C	A		C	
Approach Delay		4.1			10.9			21.4			26.4	
Approach LOS		A			B			C			C	
Queue Length 50th (m)	1.8	8.5	0.1	4.1	46.5		14.2	11.9	0.0		20.0	
Queue Length 95th (m)	7.1	21.7	0.0	10.5	61.4		28.2	23.1	10.8		37.4	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	302	2054	959	333	2059		329	562	528		514	
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	0.30	0.41	0.15	0.15	0.43		0.33	0.17	0.20		0.36	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 68 (76%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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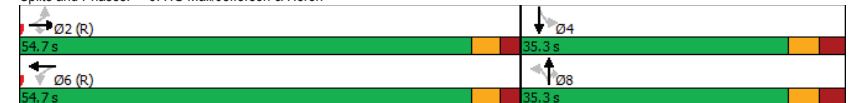
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1	695	933	783	881	27
Future Volume (vph)	1	695	933	783	881	27
Satd. Flow (prot)	1658	3283	3316	2585	3185	0
Fit Permitted	0.179				0.954	
Satd. Flow (perm)	312	3283	3316	2532	3185	0
Satd. Flow (RTOR)				870	3	
Lane Group Flow (vph)	1	772	1037	870	1009	0
Turn Type	Perm	NA	NA	Perm	Perm	
Protected Phases		2	6			
Permitted Phases	2			6	4	
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	59.0	59.0	59.0	59.0	51.0	
Total Split (%)	53.6%	53.6%	53.6%	53.6%	46.4%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	52.4	52.4	52.4	52.4	44.3	
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.40	
v/c Ratio	0.01	0.49	0.66	0.52	0.79	
Control Delay	15.0	21.1	24.4	2.4	34.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	15.0	21.1	24.4	2.4	34.0	
LOS	B	C	C	A	C	
Approach Delay		21.1	14.4		34.0	
Approach LOS		C	B		C	
Queue Length 50th (m)	0.1	57.9	86.5	0.0	95.6	
Queue Length 95th (m)	1.0	74.4	108.7	10.7	121.0	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	148	1563	1579	1661	1284	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.49	0.66	0.52	0.79	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 53 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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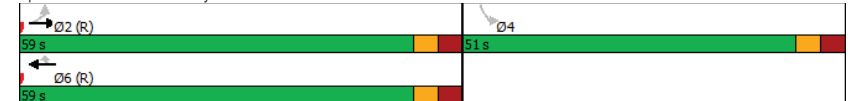
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Lanes, Volumes, Timings
7: Walkley & Heron

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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HCM 2010 AWSC
8: Baycrest

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Intersection						
Intersection Delay, s/veh	8.8					
Intersection LOS	A					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	68	26	32	130	123	75
Future Vol, veh/h	68	26	32	130	123	75
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	2	9	10	2
Mvmt Flow	76	29	36	144	137	83
Number of Lanes	1	0	0	1	1	0
Approach	EB	NB		SB		
Opposing Approach		SB		NB		
Opposing Lanes	0	1		1		
Conflicting Approach Left	SB	EB				
Conflicting Lanes Left	1	1		0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay	8.6	8.8		8.8		
HCM LOS	A	A		A		
Lane	NBLn1	EBLn1	SBLn1			
Vol Left, %	20%	72%	0%			
Vol Thru, %	80%	0%	62%			
Vol Right, %	0%	28%	38%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	162	94	198			
LT Vol	32	68	0			
Through Vol	130	0	123			
RT Vol	0	26	75			
Lane Flow Rate	180	104	220			
Geometry Grp	1	1	1			
Degree of Util (X)	0.223	0.139	0.263			
Departure Headway (Hd)	4.463	4.795	4.297			
Convergence, Y/N	Yes	Yes	Yes			
Cap	806	748	838			
Service Time	2.483	2.822	2.315			
HCM Lane V/C Ratio	0.223	0.139	0.263			
HCM Control Delay	8.8	8.6	8.8			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.9	0.5	1.1			

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CGH Transportation
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HCM 2010 TWSC
9: Baycrest & Sandalwood

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		W			W			W			W	
Traffic Vol, veh/h	1	1	7	63	2	21	5	172	49	26	160	2
Future Vol, veh/h	1	1	7	63	2	21	5	172	49	26	160	2
Conflicting Peds, #/hr	9	0	18	18	0	9	10	0	19	19	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	2	10	2	8	4	4	7	2
Mvmt Flow	1	1	8	70	2	23	6	191	54	29	178	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	499	523	207	509	497	246	190	0	0	264	0	0
Stage 1	247	247	-	249	249	-	-	-	-	-	-	-
Stage 2	252	276	-	260	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.3	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.39	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	482	459	833	470	475	774	1384	-	-	1289	-	-
Stage 1	757	702	-	748	701	-	-	-	-	-	-	-
Stage 2	752	682	-	738	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	448	435	815	441	450	757	1373	-	-	1270	-	-
Mov Cap-2 Maneuver	448	435	-	441	450	-	-	-	-	-	-	-
Stage 1	747	679	-	733	687	-	-	-	-	-	-	-
Stage 2	718	668	-	702	678	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.3		14.1		0.2		1.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1373	-	-	686	491	1270	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.015	0.195	0.023	-	-				
HCM Control Delay (s)	7.6	0	-	10.3	14.1	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.1	-	-				

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CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	324	399	216	247	595	218	181	766	195	263	987	574
Future Volume (vph)	324	399	216	247	595	218	181	766	195	263	987	574
Satd. Flow (prot)	3216	3221	1483	3216	3138	0	1658	4764	1483	3216	3316	1483
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3180	3221	1397	3090	3138	0	1635	4764	1434	3186	3316	1368
Satd. Flow (RTOR)			215		39				217			258
Lane Group Flow (vph)	360	443	240	274	903	0	201	851	217	292	1097	638
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		20.0	43.0	43.0	28.0	51.0	51.0
Total Split (%)	14.6%	30.8%	30.8%	14.6%	30.8%		15.4%	33.1%	33.1%	21.5%	39.2%	39.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	29.9	29.9	15.6	33.3		13.6	41.2	41.2	17.0	44.6	44.6
Actuated g/C Ratio	0.09	0.23	0.23	0.12	0.26		0.10	0.32	0.32	0.13	0.34	0.34
v/c Ratio	1.20	0.60	0.49	0.71	1.09		1.16	0.56	0.36	0.69	0.96	1.00
Control Delay	165.2	47.7	10.9	67.0	100.3		168.8	39.2	6.2	62.7	61.6	61.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.2	47.7	10.9	67.0	100.3		168.8	39.2	6.2	62.7	61.6	61.4
LOS	F	D	B	E	F		F	D	A	E	E	E
Approach Delay		79.8			92.6			54.1			61.7	
Approach LOS		E			F			D			E	
Queue Length 50th (m)	~57.3	51.9	4.9	36.3	~132.4		~60.8	66.3	0.0	37.3	144.6	113.3
Queue Length 95th (m)	#88.0	68.9	27.3	#60.4	#173.3		#109.3	84.7	18.7	50.4	#189.6	#194.9
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0			95.0		60.0	110.0		
Base Capacity (vph)	301	825	517	386	832		173	1508	602	534	1137	638
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.54	0.46	0.71	1.09		1.16	0.56	0.36	0.55	0.96	1.00

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 70.0

Intersection LOS: E

Intersection Capacity Utilization 97.9%

ICU Level of Service F

Analysis Period (min) 15

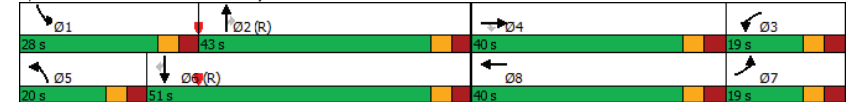
~ Volume exceeds capacity, queue is theoretically infinite.

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: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
11: Jim Durrell RC/Hampstead & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖			↖		↖	↖	
Traffic Volume (vph)	33	795	14	18	927	21	12	0	9	7	0	24
Future Volume (vph)	33	795	14	18	927	21	12	0	9	7	0	24
Satd. Flow (prot)	1642	3301	0	1658	3303	0	0	1587	0	1658	1432	0
Fit Permitted	0.257			0.310				0.811		0.742		
Satd. Flow (perm)	443	3301	0	539	3303	0	0	1320	0	1291	1432	0
Satd. Flow (RTOR)		3			4			42			86	
Lane Group Flow (vph)	37	899	0	20	1053	0	0	23	0	8	27	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1			5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	64.0	64.0		64.0	64.0			12.8		12.8	12.8	
Actuated g/C Ratio	0.80	0.80		0.80	0.80			0.16		0.16	0.16	
v/c Ratio	0.10	0.34		0.05	0.40			0.09		0.04	0.09	
Control Delay	6.7	5.3		6.2	5.8			4.0		25.3	0.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	6.7	5.3		6.2	5.8			4.0		25.3	0.6	
LOS	A	A		A	A			A		C	A	
Approach Delay		5.4			5.8			4.0			6.2	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	1.4	21.9		0.7	27.3			0.0		1.1	0.0	
Queue Length 95th (m)	7.6	55.4		4.4	68.6			2.8		3.8	0.0	
Internal Link Dist (m)		132.4			376.9			75.5			48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	354	2641		431	2643			426		388	491	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.10	0.34		0.05	0.40			0.05		0.02	0.05	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

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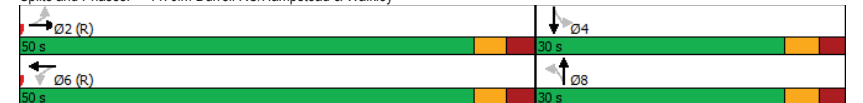
CGH Transportation
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Lanes, Volumes, Timings
11: Jim Durrell RC/Hampstead & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 48.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖		↖	↖		↖	↖	
Traffic Volume (vph)	17	659	158	84	844	13	145	1	104	14	2	2
Future Volume (vph)	17	659	158	84	844	13	145	1	104	14	2	2
Satd. Flow (prot)	1658	3316	1441	1658	3308	0	1626	1354	0	1658	1295	0
Fit Permitted	0.950			0.950			0.755			0.682		
Satd. Flow (perm)	1655	3316	1388	1648	3308	0	1285	1354	0	1130	1295	0
Satd. Flow (RTOR)			140		2			116				2
Lane Group Flow (vph)	19	732	176	93	952	0	161	117	0	16	4	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		25.1	25.1		25.1	25.1	
Total Split (s)	25.0	30.0	30.0	25.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	27.8%	33.3%	33.3%	27.8%	33.3%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	6.6	46.9	46.9	10.4	55.4		17.0	17.0		17.0	17.0	
Actuated g/C Ratio	0.07	0.52	0.52	0.12	0.62		0.19	0.19		0.19	0.19	
v/c Ratio	0.16	0.42	0.22	0.49	0.47		0.66	0.33		0.08	0.02	
Control Delay	41.4	16.8	5.7	45.1	12.7		46.2	8.5		27.9	21.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.4	16.8	5.7	45.1	12.7		46.2	8.5		27.9	21.8	
LOS	D	B	A	D	B		D	A		C	C	
Approach Delay		15.2			15.6			30.3			26.7	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	3.2	43.3	3.2	15.3	37.2		25.2	0.1		2.2	0.3	
Queue Length 95th (m)	9.6	69.9	16.8	28.5	85.2		42.6	12.5		7.0	2.7	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0			25.0			30.0		
Base Capacity (vph)	350	1728	790	350	2035		341	444		300	345	
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	0.05	0.42	0.22	0.27	0.47		0.47	0.26		0.05	0.01	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 32 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Fit Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 17.3

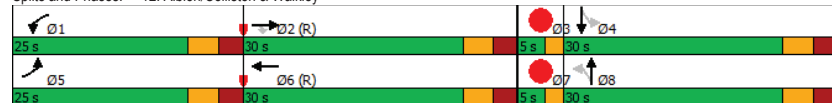
Intersection LOS: B

Intersection Capacity Utilization 60.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
13: Walkley & Cedarwood

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↩	↩↩	↩↩	↩	↩	↩
Traffic Volume (vph)	83	723	857	43	76	81
Future Volume (vph)	83	723	857	43	76	81
Satd. Flow (prot)	1658	3316	3287	0	1626	1483
Flt Permitted	0.269				0.950	
Satd. Flow (perm)	468	3316	3287	0	1621	1449
Satd. Flow (RTOR)			10			90
Lane Group Flow (vph)	92	803	1000	0	84	90
Turn Type	Perm	NA	NA		Perm	Perm
Protected Phases	2	6				
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	49.0	49.0	49.0		31.0	31.0
Total Split (%)	61.3%	61.3%	61.3%		38.8%	38.8%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	60.2	60.2	60.2		13.2	13.2
Actuated g/C Ratio	0.75	0.75	0.75		0.16	0.16
v/c Ratio	0.26	0.32	0.40		0.31	0.29
Control Delay	8.7	5.6	6.1		30.8	8.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.7	5.6	6.1		30.8	8.2
LOS	A	A	A		C	A
Approach Delay	5.9	6.1			19.1	
Approach LOS	A	A			B	
Queue Length 50th (m)	3.6	17.3	23.1		12.0	0.0
Queue Length 95th (m)	18.1	47.5	62.9		19.3	9.5
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	352	2496	2477		520	526
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.26	0.32	0.40		0.16	0.17

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 20 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
13: Walkley & Cedarwood

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 7.1

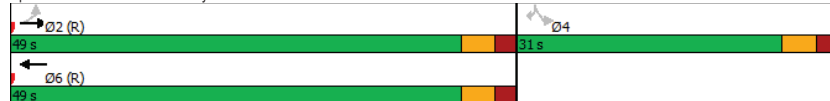
Intersection LOS: A

Intersection Capacity Utilization 60.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩		↩	↩↩		↩	↩↩		↩	↩↩	
Traffic Volume (vph)	63	697	24	45	833	155	19	14	30	135	20	59
Future Volume (vph)	63	697	24	45	833	155	19	14	30	135	20	59
Satd. Flow (prot)	1642	3294	0	1658	3184	0	0	1573	0	1566	1529	0
Fit Permitted	0.218			0.329				0.895		0.711		
Satd. Flow (perm)	376	3294	0	570	3184	0	0	1428	0	1153	1529	0
Satd. Flow (RTOR)		6			40			33			66	
Lane Group Flow (vph)	70	801	0	50	1098	0	0	70	0	150	88	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	45.2	45.2		45.2	45.2		17.2	17.2		17.2	17.2	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.25	0.25		0.25	0.25	
v/c Ratio	0.29	0.38		0.14	0.53		0.19	0.53		0.19	0.53	
Control Delay	15.0	9.5		10.7	11.0		11.8	28.2		28.2	8.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.0	9.5		10.7	11.0		11.8	28.2		28.2	8.0	
LOS	B	A		B	B		B	C		C	A	
Approach Delay		9.9			11.0			11.8			20.7	
Approach LOS		A			B			B			C	
Queue Length 50th (m)	3.7	23.8		2.4	36.2		4.0	18.1		2.3	2.3	
Queue Length 95th (m)	16.7	50.6		10.0	76.8		10.7	28.3		10.1	10.1	
Internal Link Dist (m)		241.9			372.4		64.6			105.3		
Turn Bay Length (m)	48.0			40.0				20.0				
Base Capacity (vph)	243	2129		368	2070		549	426		607	607	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.29	0.38		0.14	0.53		0.13	0.35		0.14	0.14	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

02/12/2025

CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 11.6

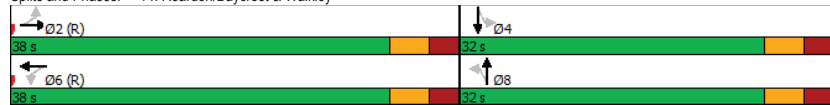
Intersection LOS: B

Intersection Capacity Utilization 69.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 14: Reardon/Baycrest & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↗	↘	↩	↗	↘	↩	↗	↘	↩	↗	↘
Traffic Volume (vph)	140	534	152	130	752	81	127	48	102	53	75	108
Future Volume (vph)	140	534	152	130	752	81	127	48	102	53	75	108
Satd. Flow (prot)	1658	3126	0	1658	3316	1483	1595	1508	0	0	1582	0
Fit Permitted	0.209			0.363			0.504				0.879	
Satd. Flow (perm)	364	3126	0	622	3316	1444	827	1508	0	0	1400	0
Satd. Flow (RTOR)		63				155		113			54	
Lane Group Flow (vph)	156	762	0	144	836	90	141	166	0	0	262	0
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.1	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3	
Total Split (s)	11.1	44.7		33.6	33.6	33.6	30.3	30.3		30.3	30.3	
Total Split (%)	13.9%	55.9%		42.0%	42.0%	42.0%	37.9%	37.9%		37.9%	37.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.2		6.2	6.2	6.2	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	47.9	47.8		33.3	33.3	33.3	19.7	19.7				
Actuated g/C Ratio	0.60	0.60		0.42	0.42	0.42	0.25	0.25			0.25	
v/c Ratio	0.44	0.40		0.56	0.61	0.13	0.69	0.36			0.68	
Control Delay	12.8	9.6		32.0	22.3	1.0	44.0	10.3			29.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay	12.8	9.6		32.0	22.3	1.0	44.0	10.3			29.7	
LOS	B	A		C	C	A	D	B			C	
Approach Delay		10.1			21.8			25.8			29.7	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	11.1	30.7		18.3	57.5	0.0	18.0	5.8			26.2	
Queue Length 95th (m)	21.8	46.5		#45.4	78.5	2.1	35.1	18.6			47.4	
Internal Link Dist (m)		372.4			588.8			97.2			59.3	
Turn Bay Length (m)	46.0			37.0			25.0					
Base Capacity (vph)	353	1893		259	1380	691	252	539			464	
Starvation Cap Reductn	0	0		0	0	0	0	0			0	
Spillback Cap Reductn	0	0		0	0	0	0	0			0	
Storage Cap Reductn	0	0		0	0	0	0	0			0	
Reduced v/c Ratio	0.44	0.40		0.56	0.61	0.13	0.56	0.31			0.56	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 57 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

02/12/2025

CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

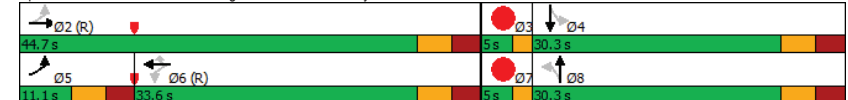
Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

ExistingPM Peak Hour
02/12/2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 15: Heatherington/HG Mall & Walkley



Appendix D

Collision Data

6/23/2021	2021	Unknown	BAYCREST DR btwn CEDARWOOD DR & SANDALWOOD DR (_320EAP)	01 - Clear	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0
11/20/2018	2018	11:10	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	01 - Approaching	02 - Wet	2	0	0	0
7/18/2019	2019	6:05	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	2	0	0	0
10/21/2019	2019	11:52	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
12/31/2019	2019	8:43	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	03 - Loose snow	2	0	0	0
8/14/2020	2020	11:30	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
9/29/2020	2020	18:09	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	2	0	0	0
10/9/2021	2021	4:02	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	07 - Dark	10 - No control	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	1	0	0	1
10/31/2022	2022	11:00	HERON RD btwn FINN CRT & BAYCREST DR (_3209X0)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
5/29/2018	2018	9:07	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
7/24/2018	2018	15:16	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	02 - Rain	01 - Daylight	10 - No control	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	2	0	0	0
3/11/2019	2019	14:05	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
1/17/2020	2020	16:30	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	99 - Other	01 - Dry	2	0	0	0
7/30/2020	2020	14:57	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	3	0	0	0
5/13/2021	2021	14:38	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	99 - Other	01 - Dry	2	0	0	0
5/10/2021	2021	18:52	HERON RD btwn SANDALWOOD DR & JEFFERSON ST (_3209X8)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	2	0	0	0
1/7/2018	2018	Unknown	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	03 - Snow	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	03 - Loose snow	1	0	0	0
2/24/2018	2018	18:30	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
2/28/2018	2018	20:48	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	01 - Clear	07 - Dark	10 - No control	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	1	0	0	0
3/17/2018	2018	8:42	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0
6/15/2018	2018	9:02	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
7/29/2020	2020	Unknown	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	02 - Rain	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	02 - Wet	1	0	0	0
4/25/2021	2021	Unknown	SANDALWOOD DR btwn BAYCREST DR & HERON RD (_320EAC)	00 - Unknown	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0
10/9/2018	2018	15:50	BAYCREST DR btwn SANDALWOOD DR & WALKLEY RD (_320EAC)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
7/14/2020	2020	Unknown	BAYCREST DR btwn SANDALWOOD DR & WALKLEY RD (_320EAK)	01 - Clear	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0
12/20/2021	2021	15:15	BAYCREST DR btwn SANDALWOOD DR & WALKLEY RD (_320EAK)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
7/23/2022	2022	10:55	BAYCREST DR btwn SANDALWOOD DR & WALKLEY RD (_320EAK)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	1	0
7/11/2018	2018	7:16	HAMPSTEAD PL @ WALKLEY RD (0006845)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
7/9/2021	2021	17:05	HAMPSTEAD PL @ WALKLEY RD (0006845)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
7/10/2021	2021	9:20	HAMPSTEAD PL @ WALKLEY RD (0006845)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
9/13/2021	2021	17:47	HAMPSTEAD PL @ WALKLEY RD (0006845)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
5/19/2019	2019	23:45	BAYCREST DR @ CEDARWOOD DR (0006999)	01 - Clear	07 - Dark	02 - Stop sign	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	1	0	0	1
1/10/2020	2020	10:59	BAYCREST DR @ CEDARWOOD DR (0006999)	01 - Clear	01 - Daylight	02 - Stop sign	0	02 - Non-fatal injury	02 - Angle	05 - Packed snow	2	0	0	0
2/7/2020	2020	19:02	BAYCREST DR @ CEDARWOOD DR (0006999)	01 - Clear	07 - Dark	02 - Stop sign	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
10/25/2021	2021	13:02	BAYCREST DR @ CEDARWOOD DR (0006999)	02 - Rain	01 - Daylight	02 - Stop sign	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
4/6/2018	2018	18:59	BAYCREST DR @ SANDALWOOD DR (0007085)	03 - Snow	05 - Dusk	03 - Yield sign	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
9/19/2020	2020	15:58	BAYCREST DR @ SANDALWOOD DR (0007085)	01 - Clear	01 - Daylight	03 - Yield sign	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
7/10/2019	2019	12:25	HERON RD btwn BAYCREST DR & SANDALWOOD DR (_3209XA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
5/3/2022	2022	22:32	WALKLEY RD btwn CEDARWOOD DR & BAYCREST DR (_3209TN)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
6/8/2018	2018	8:36	WALKLEY RD btwn CEDARWOOD DR & COLLISTON CRES (_32A370)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
12/3/2018	2018	10:28	WALKLEY RD btwn CEDARWOOD DR & COLLISTON CRES (_32A370)	02 - Rain	01 - Daylight	10 - No control	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	0
6/3/2019	2019	23:08	WALKLEY RD btwn CEDARWOOD DR & COLLISTON CRES (_32A370)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
6/25/2019	2019	15:53	WALKLEY RD btwn CEDARWOOD DR & COLLISTON CRES (_32A370)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	1	0
9/30/2022	2022	21:28	WALKLEY RD btwn CEDARWOOD DR & COLLISTON CRES (_32A370)	01 - Clear	07 - Dark	10 - No control	0	01 - Fatal injury	07 - SMV other	01 - Dry	0	0	0	1
1/10/2018	2018	13:52	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
6/10/2018	2018	Unknown	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	00 - Unknown	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0
6/25/2018	2018	21:19	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	05 - Dusk	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2/19/2019	2019	9:40	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	99 - Other	01 - Dry	2	0	0	0
5/1/2019	2019	10:00	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
9/19/2020	2020	10:00	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	99 - Other	01 - Dry	2	0	0	0
10/27/2020	2020	13:18	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	01 - Approaching	01 - Dry	2	0	0	0
1/28/2021	2021	Unknown	BAYCREST DR btwn HERON RD & CEDARWOOD DR (_320D0X)	01 - Clear	00 - Unknown	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	1	0	0	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: BAYCREST DR @ CEDARWOOD DR

Traffic Control: Stop sign

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-May-19, Sun,23:45	Clear	SMV other	Non-fatal injury	Dry	North	Unknown	Automobile, station wagon	Pedestrian	1
2020-Jan-20, Mon,10:59	Clear	Angle	Non-fatal injury	Packed snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Feb-07, Fri,19:02	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2021-Oct-25, Mon,13:02	Rain	Angle	P.D. only	Wet	North	Turning left	Truck - closed	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 29

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jan-26, Fri,08:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-09, Fri,14:46	Clear	Sideswipe	P.D. only	Packed snow	East	Overtaking	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-12, Mon,15:55	Clear	Turning movement	P.D. only	Slush	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-07, Sat,16:20	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Sep-07, Fri,08:03	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-27, Sun,01:15	Snow	SMV other	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Pole (utility, power)	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 29

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Apr-03, Wed,17:55	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jul-18, Thu,08:53	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-08, Tue,15:24	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Oct-08, Tue,17:24	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-10, Thu,14:20	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Delivery van	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Nov-14, Thu,08:10	Rain	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-17, Sun,20:12	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Municipal transit bus	Other motor vehicle	
2019-Nov-23, Sat,17:23	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2020-Aug-08, Sat,14:32	Clear	SMV other	P.D. only	Dry	South	Turning right	Automobile, station wagon	Building or wall	0
2021-Jan-08, Fri,16:02	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Feb-25, Thu,07:30	Snow	Angle	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
2021-Jun-18, Fri,11:03	Clear	Turning movement	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 29

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2021-Aug-27, Fri,16:05	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2021-Nov-04, Thu,17:11	Clear	Angle	P.D. only	Dry	West	Going ahead	Passenger van	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2021-Dec-18, Sat,14:15	Snow	Sideswipe	P.D. only	Loose snow	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Feb-15, Tue,08:47	Clear	Angle	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Pick-up truck	Other motor vehicle	
2022-May-18, Wed,18:44	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Pedestrian	1
2022-Aug-10, Wed,15:20	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Pedestrian	1
2022-Oct-31, Mon,19:15	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Unknown	Other motor vehicle	
2022-Nov-13, Sun,13:00	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Changing lanes	Automobile, station wagon	Other motor vehicle	
2022-Nov-14, Mon,13:35	Clear	Turning movement	P.D. only	Dry	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Nov-20, Sun,09:00	Clear	SMV other	P.D. only	Ice	East	Going ahead	Automobile, station wagon	Pole (utility, power)	0
2022-Nov-26, Sat,16:13	Clear	SMV other	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Pole (utility, power)	0

Location: BAYCREST DR btwn CEDARWOOD DR & SANDALWOOD DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Jan-14, Mon,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: BAYCREST DR btwn CEDARWOOD DR & SANDALWOOD DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Sep-07, Sat,17:30	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2019-Nov-06, Wed,10:07	Clear	Other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Passenger van	Other motor vehicle	
2019-Nov-22, Fri,09:55	Clear	Sideswipe	P.D. only	Dry	South	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-03, Fri,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	North	Unknown	Unknown	Unattended vehicle	0
2020-Oct-30, Fri,11:59	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Passenger van	Pedestrian	3
2021-Jan-08, Fri,16:54	Clear	Sideswipe	P.D. only	Dry	South	Stopped	Passenger van	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2021-Jun-23, Wed,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0

Location: BAYCREST DR btwn SANDALWOOD DR & WALKLEY RD

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Oct-09, Tue,15:50	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-14, Tue,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Unattended vehicle	0
2021-Dec-20, Mon,15:15	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Municipal transit bus	Other motor vehicle	
2022-Jul-23, Sat,10:55	Clear	Angle	Non-fatal injury	Dry	East	Turning left	Bicycle	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Cyclist	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CEDARWOOD DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Sep-13, Thu,13:55	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-29, Sat,11:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Passenger van	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-31, Mon,18:41	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-21, Mon,17:04	Clear	Angle	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Feb-22, Fri,19:28	Snow	Angle	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2019-Jul-17, Wed,09:02	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-03, Tue,18:00	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-19, Thu,08:36	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Pedestrian	1
2020-Jul-02, Thu,21:45	Clear	Rear end	Non-fatal injury	Dry	South	Turning left	Unknown	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Nov-06, Fri,11:32	Clear	Angle	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Dec-26, Sat,13:37	Snow	Sideswipe	P.D. only	Packed snow	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2021-Jan-27, Wed,00:04	Snow	Turning movement	P.D. only	Packed snow	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Construction equipment	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CEDARWOOD DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2021-Apr-29, Thu,17:21	Clear	SMV other	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Pedestrian	1
2022-Sep-04, Sun,19:03	Clear	SMV other	Non-fatal injury	Dry	East	Turning left	Motorcycle	Other	0
2022-Nov-05, Sat,13:14	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD btwn FINN CRT & BAYCREST DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-20, Tue,11:10	Clear	Approaching	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jul-28, Sun,06:05	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-21, Mon,11:52	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-31, Tue,08:43	Clear	Rear end	P.D. only	Loose snow	East	Going ahead	Municipal transit bus	Other motor vehicle	0
					East	Turning right	Snow plow	Other motor vehicle	
2020-Aug-14, Fri,11:30	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Sep-29, Tue,18:09	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Passenger van	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2021-Oct-09, Sat,04:02	Clear	SMV other	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Pedestrian	1
2022-Oct-31, Mon,11:00	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: WALKLEY RD btwn ALBION RD/COLLISTON CRES E & CEDARWOOD DR

Traffic Control: No control

Total Collisions: 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jun-08, Fri,08:36	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-03, Mon,10:28	Rain	SMV other	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Curb	0
2019-Jun-03, Mon,23:08	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Debris on road	0
2019-Jun-25, Tue,15:53	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Bicycle	Other motor vehicle	0
					East	Going ahead	Passenger van	Cyclist	
2022-Sep-30, Fri,21:28	Clear	SMV other	Fatal injury	Dry	West	Going ahead	Automobile, station wagon	Pedestrian	1



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-13, Sat,10:32	Clear	Rear end	P.D. only	Loose snow	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Intercity bus	Other motor vehicle	
2018-Jan-15, Mon,09:03	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-04, Sun,17:30	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-06, Thu,12:47	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Automobile, station wagon	Other motor vehicle	
2019-Jun-23, Sun,18:28	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Dec-11, Wed,18:30	Snow	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-23, Thu,20:53	Clear	Sideswipe	P.D. only	Loose snow	East	Overtaking	Ambulance	Other motor vehicle	0
					East	Going ahead	Truck and trailer	Other motor vehicle	
2020-Feb-02, Sun,11:35	Snow	Angle	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Pick-up truck	Other motor vehicle	
2020-Nov-20, Fri,11:58	Clear	SMV other	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Ran off road	0
2021-Mar-25, Thu,10:33	Clear	Angle	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Feb-19, Sat,16:10	Clear	Rear end	P.D. only	Slush	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2022-Feb-19, Sat,16:56	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Feb-20, Sun,10:12	Drifting Snow	SMV other	P.D. only	Ice	East	Turning right	Automobile, station wagon	Skidding/sliding	0
2022-Mar-01, Tue,13:25	Snow	Angle	P.D. only	Loose snow	East	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	
2022-Mar-21, Mon,06:55	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2022-Aug-30, Tue,08:49	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	School bus	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2022-Nov-01, Tue,14:30	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Nov-08, Tue,08:30	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Traffic Control: Traffic signal

Total Collisions: 12

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Feb-13, Tue,21:18	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Mar-17, Sat,18:40	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-14, Sat,08:30	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-11, Sat,17:14	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Oct-11, Thu,15:29	Clear	Turning movement	Non-fatal injury	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-29, Mon,14:52	Clear	Angle	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Traffic Control: Traffic signal

Total Collisions: 12

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Aug-30, Fri,08:42	Clear	Rear end	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Oct-25, Fri,09:00	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Mar-28, Sat,20:49	Clear	Approaching	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-22, Wed,15:30	Rain	Sideswipe	P.D. only	Wet	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Oct-03, Sun,21:57	Clear	Turning movement	Non-fatal injury	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Aug-22, Mon,11:10	Clear	Turning movement	P.D. only	Dry	South	Turning right	Pick-up truck	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn BAYCREST DR & HEATHERINGTON RD

Traffic Control: No control

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jul-20, Fri,14:20	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Motorcycle	Other motor vehicle	
2018-Sep-04, Tue,13:07	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Passenger van	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2018-Oct-15, Mon,07:09	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: WALKLEY RD btwn BAYCREST DR & HEATHERINGTON RD

Traffic Control: No control

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-30, Fri,17:24	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-01, Sat,11:12	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Mar-30, Tue,12:15	Clear	SMV other	P.D. only	Dry	North	Turning right	Truck and trailer	Pole (utility, power)	0
2021-May-21, Fri,09:47	Clear	Angle	P.D. only	Dry	North	Turning right	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Nov-10, Wed,16:15	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2021-Nov-29, Mon,16:49	Clear	Rear end	Non-fatal injury	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2022-Jun-04, Sat,15:00	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jul-16, Sat,16:28	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Oct-10, Mon,20:17	Clear	Angle	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Nov-08, Tue,10:00	Clear	Rear end	Non-reportable	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Unknown	Other motor vehicle	
2022-Nov-28, Mon,16:00	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Dec-30, Fri,11:00	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Appendix E

Bank Street Renewal Functional Design Plan



Appendix F

MMLOS Analysis

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

CGH Transportation
Existing and Conceptual
- Critical vc/delay used for transit and auto
- Future widening conditions for informational purposes only
- Effective walk time not assessed

Project
Date

Heron Gate Secondary Plan
2025-05-23

INTERSECTIONS		Heron-Baycrest - Existing				Heron-Baycrest - Widened				Heron-Sandalwood - Existing		
Crossing Side		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST
Pedestrian	Lanes	3	3	6	6	3	3	6	6	3	3	6
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
	Conflicting Left Turns	Permissive	Permissive	Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RTor) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?	No	No	No	No	No	No	Yes	Yes	No	No	No
	Right Turn Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel
	Corner Radius	10-15m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Textured/coloured pavement	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	70	71	21	24	82	82	26	26	71	71	21
	Ped. Exposure to Traffic LoS	C	C	F	F	B	B	F	F	C	C	F
	Cycle Length											
	Effective Walk Time											
	Average Pedestrian Delay											
	Pedestrian Delay LoS	-	-	-	-	-	-	-	-	-	-	-
Level of Service		C	C	F	F	B	B	F	F	C	C	F
		F				F				F		
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Right Turn Lane Configuration	≤ 50 m	≤ 50 m	≤ 50 m						≤ 50 m	≤ 50 m	≤ 50 m
	Right Turning Speed	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h						≤ 25 km/h	≤ 25 km/h	≤ 25 km/h
	Cyclist relative to RT motorists	D	D	D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	D	D	D
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Left Turn Approach	No lane crossed	No lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	No lane crossed	No lane crossed	One lane crossed
	Operating Speed	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h
	Left Turning Cyclist	B	B	D	A	A	A	A	A	B	B	D
	Level of Service	D	D	D	A	A	A	A	A	D	D	D
		D				A				D		
Transit	Average Signal Delay	> 40 sec		≤ 20 sec	≤ 10 sec	> 40 sec		≤ 20 sec	≤ 20 sec	≤ 10 sec		
	Level of Service	-	F	C	B	-	F	C	C	-	-	B
		F				F				B		
Truck	Effective Corner Radius	< 10 m	< 10 m	10 - 15 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2			≥ 2	≥ 2			≥ 2	≥ 2	
	Level of Service	D	D	-	-	D	D	-	-	D	D	-
		D				D				D		
Auto	Volume to Capacity Ratio	0.61 - 0.70				0.91 - 1.00				0.0 - 0.60		
	Level of Service	B				E				A		

Heron-Sandalwood - Widened					Walkley-Baycrest - Existing				Walkley-Baycrest - Widened			
WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
6	3	3	6	6	3	4	5	6	3	3	5	5
No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive	Protected	Protected	Permissive	Permissive
Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
No	No	No	Yes	Yes	No	No	No	No	No	No	Yes	Yes
No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel
5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m	5-10m
Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings
21	82	82	26	26	71	54	38	21	82	82	43	43
F	B	B	F	F	C	D	E	F	B	B	E	E
-	-	-	-	-	-	-	-	-	-	-	-	-
F	B	B	F	F	C	D	E	F	B	B	E	E
	F				F				E			
WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP
					≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m				
					≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h				
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	D	D	D	D	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Separated	Separated	Separated	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated
2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	No lane crossed	No lane crossed	One lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box
> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h
A	A	A	A	A	B	B	D	D	A	A	A	A
A	A	A	A	A	D	D	D	D	A	A	A	A
	A				D				A			
≤ 10 sec			≤ 10 sec	≤ 10 sec	≤ 30 sec		≤ 10 sec		≤ 40 sec		≤ 10 sec	
B	-	-	B	B	D	-	B	-	E	-	B	-
	B				D				E			
< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m
	≥ 2	≥ 2			≥ 2	≥ 2			≥ 2	≥ 2		
-	D	D	-	-	D	D	-	-	D	D	-	-
	D				D				D			
	0.0 - 0.60				0.0 - 0.60				0.0 - 0.60			
	A				A				A			

Walkley-Cedarwood - Existing				Walkley-Cedarwood - Widened				Heron-Jefferson - Existing			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
3		5	5	3		5	5	3	5	6	6
No Median - 2.4 m		Median > 2.4 m	No Median - 2.4 m	No Median - 2.4 m		Median > 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
Permissive		Permissive	No left turn / Prohib.	Protected		Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
No		No	No	No		Yes	Yes	No	No	No	No
No Channel		No Channel	No Channel	No Channel		No Channel	No Channel	No Channel	No Channel	No Channel	Conv'tl without Receiving Lane
5-10m		5-10m	5-10m	5-10m		5-10m	5-10m	5-10m	15-25m	5-10m	5-10m
Std transverse markings		Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings		Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
71		44	49	82		46	43	71	35	21	25
C	-	E	D	B	-	D	E	C	E	F	F
-	-	-	-	-	-	-	-	-	-	-	-
C	-	E	D	B	-	D	E	C	E	F	F
E				E				F			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Mixed Traffic		Mixed Traffic		Curb Bike Lane, Cycletrack or MUP		Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
≤ 50 m		≤ 50 m						≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m
≤ 25 km/h		≤ 25 km/h						≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h
D	-	D	-	Not Applicable	-	Not Applicable	Not Applicable	D	D	D	D
Mixed Traffic	-	Mixed Traffic	-	Separated	-	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
No lane crossed		No lane crossed	One lane crossed	2-stage, LT box		2-stage, LT box	2-stage, LT box	No lane crossed	No lane crossed	One lane crossed	≥ 2 lanes crossed
> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h
B	-	B	D	A	-	A	A	B	B	D	E
D	-	D	-	A	-	A	A	D	D	D	E
D				A				E			
-	-	-	-	-	-	B	B	-	-	B	B
-				B				B			
10 - 15 m	< 10 m	< 10 m		< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m	10 - 15 m
≥ 2	≥ 2			≥ 2	≥ 2			≥ 2	≥ 2		
B	D	-	-	D	D	-	-	D	D	-	-
D				D				D			
0.0 - 0.60				0.0 - 0.60				0.0 - 0.60			
A				A				A			

Heron-Jefferson - Widened				Heron-Walkley - Existing AM				Heron-Walkley - Existing PM				Heron-Walkley - Widened AM		
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST					NORTH	SOUTH	EAST
3	5	6	6				5							
No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m				No Median - 2.4 m							
Protected	Protected	Permissive	Permissive				Permissive							
Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control				Permissive or yield control							
RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed				RTOR allowed							
No	No	Yes	Yes				No							
No Channel	No Channel	No Channel	No Channel				No Channel							
5-10m	5-10m	5-10m	5-10m				10-15m							
Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings				Std transverse markings							
82	49	26	26				37							
B	D	F	F	-	-	-	E					-	-	-
B	D	F	F	-	-	-	E					-	-	-
F				E								D		
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST
Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic		Mixed Traffic	Mixed Traffic					Curb Bike Lane, Cycletrack or MUP		Curb Bike Lane, Cycletrack or MUP
				≤ 50 m		≤ 50 m	≤ 50 m							
				≤ 25 km/h		≤ 25 km/h	≤ 25 km/h							
Not Applicable	Not Applicable	Not Applicable	Not Applicable	D	-	D	D					Not Applicable	-	Not Applicable
Separated	Separated	Separated	Separated	Mixed Traffic	-	Mixed Traffic	Mixed Traffic					Separated	-	Separated
2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	No lane crossed		No lane crossed	No lane crossed					2-stage, LT box		2-stage, LT box
> 40 to ≤ 50 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h					> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h
A	A	A	A	B	-	B	B					A	-	A
A	A	A	A	D	-	D	D					A	-	A
A				D								A		
		≤ 10 sec	≤ 10 sec	≤ 30 sec		≤ 10 sec		≤ 40 sec		≤ 10 sec		≤ 30 sec		≤ 10 sec
-	-	B	B	D	-	B	-	E	-	B	-	D	-	B
B				D				E				D		
< 10 m	< 10 m	< 10 m	< 10 m	10 - 15 m		> 15 m						< 10 m		> 15 m
≥ 2	≥ 2			≥ 2		≥ 2						≥ 2		≥ 2
D	D	-	-	B	-	A	-					D	-	A
D				B								D		
		0.0 - 0.60				0.0 - 0.60				0.71 - 0.80				0.0 - 0.60
A				A				C				A		

Heron-Walkley - Widened PM					Walkley-Heatherington - Existing AM				Walkley-Heatherington - Existing PM				Walkley-Heatherington - Existing PM	
WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH
5					5	4	6	6					5	4
No Median - 2.4 m					No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m					No Median - 2.4 m	No Median - 2.4 m
No left turn / Prohib.					Permissive	Permissive	Permissive	Permissive					Protected	Protected
Permissive or yield control					Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control					Permissive or yield control	Permissive or yield control
RTOR allowed					RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed					RTOR allowed	RTOR allowed
Yes					No	No	No	No					No	No
No Channel					No Channel	No Channel	Conv't'l without Receiving Lane	No Channel					No Channel	No Channel
5-10m					10-15m	10-15m	5-10m	10-15m					5-10m	5-10m
Zebra stripe hi-vis markings					Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings					Zebra stripe hi-vis markings	Zebra stripe hi-vis markings
51					37	56	28	23					49	65
D					E	D	F	F					D	C
-					-	-	-	-	-	-	-	-	-	-
D					E	D	F	F	-	-	-	-	D	C
					F								E	
WEST					NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH
Curb Bike Lane, Cycletrack or MUP					Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic					Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP
					≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m						
					≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h						
Not Applicable					D	D	D	D	-	-	-	-	Not Applicable	Not Applicable
Separated					Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	-	-	-	-	Separated	Separated
2-stage, LT box					No lane crossed	No lane crossed	One lane crossed	One lane crossed					2-stage, LT box	2-stage, LT box
> 40 to ≤ 50 km/h					≤ 40 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h					≤ 40 km/h	≤ 40 km/h
A					B	B	D	D	-	-	-	-	A	A
A					D	D	D	D	-	-	-	-	A	A
					D				-				A	
	≤ 40 sec		≤ 10 sec		≤ 30 sec				> 40 sec				≤ 30 sec	
-	E	-	B	-	-	D	-	B	-	F	-	B	-	D
	E				D				F				C	
					> 15 m	< 10 m	10 - 15 m	10 - 15 m					< 10 m	< 10 m
					≥ 2	≥ 2							≥ 2	≥ 2
-					A	D	-	-	-	-	-	-	D	D
					D				-				C	
	0.71 - 0.80				0.0 - 0.60				0.61 - 0.70				0.0 -	
	C				A				B				A	

gton - Widened AM		Walkley-Heatherington - Widened PM				Walkley-Albion - Existing				Walkley-Albion - Widened				
EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH
5	5					4	3	5	5	4	3	5	5	5
No Median - 2.4 m	No Median - 2.4 m					No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
Permissive	Permissive					Protected	Protected	Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive
Permissive or yield control	Permissive or yield control					Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
RTOR allowed	RTOR allowed					RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
Yes	Yes					No	No	No	No	No	No	Yes	Yes	No
No Channel	No Channel					No Channel	No Channel	No Channel	Conventional with Receiving Lane	No Channel	No Channel	No Channel	No Channel	No Channel
5-10m	5-10m					10-15m	10-15m	10-15m	10-15m	5-10m	5-10m	5-10m	5-10m	10-15m
Zebra stripe hi-vis markings	Zebra stripe hi-vis markings					Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings
43	43					61	78	40	41	65	82	43	43	37
E	E					C	B	E	E	C	B	E	E	E
-	-					-	-	-	-	-	-	-	-	-
E	E					C	B	E	E	C	B	E	E	E
						E				E				
EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH
Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP					Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic
						≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m					≤ 50 m
						≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h					≤ 25 km/h
Not Applicable	Not Applicable					D	D	D	D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	D
Separated	Separated					Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated	Mixed Traffic
2-stage, LT box	2-stage, LT box					No lane crossed	No lane crossed	One lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	No lane crossed
> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h					> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h
A	A					B	B	D	D	A	A	A	A	B
A	A					D	D	D	D	A	A	A	A	D
						D				A				
	≤ 10 sec	> 40 sec				> 40 sec				> 40 sec				≤ 10 sec
-	B	-	F	-	B	-	F	-	B	-	F	-	B	-
		F				F				F				
< 10 m	< 10 m					10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m	< 10 m	< 10 m	< 10 m	< 10 m	10 - 15 m
						≥ 2	≥ 2			≥ 2	≥ 2			≥ 2
-	-					B	B	-	-	D	D	-	-	B
						B				D				
0.60						0.0 - 0.60				0.0 - 0.60				
						A				A				

Walkley-Hampstead - Existing			Walkley-Hampstead - Widened				Heron-Finn - Existing				Heron-Finn - Widened				
SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
3	5	5	5	3	5	5		4	5	5		4	6	6	
No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	
Permissive	Permissive	Permissive	Protected	Protected	Permissive	Permissive		Permissive	No left turn / Prohib.	Permissive		Protected	No left turn / Prohib.	Permissive	
Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control	
RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed	
No	No	No	No	No	Yes	Yes		No	No	No		No	Yes	Yes	
No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel		No Channel	No Right Turn	No Channel		No Channel	No Channel	No Channel	
5-10m	10-15m	5-10m	5-10m	5-10m	5-10m	5-10m		10-15m	No Right Turn	10-15m		5-10m	5-10m	5-10m	
Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings		Std transverse markings	Std transverse markings	Std transverse markings		Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	
71	37	38	49	82	43	43		53	55	37		65	34	26	
C	E	E	D	B	E	E		-	D	D	E	-	C	E	F
C	E	E	D	B	E	E	-	D	D	E	-	C	E	F	
E			E				E				F				
SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP		Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	
≤ 50 m	≤ 50 m	≤ 50 m						≤ 50 m	≤ 50 m	≤ 50 m					
≤ 25 km/h	≤ 25 km/h	≤ 25 km/h						≤ 25 km/h	≤ 25 km/h	≤ 25 km/h					
D	D	D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	-	D	D	D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	
Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated	-	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated	
No lane crossed	One lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box		No lane crossed	One lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box	
≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	
B	D	D	A	A	A	A	-	B	D	D	A	A	A	A	
D	D	D	A	A	A	A	-	D	D	D	A	A	A	A	
D			A				D				A				
≤ 10 sec		≤ 10 sec	≤ 10 sec			≤ 10 sec	≤ 10 sec			≤ 10 sec	≤ 10 sec				
B			B				B				B				
B			B				B				B				
10 - 15 m	10 - 15 m	< 10 m	< 10 m	< 10 m	< 10 m	< 10 m		10 - 15 m	10 - 15 m		< 10 m		< 10 m		
≥ 2			≥ 2	≥ 2			≥ 2	≥ 2			≥ 2				
B	-	-	D	D	-	-	-	B	-	-	-	D	-	-	
B			D				B				D				
0.0 - 0.60			0.0 - 0.60				0.0 - 0.60				0.0 - 0.60				
A			A				A				A				

Heron-Alta Vista - Existing				Heron-Alta Vista - Widened			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
4	3	5	5	3	3	6	6
No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
Protected	Protected	Protected/ Permissive	Permissive	Protected	Protected	Protected	Protected
Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
No	No	No	No	No	No	Yes	Yes
Conventional with Receiving Lane	Conventional with Receiving Lane	Conv't'l without Receiving Lane	Conv't'l without Receiving Lane	No Channel	No Channel	No Channel	No Channel
15-25m	15-25m	15-25m	15-25m	5-10m	5-10m	5-10m	5-10m
Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings
63	80	42	42	82	82	34	34
C	B	E	E	B	B	E	E
-	-	-	-	-	-	-	-
C	B	E	E	B	B	E	E
E				E			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP
		≤ 50 m	≤ 50 m				
		>25 km/h	>25 km/h				
Not Applicable	Not Applicable	E	E	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Separated	Separated	Mixed Traffic	Mixed Traffic	Separated	Separated	Separated	Separated
1 lane crossed	1 lane crossed	One lane crossed	One lane crossed	2-stage, LT box	2-stage, LT box	2-stage, LT box	2-stage, LT box
≤ 40 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h	≤ 40 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h
B	B	D	D	A	A	A	A
B	B	E	E	A	A	A	A
E				A			
≤ 30 sec		> 40 sec	> 40 sec	> 40 sec		> 40 sec	> 40 sec
D	-	F	F	F	-	F	F
F				F			
> 15 m	> 15 m	> 15 m	> 15 m	< 10 m	< 10 m	< 10 m	< 10 m
≥ 2	≥ 2			≥ 2	≥ 2		
A	A	-	-	D	D	-	-
A				D			
0.91 - 1.00				0.91 - 1.00			
E				E			

Consultant Scenario Comments	CGH Transportation
	Existing and Conceptual

Heron Gate Secondary Plan
2025-05-23

SEGMENTS		Street A	Heron			Walkley		Baycrest		Sandalwood		Cedarwood	
			North Side	South Side	Widening	Existing	Widening	Existing	Concept Collector	Existing	Concept Local	Existing	Concept Local
Pedestrian	Sidewalk Width	F	1.8 m		≥ 2 m	1.5 m	≥ 2 m	1.8 m	≥ 2 m	1.8 m	≥ 2 m	1.5 m	≥ 2 m
	Boulevard Width		> 2 m		> 2 m	< 0.5 m	> 2 m	0.5 - 2 m	> 2 m	0.5 - 2 m	0.5 - 2 m	0.5 - 2 m	0.5 - 2 m
	Avg Daily Curb Lane Traffic Volume		> 3000		> 3000	> 3000	> 3000	> 3000		≤ 3000	≤ 3000	≤ 3000	≤ 3000
	Operating Speed		> 50 to 60 km/h no	> 50 to 60 km/h no	> 50 to 60 km/h no	> 50 to 60 km/h no	> 50 to 60 km/h yes	≤ 30 km/h yes	> 50 to 60 km/h yes	≤ 30 km/h yes	> 50 to 60 km/h yes	≤ 30 km/h yes	
	On-Street Parking												
	Exposure to Traffic PLoS		D	-	C	F	C	C	A	B	A	C	A
	Effective Sidewalk Width		1.5 m		2.0 m	1.5 m	2.0 m	1.5 m	2.0 m	1.5 m	2.0 m	1.5 m	2.0 m
	Pedestrian Volume		250 ped/hr		250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr	250 ped/hr
	Crowding PLoS	B	-	B	B	B	B	B	B	B	B	B	
	Level of Service	D	-	C	F	C	C	B	B	B	C	B	
Bicycle	Type of Cycling Facility	E	Mixed Traffic	Physically Separated	Physically Separated	Mixed Traffic	Physically Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Number of Travel Lanes		2-3 lanes total		2-3 lanes total		≤ 2 (no centreline)	≤ 2 (no centreline)	≤ 2 (no centreline)	≤ 2 (no centreline)	≤ 2 (no centreline)	≤ 2 (no centreline)	≤ 2 (no centreline)
	Operating Speed		≥ 50 to 60 km/h		≥ 50 to 60 km/h		≥ 50 to 60 km/h	≤ 40 km/h	≥ 50 to 60 km/h	≤ 40 km/h	≥ 50 to 60 km/h	≤ 40 km/h	
	# of Lanes & Operating Speed LoS		E	-	-	E	-	D	A	D	A	D	A
	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		< 1.8 m refuge		< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes		≤ 3 lanes		≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes
	Sidestreet Operating Speed		>50 to 60 km/h		>50 to 60 km/h		>50 to 60 km/h	≤ 40 km/h	>50 to 60 km/h	≤ 40 km/h	>50 to 60 km/h	≤ 40 km/h	
Unsignalized Crossing - Lowest LoS	C	A	A	B	A	B	A	B	A	B	A		
	Level of Service	E	A	A	E	A	D	A	D	A	D	A	
Transit	Facility Type	E	Mixed Traffic		Segregated ROW	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic				
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≤ 0.6		Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8					
	Level of Service		E	-	A	D	D	D	D	-	-	-	-
Truck	Truck Lane Width	C	≤ 3.5 m		≤ 3.3 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m
	Travel Lanes per Direction		> 1		> 1	> 1	> 1	1	1	1	1	1	1
	Level of Service		A	-	C	A	A	C	C	C	C	C	C
Auto	Level of Service		Not Applicable										

Appendix G

TDM Checklist

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: <i>Residential developments</i>		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	☒ Additional task for rental/condo 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	☒ Recommended as development occurs, potential to monitor effectiveness of other TDM measures
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 (<i>multi-family, condominium</i>)	☒ Recommended for lobby display
2.2 Bicycle skills training		
BETTER	2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses	☒ Recommended as yearly offering, if interest from rentals is generated

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
3. TRANSIT		
3.1 Transit information		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances (<i>multi-family, condominium</i>)	☒ Recommended for lobby display
BETTER	3.1.2 Provide real-time arrival information display at entrances (<i>multi-family, condominium</i>)	☒
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	☒ Recommended to be limited to initial construction and opening of rental buildings
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 (<i>subdivision</i>)	☐
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)	☒ Recommended if senior residences are included in ultimate redevelopment
4. CARSHARING & BIKESHARING		
4.1 Bikeshare stations & memberships		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station (<i>multi-family</i>)	☒ Recommended for residential buildings and/or parks
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized (<i>multi-family</i>)	☐
4.2 Carshare vehicles & memberships		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	☒ Recommended for residential buildings or retail, in publicly accessible areas (e.g. not behind security control gates).
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 (<i>condominium</i>)	☒
BASIC ★	5.1.2 Unbundle parking cost from monthly rent (<i>multi-family</i>)	☒

TDM measures: <i>Residential developments</i>		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	☒ Similar to lobby display, recent travel options
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: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.3</i>)	☒
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 (<i>see Official Plan policy 4.3.12</i>)	☒

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.10</i>)	☒
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 (<i>see Official Plan policy 4.3.10</i>)	☒
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 (<i>see Official Plan policy 4.3.11</i>)	☒
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: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.6</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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: <i>Residential developments</i>		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 (<i>see Zoning By-law Section 94</i>)	☒
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 (<i>see Zoning By-law Section 104</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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 H

TRANS Model Plots

TRANS Regional Model

Version 1.13 - Assigned March 6, 2019

AM Peak Hour Total Traffic Volume

Baycrest Drive - Heron Gate

2011 - Base Scenario

User Initials: SG

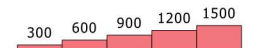
Plot Prepared: March 11, 2019

EMME Scenario: 11132



Legend

AM Peak Hour Total Traffic Volume



Distance (m)



N

The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

TRANS Regional Model

Version 1.14 - Assigned February 28, 2019

AM Peak Hour Total Traffic Volume

Baycrest Drive - Heron Gate

2031 - Base Scenario

TMP Affordabel Road & Transit Network

User Initials: SG

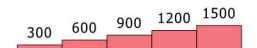
Plot Prepared: March 11, 2019

EMME Scenario: 14311



Legend

AM Peak Hour Total Traffic Volume



Distance (m)



N

The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

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As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

Appendix I

Background Developments

Figure 15 - Site Generated Traffic Volumes

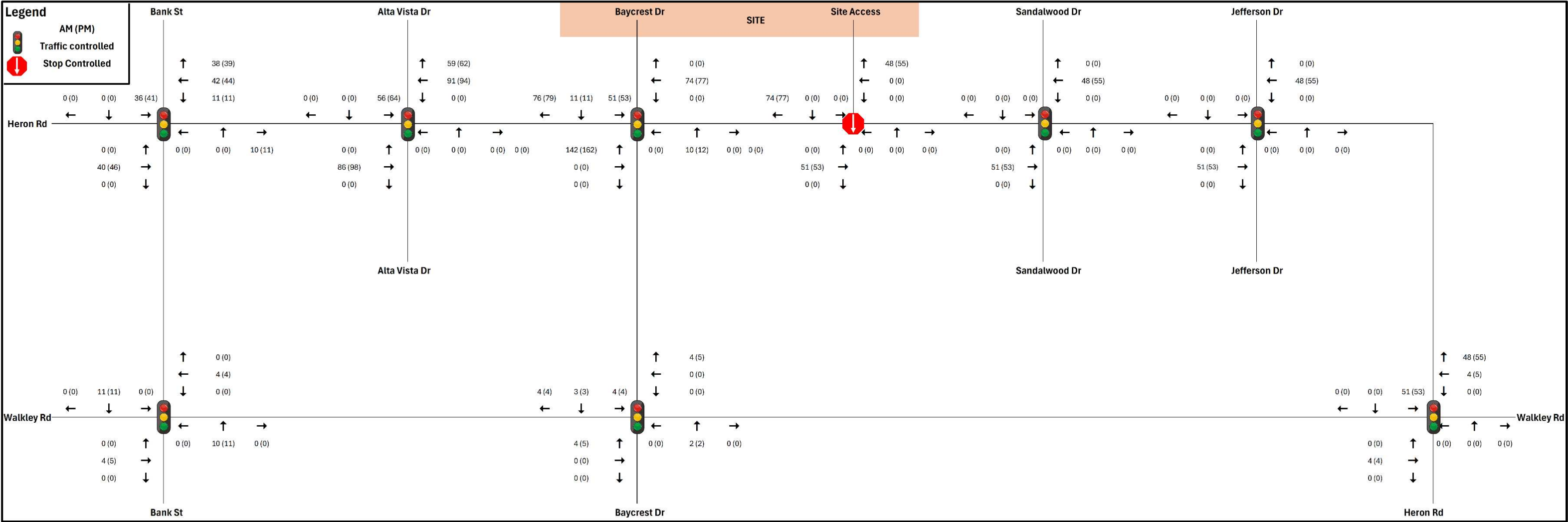
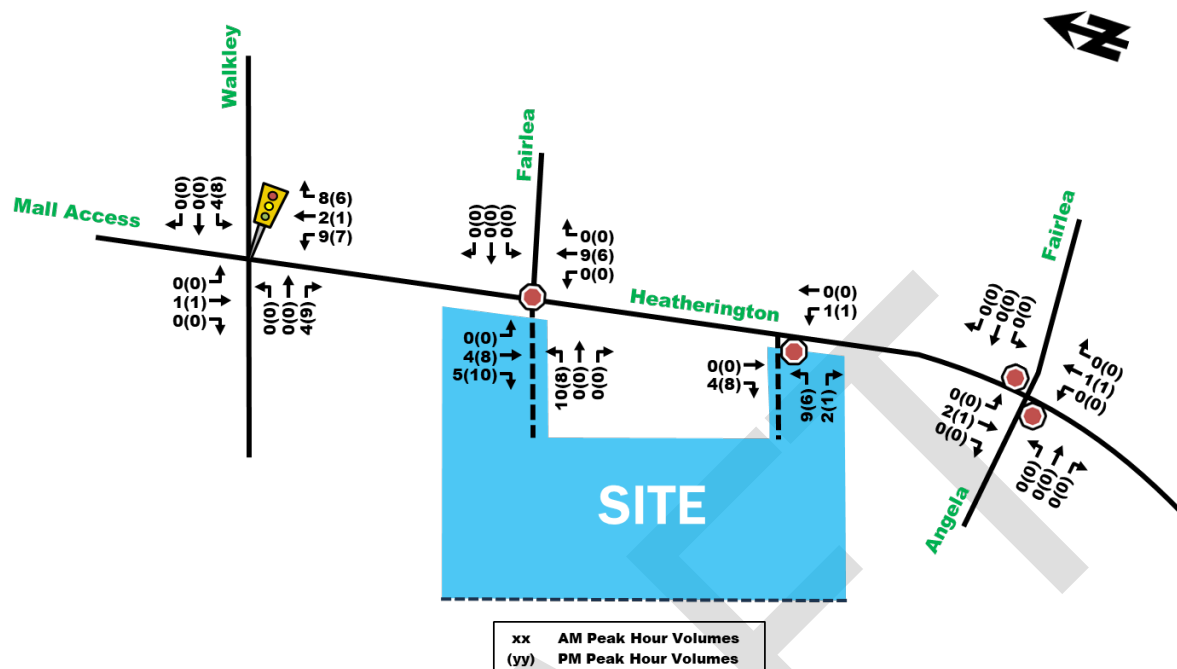


Figure 12: Site-Generated Traffic



3.2. Background Network Traffic

Exempt – See Table 9.

3.3. Demand Rationalization

Exempt – See Table 9.

3.4. Exemption Review

The following modules/elements of the TIA process provided in **Table 9** are recommended to be exempt in the subsequent steps of the TIA process, based on the City's TIA guidelines and the subject site:

Table 9: Exemptions Review Summary

Module	Element	Exemption Consideration
3.2 Background Network Traffic	All	Only required if one or more of modules 4.6 to 4.9 are triggered, as per 2023 TIA Guidelines update.
3.3 Demand Rationalization	All	Only required if one or more of modules 4.6 to 4.9 are triggered, as per 2023 TIA Guidelines update.
4.3 Boundary Street Design	All elements	MMLOS analysis to be conducted at future SPA.
4.4 Access Intersections Design	All elements	As per 2023 TIA Guidelines update, this section is removed and combined with Section 4.9.
4.6 Neighbourhood Traffic Calming	All elements	Development generates less than 75 site generated auto trips. This section is exempt as per TIA Guidelines 2023 update.
4.7 Transit	4.7.1 Transit Route Capacity	Development generates less than 75 site generated transit trips. This section is exempt as per TIA Guidelines 2023 update.

proportional assignment to the study area roadways. Figure 15 illustrates the new site generated volumes, and Figure 16 illustrates pass-by volumes.

Table 16: Trip Assignment

To/From	Inbound Via	Outbound Via
North	20% Bank Street (N) 5% Alta Vista (E) 15% Walkley Road (E) 10% Walkley Road (W)	30% Bank Street (N) 5% Alta Vista (E) 15% Walkley Road (E)
South	13% Bank Street (S) 2% Airport Parkway (S)	13% Bank Street (S) 2% Airport Parkway (S)
East	5% Walkley Road (E)	5% Walkley Road (E)
West	20% Walkley Road (W) 10% Bank Street (N)	20% Walkley Road (W) 10% Bank Street (N)
Total	100%	100%

Figure 15: New Site Generation Auto Volumes

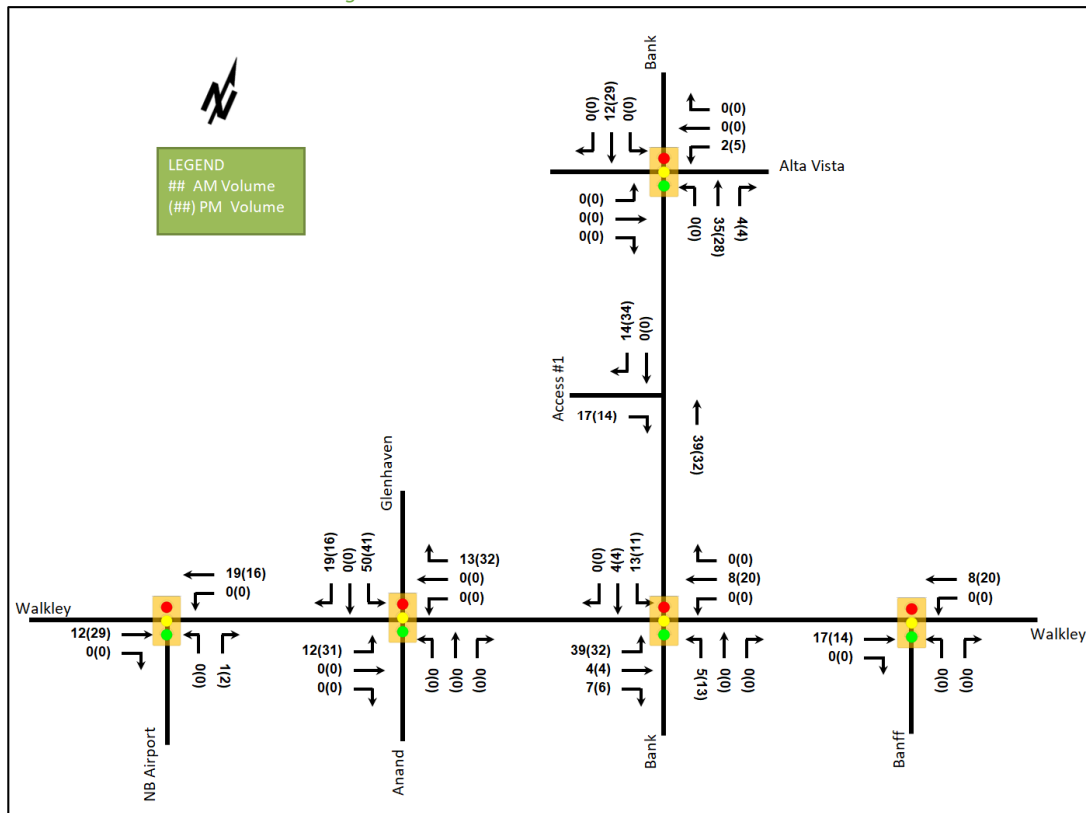


Figure 6: Site-Generated Traffic Volumes

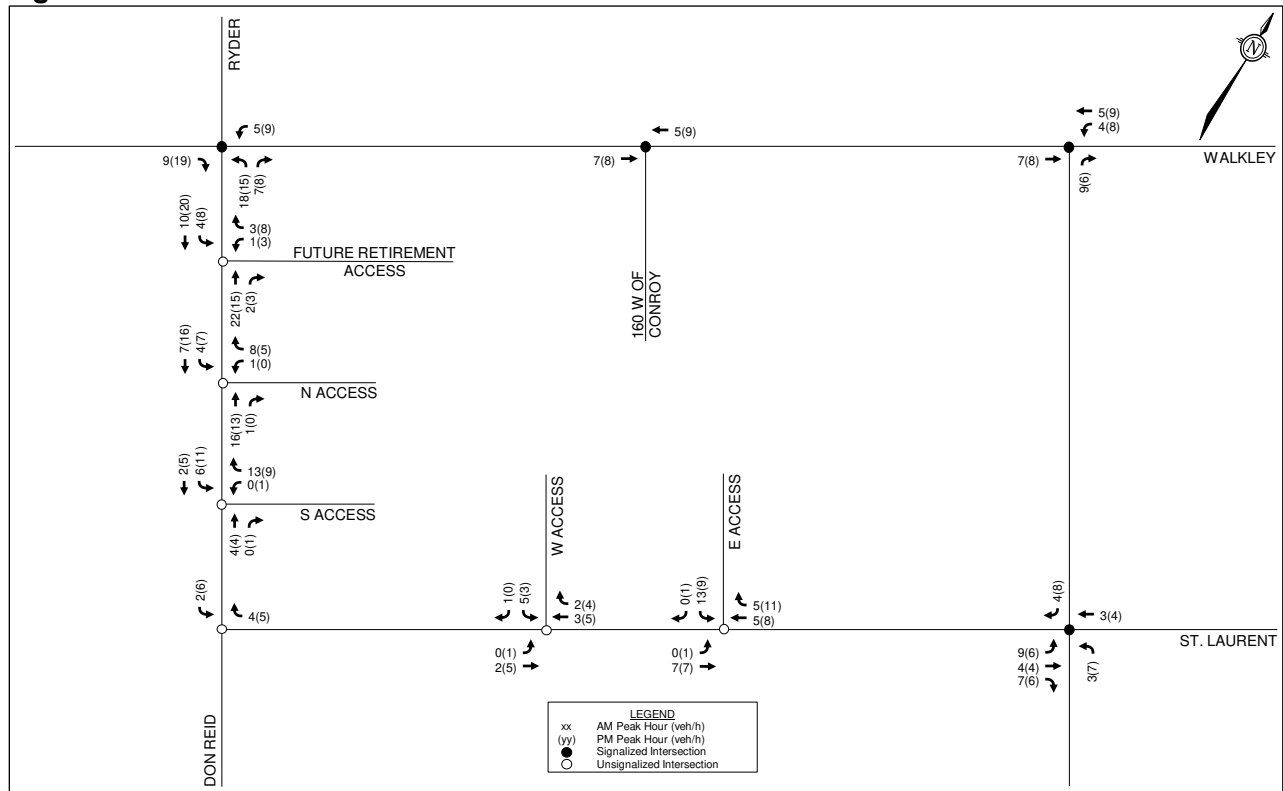
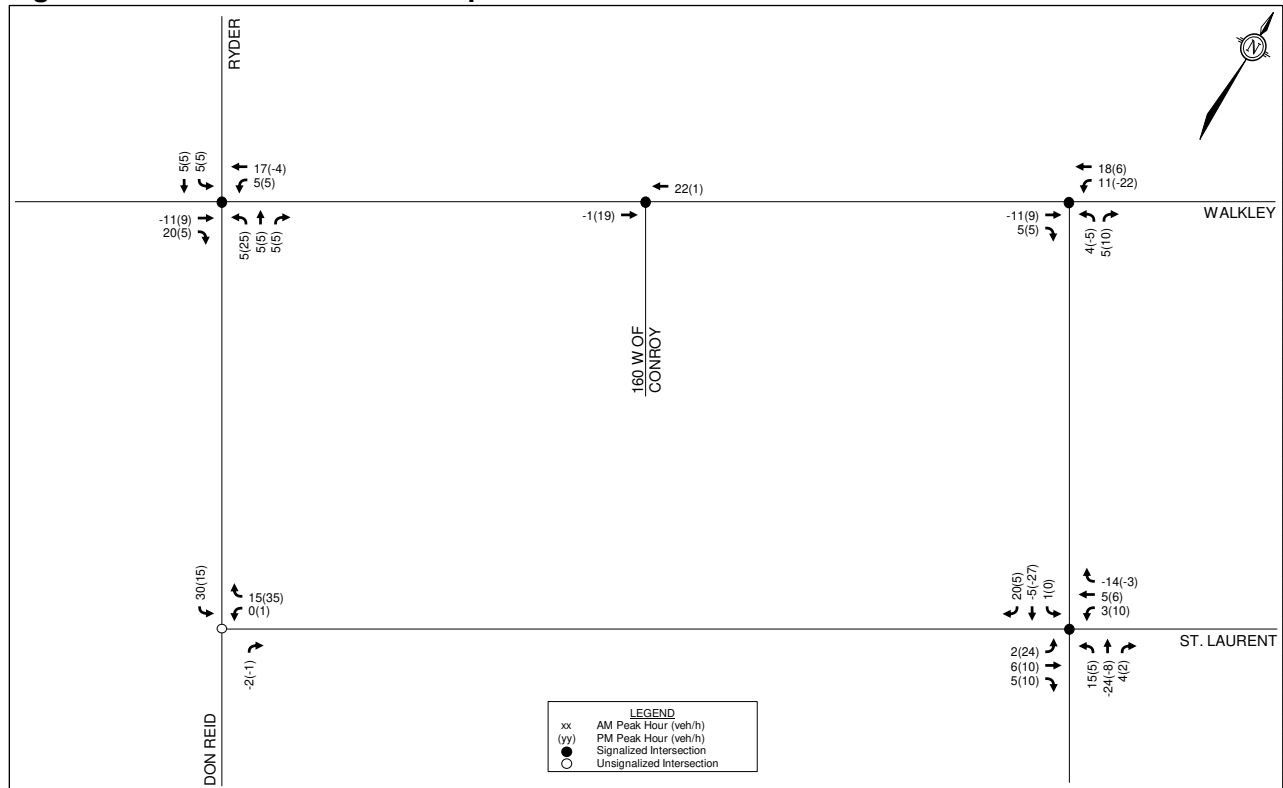


Figure 7: 2024 Other Area Development-Generated Traffic Volumes



Appendix J

Synchro Intersection Worksheets – 2040 Future Background Conditions

Lanes, Volumes, Timings

1: Bank & Heron

2040 Futurue BackgroundAM Peak Hour

Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩↩	↩↩	↩	↩	↩↩	↩
Traffic Volume (vph)	139	753	281	78	992	123	578	787	37	116	295	119
Future Volume (vph)	139	753	281	78	992	123	578	787	37	116	295	119
Satd. Flow (prot)	1658	3283	1483	1595	3221	1363	3154	3282	0	1626	3084	0
Flt Permitted	0.101			0.352			0.950			0.950		
Satd. Flow (perm)	176	3283	1411	584	3221	1323	3068	3282	0	1620	3084	0
Satd. Flow (RTOR)			281			188		4			46	
Lane Group Flow (vph)	139	753	281	78	992	123	578	824	0	116	414	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	11.0	59.0	59.0	48.0	48.0	48.0	28.6	43.0		18.0	32.4	
Total Split (%)	9.2%	49.2%	49.2%	40.0%	40.0%	40.0%	23.8%	35.8%		15.0%	27.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	54.7	52.6	52.6	41.6	41.6	41.6	22.1	37.1		11.0	26.0	
Actuated g/C Ratio	0.46	0.44	0.44	0.35	0.35	0.35	0.18	0.31		0.09	0.22	
v/c Ratio	0.86	0.52	0.36	0.39	0.89	0.21	1.00	0.81		0.78	0.59	
Control Delay	64.7	26.2	3.8	36.6	48.1	1.4	85.7	45.6		86.5	41.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	64.7	26.2	3.8	36.6	48.1	1.4	85.7	45.6		86.5	41.2	
LOS	E	C	A	D	D	A	F	D		F	D	
Approach Delay		25.4			42.6			62.1			51.1	
Approach LOS		C			D			E			D	
Queue Length 50th (m)	19.0	66.6	0.0	13.8	115.3	0.0	70.7	94.1		27.0	41.2	
Queue Length 95th (m)	#51.0	84.5	15.2	28.7	#152.1	2.0	#107.4	118.8		#55.9	57.8	
Internal Link Dist (m)		118.5			157.2			173.2			94.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	162	1439	776	202	1116	581	580	1017		155	704	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.86	0.52	0.36	0.39	0.89	0.21	1.00	0.81		0.75	0.59	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

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CGH Transportation
Page 1

Lanes, Volumes, Timings

1: Bank & Heron

2040 Futurue BackgroundAM Peak Hour

Heron Gate Mater Plan

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 45.3

Intersection LOS: D

Intersection Capacity Utilization 95.8%

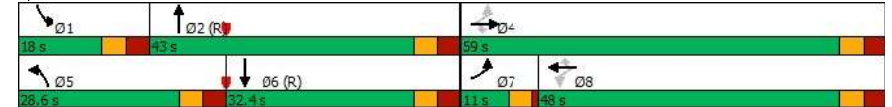
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Bank & Heron



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CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	112	733	73	128	941	221	66	263	161	176	232	190
Future Volume (vph)	112	733	73	128	941	221	66	263	161	176	232	190
Satd. Flow (prot)	1658	3138	0	1658	3191	1441	1551	1478	0	1580	1545	0
Flt Permitted	0.950			0.950			0.513			0.173		
Satd. Flow (perm)	1582	3138	0	1528	3191	1173	791	1478	0	288	1545	0
Satd. Flow (RTOR)		13			221		34			54		
Lane Group Flow (vph)	112	806	0	128	941	221	66	424	0	176	422	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0			5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	12.0	34.0		13.0	37.0	37.0	30.3	30.3		10.7	40.0	
Total Split (%)	13.3%	37.8%		14.4%	41.1%	41.1%	33.7%	33.7%		11.9%	44.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	6.3	30.4		7.3	31.4	31.4	24.3	24.3		35.3	35.0	
Actuated g/C Ratio	0.07	0.34		0.08	0.35	0.35	0.27	0.27		0.39	0.39	
v/c Ratio	0.97	0.75		0.96	0.85	0.40	0.31	1.00		0.96	0.67	
Control Delay	119.9	31.4		100.5	36.6	10.8	31.1	76.7		82.2	25.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	119.9	31.4		100.5	36.6	10.8	31.1	76.7		82.2	25.8	
LOS	F	C		F	D	B	C	E		F	C	
Approach Delay		42.2			38.5			70.6			42.4	
Approach LOS		D			D			E			D	
Queue Length 50th (m)	19.7	63.4		23.0	61.3	7.4	9.1	~68.4		20.4	51.5	
Queue Length 95th (m)	#51.6	85.1		#55.9	#106.8	33.0	20.7	#128.1		#55.8	84.0	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	116	1068		134	1113	553	213	423		184	633	
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	0.97	0.75		0.96	0.85	0.40	0.31	1.00		0.96	0.67	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 45.0

Intersection LOS: D

Intersection Capacity Utilization 91.1%

ICU Level of Service F

Analysis Period (min) 15

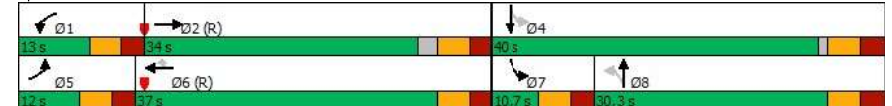
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Alta Vista & Heron



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CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↖
Traffic Volume (vph)	1107	12	3	1313	36	10
Future Volume (vph)	1107	12	3	1313	36	10
Satd. Flow (prot)	3241	0	1013	3252	1642	1261
Flt Permitted			0.241		0.950	
Satd. Flow (perm)	3241	0	254	3252	1635	1229
Satd. Flow (RTOR)	2					10
Lane Group Flow (vph)	1119	0	3	1313	36	10
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases			6		8	8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.42		0.01	0.49	0.16	0.06
Control Delay	2.9		5.7	5.2	34.3	16.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	2.9		5.7	5.2	34.3	16.7
LOS	A		A	A	C	B
Approach Delay	2.9			5.2	30.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	19.9		0.1	41.6	5.8	0.0
Queue Length 95th (m)	m40.1		m0.5	79.9	12.4	4.0
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2695		211	2704	406	313
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.42		0.01	0.49	0.09	0.03
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 48 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Maximum v/c Ratio: 0.49	Intersection LOS: A
Intersection Signal Delay: 4.6	Intersection Capacity Utilization 58.9%
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	
Splits and Phases: 3: Finn & Heron	

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CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	799	186	24	952	29	229	23	34	66	15	80
Future Volume (vph)	152	799	186	24	952	29	229	23	34	66	15	80
Satd. Flow (prot)	1537	3147	0	1496	3203	0	0	1576	0	1271	1498	0
Flt Permitted	0.238			0.237				0.705		0.661		
Satd. Flow (perm)	384	3147	0	371	3203	0	0	1147	0	883	1498	0
Satd. Flow (RTOR)		45			5			9			80	
Lane Group Flow (vph)	152	985	0	24	981	0	0	286	0	66	95	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	51.0	51.0		51.0	51.0		39.0	39.0		39.0	39.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.1	52.1		52.1	52.1		26.2	26.2		26.2	26.2	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.29	0.29		0.29	0.29	
v/c Ratio	0.68	0.54		0.11	0.53		0.84	0.26		0.19		
Control Delay	32.2	10.4		13.5	12.5		49.9	24.8		7.4		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	32.2	10.4		13.5	12.5		49.9	24.8		7.4		
LOS	C	B		B	B		D	C		A		
Approach Delay		13.3			12.5			49.9			14.5	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	7.8	17.5		1.3	29.1			44.0		8.5	1.8	
Queue Length 95th (m)	#54.8	33.7		m5.7	54.3			68.7		17.3	11.1	
Internal Link Dist (m)		288.4			285.4			192.7			17.6	
Turn Bay Length (m)	45.0			50.0						24.5		
Base Capacity (vph)	222	1840		214	1856			425		322	598	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.68	0.54		0.11	0.53			0.67		0.20	0.16	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 64 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Maximum v/c Ratio: 0.84	Intersection LOS: B
Intersection Signal Delay: 17.1	Intersection Capacity Utilization 76.3%
	ICU Level of Service D
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Baycrest/St Pats & Heron



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CGH Transportation
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Lanes, Volumes, Timings

2040 Future Background AM Peak Hour

5: Sandalwood/Briar Hill & Heron

Heron Gate Master Plan

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	821	18	21	806	12	36	26	25	28	29	135
Future Volume (vph)	64	821	18	21	806	12	36	26	25	28	29	135
Satd. Flow (prot)	1610	3237	0	1610	3185	0	1642	1481	0	0	1695	1483
Flt Permitted	0.330			0.322			0.720				0.828	
Satd. Flow (perm)	559	3237	0	541	3185	0	1235	1481	0	0	1430	1452
Satd. Flow (RTOR)		4			2			25				135
Lane Group Flow (vph)	64	839	0	21	818	0	36	51	0	0	57	135
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	36.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	64.4	64.4		64.4	64.4		13.8	13.8		13.8	13.8	13.8
Actuated g/C Ratio	0.72	0.72		0.72	0.72		0.15	0.15		0.15	0.15	0.15
v/c Ratio	0.16	0.36		0.05	0.36		0.19	0.21		0.26	0.40	0.40
Control Delay	8.4	8.4		4.8	4.4		32.6	19.7		34.0	8.7	8.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.4	8.4		4.8	4.4		32.6	19.7		34.0	8.7	8.7
LOS	A	A		A	A		C	B		C	A	A
Approach Delay		8.4			4.4			25.0			16.2	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	4.7	35.7		0.6	12.4		5.8	4.1		9.3	0.0	0.0
Queue Length 95th (m)	m9.7	44.1		m2.7	26.0		11.0	10.9		15.5	11.8	
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	399	2315		386	2278		408	507		473	571	
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	0.16	0.36		0.05	0.36		0.09	0.10		0.12	0.24	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

2040 Future Background AM Peak Hour

5: Sandalwood/Briar Hill & Heron

Heron Gate Master Plan

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 8.2

Intersection LOS: A

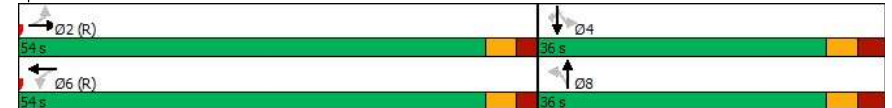
Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 5: Sandalwood/Briar Hill & Heron



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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	77	740	80	23	725	39	42	66	35	32	36	70
Future Volume (vph)	77	740	80	23	725	39	42	66	35	32	36	70
Satd. Flow (prot)	1610	3252	1441	1551	3156	0	1658	1745	1363	0	1537	0
Flt Permitted	0.345			0.355			0.653				0.912	
Satd. Flow (perm)	582	3252	1441	580	3156	0	1136	1745	1322	0	1413	0
Satd. Flow (RTOR)			80		9			35			61	
Lane Group Flow (vph)	77	740	80	23	764	0	42	66	35	0	138	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	54.0	54.0	54.0	54.0	54.0		36.0	36.0	36.0	36.0	36.0	
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3		6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	60.4	60.4	60.4	60.4	60.4		17.7	17.7	17.7		17.7	
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.67		0.20	0.20	0.20		0.20	
v/c Ratio	0.20	0.34	0.08	0.06	0.36		0.19	0.19	0.12		0.42	
Control Delay	11.7	9.9	5.2	8.8	8.5		28.1	28.0	8.6		19.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	11.7	9.9	5.2	8.8	8.5		28.1	28.0	8.6		19.9	
LOS	B	A	A	A	A		C	C	A		B	
Approach Delay		9.6			8.5			23.3			19.9	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	5.8	30.5	2.2	0.8	17.9		6.8	10.7	0.0		12.7	
Queue Length 95th (m)	17.1	54.9	9.7	5.5	51.9		12.4	17.1	6.3		23.1	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	390	2183	993	389	2122		374	575	459		507	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.20	0.34	0.08	0.06	0.36		0.11	0.11	0.08		0.27	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

	↖	→	←	↗	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Volume (vph)	1	598	660	807	760	30
Future Volume (vph)	1	598	660	807	760	30
Satd. Flow (prot)	1658	3283	3191	2512	3148	0
Flt Permitted	0.350				0.954	
Satd. Flow (perm)	611	3283	3191	2459	3148	0
Satd. Flow (RTOR)				807	5	
Lane Group Flow (vph)	1	598	660	807	790	0
Turn Type	Perm	NA	NA	Perm	Perm	
Protected Phases		2	6			
Permitted Phases	2			6	4	
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	54.0	54.0	54.0	54.0	46.0	
Total Split (%)	54.0%	54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	47.4	47.4	47.4	47.4	39.3	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.39	
v/c Ratio	0.00	0.38	0.44	0.51	0.64	
Control Delay	14.0	17.8	18.6	2.3	27.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.0	17.8	18.6	2.3	27.3	
LOS	B	B	B	A	C	
Approach Delay		17.8	9.7		27.3	
Approach LOS		B	A		C	
Queue Length 50th (m)	0.1	37.8	43.1	0.0	62.3	
Queue Length 95th (m)	1.0	50.7	57.3	10.2	81.7	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	289	1556	1512	1590	1240	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.00	0.38	0.44	0.51	0.64	
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 16.2

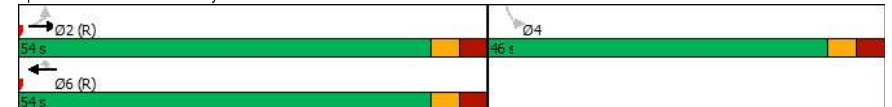
Intersection LOS: B

Intersection Capacity Utilization 54.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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Lanes, Volumes, Timings
8: Baycrest

2040 Future Background AM Peak Hour
Heron Gate Master Plan

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	103	22	40	180	146	86
Future Volume (vph)	103	22	40	180	146	86
Satd. Flow (prot)	1627	0	0	1635	1589	0
Flt Permitted	0.960			0.991		
Satd. Flow (perm)	1627	0	0	1635	1589	0
Lane Group Flow (vph)	125	0	0	220	232	0
Sign Control	Stop			Stop	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 46.1%	ICU Level of Service A					
Analysis Period (min) 15						

HCM 2010 AWSC
8: Baycrest

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Intersection						
Intersection Delay, s/veh	9.3					
Intersection LOS	A					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	103	22	40	180	146	86
Future Vol, veh/h	103	22	40	180	146	86
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	5	3	9	9	2
Mvmt Flow	103	22	40	180	146	86
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1		0	
Conflicting Approach Right	NB				EB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay	9.1		9.4		9.2	
HCM LOS	A		A		A	
Lane	NBLn1	EBLn1	SBLn1			
Vol Left, %	18%	82%	0%			
Vol Thru, %	82%	0%	63%			
Vol Right, %	0%	18%	37%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	220	125	232			
LT Vol	40	103	0			
Through Vol	180	0	146			
RT Vol	0	22	86			
Lane Flow Rate	220	125	232			
Geometry Grp	1	1	1			
Degree of Util (X)	0.279	0.174	0.283			
Departure Headway (Hd)	4.559	4.999	4.398			
Convergence, Y/N	Yes	Yes	Yes			
Cap	788	716	817			
Service Time	2.588	3.038	2.426			
HCM Lane V/C Ratio	0.279	0.175	0.284			
HCM Control Delay	9.4	9.1	9.2			
HCM Lane LOS	A	A	A			
HCM 95th-ile Q	1.1	0.6	1.2			

Lanes, Volumes, Timings
9: Baycrest & Sandalwood

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	4	45	2	29	1	191	42	9	141	0
Future Volume (vph)	0	2	4	45	2	29	1	191	42	9	141	0
Satd. Flow (prot)	0	1588	0	0	1577	0	0	1617	0	0	1631	0
Flt Permitted					0.971						0.997	
Satd. Flow (perm)	0	1588	0	0	1577	0	0	1617	0	0	1631	0
Lane Group Flow (vph)	0	6	0	0	76	0	0	234	0	0	150	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 33.5%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 2010 TWSC
9: Baycrest & Sandalwood

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	4	45	2	29	1	191	42	9	141	0
Future Vol, veh/h	0	2	4	45	2	29	1	191	42	9	141	0
Conflicting Peds, #/hr	9	0	6	6	0	9	6	0	24	24	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	7	2	8	5	22	8	2
Mvmt Flow	0	2	4	45	2	29	1	191	42	9	141	0
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	404	424	153	406	403	245	147	0	0	257	0	0
Stage 1	165	165	-	238	238	-	-	-	-	-	-	-
Stage 2	239	259	-	168	165	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.27	4.12	-	-	4.32	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.363	2.218	-	-	2.398	-	-
Pot Cap-1 Maneuver	557	522	893	555	536	782	1435	-	-	1200	-	-
Stage 1	837	762	-	765	708	-	-	-	-	-	-	-
Stage 2	764	694	-	834	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	524	505	885	534	518	762	1428	-	-	1178	-	-
Mov Cap-2 Maneuver	524	505	-	534	518	-	-	-	-	-	-	-
Stage 1	832	752	-	750	694	-	-	-	-	-	-	-
Stage 2	727	680	-	818	752	-	-	-	-	-	-	-
Approach	EB	WB			NB			SB				
HCM Control Delay, s	10.1	11.8			0			0.5				
HCM LOS	B	B										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1428	-	-	708	602	1178	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.008	0.126	0.008	-	-				
HCM Control Delay (s)	7.5	0	-	10.1	11.8	8.1	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0	-	-				

Lanes, Volumes, Timings
10: Bank & Walkley

2040 Future Background AM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (vph)	427	437	162	102	383	265	159	1413	181	155	514	264
Future Volume (vph)	427	437	162	102	383	265	159	1413	181	155	514	264
Satd. Flow (prot)	3154	3316	1483	3154	2998	0	3185	3283	1414	3216	3252	1469
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3112	3316	1418	3064	2998	0	3135	3283	1383	3209	3252	1424
Satd. Flow (RTOR)			209		144				215			273
Lane Group Flow (vph)	427	437	162	102	648	0	159	1413	181	155	514	264
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	19.3	47.0	47.0	12.0	39.7		26.0	48.3	48.3	12.7	35.0	35.0
Total Split (%)	16.1%	39.2%	39.2%	10.0%	33.1%		21.7%	40.3%	40.3%	10.6%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.5	26.8	26.8	18.7	27.0		11.3	41.9	41.9	6.3	36.9	36.9
Actuated g/C Ratio	0.15	0.22	0.22	0.16	0.22		0.09	0.35	0.35	0.05	0.31	0.31
v/c Ratio	0.88	0.59	0.34	0.21	0.83		0.53	1.23	0.29	0.92	0.51	0.42
Control Delay	70.2	44.2	3.6	48.5	43.3		58.0	147.4	3.1	108.4	36.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	44.2	3.6	48.5	43.3		58.0	147.4	3.1	108.4	36.9	5.7
LOS	E	D	A	D	D		E	F	A	F	D	A
Approach Delay		48.6			44.0			124.4			39.9	
Approach LOS		D			D			F			D	
Queue Length 50th (m)	50.9	45.3	0.0	11.6	61.3		18.7	~216.5	0.0	19.0	52.3	0.0
Queue Length 95th (m)	#97.9	61.0	7.1	20.3	77.5		28.8	#258.8	9.1	#39.3	72.0	17.5
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0			95.0		60.0	110.0		
Base Capacity (vph)	487	1113	615	491	928		520	1146	622	168	999	626
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.39	0.26	0.21	0.70		0.31	1.23	0.29	0.92	0.51	0.42

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

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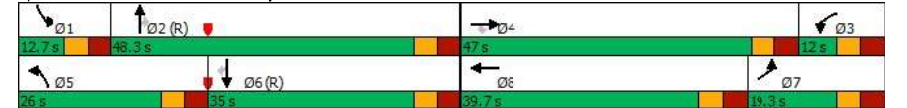
CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

2040 Future Background AM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 1.23	Intersection LOS: E
Intersection Signal Delay: 75.8	Intersection Capacity Utilization 104.5%
Intersection Capacity Utilization 104.5%	ICU Level of Service G
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings

2040 Future Background AM Peak Hour

11: Jim Durrell RC/Hampstead & Walkley

Heron Gate Mater Plan

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	620	5	11	765	11	15	0	10	13	1	17
Future Volume (vph)	7	620	5	11	765	11	15	0	10	13	1	17
Satd. Flow (prot)	1658	3275	0	1551	3276	0	0	1503	0	1658	1468	0
Flt Permitted	0.358			0.415				0.806		0.741		
Satd. Flow (perm)	624	3275	0	675	3276	0	0	1242	0	1292	1468	0
Satd. Flow (RTOR)		2			3			48			17	
Lane Group Flow (vph)	7	625	0	11	776	0	0	25	0	13	18	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Split (%)	57.1%	57.1%		57.1%	57.1%		42.9%	42.9%		42.9%	42.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1			5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	54.0	54.0		54.0	54.0			12.8		12.8	12.8	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.18		0.18	0.18	
v/c Ratio	0.01	0.25		0.02	0.31			0.09		0.06	0.06	
Control Delay	7.0	5.5		7.1	5.9			3.1		21.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.0	5.5		7.1	5.9			3.1		21.0	10.3	
LOS	A	A		A	A			A		C	B	
Approach Delay		5.5			5.9			3.1			14.8	
Approach LOS		A			A			A			B	
Queue Length 50th (m)	0.2	13.6		0.4	18.1			0.0		1.5	0.1	
Queue Length 95th (m)	2.3	36.8		3.1	47.4			2.4		4.4	3.8	
Internal Link Dist (m)		132.4			376.9			75.5			48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	481	2527		520	2528			459		444	516	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.01	0.25		0.02	0.31			0.05		0.03	0.03	
Intersection Summary												
Cycle Length: 70												
Actuated Cycle Length: 70												
Offset: 44 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

2040 Future Background AM Peak Hour

11: Jim Durrell RC/Hampstead & Walkley

Heron Gate Mater Plan

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 5.9

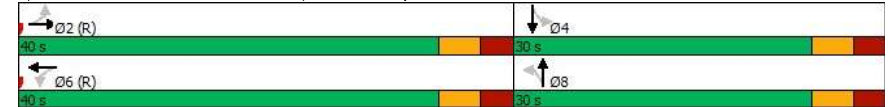
Intersection LOS: A

Intersection Capacity Utilization 44.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future BackgroundAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	4	515	125	131	627	12	168	2	135	18	2	6
Future Volume (vph)	4	515	125	131	627	12	168	2	135	18	2	6
Satd. Flow (prot)	1658	3283	1441	1566	3269	0	1566	1360	0	1658	1500	0
Flt Permitted	0.950			0.950			0.752			0.669		
Satd. Flow (perm)	1649	3283	1354	1534	3269	0	1203	1360	0	1121	1500	0
Satd. Flow (RTOR)			135		2			135			6	
Lane Group Flow (vph)	4	515	125	131	639	0	168	137	0	18	8	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		25.1	25.1		25.1	25.1	
Total Split (s)	20.0	35.0	35.0	20.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	22.2%	38.9%	38.9%	22.2%	38.9%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	5.8	41.3	41.3	12.7	57.5		17.9	17.9		17.9	17.9	
Actuated g/C Ratio	0.06	0.46	0.46	0.14	0.64		0.20	0.20		0.20	0.20	
v/c Ratio	0.04	0.34	0.18	0.60	0.31		0.70	0.36		0.08	0.03	
Control Delay	40.0	18.6	4.1	46.7	9.6		48.4	8.0		27.0	17.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.0	18.6	4.1	46.7	9.6		48.4	8.0		27.0	17.0	
LOS	D	B	A	D	A		D	A		C	B	
Approach Delay		15.9			15.9			30.2			23.9	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	0.7	29.7	0.0	21.5	22.1		26.8	0.3		2.5	0.3	
Queue Length 95th (m)	3.8	52.1	10.1	36.7	52.2		44.0	13.1		7.4	3.4	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0		25.0			30.0			
Base Capacity (vph)	257	1505	694	259	2088		322	463		300	406	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.34	0.18	0.51	0.31		0.52	0.30		0.06	0.02	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 14 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future BackgroundAM Peak Hour
Heron Gate Mater Plan

	Ø3	Ø7
Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future Background AM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 18.5

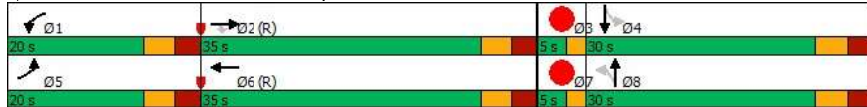
Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Future Background AM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	50	653	660	22	51	96
Future Volume (vph)	50	653	660	22	51	96
Satd. Flow (prot)	1595	3283	3235	0	1626	1483
Flt Permitted	0.392				0.950	
Satd. Flow (perm)	657	3283	3235	0	1622	1455
Satd. Flow (RTOR)			6			96
Lane Group Flow (vph)	50	653	682	0	51	96
Turn Type	Perm	NA	NA		Perm	Perm
Protected Phases		2	6			
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	39.0	39.0	39.0		31.0	31.0
Total Split (%)	55.7%	55.7%	55.7%		44.3%	44.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	50.4	50.4	50.4		13.0	13.0
Actuated g/C Ratio	0.72	0.72	0.72		0.19	0.19
v/c Ratio	0.11	0.28	0.29		0.17	0.28
Control Delay	7.1	6.0	9.3		23.1	6.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.1	6.0	9.3		23.1	6.9
LOS	A	A	A		C	A
Approach Delay		6.1	9.3		12.5	
Approach LOS		A	A		B	
Queue Length 50th (m)	1.7	13.3	10.1		6.0	0.0
Queue Length 95th (m)	9.2	38.4	48.4		10.9	8.4
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	473	2365	2333		595	594
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.11	0.28	0.29		0.09	0.16
Intersection Summary						
Cycle Length: 70						
Actuated Cycle Length: 70						
Offset: 8 (11%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 8.1

Intersection LOS: A

Intersection Capacity Utilization 53.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Futurue BackgroundAM Peak Hour
Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	48	636	11	15	592	145	22	35	39	127	20	67
Future Volume (vph)	48	636	11	15	592	145	22	35	39	127	20	67
Satd. Flow (prot)	1483	3303	0	1658	3083	0	0	1609	0	1523	1523	0
Flt Permitted	0.359			0.403				0.916		0.811		
Satd. Flow (perm)	559	3303	0	697	3083	0	0	1489	0	1276	1523	0
Satd. Flow (RTOR)		3			57			39			67	
Lane Group Flow (vph)	48	647	0	15	737	0	0	96	0	127	87	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	45.6	45.6		45.6	45.6			16.8		16.8	16.8	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.24		0.24	0.24	
v/c Ratio	0.13	0.30		0.03	0.36			0.25		0.41	0.21	
Control Delay	6.9	5.6		7.0	6.8			13.4		24.6	7.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	6.9	5.6		7.0	6.8			13.4		24.6	7.9	
LOS	A	A		A	A			B		C	A	
Approach Delay		5.7			6.8			13.4			17.8	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	1.6	11.1		0.6	15.5			6.3		15.0	2.2	
Queue Length 95th (m)	3.8	14.4		m2.5	22.3			14.0		23.7	9.8	
Internal Link Dist (m)		241.9			372.4			64.6			105.3	
Turn Bay Length (m)	48.0			40.0						20.0		
Base Capacity (vph)	363	2150		453	2026			575		472	605	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.13	0.30		0.03	0.36			0.17		0.27	0.14	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Future Background AM Peak Hour
Heron Gate Master Plan

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 8.1

Intersection LOS: A

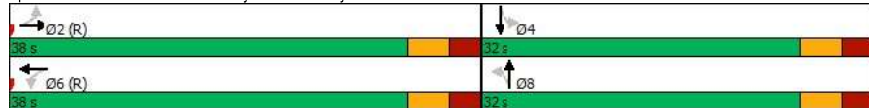
Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 14: Reardon/Baycrest & Walkley



Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2040 Future Background AM Peak Hour
Heron Gate Master Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↗	↘	↩	↗	↘	↩	↗	↘	↩	↗	↘
Traffic Volume (vph)	57	549	98	103	474	25	155	25	117	26	8	50
Future Volume (vph)	57	549	98	103	474	25	155	25	117	26	8	50
Satd. Flow (prot)	1626	3145	0	1580	3161	1483	1595	1470	0	0	1543	0
Flt Permitted	0.481			0.399			0.702				0.875	
Satd. Flow (perm)	820	3145	0	653	3161	1442	1159	1470	0	0	1365	0
Satd. Flow (RTOR)		35			83		117				50	
Lane Group Flow (vph)	57	647	0	103	474	25	155	142	0	0	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	28.2	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3	
Total Split (s)	34.7	34.7		34.7	34.7	34.7	30.3	30.3		30.3	30.3	
Total Split (%)	49.6%	49.6%		49.6%	49.6%	49.6%	43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.3	6.3		6.3	6.3	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	40.6	40.6		40.6	40.6	40.6	16.9	16.9		16.9	16.9	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58	0.24	0.24		0.24	0.24	
v/c Ratio	0.12	0.35		0.27	0.26	0.03	0.56	0.32		0.23	0.23	
Control Delay	6.8	7.6		12.2	9.0	0.1	29.5	7.4		10.5	10.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.8	7.6		12.2	9.0	0.1	29.5	7.4		10.5	10.5	
LOS	A	A		B	A	A	C	A		B	B	
Approach Delay		7.5			9.1			19.0			10.5	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	4.0	25.7		5.5	13.1	0.0	18.6	2.6			3.6	
Queue Length 95th (m)	5.6	36.6		18.8	28.1	0.0	30.1	12.9			11.4	
Internal Link Dist (m)		372.4			588.8			97.2			59.3	
Turn Bay Length (m)	46.0			37.0			25.0					
Base Capacity (vph)	475	1838		378	1833	871	397	580			500	
Starvation Cap Reductn	0	0		0	0	0	0	0			0	
Spillback Cap Reductn	0	0		0	0	0	0	0			0	
Storage Cap Reductn	0	0		0	0	0	0	0			0	
Reduced v/c Ratio	0.12	0.35		0.27	0.26	0.03	0.39	0.24			0.17	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

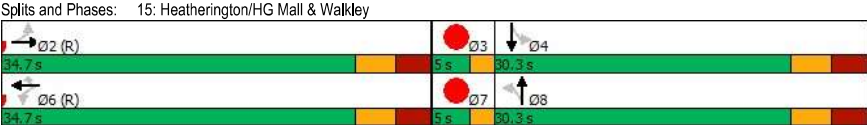
Offset: 64 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Fit Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	7%	7%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 75.0%	ICU Level of Service D
Analysis Period (min) 15	



Lanes, Volumes, Timings

1: Bank & Heron

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖	↖	↖↖	↖↖	↖	↖	↖↖	↖
Traffic Volume (vph)	150	977	556	67	883	126	488	476	70	218	890	175
Future Volume (vph)	150	977	556	67	883	126	488	476	70	218	890	175
Satd. Flow (prot)	1658	3283	1483	1658	3316	1483	3216	3246	0	1658	3223	0
Flt Permitted	0.099			0.181			0.950			0.950		
Satd. Flow (perm)	173	3283	1423	314	3316	1459	3209	3246	0	1654	3223	0
Satd. Flow (RTOR)			402			119		12			18	
Lane Group Flow (vph)	150	977	556	67	883	126	488	546	0	218	1065	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	11.0	56.0	56.0	45.0	45.0	45.0	26.0	42.0		32.0	48.0	
Total Split (%)	8.5%	43.1%	43.1%	34.6%	34.6%	34.6%	20.0%	32.3%		24.6%	36.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	51.7	49.6	49.6	38.6	38.6	38.6	19.5	39.8		21.3	41.6	
Actuated g/C Ratio	0.40	0.38	0.38	0.30	0.30	0.30	0.15	0.31		0.16	0.32	
v/c Ratio	1.03	0.78	0.70	0.72	0.90	0.24	1.01	0.55		0.80	1.02	
Control Delay	115.5	40.7	14.2	82.5	56.7	8.0	98.6	40.0		73.5	76.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	115.5	40.7	14.2	82.5	56.7	8.0	98.6	40.0		73.5	76.1	
LOS	F	D	B	F	E	A	F	D		E	E	
Approach Delay		38.6			52.6			67.6			75.7	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	~26.5	115.0	31.4	15.4	114.1	1.3	~66.3	60.6		54.0	~150.4	
Queue Length 95th (m)	#68.0	141.2	75.5	#41.2	#149.5	15.7	#101.4	81.7		79.6	#192.5	
Internal Link Dist (m)		118.5			157.2			173.2			148.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	145	1252	791	93	984	516	482	1000		325	1043	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.03	0.78	0.70	0.72	0.90	0.24	1.01	0.55		0.67	1.02	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 52 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

05-28-2025

CGH Transportation
Page 1

Lanes, Volumes, Timings

1: Bank & Heron

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 56.9

Intersection LOS: E

Intersection Capacity Utilization 104.9%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Bank & Heron



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CGH Transportation
Page 2

Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	162	1095	35	120	955	211	24	236	115	183	449	144
Future Volume (vph)	162	1095	35	120	955	211	24	236	115	183	449	144
Satd. Flow (prot)	1658	3289	0	1658	3316	1483	1658	1626	0	1610	1658	0
Flt Permitted	0.950			0.950			0.176			0.274		
Satd. Flow (perm)	1631	3289	0	1631	3316	1364	304	1626	0	464	1658	0
Satd. Flow (RTOR)		3				204		19			14	
Lane Group Flow (vph)	162	1130	0	120	955	211	24	351	0	183	593	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	20.0	59.0		16.0	55.0	55.0	44.0	44.0		11.0	55.0	
Total Split (%)	15.4%	45.4%		12.3%	42.3%	42.3%	33.8%	33.8%		8.5%	42.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	14.2	53.4		10.3	49.5	49.5	38.0	38.0		49.3	49.0	
Actuated g/C Ratio	0.11	0.41		0.08	0.38	0.38	0.29	0.29		0.38	0.38	
v/c Ratio	0.90	0.84		0.92	0.76	0.33	0.27	0.72		0.82	0.94	
Control Delay	101.8	41.0		118.0	39.7	5.4	45.3	48.5		62.1	61.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	101.8	41.0		118.0	39.7	5.4	45.3	48.5		62.1	61.8	
LOS	F	D		F	D	A	D	D		E	E	
Approach Delay		48.6			41.4			48.3			61.9	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	41.6	134.6		31.1	111.2	1.1	4.7	76.6		32.6	142.5	
Queue Length 95th (m)	#81.9	163.7		#68.3	136.5	16.8	13.3	112.0		#65.6	#215.1	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	182	1352		131	1263	645	88	488		222	633	
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	0.89	0.84		0.92	0.76	0.33	0.27	0.72		0.82	0.94	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												

05-28-2025

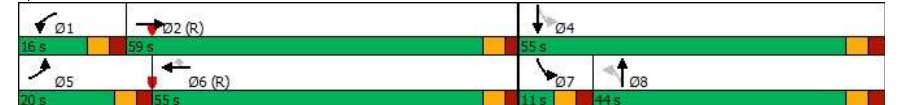
CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.94	Intersection LOS: D
Intersection Signal Delay: 48.9	Intersection Capacity Utilization 102.8%
Analysis Period (min) 15	ICU Level of Service G
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: Alta Vista & Heron



05-28-2025

CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↖
Traffic Volume (vph)	1374	31	14	1257	24	12
Future Volume (vph)	1374	31	14	1257	24	12
Satd. Flow (prot)	3296	0	1658	3316	1658	1210
Flt Permitted			0.170		0.950	
Satd. Flow (perm)	3296	0	296	3316	1639	1188
Satd. Flow (RTOR)	5					12
Lane Group Flow (vph)	1405	0	14	1257	24	12
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.51		0.06	0.46	0.11	0.07
Control Delay	5.6		2.8	2.0	33.0	16.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.6		2.8	2.0	33.0	16.4
LOS	A		A	A	C	B
Approach Delay	5.6			2.0	27.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	42.2		0.1	5.2	3.8	0.0
Queue Length 95th (m)	93.4		m0.9	30.1	9.5	4.2
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2741		246	2757	412	304
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.51		0.06	0.46	0.06	0.04
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

05-28-2025

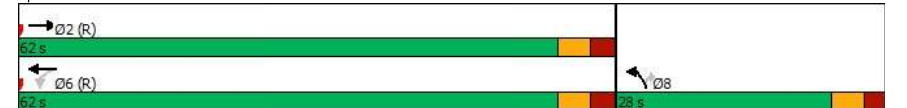
CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.51
Intersection Signal Delay: 4.2 Intersection LOS: A
Intersection Capacity Utilization 60.6% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Finn & Heron



05-28-2025

CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	1030	191	31	986	12	171	14	54	82	16	85
Future Volume (vph)	164	1030	191	31	986	12	171	14	54	82	16	85
Satd. Flow (prot)	1658	3195	0	1642	3308	0	0	1585	0	1537	1416	0
Flt Permitted	0.245			0.176				0.725		0.651		
Satd. Flow (perm)	427	3195	0	303	3308	0	0	1185	0	1050	1416	0
Satd. Flow (RTOR)		37			2			17			85	
Lane Group Flow (vph)	164	1221	0	31	998	0	0	239	0	82	101	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	56.3	56.3		56.3	56.3		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.63	0.63		0.63	0.63		0.24	0.24		0.24	0.24	
v/c Ratio	0.61	0.61		0.16	0.48		0.79	0.32		0.32	0.25	
Control Delay	21.2	9.4		11.6	11.6		47.4	29.1		29.1	8.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.2	9.4		11.6	11.6		47.4	29.1		29.1	8.7	
LOS	C	A		B	B		D	C		C	A	
Approach Delay		10.8			11.6			47.4			17.8	
Approach LOS		B			B			D			B	
Queue Length 50th (m)	9.1	34.4		2.4	42.8			35.9		11.6	2.1	
Queue Length 95th (m)	#53.6	45.8		7.6	60.7			56.0		21.3	12.3	
Internal Link Dist (m)		288.4			285.4			192.7			17.6	
Turn Bay Length (m)	45.0			50.0						24.5		
Base Capacity (vph)	267	2014		189	2071			405		348	527	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.61	0.61		0.16	0.48			0.59		0.24	0.19	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												

05-28-2025

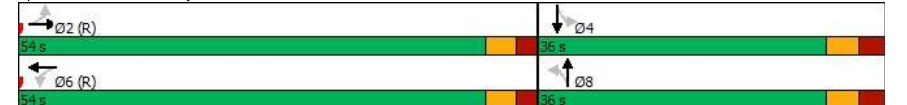
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.79	Intersection LOS: B
Intersection Signal Delay: 14.7	Intersection Capacity Utilization 81.0%
	ICU Level of Service D
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 4: Baycrest/St Pats & Heron



05-28-2025

CGH Transportation
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Lanes, Volumes, Timings

5: Sandalwood/Briar Hill & Heron

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	975	29	42	945	26	17	36	26	11	39	57
Future Volume (vph)	164	975	29	42	945	26	17	36	26	11	39	57
Satd. Flow (prot)	1658	3299	0	1610	3300	0	1658	1586	0	0	1713	1455
Flt Permitted	0.278			0.267			0.724			0.921		
Satd. Flow (perm)	484	3299	0	451	3300	0	1262	1586	0	0	1593	1435
Satd. Flow (RTOR)		5			5			26				57
Lane Group Flow (vph)	164	1004	0	42	971	0	17	62	0	0	50	57
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	35.0
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	38.9%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	68.8	68.8		68.8	68.8		13.8	13.8		13.8	13.8	13.8
Actuated g/C Ratio	0.76	0.76		0.76	0.76		0.15	0.15		0.15	0.15	0.15
v/c Ratio	0.44	0.40		0.12	0.38		0.09	0.23		0.21	0.21	0.21
Control Delay	14.7	7.8		7.5	5.8		29.9	21.9		32.7	9.5	9.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.7	7.8		7.5	5.8		29.9	21.9		32.7	9.5	9.5
LOS	B	A		A	A		C	C		C	A	A
Approach Delay		8.8			5.8			23.6			20.4	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	13.9	35.9		1.3	19.5		2.7	5.8		8.1	0.0	0.0
Queue Length 95th (m)	#49.7	107.1		m7.9	57.6		6.6	13.0		14.1	7.9	
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	369	2523		344	2523		403	525		509	497	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.44	0.40		0.12	0.38		0.04	0.12		0.10	0.11	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 80												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

5: Sandalwood/Briar Hill & Heron

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 8.5

Intersection LOS: A

Intersection Capacity Utilization 64.2%

ICU Level of Service C

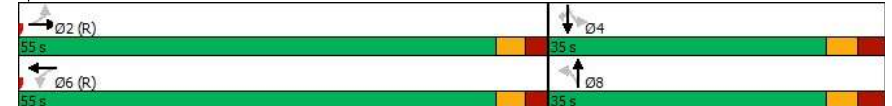
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Sandalwood/Briar Hill & Heron



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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	83	806	128	45	864	38	98	87	96	29	83	54
Future Volume (vph)	83	806	128	45	864	38	98	87	96	29	83	54
Satd. Flow (prot)	1610	3283	1483	1658	3290	0	1658	1745	1483	0	1642	0
Flt Permitted	0.281			0.319			0.616				0.935	
Satd. Flow (perm)	475	3283	1448	556	3290	0	1073	1745	1414	0	1541	0
Satd. Flow (RTOR)			128		8				96		28	
Lane Group Flow (vph)	83	806	128	45	902	0	98	87	96	0	166	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3		6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	56.7	56.7	56.7	56.7	56.7		21.4	21.4	21.4		21.4	
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.63		0.24	0.24	0.24		0.24	
v/c Ratio	0.28	0.39	0.13	0.13	0.43		0.38	0.21	0.23		0.43	
Control Delay	6.5	4.4	0.5	10.6	10.7		30.6	25.8	6.5		25.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	6.5	4.4	0.5	10.6	10.7		30.6	25.8	6.5		25.4	
LOS	A	A	A	B	B		C	C	A		C	
Approach Delay		4.1			10.7			20.9			25.4	
Approach LOS		A			B			C			C	
Queue Length 50th (m)	2.1	10.7	0.2	3.6	47.3		12.6	10.7	0.0		17.7	
Queue Length 95th (m)	5.1	16.3	1.9	9.4	62.4		25.4	21.4	10.2		33.8	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	299	2068	959	350	2075		342	556	516		510	
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	0.28	0.39	0.13	0.13	0.43		0.29	0.16	0.19		0.33	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 68 (76%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	↗	→	←	↖	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Volume (vph)	1	720	976	887	935	27
Future Volume (vph)	1	720	976	887	935	27
Satd. Flow (prot)	1658	3283	3316	2585	3185	0
Flt Permitted	0.202				0.954	
Satd. Flow (perm)	353	3283	3316	2532	3185	0
Satd. Flow (RTOR)				887	3	
Lane Group Flow (vph)	1	720	976	887	962	0
Turn Type	Perm	NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	59.0	59.0	59.0	59.0	51.0	
Total Split (%)	53.6%	53.6%	53.6%	53.6%	46.4%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	52.4	52.4	52.4	52.4	44.3	
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.40	
v/c Ratio	0.01	0.46	0.62	0.53	0.75	
Control Delay	15.0	20.5	23.5	2.4	32.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	15.0	20.5	23.5	2.4	32.5	
LOS	B	C	C	A	C	
Approach Delay		20.5	13.5		32.5	
Approach LOS		C	B		C	
Queue Length 50th (m)	0.1	52.8	79.3	0.0	89.2	
Queue Length 95th (m)	1.0	68.4	100.0	10.7	113.2	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	168	1563	1579	1670	1284	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.46	0.62	0.53	0.75	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 53 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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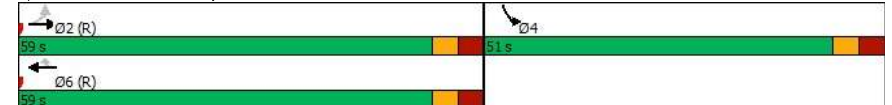
CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.75	Intersection LOS: C
Intersection Signal Delay: 20.1	Intersection Capacity Utilization 68.6%
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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Lanes, Volumes, Timings
8: Baycrest

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	
Traffic Volume (vph)	68	26	32	142	134	75
Future Volume (vph)	68	26	32	142	134	75
Satd. Flow (prot)	1613	0	0	1638	1582	0
Flt Permitted	0.965			0.991		
Satd. Flow (perm)	1613	0	0	1638	1582	0
Lane Group Flow (vph)	94	0	0	174	209	0
Sign Control	Stop			Stop	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 40.4%	ICU Level of Service A					
Analysis Period (min) 15						

HCM 2010 AWSC
8: Baycrest

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Intersection						
Intersection Delay, s/veh	8.6					
Intersection LOS	A					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	68	26	32	142	134	75
Future Vol, veh/h	68	26	32	142	134	75
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	4	2	9	10	2
Mvmt Flow	68	26	32	142	134	75
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1		0	
Conflicting Approach Right	NB				EB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay	8.5		8.6		8.7	
HCM LOS	A		A		A	
Lane	NBLn1	EBLn1	SBLn1			
Vol Left, %	18%	72%	0%			
Vol Thru, %	82%	0%	64%			
Vol Right, %	0%	28%	36%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	174	94	209			
LT Vol	32	68	0			
Through Vol	142	0	134			
RT Vol	0	26	75			
Lane Flow Rate	174	94	209			
Geometry Grp	1	1	1			
Degree of Util (X)	0.214	0.124	0.248			
Departure Headway (Hd)	4.419	4.755	4.273			
Convergence, Y/N	Yes	Yes	Yes			
Cap	814	755	842			
Service Time	2.435	2.779	2.288			
HCM Lane V/C Ratio	0.214	0.125	0.248			
HCM Control Delay	8.6	8.5	8.7			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.8	0.4	1			

Lanes, Volumes, Timings
9: Baycrest & Sandalwood

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	7	63	2	21	5	184	49	26	171	2
Future Volume (vph)	1	1	7	63	2	21	5	184	49	26	171	2
Satd. Flow (prot)	0	1552	0	0	1565	0	0	1615	0	0	1659	0
Flt Permitted		0.994			0.965			0.999			0.994	
Satd. Flow (perm)	0	1552	0	0	1565	0	0	1615	0	0	1659	0
Lane Group Flow (vph)	0	9	0	0	86	0	0	238	0	0	199	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 43.6%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 2010 TWSC
9: Baycrest & Sandalwood

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	7	63	2	21	5	184	49	26	171	2
Future Vol, veh/h	1	1	7	63	2	21	5	184	49	26	171	2
Conflicting Peds, #/hr	9	0	18	18	0	9	10	0	19	19	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	5	2	10	2	8	4	4	7	2
Mvmt Flow	1	1	7	63	2	21	5	184	49	26	171	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	473	496	200	484	473	237	183	0	0	252	0	0
Stage 1	234	234	-	238	238	-	-	-	-	-	-	-
Stage 2	239	262	-	246	235	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.3	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.39	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	501	475	841	488	490	783	1392	-	-	1302	-	-
Stage 1	769	711	-	759	708	-	-	-	-	-	-	-
Stage 2	764	691	-	751	710	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	469	452	823	460	466	766	1381	-	-	1283	-	-
Mov Cap-2 Maneuver	469	452	-	460	466	-	-	-	-	-	-	-
Stage 1	760	690	-	745	695	-	-	-	-	-	-	-
Stage 2	733	678	-	717	689	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.2		13.5		0.2		1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1381	-	-	700	510	1283	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.013	0.169	0.02	-	-				
HCM Control Delay (s)	7.6	0	-	10.2	13.5	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0.1	-	-				

Lanes, Volumes, Timings
10: Bank & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (vph)	335	419	207	247	607	218	194	777	195	272	1261	574
Future Volume (vph)	335	419	207	247	607	218	194	777	195	272	1261	574
Satd. Flow (prot)	3216	3221	1483	3216	3139	0	3216	3316	1483	3216	3316	1483
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3150	3221	1397	3085	3139	0	3157	3316	1434	3183	3316	1368
Satd. Flow (RTOR)			193		38				196			270
Lane Group Flow (vph)	335	419	207	247	825	0	194	777	195	272	1261	574
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	20.0	42.0	42.0	19.0	41.0		14.0	44.0	44.0	25.0	55.0	55.0
Total Split (%)	15.4%	32.3%	32.3%	14.6%	31.5%		10.8%	33.8%	33.8%	19.2%	42.3%	42.3%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.3	29.7	29.7	17.8	34.2		7.6	40.4	40.4	15.8	48.6	48.6
Actuated g/C Ratio	0.10	0.23	0.23	0.14	0.26		0.06	0.31	0.31	0.12	0.37	0.37
v/c Ratio	1.02	0.57	0.44	0.56	0.97		1.03	0.75	0.34	0.70	1.02	0.84
Control Delay	111.1	47.1	9.8	59.5	69.1		133.1	46.4	6.3	64.4	70.4	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.1	47.1	9.8	59.5	69.1		133.1	46.4	6.3	64.4	70.4	32.0
LOS	F	D	A	E	E		F	D	A	E	E	C
Approach Delay		61.3			66.9			54.1			59.2	
Approach LOS		E			E			D			E	
Queue Length 50th (m)	~47.1	48.7	2.7	31.9	106.1		~27.4	94.7	0.0	34.8	~179.5	77.5
Queue Length 95th (m)	#77.0	65.0	22.8	46.0	#147.4		#52.1	121.4	17.1	48.5	#221.6	#146.9
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0			95.0		60.0	110.0		
Base Capacity (vph)	329	874	519	439	856		188	1030	580	460	1239	680
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.48	0.40	0.56	0.96		1.03	0.75	0.34	0.59	1.02	0.84

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings
10: Bank & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 1.03	Intersection LOS: E
Intersection Signal Delay: 60.0	Intersection Capacity Utilization 101.6%
Intersection Capacity Utilization 101.6%	ICU Level of Service G
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

	↖	→	↗	↖	←	↖	↗	↖	↗	↖	↗	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖↗		↖	↖	
Traffic Volume (vph)	33	824	14	18	939	21	12	0	9	7	0	24
Future Volume (vph)	33	824	14	18	939	21	12	0	9	7	0	24
Satd. Flow (prot)	1642	3301	0	1658	3303	0	0	1588	0	1658	1432	0
Flt Permitted	0.292			0.336				0.810		0.744		
Satd. Flow (perm)	503	3301	0	584	3303	0	0	1320	0	1295	1432	0
Satd. Flow (RTOR)		3			4			42			109	
Lane Group Flow (vph)	33	838	0	18	960	0	0	21	0	7	24	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1			5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	68.4	68.4		68.4	68.4			12.8		12.8	12.8	
Actuated g/C Ratio	0.86	0.86		0.86	0.86			0.16		0.16	0.16	
v/c Ratio	0.08	0.30		0.04	0.34			0.09		0.03	0.07	
Control Delay	5.7	4.3		5.6	4.6			3.6		25.1	0.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	5.7	4.3		5.6	4.6			3.6		25.1	0.5	
LOS	A	A		A	A			A		C	A	
Approach Delay		4.4			4.6			3.6			6.0	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	0.0	0.0		0.0	0.0			0.0		1.0	0.0	
Queue Length 95th (m)	6.6	50.5		4.2	60.3			2.5		3.5	0.0	
Internal Link Dist (m)		132.4			376.9			75.5			48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	430	2823		499	2824			426		390	507	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.08	0.30		0.04	0.34			0.05		0.02	0.05	
Intersection Summary												
Cycle Length: 80												
Actuated Cycle Length: 80												
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2040 Future BackgroundPM Peak Hour

05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 4.5

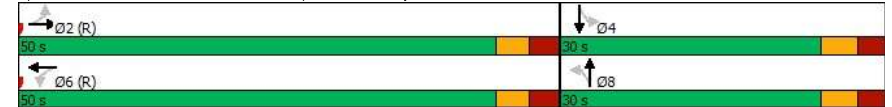
Intersection LOS: A

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	17	688	158	84	856	13	145	1	104	14	2	2
Future Volume (vph)	17	688	158	84	856	13	145	1	104	14	2	2
Satd. Flow (prot)	1658	3316	1441	1658	3308	0	1626	1354	0	1658	1295	0
Flt Permitted	0.950			0.950			0.755			0.689		
Satd. Flow (perm)	1654	3316	1388	1647	3308	0	1285	1354	0	1140	1295	0
Satd. Flow (RTOR)			135		2			104			2	
Lane Group Flow (vph)	17	688	158	84	869	0	145	105	0	14	4	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		30.1	30.1		30.1	30.1	
Total Split (s)	25.0	30.0	30.0	25.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	27.8%	33.3%	33.3%	27.8%	33.3%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	6.5	47.9	47.9	9.9	55.9		16.5	16.5		16.5	16.5	
Actuated g/C Ratio	0.07	0.53	0.53	0.11	0.62		0.18	0.18		0.18	0.18	
v/c Ratio	0.14	0.39	0.20	0.46	0.42		0.62	0.32		0.07	0.02	
Control Delay	41.2	15.6	4.9	45.0	11.7		44.4	8.8		28.4	22.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.2	15.6	4.9	45.0	11.7		44.4	8.8		28.4	22.2	
LOS	D	B	A	D	B		D	A		C	C	
Approach Delay		14.2			14.6			29.5			27.0	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	2.8	39.5	2.0	13.8	32.7		22.4	0.1		2.0	0.3	
Queue Length 95th (m)	8.9	62.3	13.9	26.4	72.8		39.2	12.2		6.6	2.8	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0		25.0			30.0			
Base Capacity (vph)	350	1764	801	350	2056		341	435		302	345	
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	0.05	0.39	0.20	0.24	0.42		0.43	0.24		0.05	0.01	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 32 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	Ø3	Ø7
Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

05-28-2025

CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 16.3

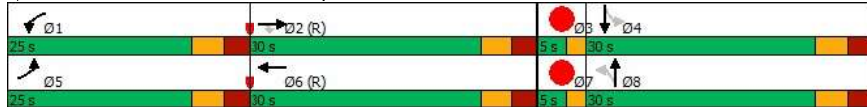
Intersection LOS: B

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	83	752	869	43	76	81
Future Volume (vph)	83	752	869	43	76	81
Satd. Flow (prot)	1658	3316	3287	0	1626	1483
Flt Permitted	0.299				0.950	
Satd. Flow (perm)	520	3316	3287	0	1621	1449
Satd. Flow (RTOR)			10			81
Lane Group Flow (vph)	83	752	912	0	76	81
Turn Type	Perm	NA	NA	Prot	Perm	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	49.0	49.0	49.0		31.0	31.0
Total Split (%)	61.3%	61.3%	61.3%		38.8%	38.8%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	60.3	60.3	60.3		13.1	13.1
Actuated g/C Ratio	0.75	0.75	0.75		0.16	0.16
v/c Ratio	0.21	0.30	0.37		0.29	0.27
Control Delay	7.7	5.4	5.8		30.2	8.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.7	5.4	5.8		30.2	8.3
LOS	A	A	A		C	A
Approach Delay		5.6	5.8		18.9	
Approach LOS		A	A		B	
Queue Length 50th (m)	3.1	15.8	20.3		10.8	0.0
Queue Length 95th (m)	15.3	43.9	55.5		17.7	8.9
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	392	2500	2481		522	520
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.21	0.30	0.37		0.15	0.16
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 20 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 6.8

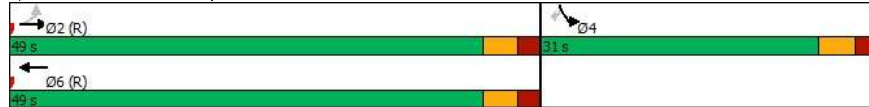
Intersection LOS: A

Intersection Capacity Utilization 61.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	68	721	24	45	841	160	19	16	30	139	23	63
Future Volume (vph)	68	721	24	45	841	160	19	16	30	139	23	63
Satd. Flow (prot)	1642	3294	0	1658	3179	0	0	1579	0	1566	1535	0
Flt Permitted	0.252			0.355				0.900		0.715		
Satd. Flow (perm)	434	3294	0	615	3179	0	0	1439	0	1159	1535	0
Satd. Flow (RTOR)		6			41			30			63	
Lane Group Flow (vph)	68	745	0	45	1001	0	0	65	0	139	86	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	45.5	45.5		45.5	45.5			16.9		16.9	16.9	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.24		0.24	0.24	
v/c Ratio	0.24	0.35		0.11	0.48			0.18		0.50	0.21	
Control Delay	13.2	9.1		10.2	10.2			11.9		27.2	8.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	13.2	9.1		10.2	10.2			11.9		27.2	8.3	
LOS	B	A		B	B			B		C	A	
Approach Delay		9.5			10.2			11.9			20.0	
Approach LOS		A			B			B			B	
Queue Length 50th (m)	3.4	20.8		2.0	30.3			3.8		16.8	2.5	
Queue Length 95th (m)	14.9	46.4		9.0	66.9			10.2		26.3	10.1	
Internal Link Dist (m)		241.9			372.4			64.6			105.3	
Turn Bay Length (m)	48.0			40.0						20.0		
Base Capacity (vph)	281	2141		399	2078			551		428	607	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.24	0.35		0.11	0.48			0.12		0.32	0.14	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 11.0

Intersection LOS: B

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 14: Reardon/Baycrest & Walkley



Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘	↙	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↖	↗		↖	↗	↗	↖	↗			↖	↗		
Traffic Volume (vph)	140	540	174	149	758	81	134	49	108	53	75	108		
Future Volume (vph)	140	540	174	149	758	81	134	49	108	53	75	108		
Satd. Flow (prot)	1658	3108	0	1658	3316	1483	1595	1506	0	0	1582	0		
Flt Permitted	0.247			0.380			0.533				0.884			
Satd. Flow (perm)	430	3108	0	651	3316	1444	873	1506	0	0	1408	0		
Satd. Flow (RTOR)		75				155		108			54			
Lane Group Flow (vph)	140	714	0	149	758	81	134	157	0	0	236	0		
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA			
Protected Phases	5	2			6			8			4			
Permitted Phases	2			6		6	8				4			
Detector Phase	5	2		6	6	6	8	8		4	4			
Switch Phase														
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0			
Minimum Split (s)	11.1	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3			
Total Split (s)	11.0	45.0		34.0	34.0	34.0	30.0	30.0		30.0	30.0			
Total Split (%)	13.8%	56.3%		42.5%	42.5%	42.5%	37.5%	37.5%		37.5%	37.5%			
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3			
All-Red Time (s)	2.8	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0			
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0			
Total Lost Time (s)	6.1	6.2		6.2	6.2	6.2	6.3	6.3			6.3			
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lag	Lag			
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes			
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None			
Act Effct Green (s)	48.4	48.3		34.1	34.1	34.1	19.2	19.2			19.2			
Actuated g/C Ratio	0.60	0.60		0.43	0.43	0.43	0.24	0.24			0.24			
v/c Ratio	0.36	0.37		0.54	0.54	0.12	0.64	0.35			0.62			
Control Delay	11.2	8.8		30.0	20.6	0.5	40.2	10.4			27.0			
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0			
Total Delay	11.2	8.8		30.0	20.6	0.5	40.2	10.4			27.0			
LOS	B	A		C	C	A	D	B			C			
Approach Delay		9.2			20.4			24.2			27.0			
Approach LOS		A			C			C			C			
Queue Length 50th (m)	9.8	27.4		18.5	49.6	0.0	16.7	5.4			22.3			
Queue Length 95th (m)	18.8	40.1		#45.9	69.0	0.7	33.7	18.4			42.8			
Internal Link Dist (m)		372.4			588.8			97.2			59.3			
Turn Bay Length (m)	46.0			37.0			25.0							
Base Capacity (vph)	384	1906		277	1414	704	261	527			460			
Starvation Cap Reductn	0	0		0	0	0	0	0			0			
Spillback Cap Reductn	0	0		0	0	0	0	0			0			
Storage Cap Reductn	0	0		0	0	0	0	0			0			
Reduced v/c Ratio	0.36	0.37		0.54	0.54	0.12	0.51	0.30			0.51			

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 57 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2040 Future BackgroundPM Peak Hour
05-28-2025Heron Gate Mater Plan

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 17.5

Intersection LOS: B

Intersection Capacity Utilization 86.8%

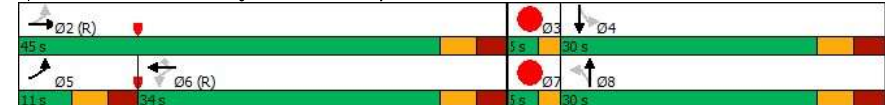
ICU Level of Service E

Analysis Period (min) 15

- 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 15: Heatherington/HG Mall & Walkley



Appendix K

Transit Level of Service Summary

Transit Level of Service Summary

Route	Movement	Existing		2040 Background		2040 Future Total	
		AM	PM	AM	PM	AM	PM
Route 6	Northbound Through at Heron Road & Bank Street	C (32.8)	D (43.0)	D (45.6)	D (40.0)	D (46.2)	D (41.6)
	Southbound Through at Heron Road & Bank Street	D (43.4)	F (90.1)	D (41.2)	E (76.1)	D (41.2)	E (76.1)
	Northbound Through at Walkley Road & Bank Street	D (40.8)	D (39.2)	F (147.4)	D (46.4)	F (147.4)	D (47.4)
	Southbound Through at Walkley Road & Bank Street	D (44.2)	E (61.6)	D (36.9)	E (70.4)	D (36.9)	E (70.4)
Route 41	Eastbound Left at Heron Road & Walkley Road	B (14.0)	B (15.0)	B (14.0)	B (15.0)	B (14.0)	B (15.0)
	Westbound Right at Heron Road & Walkley Road	A (2.4)	A (2.4)	A (2.3)	A (2.4)	A (2.4)	A (2.4)
	Eastbound Through at Heron Road & Jefferson Street/HG Mall	A (9.9)	A (4.3)	A (9.9)	A (4.4)	A (9.2)	A (4.8)
	Westbound Through at Heron Road & Jefferson Street/HG Mall	A (8.7)	B (10.8)	A (8.5)	B (10.7)	A (8.6)	B (11.0)
	Eastbound Through at Heron Road & Sandalwood Drive	A (7.8)	A (8.5)	A (8.4)	A (7.8)	A (8.9)	A (6.5)
	Westbound Through at Heron Road & Sandalwood Drive	A (4.0)	A (5.6)	A (4.4)	A (5.8)	A (4.8)	A (6.3)
	Eastbound Through at Heron Road & Baycrest Drive	A (10.0)	A (9.2)	B (10.4)	A (9.4)	B (14.7)	B (14.6)
	Westbound Through at Heron Road & Baycrest Drive	B (12.4)	B (11.6)	B (12.5)	B (11.6)	B (16.1)	B (14.3)
	Eastbound Through at Heron Road & Finn Court	A (3.0)	A (5.2)	A (2.9)	A (5.6)	A (2.9)	A (6.3)
	Westbound Through at Heron Road & Finn Court	A (5.2)	A (1.6)	A (5.2)	A (2.0)	A (5.8)	A (2.4)
	Eastbound Through at Heron Road & Alta Vista Drive	C (33.2)	E (58.4)	C (31.4)	D (41.0)	D (36.8)	D (51.9)
	Westbound Through at Heron Road & Alta Vista Drive	D (41.4)	D (42.3)	D (36.6)	D (39.7)	D (53.4)	D (44.8)
	Eastbound Through at Heron Road & Bank Street	C (29.1)	D (35.8)	C (26.2)	D (40.7)	C (26.9)	D (46.2)
	Westbound Through at Heron Road & Bank Street	E (71.7)	E (76.5)	D (48.1)	E (56.7)	E (67.2)	E (75.0)
Route 44	Eastbound Through at Walkley Road & Bank Street	D (44.5)	D (47.7)	D (44.2)	D (47.1)	D (44.6)	D (48.3)
	Westbound Through at Walkley Road & Bank Street	A (44.3)	F (100.3)	D (43.3)	E (69.1)	D (46.9)	F (83.4)
	Eastbound Right at Walkley Road & Albion Road/Colliston Crescent	A (4.8)	A (5.7)	A (4.1)	A (4.9)	A (4.1)	A (4.9)
	Northbound Left at Walkley Road & Albion Road/Colliston Crescent	D (49.6)	D (46.2)	D (48.4)	D (44.4)	D (48.4)	D (44.4)
	Eastbound Right at Walkley Road & Heatherington Road/HG Mall	A (7.7)	A (9.6)	A (7.6)	A (8.8)	A (9.6)	A (9.4)
	Northbound Left at Walkley Road & Heatherington Road/HG Mall	C (29.3)	D (44.0)	C (29.5)	D (40.2)	C (29.5)	D (40.2)

Route	Movement	Existing		2040 Background		2040 Future Total	
		AM	PM	AM	PM	AM	PM
	Westbound Right at Walkley Road & Baycrest Drive	A (6.9)	B (11.0)	A (6.8)	B (10.2)	A (8.0)	B (11.4)
	Southbound Left at Walkley Road & Baycrest Drive	C (25.4)	C (28.2)	C (24.6)	C (27.2)	C (32.8)	C (34.6)
	Eastbound Through at Heron Road & Finn Court	A (3.0)	A (5.2)	A (2.9)	A (5.6)	A (2.9)	A (6.3)
	Westbound Through at Heron Road & Finn Court	A (5.2)	A (1.6)	A (5.2)	A (2.0)	A (5.8)	A (2.4)
	Westbound Right at Heron Road & Alta Vista Drive	B (12.2)	A (5.7)	B (10.8)	A (5.4)	B (10.5)	A (7.3)
	Southbound Left at Heron Road & Alta Vista Drive	C (29.0)	C (28.9)	F (82.2)	E (62.1)	F (82.2)	E (62.1)
Route 92	Eastbound Through at Walkley Road & Bank Street	D (44.5)	D (47.7)	D (44.2)	D (47.1)	D (44.6)	D (48.3)
	Westbound Through at Walkley Road & Bank Street	D (44.3)	F (100.3)	D (43.3)	E (69.1)	D (46.9)	F (83.4)
	Eastbound Right at Walkley Road & Albion Road/Colliston Crescent	A (4.8)	A (5.7)	A (4.1)	A (4.9)	A (4.1)	A (4.9)
	Northbound Left at Walkley Road & Albion Road/Colliston Crescent	D (49.6)	D (46.2)	D (48.4)	D (44.4)	D (48.4)	D (44.4)
	Eastbound Right at Walkley Road & Heatherington Road/HG Mall	A (7.7)	A (9.6)	A (7.6)	A (8.8)	A (9.6)	A (9.4)
	Northbound Left at Walkley Road & Heatherington Road/HG Mall	C (29.3)	D (44.0)	C (29.5)	D (40.2)	C (29.5)	D (40.2)
	Westbound Right at Walkley Road & Baycrest Drive	A (6.9)	B (11.0)	A (6.8)	B (10.2)	A (8.0)	B (11.4)
	Southbound Left at Walkley Road & Baycrest Drive	C (25.4)	C (28.2)	C (24.6)	C (27.2)	C (32.8)	C (34.6)
	Eastbound Through at Heron Road & Finn Court	A (3.0)	A (5.2)	A (2.9)	A (5.6)	A (2.9)	A (6.3)
	Westbound Through at Heron Road & Finn Court	A (5.2)	A (1.6)	A (5.2)	A (2.0)	A (5.8)	A (2.4)
	Eastbound Through at Heron Road & Alta Vista Drive	C (33.2)	E (58.4)	C (31.4)	D (41.0)	D (36.8)	D (51.9)
	Westbound Through at Heron Road & Alta Vista Drive	D (41.4)	D (42.3)	D (36.6)	D (39.7)	D (53.4)	D (44.8)
	Eastbound Through at Heron Road & Bank Street	C (29.1)	D (35.8)	C (26.2)	D (40.7)	C (26.9)	D (46.2)
	Westbound Through at Heron Road & Bank Street	E (71.7)	E (76.5)	D (48.1)	E (56.7)	E (67.2)	E (75.0)

Appendix L

Synchro Intersection Worksheets – 2040 Future Total Conditions

Lanes, Volumes, Timings

1: Bank & Heron

2040 Future Total

AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↗	↖	↗	↗	↖	↗	↖	↖	↗	↖
Traffic Volume (vph)	139	805	281	78	1120	148	578	787	39	129	295	119
Future Volume (vph)	139	805	281	78	1120	148	578	787	39	129	295	119
Satd. Flow (prot)	1658	3283	1483	1595	3221	1363	3154	3281	0	1626	3084	0
Flt Permitted	0.087			0.320			0.950			0.950		
Satd. Flow (perm)	152	3283	1411	531	3221	1323	3068	3281	0	1620	3084	0
Satd. Flow (RTOR)			281			188		4			46	
Lane Group Flow (vph)	139	805	281	78	1120	148	578	826	0	129	414	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	11.0	59.0	59.0	48.0	48.0	48.0	28.6	43.0		18.0	32.4	
Total Split (%)	9.2%	49.2%	49.2%	40.0%	40.0%	40.0%	23.8%	35.8%		15.0%	27.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	54.7	52.6	52.6	41.6	41.6	41.6	22.1	36.8		11.3	26.0	
Actuated g/C Ratio	0.46	0.44	0.44	0.35	0.35	0.35	0.18	0.31		0.09	0.22	
v/c Ratio	0.91	0.56	0.36	0.42	1.00	0.25	1.00	0.82		0.85	0.59	
Control Delay	76.4	26.9	3.8	38.8	67.2	2.7	85.7	46.2		95.0	41.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	76.4	26.9	3.8	38.8	67.2	2.7	85.7	46.2		95.0	41.2	
LOS	E	C	A	D	E	A	F	D		F	D	
Approach Delay		27.2			58.5			62.5			54.0	
Approach LOS		C			E			E			D	
Queue Length 50th (m)	19.0	72.7	0.0	14.0	~138.8	0.0	70.7	94.4		30.3	41.2	
Queue Length 95th (m)	#55.9	91.9	15.2	29.6	#186.1	7.0	#107.4	119.2		#63.8	57.8	
Internal Link Dist (m)		118.5			157.2			173.2			94.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	153	1439	776	184	1116	581	580	1008		155	704	
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	0.91	0.56	0.36	0.42	1.00	0.25	1.00	0.82		0.83	0.59	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

05-28-2025

CGH Transportation
Page 1

Lanes, Volumes, Timings

1: Bank & Heron

2040 Future Total

AM Peak Hour

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 50.7

Intersection LOS: D

Intersection Capacity Utilization 99.5%

ICU Level of Service F

Analysis Period (min) 15

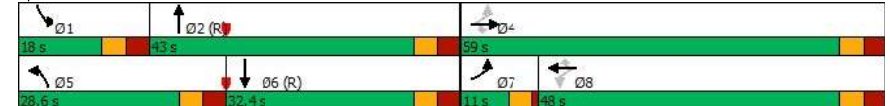
~ Volume exceeds capacity, queue is theoretically infinite.

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: Bank & Heron



05-28-2025

CGH Transportation
Page 2

Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Future Total
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	112	798	73	128	1096	221	66	263	161	176	232	190
Future Volume (vph)	112	798	73	128	1096	221	66	263	161	176	232	190
Satd. Flow (prot)	1658	3146	0	1658	3191	1441	1551	1478	0	1580	1545	0
Flt Permitted	0.950			0.950			0.513			0.173		
Satd. Flow (perm)	1597	3146	0	1540	3191	1173	791	1478	0	288	1545	0
Satd. Flow (RTOR)		11			221		34			54		
Lane Group Flow (vph)	112	871	0	128	1096	221	66	424	0	176	422	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0			5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	12.0	35.0		14.0	37.0	37.0	30.3	30.3		10.7	40.0	
Total Split (%)	13.3%	38.9%		15.6%	41.1%	41.1%	33.7%	33.7%		11.9%	44.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	6.3	29.4		8.3	31.4	31.4	24.3	24.3		35.3	35.0	
Actuated g/C Ratio	0.07	0.33		0.09	0.35	0.35	0.27	0.27		0.39	0.39	
v/c Ratio	0.97	0.84		0.84	0.98	0.40	0.31	1.00		0.96	0.67	
Control Delay	119.9	36.8		70.3	53.4	10.5	31.1	76.7		82.2	25.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	119.9	36.8		70.3	53.4	10.5	31.1	76.7		82.2	25.8	
LOS	F	D		E	D	B	C	E		F	C	
Approach Delay		46.2			48.4			70.6			42.4	
Approach LOS		D			D			E			D	
Queue Length 50th (m)	19.7	72.1		19.2	74.8	7.9	9.1	~68.4		20.4	51.5	
Queue Length 95th (m)	#51.6	#103.1		#51.9	#141.6	34.6	20.7	#128.1		#55.8	84.0	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	116	1035		152	1113	553	213	423		184	633	
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	0.97	0.84		0.84	0.98	0.40	0.31	1.00		0.96	0.67	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 45 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

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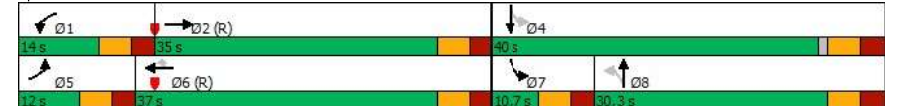
CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 1.00	Intersection LOS: D
Intersection Signal Delay: 49.9	Intersection Capacity Utilization 95.6%
Intersection Capacity Utilization 95.6%	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: 2: Alta Vista & Heron



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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future Total
AM Peak Hour

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↖
Traffic Volume (vph)	1172	12	3	1468	36	10
Future Volume (vph)	1172	12	3	1468	36	10
Satd. Flow (prot)	3242	0	1013	3252	1642	1261
Flt Permitted			0.223		0.950	
Satd. Flow (perm)	3242	0	236	3252	1635	1229
Satd. Flow (RTOR)	2					10
Lane Group Flow (vph)	1184	0	3	1468	36	10
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases			6		8	8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.44		0.02	0.54	0.16	0.06
Control Delay	2.9		5.7	5.8	34.3	16.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	2.9		5.7	5.8	34.3	16.7
LOS	A		A	A	C	B
Approach Delay	2.9			5.8	30.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	21.2		0.1	43.8	5.8	0.0
Queue Length 95th (m)	m40.0		m0.4	m88.6	12.4	4.0
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2696		196	2704	406	313
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.44		0.02	0.54	0.09	0.03
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 48 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green						
Natural Cycle: 65						
Control Type: Actuated-Coordinated						

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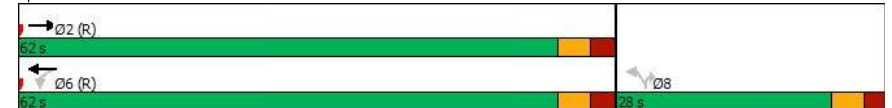
CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.54
Intersection Signal Delay: 4.9
Intersection Capacity Utilization 63.4%
Analysis Period (min) 15
Intersection LOS: A
ICU Level of Service B
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Finn & Heron



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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future Total
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↰	↱	↱
Traffic Volume (vph)	152	824	227	33	1010	29	326	23	53	66	15	80
Future Volume (vph)	152	824	227	33	1010	29	326	23	53	66	15	80
Satd. Flow (prot)	1537	3127	0	1496	3203	0	0	1574	0	1271	1498	0
Flt Permitted	0.194			0.190				0.703		0.630		
Satd. Flow (perm)	313	3127	0	297	3203	0	0	1144	0	842	1498	0
Satd. Flow (RTOR)		56			5			10			71	
Lane Group Flow (vph)	152	1051	0	33	1039	0	0	402	0	66	95	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	51.0	51.0		51.0	51.0		39.0	39.0		39.0	39.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	46.0	46.0		46.0	46.0			32.3		32.3	32.3	
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.36		0.36	0.36	
v/c Ratio	0.96	0.65		0.22	0.63			0.97		0.22	0.16	
Control Delay	82.5	14.7		17.0	16.1			66.1		22.2	8.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	82.5	14.7		17.0	16.1			66.1		22.2	8.0	
LOS	F	B		B	B			E		C	A	
Approach Delay		23.2			16.1			66.1			13.8	
Approach LOS		C			B			E			B	
Queue Length 50th (m)	16.2	53.0		2.1	56.9			65.0		7.7	2.6	
Queue Length 95th (m)	#61.6	36.3		7.8	61.6			#122.6		17.5	12.2	
Internal Link Dist (m)		288.4			285.4			192.7			17.6	
Turn Bay Length (m)	45.0			50.0						24.5		
Base Capacity (vph)	159	1627		151	1641			424		307	592	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.96	0.65		0.22	0.63			0.95		0.21	0.16	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 64 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 80												
Control Type: Actuated-Coordinated												

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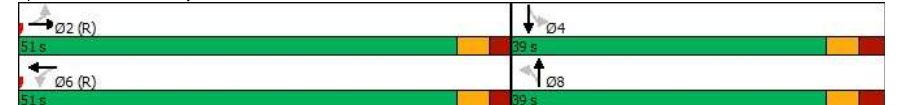
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.97	Intersection LOS: C
Intersection Signal Delay: 26.1	Intersection Capacity Utilization 85.3%
Analysis Period (min) 15	ICU Level of Service E
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 4: Baycrest/St Pats & Heron



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CGH Transportation
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Lanes, Volumes, Timings

5: Sandalwood/Briar Hill & Heron

2040 Future Total

AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	64	840	43	30	815	12	94	26	44	28	29	135
Future Volume (vph)	64	840	43	30	815	12	94	26	44	28	29	135
Satd. Flow (prot)	1610	3218	0	1610	3185	0	1642	1437	0	0	1695	1483
Flt Permitted	0.324			0.303			0.720				0.826	
Satd. Flow (perm)	549	3218	0	510	3185	0	1235	1437	0	0	1427	1452
Satd. Flow (RTOR)		9			2			44				135
Lane Group Flow (vph)	64	883	0	30	827	0	94	70	0	0	57	135
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	36.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	63.1	63.1		63.1	63.1		15.1	15.1		15.1	15.1	15.1
Actuated g/C Ratio	0.70	0.70		0.70	0.70		0.17	0.17		0.17	0.17	0.17
v/c Ratio	0.17	0.39		0.08	0.37		0.45	0.25		0.24	0.38	0.38
Control Delay	8.9	8.9		5.3	4.8		38.8	15.8		32.0	8.0	8.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.9	8.9		5.3	4.8		38.8	15.8		32.0	8.0	8.0
LOS	A	A		A	A		D	B		C	A	A
Approach Delay		8.9			4.8			29.0			15.1	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	4.9	36.8		0.9	17.6		15.1	3.9		9.0	0.0	0.0
Queue Length 95th (m)	m8.1	m47.2		3.7	26.1		m23.3	m11.5		15.5	11.8	
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	384	2257		357	2232		408	505		472	571	
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	0.17	0.39		0.08	0.37		0.23	0.14		0.12	0.24	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

5: Sandalwood/Briar Hill & Heron

2040 Future Total

AM Peak Hour

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 9.3

Intersection LOS: A

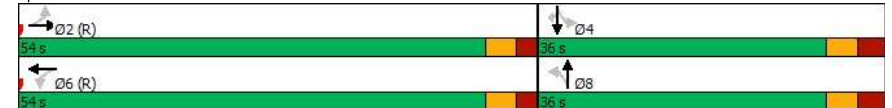
Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 5: Sandalwood/Briar Hill & Heron



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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future Total
AM Peak Hour

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘	↘	↙	↘	↘	↙	↘	↙	↘	↘	↙
Traffic Volume (vph)	77	779	80	23	741	39	42	66	35	32	36	70
Future Volume (vph)	77	779	80	23	741	39	42	66	35	32	36	70
Satd. Flow (prot)	1610	3252	1441	1551	3157	0	1658	1745	1363	0	1537	0
Flt Permitted	0.338			0.338			0.653				0.912	
Satd. Flow (perm)	571	3252	1441	552	3157	0	1136	1745	1322	0	1413	0
Satd. Flow (RTOR)			80		9				35		61	
Lane Group Flow (vph)	77	779	80	23	780	0	42	66	35	0	138	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	54.0	54.0	54.0	54.0	54.0		36.0	36.0	36.0	36.0	36.0	
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3		6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	60.4	60.4	60.4	60.4	60.4		17.7	17.7	17.7		17.7	
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.67		0.20	0.20	0.20		0.20	
v/c Ratio	0.20	0.36	0.08	0.06	0.37		0.19	0.19	0.12		0.42	
Control Delay	11.2	9.2	4.6	8.9	8.6		28.1	28.0	8.6		19.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	11.2	9.2	4.6	8.9	8.6		28.1	28.0	8.6		19.9	
LOS	B	A	A	A	A		C	C	A		B	
Approach Delay		9.0			8.6			23.3			19.9	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	2.5	21.4	0.9	0.8	18.4		6.8	10.7	0.0		12.7	
Queue Length 95th (m)	17.7	59.2	9.2	5.5	53.3		12.4	17.1	6.3		23.1	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	383	2183	993	370	2122		374	575	459		507	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.20	0.36	0.08	0.06	0.37		0.11	0.11	0.08		0.27	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Future Total
AM Peak Hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	695	701	823	799	30
Future Volume (vph)	1	695	701	823	799	30
Satd. Flow (prot)	1658	3283	3191	2512	3151	0
Flt Permitted	0.329				0.954	
Satd. Flow (perm)	574	3283	3191	2459	3151	0
Satd. Flow (RTOR)				823	4	
Lane Group Flow (vph)	1	695	701	823	829	0
Turn Type	Perm	NA	NA	Perm	Perm	
Protected Phases		2	6			
Permitted Phases	2			6	4	
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	54.0	54.0	54.0	54.0	46.0	
Total Split (%)	54.0%	54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	47.4	47.4	47.4	47.4	39.3	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.39	
v/c Ratio	0.00	0.45	0.46	0.52	0.67	
Control Delay	14.0	18.7	19.0	2.4	28.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.0	18.7	19.0	2.4	28.1	
LOS	B	B	B	A	C	
Approach Delay		18.7	10.0		28.1	
Approach LOS		B	B		C	
Queue Length 50th (m)	0.1	45.6	46.5	0.0	66.6	
Queue Length 95th (m)	1.0	60.3	61.5	10.3	87.0	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	272	1556	1512	1598	1240	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.00	0.45	0.46	0.52	0.67	
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.9

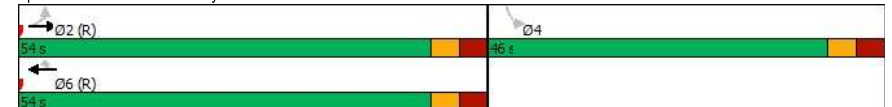
Intersection LOS: B

Intersection Capacity Utilization 56.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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Lanes, Volumes, Timings
8: Baycrest

2040 Future Total
AM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	111	22	42	189	167	93
Future Volume (vph)	111	22	42	189	167	93
Satd. Flow (prot)	1631	0	0	1635	1591	0
Flt Permitted	0.960			0.991		
Satd. Flow (perm)	1631	0	0	1635	1591	0
Lane Group Flow (vph)	133	0	0	231	260	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 48.6%				ICU Level of Service A		
Analysis Period (min) 15						

HCM 2010 TWSC
8: Baycrest

2040 Future Total
AM Peak Hour

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	111	22	42	189	167	93
Future Vol, veh/h	111	22	42	189	167	93
Conflicting Peds, #/hr	20	13	13	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	5	3	9	9	2
Mvmt Flow	111	22	42	189	167	93
Major/Minor						
	Minor2	Major1	Major2			
Conflicting Flow All	520	240	273	0	-	0
Stage 1	227	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.42	6.25	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	516	792	1284	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	487	776	1271	-	-	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Approach						
	EB	NB	SB			
HCM Control Delay, s	14.3	1.4	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBL	NBT EBLn1	SBT	SBR		
Capacity (veh/h)	1271	-	519	-	-	
HCM Lane V/C Ratio	0.033	-	0.256	-	-	
HCM Control Delay (s)	7.9	0	14.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	1	-	-	

Lanes, Volumes, Timings
9: Baycrest & Sandalwood

2040 Future Total
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	4	6	8	80	4	29	3	200	57	9	160	2
Future Volume (vph)	4	6	8	80	4	29	3	200	57	9	160	2
Satd. Flow (prot)	0	1622	0	0	1607	0	0	1608	0	0	1630	0
Flt Permitted		0.989			0.966			0.999			0.997	
Satd. Flow (perm)	0	1622	0	0	1607	0	0	1608	0	0	1630	0
Lane Group Flow (vph)	0	18	0	0	113	0	0	260	0	0	171	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 36.6%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 2010 TWSC
9: Baycrest & Sandalwood

2040 Future Total
AM Peak Hour

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	6	8	80	4	29	3	200	57	9	160	2
Future Vol, veh/h	4	6	8	80	4	29	3	200	57	9	160	2
Conflicting Peds, #/hr	9	0	6	6	0	9	6	0	24	24	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	7	2	8	5	22	8	2
Mvmt Flow	4	6	8	80	4	29	3	200	57	9	160	2
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	445	472	173	451	445	262	168	0	0	281	0	0
Stage 1	185	185	-	259	259	-	-	-	-	-	-	-
Stage 2	260	287	-	192	186	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.27	4.12	-	-	4.32	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.363	2.218	-	-	2.398	-	-
Pot Cap-1 Maneuver	523	490	871	519	508	765	1410	-	-	1175	-	-
Stage 1	817	747	-	746	694	-	-	-	-	-	-	-
Stage 2	745	674	-	810	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	489	472	863	493	490	746	1403	-	-	1153	-	-
Mov Cap-2 Maneuver	489	472	-	493	490	-	-	-	-	-	-	-
Stage 1	810	737	-	730	679	-	-	-	-	-	-	-
Stage 2	705	659	-	785	736	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.2		13.4			0.1			0.4			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1403	-	-	597	540	1153	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.03	0.209	0.008	-	-				
HCM Control Delay (s)	7.6	0	-	11.2	13.4	8.1	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0	-	-				

Lanes, Volumes, Timings

10: Bank & Walkley

2040 Future Total

AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↖↖	↖↖		↖↖	↖↖	↖	↖↖	↖↖	↖
Traffic Volume (vph)	427	459	162	115	426	306	159	1413	190	165	514	264
Future Volume (vph)	427	459	162	115	426	306	159	1413	190	165	514	264
Satd. Flow (prot)	3154	3316	1483	3154	2991	0	3185	3283	1414	3216	3252	1469
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3117	3316	1418	3066	2991	0	3135	3283	1383	3209	3252	1424
Satd. Flow (RTOR)			209		148				215			273
Lane Group Flow (vph)	427	459	162	115	732	0	159	1413	190	165	514	264
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	19.3	47.0	47.0	12.0	39.7		26.0	48.3	48.3	12.7	35.0	35.0
Total Split (%)	16.1%	39.2%	39.2%	10.0%	33.1%		21.7%	40.3%	40.3%	10.6%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.5	27.1	27.1	18.4	29.0		11.3	41.9	41.9	6.3	36.9	36.9
Actuated g/C Ratio	0.14	0.23	0.23	0.15	0.24		0.09	0.35	0.35	0.05	0.31	0.31
v/c Ratio	0.99	0.61	0.34	0.24	0.88		0.53	1.23	0.31	0.98	0.51	0.42
Control Delay	92.5	44.6	3.6	48.9	46.9		58.0	147.4	3.7	121.9	36.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.5	44.6	3.6	48.9	46.9		58.0	147.4	3.7	121.9	36.9	5.7
LOS	F	D	A	D	D		E	F	A	F	D	A
Approach Delay		57.8			47.2			123.9			43.0	
Approach LOS		E			D			F			D	
Queue Length 50th (m)	~58.0	47.9	0.0	13.1	70.4		18.7	~216.5	0.0	20.4	52.3	0.0
Queue Length 95th (m)	#97.9	64.2	7.1	22.4	91.5		28.8	#258.8	10.9	#42.5	72.0	17.5
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0			95.0		60.0	110.0		
Base Capacity (vph)	433	1113	615	483	929		520	1146	622	168	999	626
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.41	0.26	0.24	0.79		0.31	1.23	0.31	0.98	0.51	0.42

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings

10: Bank & Walkley

2040 Future Total

AM Peak Hour

Maximum v/c Ratio: 1.23

Intersection Signal Delay: 78.1

Intersection LOS: E

Intersection Capacity Utilization 106.3%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2040 Future Total

AM Peak Hour

	↖	→	↗	↖	←	↖	↗	↖	↗	↖	↗	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖↗		↖	↖	
Traffic Volume (vph)	7	661	5	11	862	11	15	0	10	13	1	17
Future Volume (vph)	7	661	5	11	862	11	15	0	10	13	1	17
Satd. Flow (prot)	1658	3275	0	1551	3276	0	0	1503	0	1658	1468	0
Flt Permitted	0.318			0.399				0.806		0.741		
Satd. Flow (perm)	555	3275	0	649	3276	0	0	1242	0	1292	1468	0
Satd. Flow (RTOR)		1			2			48			17	
Lane Group Flow (vph)	7	666	0	11	873	0	0	25	0	13	18	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Split (%)	57.1%	57.1%		57.1%	57.1%		42.9%	42.9%		42.9%	42.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	54.0	54.0		54.0	54.0		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.77	0.77		0.77	0.77		0.18	0.18		0.18	0.18	
v/c Ratio	0.02	0.26		0.02	0.35		0.09	0.06		0.06	0.06	
Control Delay	7.1	5.6		7.1	6.1		3.1			21.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay	7.1	5.6		7.1	6.1		3.1			21.0	10.3	
LOS	A	A		A	A		A			C	B	
Approach Delay		5.6			6.2		3.1				14.8	
Approach LOS		A			A		A				B	
Queue Length 50th (m)	0.2	14.8		0.4	21.1		0.0			1.5	0.1	
Queue Length 95th (m)	2.3	39.6		3.1	55.1		2.4			4.4	3.8	
Internal Link Dist (m)		132.4			376.9		75.5				48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	428	2527		501	2528		459			444	516	
Starvation Cap Reductn	0	0		0	0		0			0	0	
Spillback Cap Reductn	0	0		0	0		0			0	0	
Storage Cap Reductn	0	0		0	0		0			0	0	
Reduced v/c Ratio	0.02	0.26		0.02	0.35		0.05			0.03	0.03	
Intersection Summary												
Cycle Length: 70												
Actuated Cycle Length: 70												
Offset: 44 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2040 Future Total

AM Peak Hour

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 6.1

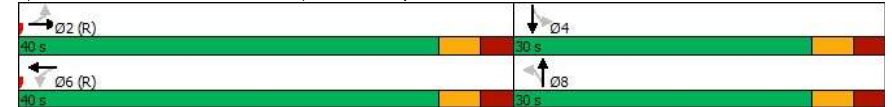
Intersection LOS: A

Intersection Capacity Utilization 47.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future Total
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	556	125	131	724	12	168	2	135	18	2	6
Future Volume (vph)	4	556	125	131	724	12	168	2	135	18	2	6
Satd. Flow (prot)	1658	3283	1441	1566	3273	0	1566	1360	0	1658	1500	0
Flt Permitted	0.950			0.950			0.752			0.669		
Satd. Flow (perm)	1650	3283	1354	1536	3273	0	1203	1360	0	1121	1500	0
Satd. Flow (RTOR)			135		2			135			6	
Lane Group Flow (vph)	4	556	125	131	736	0	168	137	0	18	8	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		25.1	25.1		25.1	25.1	
Total Split (s)	20.0	35.0	35.0	20.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	22.2%	38.9%	38.9%	22.2%	38.9%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	5.8	41.3	41.3	12.7	57.5		17.9	17.9		17.9	17.9	
Actuated g/C Ratio	0.06	0.46	0.46	0.14	0.64		0.20	0.20		0.20	0.20	
v/c Ratio	0.04	0.37	0.18	0.60	0.35		0.70	0.36		0.08	0.03	
Control Delay	40.0	18.9	4.1	46.7	10.0		48.4	8.0		27.0	17.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.0	18.9	4.1	46.7	10.0		48.4	8.0		27.0	17.0	
LOS	D	B	A	D	A		D	A		C	B	
Approach Delay		16.3			15.5			30.2			23.9	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	0.7	32.5	0.0	21.5	26.3		26.8	0.3		2.5	0.3	
Queue Length 95th (m)	3.8	56.4	10.1	36.7	61.6		44.0	13.1		7.4	3.4	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0			25.0			30.0		
Base Capacity (vph)	257	1505	694	259	2090		322	463		300	406	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.37	0.18	0.51	0.35		0.52	0.30		0.06	0.02	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 14 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future Total
AM Peak Hour

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 18.3

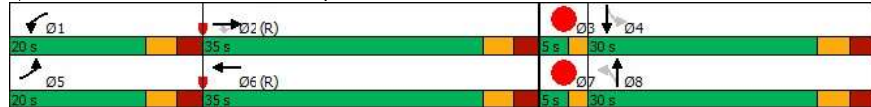
Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Future Total
AM Peak Hour

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	669	699	38	90	154
Future Volume (vph)	75	669	699	38	90	154
Satd. Flow (prot)	1595	3283	3225	0	1626	1483
Flt Permitted	0.363				0.950	
Satd. Flow (perm)	609	3283	3225	0	1622	1455
Satd. Flow (RTOR)			11			154
Lane Group Flow (vph)	75	669	737	0	90	154
Turn Type	Perm	NA	NA		Perm	Perm
Protected Phases		2	6			
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	39.0	39.0	39.0		31.0	31.0
Total Split (%)	55.7%	55.7%	55.7%		44.3%	44.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	46.2	46.2	46.2		13.1	13.1
Actuated g/C Ratio	0.66	0.66	0.66		0.19	0.19
v/c Ratio	0.19	0.31	0.35		0.30	0.39
Control Delay	8.2	6.6	9.8		25.3	6.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.2	6.6	9.8		25.3	6.8
LOS	A	A	A		C	A
Approach Delay		6.8	9.8		13.6	
Approach LOS		A	A		B	
Queue Length 50th (m)	2.7	13.7	11.2		10.9	0.0
Queue Length 95th (m)	13.5	39.5	52.3		16.9	10.4
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	401	2165	2130		595	631
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.19	0.31	0.35		0.15	0.24
Intersection Summary						
Cycle Length: 70						
Actuated Cycle Length: 70						
Offset: 8 (11%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

Lanes, Volumes, Timings
13: Walkley & Cedarwood

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.0

Intersection LOS: A

Intersection Capacity Utilization 55.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Future Total
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Traffic Volume (vph)	64	675	11	15	608	170	22	35	39	185	20	106
Future Volume (vph)	64	675	11	15	608	170	22	35	39	185	20	106
Satd. Flow (prot)	1483	3307	0	1658	3069	0	0	1609	0	1523	1503	0
Flt Permitted	0.330			0.374				0.915		0.695		
Satd. Flow (perm)	514	3307	0	647	3069	0	0	1487	0	1093	1503	0
Satd. Flow (RTOR)		3			68			39			106	
Lane Group Flow (vph)	64	686	0	15	778	0	0	96	0	185	126	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	39.8	39.8		39.8	39.8			18.2		18.2	18.2	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.26		0.26	0.26	
v/c Ratio	0.22	0.36		0.04	0.44			0.23		0.65	0.27	
Control Delay	8.6	7.0		7.0	8.0			12.7		32.8	6.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	8.6	7.0		7.0	8.0			12.7		32.8	6.6	
LOS	A	A		A	A			B		C	A	
Approach Delay		7.1			8.0			12.7			22.2	
Approach LOS		A			A			B			C	
Queue Length 50th (m)	2.5	13.8		0.6	15.5			5.9		22.0	2.0	
Queue Length 95th (m)	5.3	17.6		m2.3	21.8			14.0		35.8	11.3	
Internal Link Dist (m)		241.9			372.4			64.6			105.3	
Turn Bay Length (m)	48.0			40.0						20.0		
Base Capacity (vph)	292	1880		367	1773			574		404	622	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.22	0.36		0.04	0.44			0.17		0.46	0.20	
Intersection Summary												
Cycle Length: 70												
Actuated Cycle Length: 70												
Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2040 Future Total
AM Peak Hour

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.1

Intersection LOS: B

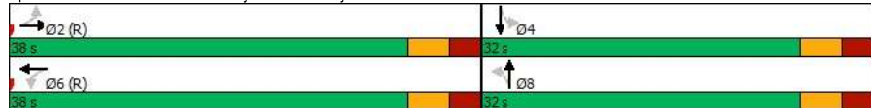
Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 14: Reardon/Baycrest & Walkley



Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2040 Future Total
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	57	646	98	103	515	25	155	25	117	26	8	50
Future Volume (vph)	57	646	98	103	515	25	155	25	117	26	8	50
Satd. Flow (prot)	1626	3163	0	1580	3161	1483	1595	1470	0	0	1543	0
Flt Permitted	0.462			0.351			0.702				0.875	
Satd. Flow (perm)	788	3163	0	576	3161	1442	1159	1470	0	0	1365	0
Satd. Flow (RTOR)		29			83		117				50	
Lane Group Flow (vph)	57	744	0	103	515	25	155	142	0	0	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	28.2	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3	
Total Split (s)	34.7	34.7		34.7	34.7	34.7	30.3	30.3		30.3	30.3	
Total Split (%)	49.6%	49.6%		49.6%	49.6%	49.6%	43.3%	43.3%		43.3%	43.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.3	6.3		6.3	6.3	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	40.6	40.6		40.6	40.6	40.6	16.9	16.9		16.9	16.9	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58	0.24	0.24		0.24	0.24	
v/c Ratio	0.12	0.40		0.31	0.28	0.03	0.56	0.32		0.23	0.23	
Control Delay	8.4	9.6		13.3	9.1	0.1	29.5	7.4		10.5	10.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.4	9.6		13.3	9.1	0.1	29.5	7.4		10.5	10.5	
LOS	A	A		B	A	A	C	A		A	B	
Approach Delay		9.5			9.4			19.0			10.5	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	4.3	32.3		5.6	14.5	0.0	18.6	2.6			3.6	
Queue Length 95th (m)	m8.2	23.0		19.9	30.7	0.0	30.1	12.9			11.4	
Internal Link Dist (m)		372.4			588.8			97.2			59.3	
Turn Bay Length (m)	46.0			37.0			25.0					
Base Capacity (vph)	457	1846		334	1833	871	397	580			500	
Starvation Cap Reductn	0	0		0	0	0	0	0			0	
Spillback Cap Reductn	0	0		0	0	0	0	0			0	
Storage Cap Reductn	0	0		0	0	0	0	0			0	
Reduced v/c Ratio	0.12	0.40		0.31	0.28	0.03	0.39	0.24			0.17	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

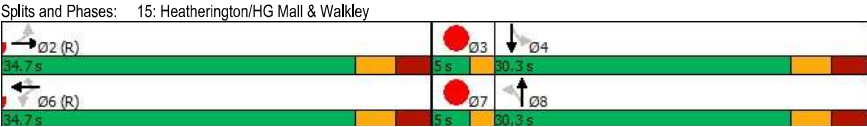
Offset: 64 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	7%	7%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.



Lanes, Volumes, Timings

1: Bank & Heron

2030 Future Total

PM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖	↖	↖↖	↖↖	↖	↖	↖↖	↖
Traffic Volume (vph)	150	1091	556	67	987	143	488	476	75	251	890	175
Future Volume (vph)	150	1091	556	67	987	143	488	476	75	251	890	175
Satd. Flow (prot)	1658	3283	1483	1658	3316	1483	3216	3242	0	1658	3223	0
Flt Permitted	0.093			0.124			0.950			0.950		
Satd. Flow (perm)	162	3283	1423	216	3316	1459	3209	3242	0	1654	3223	0
Satd. Flow (RTOR)			402			119		13			18	
Lane Group Flow (vph)	150	1091	556	67	987	143	488	551	0	251	1065	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.3	34.4	34.4	34.4	34.4	34.4	11.5	32.4		11.5	32.4	
Total Split (s)	11.0	56.0	56.0	45.0	45.0	45.0	26.0	42.0		32.0	48.0	
Total Split (%)	8.5%	43.1%	43.1%	34.6%	34.6%	34.6%	20.0%	32.3%		24.6%	36.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.3	6.4	6.4	6.4	6.4	6.4	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	Max	Max	Max	None	C-Max		None	C-Max	
Act Effct Green (s)	51.7	49.6	49.6	38.6	38.6	38.6	19.5	38.0		23.1	41.6	
Actuated g/C Ratio	0.40	0.38	0.38	0.30	0.30	0.30	0.15	0.29		0.18	0.32	
v/c Ratio	1.06	0.87	0.70	1.05	1.00	0.28	1.01	0.58		0.85	1.02	
Control Delay	124.6	46.2	14.2	172.2	75.0	10.2	98.6	41.6		77.3	76.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	124.6	46.2	14.2	172.2	75.0	10.2	98.6	41.6		77.3	76.1	
LOS	F	D	B	F	E	B	F	D		E	E	
Approach Delay		42.8			72.7			68.4			76.3	
Approach LOS		D			E			E			E	
Queue Length 50th (m)	~26.8	135.1	31.4	~18.6	~133.8	4.4	~66.3	63.4		61.6	~150.4	
Queue Length 95th (m)	#70.1	164.5	75.5	#48.9	#179.4	20.1	#101.4	82.6		#99.2	#192.5	
Internal Link Dist (m)		118.5			157.2			173.2			148.5	
Turn Bay Length (m)	60.0		75.0	40.0		60.0	90.0			50.0		
Base Capacity (vph)	141	1252	791	64	984	516	482	957		325	1043	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.06	0.87	0.70	1.05	1.00	0.28	1.01	0.58		0.77	1.02	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 52 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

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CGH Transportation
Page 1

Lanes, Volumes, Timings

1: Bank & Heron

2030 Future Total

PM Peak Hour

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 62.7

Intersection LOS: E

Intersection Capacity Utilization 108.2%

ICU Level of Service G

Analysis Period (min): 15

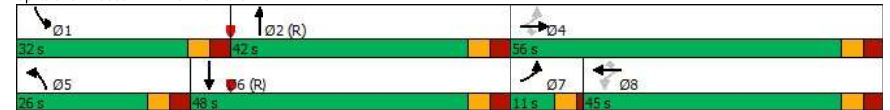
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Bank & Heron



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CGH Transportation
Page 2

Lanes, Volumes, Timings
2: Alta Vista & Heron

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑↓	→	←	↑↓	→	←	↑↓	→	←	↑↓	→
Traffic Volume (vph)	162	1248	35	120	1076	211	24	236	115	183	449	144
Future Volume (vph)	162	1248	35	120	1076	211	24	236	115	183	449	144
Satd. Flow (prot)	1658	3294	0	1658	3316	1483	1658	1626	0	1610	1658	0
Flt Permitted	0.950			0.950			0.176			0.274		
Satd. Flow (perm)	1635	3294	0	1636	3316	1364	304	1626	0	464	1658	0
Satd. Flow (RTOR)		3				181		19			14	
Lane Group Flow (vph)	162	1283	0	120	1076	211	24	351	0	183	593	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	10.0	10.0		5.0	10.0	
Minimum Split (s)	10.7	22.5		10.7	22.5	22.5	24.0	24.0		10.7	30.0	
Total Split (s)	20.0	59.0		16.0	55.0	55.0	44.0	44.0		11.0	55.0	
Total Split (%)	15.4%	45.4%		12.3%	42.3%	42.3%	33.8%	33.8%		8.5%	42.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.4	2.3		2.4	2.3	2.3	2.7	2.7		2.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.6		5.7	5.6	5.6	6.0	6.0		5.7	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	14.2	53.4		10.3	49.5	49.5	38.0	38.0		49.3	49.0	
Actuated g/C Ratio	0.11	0.41		0.08	0.38	0.38	0.29	0.29		0.38	0.38	
v/c Ratio	0.90	0.95		0.92	0.85	0.33	0.27	0.72		0.82	0.94	
Control Delay	101.8	51.9		118.0	44.8	7.3	45.3	48.5		62.1	61.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	101.8	51.9		118.0	44.8	7.3	45.3	48.5		62.1	61.8	
LOS	F	D		F	D	A	D	D		E	E	
Approach Delay		57.5			45.4			48.3			61.9	
Approach LOS		E			D			D			E	
Queue Length 50th (m)	41.6	164.4		31.1	132.1	4.8	4.7	76.6		32.6	142.5	
Queue Length 95th (m)	#81.9	#212.0		#68.3	160.8	21.8	13.3	112.0		#65.6	#215.1	
Internal Link Dist (m)		157.8			327.7			230.1			131.5	
Turn Bay Length (m)	65.0			57.0		75.0	21.0			38.0		
Base Capacity (vph)	182	1354		131	1263	631	88	488		222	633	
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	0.89	0.95		0.92	0.85	0.33	0.27	0.72		0.82	0.94	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 100												
Control Type: Actuated-Coordinated												

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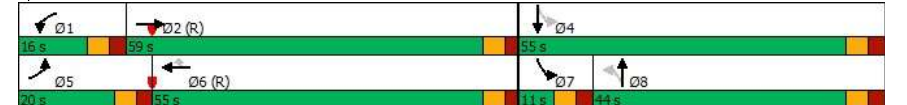
CGH Transportation
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Lanes, Volumes, Timings
2: Alta Vista & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.95	Intersection LOS: D
Intersection Signal Delay: 53.2	Intersection Capacity Utilization 107.2%
Analysis Period (min) 15	ICU Level of Service G
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: Alta Vista & Heron



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CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2030 Future Total
PM Peak Hour

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↖
Traffic Volume (vph)	1527	31	14	1378	24	12
Future Volume (vph)	1527	31	14	1378	24	12
Satd. Flow (prot)	3297	0	1658	3316	1658	1210
Flt Permitted			0.139		0.950	
Satd. Flow (perm)	3297	0	242	3316	1639	1188
Satd. Flow (RTOR)	4					12
Lane Group Flow (vph)	1558	0	14	1378	24	12
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	10.0
Minimum Split (s)	33.0		24.0	24.0	26.6	26.6
Total Split (s)	62.0		62.0	62.0	28.0	28.0
Total Split (%)	68.9%		68.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.7		2.7	2.7	2.3	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	None
Act Effct Green (s)	74.8		74.8	74.8	12.2	12.2
Actuated g/C Ratio	0.83		0.83	0.83	0.14	0.14
v/c Ratio	0.57		0.07	0.50	0.11	0.07
Control Delay	6.3		3.4	2.4	33.0	16.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	6.3		3.4	2.4	33.0	16.4
LOS	A		A	A	C	B
Approach Delay	6.3			2.4	27.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	51.2		0.2	9.6	3.8	0.0
Queue Length 95th (m)	113.1		m0.9	39.2	9.5	4.2
Internal Link Dist (m)	327.7			288.4	117.2	
Turn Bay Length (m)			50.0		15.0	
Base Capacity (vph)	2742		201	2757	412	304
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.57		0.07	0.50	0.06	0.04
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green						
Natural Cycle: 65						
Control Type: Actuated-Coordinated						

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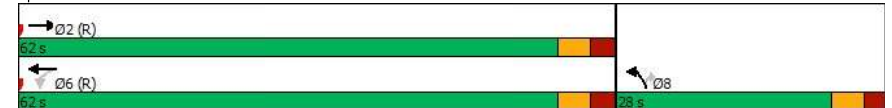
CGH Transportation
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Lanes, Volumes, Timings
3: Finn & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.57
Intersection Signal Delay: 4.7
Intersection Capacity Utilization 65.0%
Analysis Period (min) 15
Intersection LOS: A
ICU Level of Service C
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Finn & Heron



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CGH Transportation
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↱	↰	↰
Traffic Volume (vph)	164	1088	287	51	1032	12	247	14	70	82	16	85
Future Volume (vph)	164	1088	287	51	1032	12	247	14	70	82	16	85
Satd. Flow (prot)	1658	3155	0	1642	3308	0	0	1586	0	1537	1416	0
Flt Permitted	0.212			0.117				0.716		0.634		
Satd. Flow (perm)	369	3155	0	202	3308	0	0	1172	0	1023	1416	0
Satd. Flow (RTOR)		57			2			16			83	
Lane Group Flow (vph)	164	1375	0	51	1044	0	0	331	0	82	101	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	30.6	30.6		30.6	30.6		35.1	35.1		35.1	35.1	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	51.0	51.0		51.0	51.0			27.3		27.3	27.3	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.30		0.30	0.30	
v/c Ratio	0.78	0.76		0.45	0.56			0.90		0.26	0.21	
Control Delay	39.8	14.6		28.1	14.3			57.4		25.1	8.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	39.8	14.6		28.1	14.3			57.4		25.1	8.0	
LOS	D	B		C	B			E		C	A	
Approach Delay		17.3			15.0			57.4			15.7	
Approach LOS		B			B			E			B	
Queue Length 50th (m)	9.1	38.3		4.1	44.4			49.9		10.2	2.1	
Queue Length 95th (m)	#59.8	59.9		#22.2	62.8			#95.9		21.3	12.6	
Internal Link Dist (m)		288.4			285.4			192.7			17.6	
Turn Bay Length (m)	45.0			50.0						24.5		
Base Capacity (vph)	209	1812		114	1875			400		339	525	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.78	0.76		0.45	0.56			0.83		0.24	0.19	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												

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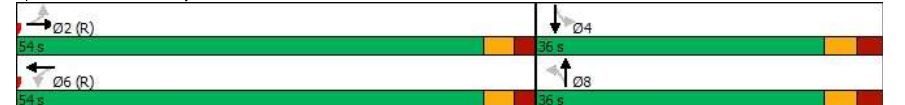
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Lanes, Volumes, Timings
4: Baycrest/St Pats & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.90	Intersection LOS: C
Intersection Signal Delay: 20.6	Intersection Capacity Utilization 91.0%
Intersection Capacity Utilization 91.0%	ICU Level of Service F
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 4: Baycrest/St Pats & Heron



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CGH Transportation
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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱	↱	↰	↰↱	↱	↰	↰	↱	↰	↰	↱
Traffic Volume (vph)	164	991	87	62	965	26	63	36	42	11	39	57
Future Volume (vph)	164	991	87	62	965	26	63	36	42	11	39	57
Satd. Flow (prot)	1658	3265	0	1610	3300	0	1658	1560	0	0	1713	1455
Flt Permitted	0.271			0.244			0.724				0.919	
Satd. Flow (perm)	472	3265	0	412	3300	0	1262	1560	0	0	1590	1435
Satd. Flow (RTOR)		16			5			42				57
Lane Group Flow (vph)	164	1078	0	62	991	0	63	78	0	0	50	57
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	24.6	24.6		24.6	24.6		35.2	35.2		35.2	35.2	35.2
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	35.0
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	38.9%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6		6.2	6.2		6.2	6.2	6.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Act Effct Green (s)	68.5	68.5		68.5	68.5		14.1	14.1		14.1	14.1	14.1
Actuated g/C Ratio	0.76	0.76		0.76	0.76		0.16	0.16		0.16	0.16	0.16
v/c Ratio	0.46	0.43		0.20	0.39		0.32	0.28		0.20	0.21	0.21
Control Delay	13.2	6.5		9.0	6.3		36.0	18.9		32.2	9.3	9.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.2	6.5		9.0	6.3		36.0	18.9		32.2	9.3	9.3
LOS	B	A		A	A		D	B		C	A	A
Approach Delay		7.4			6.5			26.5			20.0	
Approach LOS		A			A			C			B	
Queue Length 50th (m)	4.2	12.4		2.1	20.2		10.5	5.9		8.1	0.0	0.0
Queue Length 95th (m)	m38.0	113.4		12.5	60.5		m17.2	m14.5		14.1	7.9	7.9
Internal Link Dist (m)		285.4			335.4			327.8			77.5	
Turn Bay Length (m)	55.0			50.0			30.0					
Base Capacity (vph)	359	2487		313	2511		403	527		508	497	497
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.46	0.43		0.20	0.39		0.16	0.15		0.10	0.11	0.11
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 62 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												

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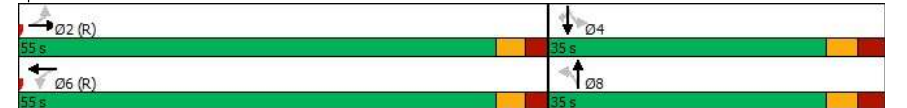
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Lanes, Volumes, Timings
5: Sandalwood/Briar Hill & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.46	Intersection LOS: A
Intersection Signal Delay: 8.6	Intersection Capacity Utilization 68.0%
Analysis Period (min): 15	ICU Level of Service C
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 5: Sandalwood/Briar Hill & Heron



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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑↑	↗	←	↑↑	↗	←	↑	↗	←	↖	↘
Traffic Volume (vph)	83	836	128	45	902	38	98	87	96	29	83	54
Future Volume (vph)	83	836	128	45	902	38	98	87	96	29	83	54
Satd. Flow (prot)	1610	3283	1483	1658	3290	0	1658	1745	1483	0	1642	0
Flt Permitted	0.267			0.306			0.616			0.935		
Satd. Flow (perm)	451	3283	1448	533	3290	0	1073	1745	1414	0	1541	0
Satd. Flow (RTOR)			128		7				96		28	
Lane Group Flow (vph)	83	836	128	45	940	0	98	87	96	0	166	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		35.3	35.3	35.3	35.3	35.3	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.3	6.3	6.3		6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	56.7	56.7	56.7	56.7	56.7		21.4	21.4	21.4		21.4	
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.63		0.24	0.24	0.24		0.24	
v/c Ratio	0.29	0.40	0.13	0.13	0.45		0.38	0.21	0.23		0.43	
Control Delay	7.6	4.8	1.0	10.8	11.0		30.6	25.8	6.5		25.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	7.6	4.8	1.0	10.8	11.0		30.6	25.8	6.5		25.4	
LOS	A	A	A	B	B		C	C	A		C	
Approach Delay		4.6			11.0			20.9			25.4	
Approach LOS		A			B			C			C	
Queue Length 50th (m)	2.2	11.5	0.1	3.6	50.2		12.6	10.7	0.0		17.7	
Queue Length 95th (m)	7.0	23.5	4.0	9.5	65.9		25.4	21.4	10.2		33.8	
Internal Link Dist (m)		335.4			462.4			51.9			96.8	
Turn Bay Length (m)	55.0		50.0	50.0			15.0					
Base Capacity (vph)	284	2068	959	335	2075		342	556	516		510	
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	0.29	0.40	0.13	0.13	0.45		0.29	0.16	0.19		0.33	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 68 (76%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
6: HG Mall/Jefferson & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: HG Mall/Jefferson & Heron



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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2030 Future Total
PM Peak Hour

	↖	→	←	↗	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Volume (vph)	1	796	1072	925	965	27
Future Volume (vph)	1	796	1072	925	965	27
Satd. Flow (prot)	1658	3283	3316	2585	3185	0
Flt Permitted	0.166				0.954	
Satd. Flow (perm)	290	3283	3316	2532	3185	0
Satd. Flow (RTOR)				925	3	
Lane Group Flow (vph)	1	796	1072	925	992	0
Turn Type	Perm	NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	33.7	
Total Split (s)	59.0	59.0	59.0	59.0	51.0	
Total Split (%)	53.6%	53.6%	53.6%	53.6%	46.4%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	52.4	52.4	52.4	52.4	44.3	
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.40	
v/c Ratio	0.01	0.51	0.68	0.55	0.77	
Control Delay	15.0	21.4	25.0	2.4	33.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	15.0	21.4	25.0	2.4	33.4	
LOS	B	C	C	A	C	
Approach Delay		21.3	14.6		33.4	
Approach LOS		C	B		C	
Queue Length 50th (m)	0.1	60.2	90.9	0.0	93.2	
Queue Length 95th (m)	1.0	77.3	113.7	10.9	118.0	
Internal Link Dist (m)		588.8	229.6		462.4	
Turn Bay Length (m)				155.0		
Base Capacity (vph)	138	1563	1579	1690	1284	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.51	0.68	0.55	0.77	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 53 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						

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CGH Transportation
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Lanes, Volumes, Timings
7: Walkley & Heron

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Walkley & Heron



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CGH Transportation
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Lanes, Volumes, Timings
8: Baycrest

2030 Future Total
PM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	74	26	36	162	154	90
Future Volume (vph)	74	26	36	162	154	90
Satd. Flow (prot)	1615	0	0	1637	1580	0
Flt Permitted	0.964			0.991		
Satd. Flow (perm)	1615	0	0	1637	1580	0
Lane Group Flow (vph)	100	0	0	198	244	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.9%				ICU Level of Service A		
Analysis Period (min) 15						

HCM 2010 TWSC
8: Baycrest

2030 Future Total
PM Peak Hour

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	74	26	36	162	154	90
Future Vol, veh/h	74	26	36	162	154	90
Conflicting Peds, #/hr	12	10	10	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	4	2	9	10	2
Mvmt Flow	74	26	36	162	154	90
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	455	219	254	0	-	0
Stage 1	209	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.42	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	563	816	1311	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	538	803	1301	-	-	-
Mov Cap-2 Maneuver	538	-	-	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Control Delay, s	12.4	1.4	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT EBLn1	SBT	SBR			
Capacity (veh/h)	1301	-	588	-	-	-
HCM Lane V/C Ratio	0.028	-	0.17	-	-	-
HCM Control Delay (s)	7.8	0	12.4	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-	-

Lanes, Volumes, Timings
9: Baycrest & Sandalwood

2030 Future Total
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	11	91	6	21	9	204	84	26	187	6
Future Volume (vph)	5	5	11	91	6	21	9	204	84	26	187	6
Satd. Flow (prot)	0	1602	0	0	1582	0	0	1602	0	0	1655	0
Flt Permitted		0.988			0.963			0.998			0.994	
Satd. Flow (perm)	0	1602	0	0	1582	0	0	1602	0	0	1655	0
Lane Group Flow (vph)	0	21	0	0	118	0	0	297	0	0	219	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 44.1%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 2010 TWSC
9: Baycrest & Sandalwood

2030 Future Total
PM Peak Hour

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	11	91	6	21	9	204	84	26	187	6
Future Vol, veh/h	5	5	11	91	6	21	9	204	84	26	187	6
Conflicting Peds, #/hr	9	0	18	18	0	9	10	0	19	19	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	5	2	10	2	8	4	4	7	2
Mvmt Flow	5	5	11	91	6	21	9	204	84	26	187	6
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	539	577	218	551	538	274	203	0	0	307	0	0
Stage 1	252	252	-	283	283	-	-	-	-	-	-	-
Stage 2	287	325	-	268	255	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.3	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.39	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	453	427	822	440	450	746	1369	-	-	1242	-	-
Stage 1	752	698	-	718	677	-	-	-	-	-	-	-
Stage 2	720	649	-	731	696	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	419	404	804	407	426	730	1358	-	-	1224	-	-
Mov Cap-2 Maneuver	419	404	-	407	426	-	-	-	-	-	-	-
Stage 1	740	676	-	701	661	-	-	-	-	-	-	-
Stage 2	683	634	-	689	674	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.8		16.1			0.2			1			
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1358	-	-	553	443	1224	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.038	0.266	0.021	-	-				
HCM Control Delay (s)	7.7	0	-	11.8	16.1	8	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	1.1	0.1	-	-				

Lanes, Volumes, Timings

10: Bank & Walkley

2030 Future Total

PM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↖↖	↖↖		↖↖	↖↖	↖	↖↖	↖↖	↖
Traffic Volume (vph)	335	463	207	267	645	237	194	777	219	300	1261	574
Future Volume (vph)	335	463	207	267	645	237	194	777	219	300	1261	574
Satd. Flow (prot)	3216	3221	1483	3216	3138	0	3216	3316	1483	3216	3316	1483
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3155	3221	1397	3093	3138	0	3157	3316	1434	3183	3316	1368
Satd. Flow (RTOR)			193		39				196			266
Lane Group Flow (vph)	335	463	207	267	882	0	194	777	219	300	1261	574
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	39.7	39.7	11.8	39.7		11.4	34.4	34.4	11.4	34.4	34.4
Total Split (s)	20.0	42.0	42.0	19.0	41.0		14.0	44.0	44.0	25.0	55.0	55.0
Total Split (%)	15.4%	32.3%	32.3%	14.6%	31.5%		10.8%	33.8%	33.8%	19.2%	42.3%	42.3%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.2	30.0	30.0	17.5	34.3		7.6	39.7	39.7	16.5	48.6	48.6
Actuated g/C Ratio	0.10	0.23	0.23	0.13	0.26		0.06	0.31	0.31	0.13	0.37	0.37
v/c Ratio	1.03	0.62	0.44	0.62	1.03		1.03	0.77	0.38	0.74	1.02	0.85
Control Delay	113.7	48.3	9.7	61.3	83.4		133.1	47.4	8.7	65.6	70.4	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.7	48.3	9.7	61.3	83.4		133.1	47.4	8.7	65.6	70.4	32.6
LOS	F	D	A	E	F		F	D	A	E	E	C
Approach Delay		62.2			78.3			54.3			59.6	
Approach LOS		E			E			D			E	
Queue Length 50th (m)	~47.1	54.6	2.7	34.6	~123.0		~27.4	95.9	4.2	38.4	~179.5	78.7
Queue Length 95th (m)	#77.0	72.1	22.8	#51.4	#163.7		#52.1	121.4	23.9	53.1	#221.6	#148.2
Internal Link Dist (m)		140.6			153.7			170.4			226.0	
Turn Bay Length (m)	65.0		35.0	65.0		95.0		60.0	110.0			
Base Capacity (vph)	326	874	519	431	856		188	1012	574	460	1239	677
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.53	0.40	0.62	1.03		1.03	0.77	0.38	0.65	1.02	0.85

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

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CGH Transportation
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Lanes, Volumes, Timings

10: Bank & Walkley

2030 Future Total

PM Peak Hour

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 62.8

Intersection LOS: E

Intersection Capacity Utilization 102.2%

ICU Level of Service G

Analysis Period (min) 15

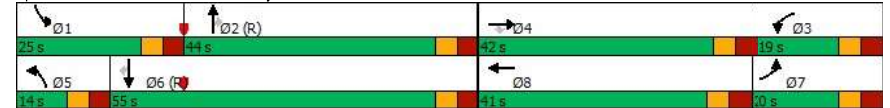
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Bank & Walkley



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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2030 Future Total

PM Peak Hour

	↖	→	↗	↖	←	↖	↗	↖	↗	↖	↗	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖↗		↖	↖	
Traffic Volume (vph)	33	920	14	18	1015	21	12	0	9	7	0	24
Future Volume (vph)	33	920	14	18	1015	21	12	0	9	7	0	24
Satd. Flow (prot)	1642	3305	0	1658	3304	0	0	1588	0	1658	1432	0
Flt Permitted	0.267			0.301				0.810		0.744		
Satd. Flow (perm)	460	3305	0	524	3304	0	0	1320	0	1295	1432	0
Satd. Flow (RTOR)		3			4			42			90	
Lane Group Flow (vph)	33	934	0	18	1036	0	0	21	0	7	24	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	32.1	32.1		32.1	32.1		29.9	29.9		29.9	29.9	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1			5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	68.4	68.4		68.4	68.4			12.8		12.8	12.8	
Actuated g/C Ratio	0.86	0.86		0.86	0.86			0.16		0.16	0.16	
v/c Ratio	0.08	0.33		0.04	0.37			0.09		0.03	0.08	
Control Delay	5.9	4.5		5.7	4.8			3.6		25.1	0.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	5.9	4.5		5.7	4.8			3.6		25.1	0.5	
LOS	A	A		A	A			A		C	A	
Approach Delay		4.6			4.8			3.6			6.1	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	0.0	0.0		0.0	0.0			0.0		1.0	0.0	
Queue Length 95th (m)	6.7	58.3		4.2	66.9			2.5		3.5	0.0	
Internal Link Dist (m)		132.4			376.9			75.5			48.0	
Turn Bay Length (m)	60.0			54.0						25.0		
Base Capacity (vph)	393	2826		448	2825			426		390	494	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.08	0.33		0.04	0.37			0.05		0.02	0.05	
Intersection Summary												
Cycle Length: 80												
Actuated Cycle Length: 80												
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings

11: Jim Durrell RC/Hampstead & Walkley

2030 Future Total

PM Peak Hour

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 4.7

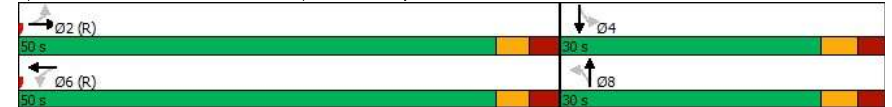
Intersection LOS: A

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Jim Durrell RC/Hampstead & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2030 Future Total
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	784	158	84	932	13	145	1	104	14	2	2
Future Volume (vph)	17	784	158	84	932	13	145	1	104	14	2	2
Satd. Flow (prot)	1658	3316	1441	1658	3308	0	1626	1354	0	1658	1295	0
Flt Permitted	0.950			0.950			0.755			0.689		
Satd. Flow (perm)	1654	3316	1388	1648	3308	0	1285	1354	0	1140	1295	
Satd. Flow (RTOR)			135		1			104			2	
Lane Group Flow (vph)	17	784	158	84	945	0	145	105	0	14	4	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	30.0	30.0	11.0	30.0		30.1	30.1		30.1	30.1	
Total Split (s)	25.0	30.0	30.0	25.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	27.8%	33.3%	33.3%	27.8%	33.3%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1		6.1	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None		None	None	
Act Effct Green (s)	6.5	47.9	47.9	9.9	55.9		16.5	16.5		16.5	16.5	
Actuated g/C Ratio	0.07	0.53	0.53	0.11	0.62		0.18	0.18		0.18	0.18	
v/c Ratio	0.14	0.44	0.20	0.46	0.46		0.62	0.32		0.07	0.02	
Control Delay	41.2	16.3	4.9	45.0	12.2		44.4	8.8		28.4	22.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.2	16.3	4.9	45.0	12.2		44.4	8.8		28.4	22.2	
LOS	D	B	A	D	B		D	A		C	C	
Approach Delay		14.9			14.8			29.5			27.0	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	2.8	46.8	2.0	13.8	36.8		22.4	0.1		2.0	0.3	
Queue Length 95th (m)	8.9	72.8	13.9	26.4	81.3		39.2	12.2		6.6	2.8	
Internal Link Dist (m)		376.9			165.1			148.5			93.2	
Turn Bay Length (m)	52.0		35.0	57.0			25.0			30.0		
Base Capacity (vph)	350	1764	801	350	2056		341	435		302	345	
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	0.05	0.44	0.20	0.24	0.46		0.43	0.24		0.05	0.01	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 32 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2030 Future Total
PM Peak Hour

	Ø3	Ø7
Lane Group		
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

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CGH Transportation
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Lanes, Volumes, Timings
12: Albion/Colliston & Walkley

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 16.6

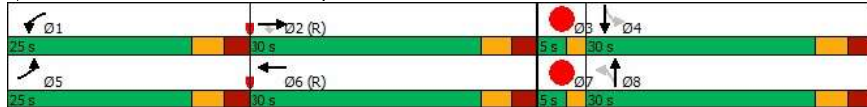
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 12: Albion/Colliston & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
13: Walkley & Cedarwood

2030 Future Total
PM Peak Hour

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	141	790	899	81	106	127
Future Volume (vph)	141	790	899	81	106	127
Satd. Flow (prot)	1658	3316	3267	0	1626	1483
Flt Permitted	0.269				0.950	
Satd. Flow (perm)	468	3316	3267	0	1621	1449
Satd. Flow (RTOR)			18			120
Lane Group Flow (vph)	141	790	980	0	106	127
Turn Type	Perm	NA	NA	Prot	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.5	23.5	25.5		30.3	30.3
Total Split (s)	49.0	49.0	49.0		31.0	31.0
Total Split (%)	61.3%	61.3%	61.3%		38.8%	38.8%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.1	2.1	2.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.3	5.3
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	None
Act Effct Green (s)	55.7	55.7	55.7		13.6	13.6
Actuated g/C Ratio	0.70	0.70	0.70		0.17	0.17
v/c Ratio	0.43	0.34	0.43		0.39	0.37
Control Delay	12.7	6.2	6.8		32.0	8.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	12.7	6.2	6.8		32.0	8.9
LOS	B	A	A		C	A
Approach Delay		7.2	6.8		19.4	
Approach LOS		A	A		B	
Queue Length 50th (m)	6.5	17.5	23.1		15.2	1.0
Queue Length 95th (m)	32.3	46.5	61.0		23.4	11.8
Internal Link Dist (m)		165.1	241.9		90.2	
Turn Bay Length (m)	57.0				15.0	
Base Capacity (vph)	325	2310	2281		522	546
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.43	0.34	0.43		0.20	0.23
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 20 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Green						
Natural Cycle: 70						
Control Type: Actuated-Coordinated						

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CGH Transportation
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Lanes, Volumes, Timings
13: Walkley & Cedarwood

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 8.3

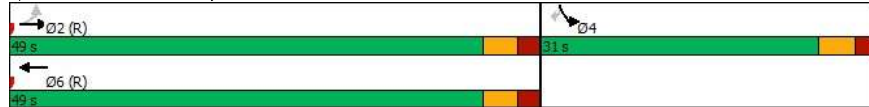
Intersection LOS: A

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Walkley & Cedarwood



Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	106	751	24	45	879	218	19	16	30	185	23	93
Future Volume (vph)	106	751	24	45	879	218	19	16	30	185	23	93
Satd. Flow (prot)	1642	3295	0	1658	3146	0	0	1579	0	1566	1516	0
Flt Permitted	0.211			0.336				0.898		0.715		
Satd. Flow (perm)	364	3295	0	582	3146	0	0	1436	0	1159	1516	0
Satd. Flow (RTOR)		6			58			30			82	
Lane Group Flow (vph)	106	775	0	45	1097	0	0	65	0	185	116	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	41.1	41.1		41.1	41.1			16.9		16.9	16.9	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.24		0.24	0.24	
v/c Ratio	0.50	0.40		0.13	0.59			0.18		0.66	0.27	
Control Delay	23.0	9.6		10.0	11.4			12.4		34.6	8.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	23.0	9.6		10.0	11.4			12.4		34.6	8.9	
LOS	C	A		A	B			B		C	A	
Approach Delay		11.2			11.3			12.4			24.7	
Approach LOS		B			B			B			C	
Queue Length 50th (m)	7.1	25.1		2.3	39.3			3.6		22.1	3.5	
Queue Length 95th (m)	#33.0	48.6		9.1	76.2			10.2		35.0	12.4	
Internal Link Dist (m)		241.9			372.4			64.6			105.3	
Turn Bay Length (m)	48.0			40.0						20.0		
Base Capacity (vph)	213	1937		342	1871			550		428	612	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.50	0.40		0.13	0.59			0.12		0.43	0.19	
Intersection Summary												
Cycle Length: 70												
Actuated Cycle Length: 70												
Offset: 17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												

Lanes, Volumes, Timings
14: Reardon/Baycrest & Walkley

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 74.4%

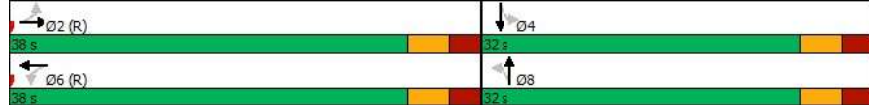
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 14: Reardon/Baycrest & Walkley



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CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2030 Future Total
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	140	616	174	149	854	81	134	49	108	53	75	108
Future Volume (vph)	140	616	174	149	854	81	134	49	108	53	75	108
Satd. Flow (prot)	1658	3126	0	1658	3316	1483	1595	1506	0	0	1582	0
Flt Permitted	0.206			0.353			0.533				0.884	
Satd. Flow (perm)	359	3126	0	606	3316	1444	873	1506	0	0	1408	0
Satd. Flow (RTOR)		63				155		108			54	
Lane Group Flow (vph)	140	790	0	149	854	81	134	157	0	0	236	0
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.1	28.2		28.2	28.2	28.2	30.3	30.3		30.3	30.3	
Total Split (s)	11.0	45.0		34.0	34.0	34.0	30.0	30.0		30.0	30.0	
Total Split (%)	13.8%	56.3%		42.5%	42.5%	42.5%	37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.9		2.9	2.9	2.9	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.2		6.2	6.2	6.2	6.3	6.3			6.3	
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	48.4	48.3		34.0	34.0	34.0	19.2	19.2			19.2	
Actuated g/C Ratio	0.60	0.60		0.42	0.42	0.42	0.24	0.24			0.24	
v/c Ratio	0.40	0.41		0.58	0.61	0.12	0.64	0.35			0.62	
Control Delay	11.9	9.4		33.1	21.9	0.5	40.2	10.4			27.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay	11.9	9.4		33.1	21.9	0.5	40.2	10.4			27.0	
LOS	B	A		C	C	A	D	B			C	
Approach Delay		9.8			21.8			24.2			27.0	
Approach LOS		A			C			C			C	
Queue Length 50th (m)	9.8	32.4		19.1	58.5	0.0	16.7	5.4			22.3	
Queue Length 95th (m)	18.8	46.5		#48.4	79.7	0.7	33.7	18.4			42.8	
Internal Link Dist (m)		372.4			588.8			97.2			59.3	
Turn Bay Length (m)	46.0			37.0			25.0					
Base Capacity (vph)	350	1912		257	1408	702	261	527			460	
Starvation Cap Reductn	0	0		0	0	0	0	0			0	
Spillback Cap Reductn	0	0		0	0	0	0	0			0	
Storage Cap Reductn	0	0		0	0	0	0	0			0	
Reduced v/c Ratio	0.40	0.41		0.58	0.61	0.12	0.51	0.30			0.51	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 57 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

05-28-2025

CGH Transportation
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Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2030 Future Total
PM Peak Hour

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Fit Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
15: Heatherington/HG Mall & Walkley

2030 Future Total
PM Peak Hour

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 18.2

Intersection LOS: B

Intersection Capacity Utilization 89.0%

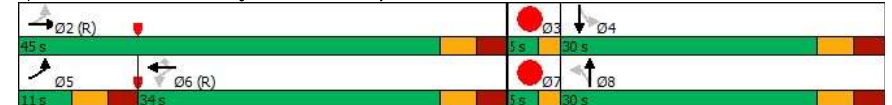
ICU Level of Service E

Analysis Period (min) 15

- 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 15: Heatherington/HG Mall & Walkley



Appendix M

All-Way Stop Control Warrant Calculation Sheets

Warrants for AWSC on Local Roads (Baycrest Drive at Sandalwood Drive (FT2040))

Volume Criteria		
Major Street 2-Way Hourly Volume (per 8-hr period)	Minor Street 2-Way Hourly Volume (per 8-hr period)	Minor Street Pedestrian 2-Way Hourly Volume (per 8-hr period)
3233	769	179
Control Required		
Total Vehicle Volume	YES	
Minor Street Volume & Pedestrian Volume	YES	
	3-Way Stop	4-Way Stop
Vehicle Split	NO	NO

Warrants for AWSC on Local Roads (Baycrest Drive at Cedarwood Drive (FT2040))

Volume Criteria		
Major Street 2-Way Hourly Volume (per 8-hr period)	Minor Street 2-Way Hourly Volume (per 8-hr period)	Minor Street Pedestrian 2-Way Hourly Volume (per 8-hr period)
3220	745	76
Control Required		
Total Vehicle Volume	YES	
Minor Street Volume & Pedestrian Volume	YES	
	3-Way Stop	4-Way Stop
Vehicle Split	NO	NO

Appendix N

Turn Lane Storage Length Review

Heron Gate Turn Lane Storage Length Review

Intersection	Turning Movement	Theoretical Storage Length		Existing Storage
		TIA Guidelines	TAC	
Heron @ Baycrest	Eastbound Right	59 to 75 metres	53 to 67 metres	45
	Westbound Left	8 to 13 metres	7 to 12 metres	50
	Northbound Left	64 to 85 metres	57 to 76 metres	-
	Northbound Right	14 to 18 metres	12 to 16 metres	-
Heron @ Sandalwood	Eastbound Right	11 to 22 metres	10 to 20 metres	-
	Westbound Left	8 to 16 metres	7 to 14 metres	55
	Northbound Left	16 to 24 metres	14 to 22 metres	25
	Northbound Right *	11 to 12 metres	9 to 10 metres	-
Walkley @ Cedarwood	Eastbound Left	15 to 33 metres	17 to 33 metres	57
	Westbound Right	7 to 19 metres	9 to 19 metres	-
	Southbound Left	18 to 24 metres	21 to 24 metres	15
	Southbound Right	29 to 31 metres	29 to 36 metres	-
Walkley @ Baycrest	Eastbound Left	13 to 24 metres	15 to 24 metres	45
	Westbound Right	34 to 60 metres	39 to 60 metres	-
	Southbound Left	37 to 43 metres	43 metres	20
	Southbound Right	21 metres	21 to 24 metres	-

Note: * denotes with right-turn volumes fewer than 60 vehicles in the AM or PM peak