DILLON CONSULTING

1027458 ONTARIO INC.

Banwell and McHugh Mixed Use Developments

Transportation Impact Study

March 2023 – 22-5144

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1.0 Introduction

1.1 Purpose

Dillon Consulting Limited (Dillon) has been retained by 1027458 Ontario Inc. to undertake a comprehensive Transportation Impact Study (TIS) which reviews the impact of three adjacent parcels that are planned to be developed in the City of Windsor, Ontario. These proposed developments would be located on vacant lands found northwest and southwest of the Banwell Road and McHugh Street intersection.

This report documents the anticipated change to traffic volumes and intersection operations associated with the proposed development and identifies any modification to traffic controls or infrastructure that may be necessary to mitigate the impacts from the additional traffic.

1.2 Proposed Development

The proposed developments are located northwest and southwest of the Banwell Road and McHugh Street intersection. Four connections to the existing road network are proposed; two connecting to Leathorne Street and two connecting to McHugh Street, while no driveways to Banwell Road or Firgrove Drive are proposed. Leathorne Street is also proposed to be extended west of Banwell Road. Figure 1 illustrates the concept plan for these developments. A larger version can be found in Appendix A.

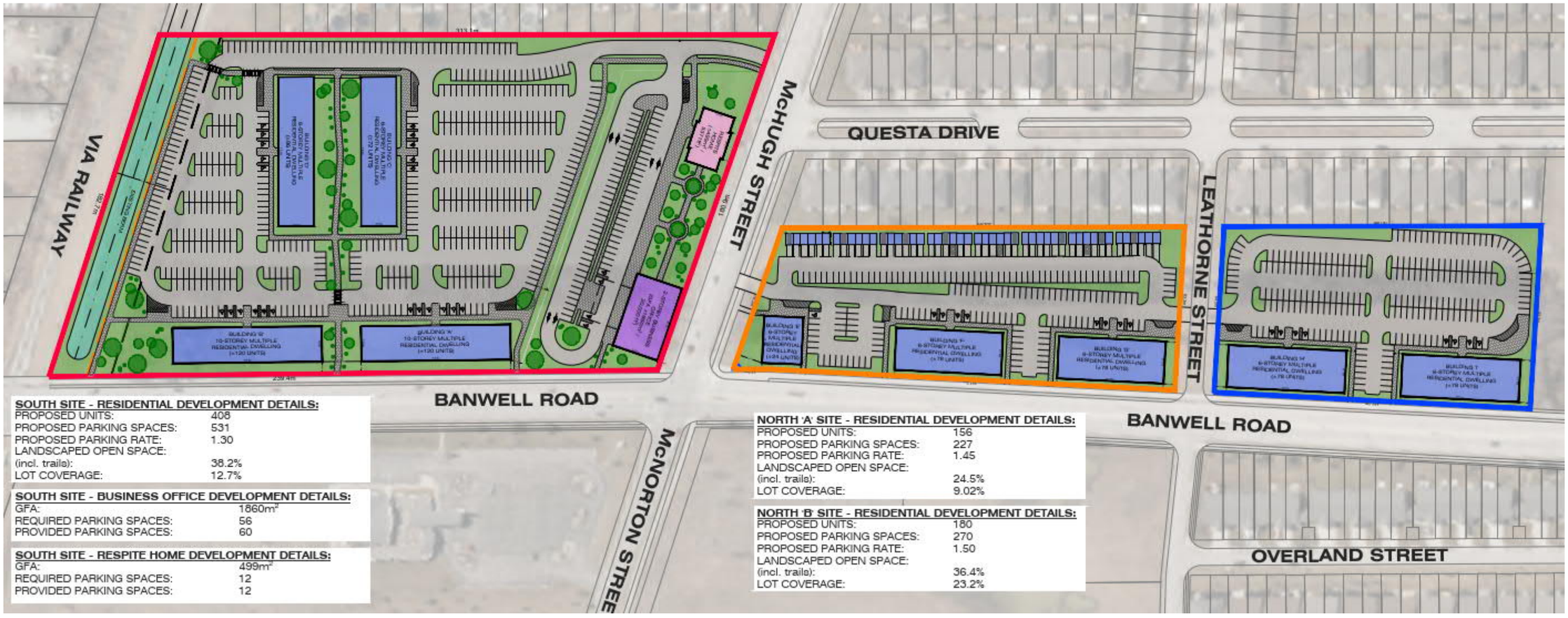


Figure 1: Mixed-Use Development Concept Plan

1.3 Scope of Analyses

The report documents the following:

- Existing traffic volumes, and traffic projections for the study area intersections and accesses;
- Existing transit and active transportation facilities near the site;
- Intersection capacity analyses under existing conditions, future background conditions, and total future conditions;
- Future mode-shares and non-auto trips that may be generated by the site;
- Identification of potential modifications to transportation infrastructure (roads, intersection traffic control or geometry) that may be required; and
- Address active transportation infrastructure considerations.

Traffic data collection, forecasts and operational analyses have been completed at:

- Banwell Road and Firgrove Drive (unsignalized);
- Banwell Road and Leathorne Street (unsignalized);
- Banwell Road and McHugh Street/McNorton Street (signalized); and
- Banwell Road and Tecumseh Road East (signalized).

Traffic projections and intersection analyses were completed for the weekday AM, PM, and Saturday mid-day peak hours. All portions of these developments are anticipated to be constructed by 2027 and for the purposes of analysis, the final horizon year has been identified as 2032 (five years following the complete build-out).

2.0 Existing (2023) Conditions

2.1 Existing Transportation Network Characteristics

The following describes the existing road network in the immediate study area:

Banwell Road is a north-south Class II Arterial Road that is under the jurisdiction of the City of Windsor. The roadway runs north from County Road 42 to just north of Wyandotte Street East. Within the study area, Banwell Road features a four-lane cross-section (two lanes per direction), a multi-use path, and a sidewalk. The posted speed limit is 50 km/h.

McHugh Street/McNorton Street is an east-west Class II Arterial Road that is under the jurisdiction of the City of Windsor. McHugh Street runs east of Lauzon Parkway/Lauzon Road to Banwell Road before turning into McNorton Street. McNorton Street extends east of Banwell Road to Lacasse Boulevard. Within the study area, McHugh Street features a four-lane cross-section (two lanes per direction), a multi-use path, and a sidewalk on the south side that only partially extends to Banwell Road. McNorton Street features a two-lane cross-section (one lane per direction), a multi-use path, and a sidewalk. The posted speed limit is 50 km/h.

Tecumseh Road East is an east-west Class II Arterial Road that is under the jurisdiction of the City of Windsor. The roadway runs across the city of Windsor from Prince Road (Tecumseh Road West) to Brighton Road (Tecumseh Road East). Within the study area, Tecumseh Road East features a four-lane cross-section (two lanes per direction), a multi-use path, and sidewalks. The posted speed limit of 60 km/h.

Firgrove Drive is an east-west Local Road that is under the jurisdiction of the City of Windsor. The roadway runs east from Aspenshore Court to Blue Heron Drive. Within the study area, Firgrove Drive features a two-lane cross-section (one lane per direction), a multi-use path, and sidewalks. As no speed limit signage is present, the speed limit would default to the statutory limit of 50 km/h.

Leathorne Street is an east-west Local Road that is under the jurisdiction of the City of Windsor. The roadway runs east from Luxury Avenue to Blue Heron Drive. The road ends at Questa Drive and continues east of Banwell Road. Within the study area, Leathorne Street features a two-lane cross-section (one lane per direction), and a sidewalk exists. As no speed limit signage is present along either section of the road, the speed limit would default to the statutory limit of 50 km/h.

Figure 2 illustrates the current lane configurations and traffic controls at the study area intersections. This includes the recent geometry and traffic signal changes introduced at the Banwell Road and McHugh Road intersection, as exclusive eastbound and southbound left-turn lanes are now constructed.

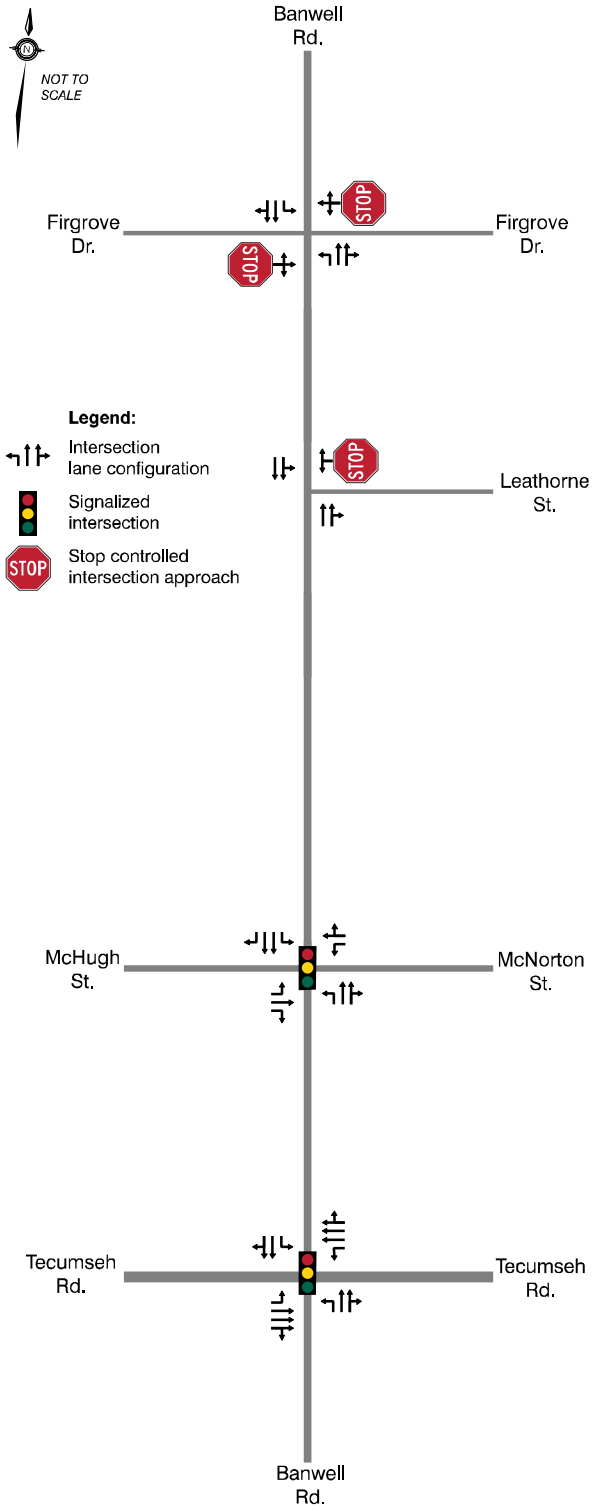


Figure 2: Existing Laning and Traffic Control

2.2 Existing Alternative Transportation Facilities

Active transportation facilities, as well as public transit service, currently exist in the study area. A summary of these facilities is noted below.

2.2.1 Active Transportation Infrastructure

Banwell Road: Within the study area, a sidewalk is present on the east side of the road while and a multi-use path is on the west side.
McHugh Street: Within the study area, a multi-use path is located on the north side of the road while a sidewalk on the south side only partially extends to Banwell Road.
McNorton Street: Within the study area, a multi-use path is on the road's north side while a sidewalk is on the south side.
Tecumseh Road East: Within the study area, a multi-use path is on the road's north side, and a sidewalk is on the south side. East of Banwell Road, sidewalks are on both sides.
Firgrove Drive: Within the study area, a multi-use path is on the road's north side, and a sidewalk is on the south side. East of Banwell Road, sidewalks are on both sides of the road.
Leathorne Street: Within the study area, a sidewalk exists on one side of the road.

2.2.2 Transit Services

Lauzon 10: Within the study area, the Lauzon 10 route travels northbound on Banwell Road and westbound on McHugh Street. The route travels through east Windsor and originates at the Tecumseh Mall Terminal. At the Tecumseh Mall Terminal, connections to the 518X, the Transway 1C, the Crosstown 2, and the Ottawa 4 bus routes can be made. On weekdays and during the AM, PM, and evening peak hours, the route frequency operates every 35 minutes, while on Saturdays, the Lauzon 10 transit route operates every 70 minutes. The Lauzon 10 transit route does not provide Sunday or Holiday service.

Figure 3 shows the routing of the Lauzon 10 transit route sourced from Transit Windsor's website[1].

[1] https://www.citywindsor.ca/residents/transitwindsor/Routes-and-Schedules/Documents/Schedule/Lauzon10.pdf

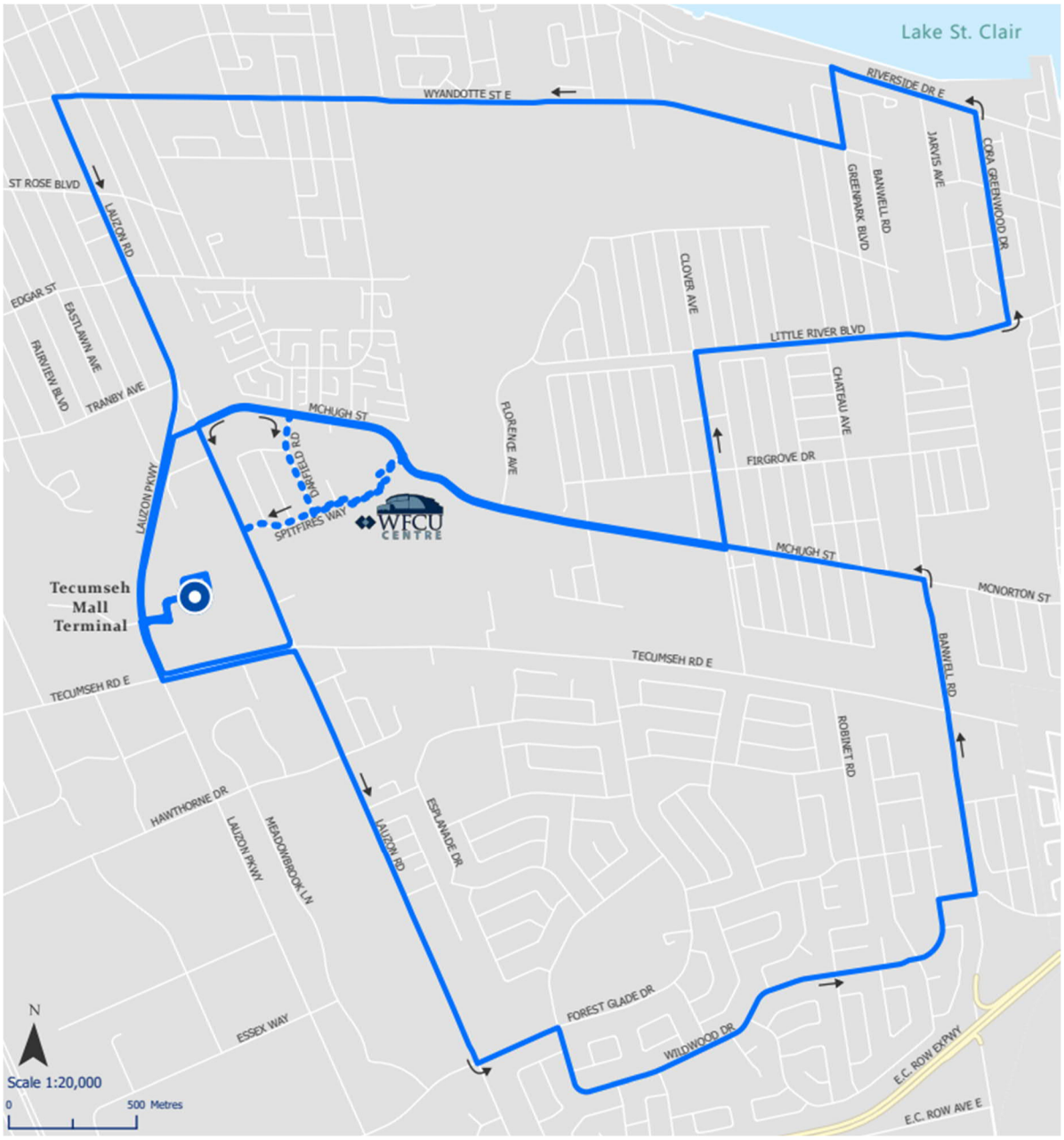


Figure 3: Lauzon 10 Bus Routing Surrounding the Study Area

2.3 Traffic Data Collection

Turning movement count (TMC) data was collected at the four existing study area intersections in February 2023. The TMC data can be found in Appendix B.

TMC data was collected at the following locations:

- Banwell Road and Firgrove Drive (unsignalized);
- Banwell Road and Leathorne Street (unsignalized);
- Banwell Road and McHugh Street/McNorton Street (signalized); and
- Banwell Road and Tecumseh Road East (signalized).

The data collected was inclusive of the following periods:

- Weekday morning between 7:00 AM and 10:00 AM;
- Weekday afternoon between 3:00 PM and 6:00 PM; and
- Saturday mid-day between 11:00 AM and 2:00 PM.

The weekday AM and PM peak hour field traffic counts were performed on Thursday, February 16, 2023 and the Saturday mid-day peak hour field traffic counts were performed on Saturday, February 18, 2023.

2.4 Existing (2023) Traffic Volumes

Figure 4 illustrates the existing (2023) traffic volumes at the four study area intersections during the weekday AM, weekday PM, and Saturday mid-day peak hours.

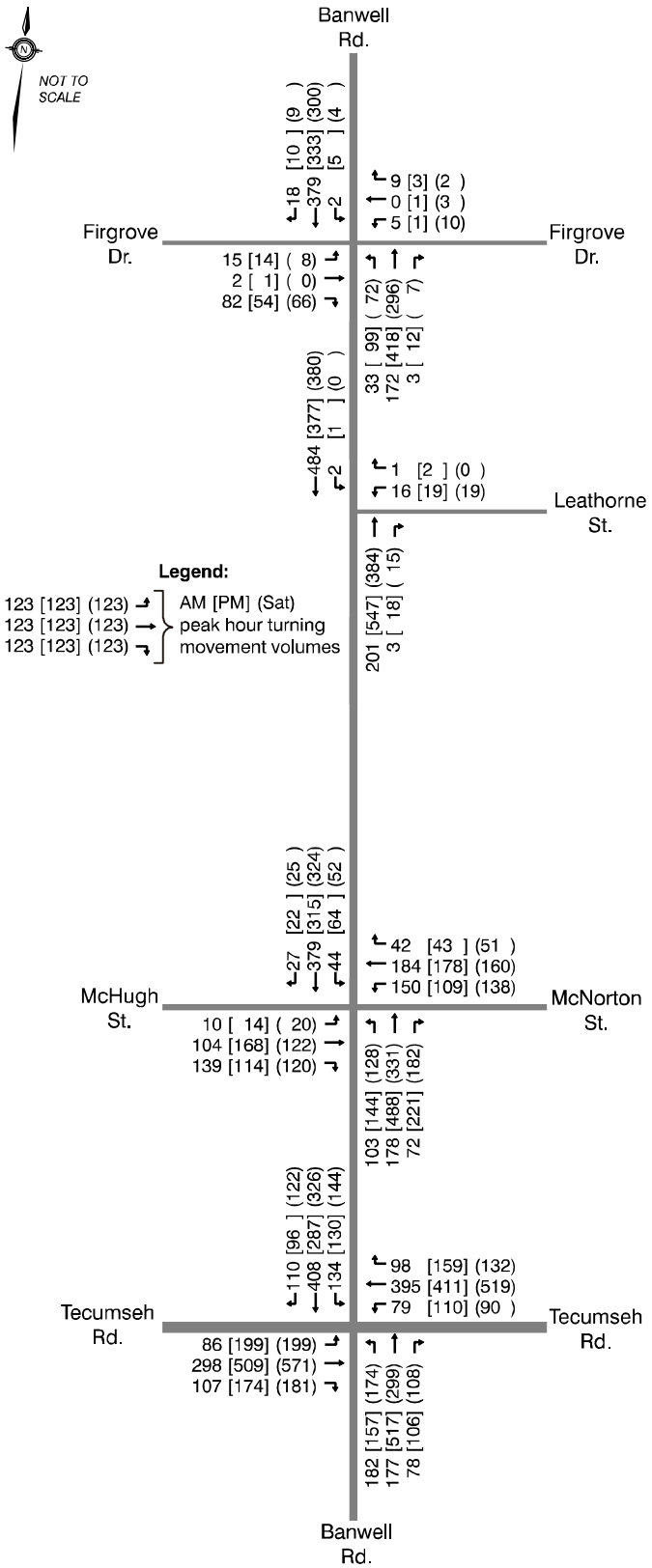


Figure 4: Existing (2023) Traffic Volumes

2.5 Existing (2023) Operational Analyses

Existing (2023) peak hour operations were determined based on the methodology outlined in the Highway Capacity Manual (HCM) and facilitated using Synchro (version 10) analysis software. The intersection analyses are based on existing lane configurations.

At the signalized intersections in the study area, the v/c ratio, delay, level of service, and 95th percentile queue were noted for all movements. In addition, the overall delay and level of service were also noted. The signalized intersection operations were also based on the traffic signal timings and plans provided by the City of Windsor.

At the unsignalized intersections/driveways, the v/c ratio, delay, level of service, and 95th percentile queue were noted for any stop-controlled movements and movements where a left-turn lane is present. HCM's 2000 Unsignalized intersection methodology was used to report operations at the unsignalized intersections.

Level of service definitions are provided in Appendix C. The Synchro analysis worksheets are provided in Appendix D. The results were reviewed to identify any critical movements, defined as follows:

- Any through lane/movement with a v/c ratio of 0.85 or higher;
- Any exclusive turning lane/movement with a v/c ratio of 1.00 or higher;
- Any movement operating at LOS E or LOS F; and/or
- Any turning movement with a 95th percentile queue exceeding the available storage.

Table 1 summarizes the signalized intersection operations under existing (2023) peak hour traffic volumes.

Table 1: Existing (2023) Signalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and McHugh Street/McNorton Street	EBL	0.07	C	23.3	5	0.09	C	25.2	6	0.12	C	24.3	8
	EBT	0.28	C	27.5	26	0.47	C	32.6	40	0.34	C	28.0	29
	EBR	0.33	A	6.1	12	0.29	A	6.5	12	0.30	A	6.2	11
	WBL	0.59	D	37.5	38	0.55	D	39.0	31	0.57	D	36.0	34
	WBTR	0.61	C	33.2	50	0.61	C	34.5	50	0.57	C	30.5	44
	NBL	0.18	A	6.9	16	0.24	A	6.9	21	0.22	A	7.0	20
	NBTR	0.13	A	7.5	18	0.39	B	11.0	61	0.27	A	8.2	36
	SBL	0.07	A	6.6	8	0.16	A	7.0	11	0.10	A	6.8	9
	SBT	0.21	B	11.3	33	0.18	B	11.8	29	0.19	B	11.9	29
	SBR	0.03	A	0.1	0	0.03	A	0.0	0	0.03	A	0.1	0
Overall		—	B	16.9	—	—	B	16.7	—	—	B	15.3	—
Banwell Road and Tecumseh Road East	EBL	0.19	B	12.5	20	0.50	C	20.3	45	0.49	B	15.9	43
	EBTR	0.18	B	13.9	26	0.36	C	21.9	55	0.35	B	18.1	59
	WBL	0.16	B	12.3	18	0.32	B	16.5	26	0.26	B	13.1	21
	WBTR	0.23	B	16.0	35	0.31	C	20.2	42	0.31	B	19.1	51
	NBL	0.87	E	60.8	51	0.53	C	29.4	38	0.76	D	46.3	43
	NBTR	0.34	C	24.5	27	0.78	D	44.2	89	0.62	D	38.4	52
	SBL	0.41	C	26.3	31	0.58	C	31.3	32	0.58	C	34.3	36
	SBTR	0.70	D	38.7	64	0.43	C	30.1	47	0.68	D	40.3	57
Overall		—	C	26.3	—	—	C	28.0	—	—	C	26.9	—

Table 2 summarizes the unsignalized intersection operations under existing (2023) peak hour traffic volumes.

Table 2: Existing (2023) Unsignalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Firgrove Drive (TWSC)	EB approach	0.16	B	11.5	5	0.14	B	12.7	4	0.11	B	10.7	3
	WB approach	0.02	B	11.1	1	0.01	C	15.4	0	0.05	C	17.8	1
	NBL	0.03	A	8.3	1	0.09	A	8.4	2	0.06	A	8.2	2
	SBL	0.00	A	7.6	0	0.00	A	8.3	0	0.00	A	8.0	0
Banwell Road and Leathorne Street (TWSC)	WBLR	0.03	B	12.2	1	0.07	C	16.4	2	0.05	B	14.2	1

Under existing (2023) conditions, most movements currently operate in an acceptable manner (LOS D or better) and the two signalized intersections operate at LOS C or better overall during each assessed peak hour. All stop-controlled approaches during the weekday AM, weekday PM, and Saturday mid-day peak hours currently operate at LOS C or better with minimal delay and queuing.

During the AM peak hour, the northbound left-turn movement at the Banwell Road and Tecumseh Road East intersection operates at LOS E. During the PM and Saturday mid-day peak hours, this movement operates at LOS C and LOS D, respectively.

3.0 Future Background Conditions

The future background traffic volumes reflect the volume of traffic that is anticipated to be on the road network during both the 2027 and 2032 horizon years without the subject development in place.

Typically, this is comprised of two components:

- The application of site-specific traffic volumes for any background developments near the site; and
- The application of a growth rate to reflect general background traffic growth on the road network.

3.1 Background Developments

When scoping out this study with staff at the City of Windsor, it was determined that there are no specific background developments that will explicitly impact the surrounding road network for this study.

3.2 Background Growth

As for traffic growth that would not be associated with a specific development, Dillon reviewed a city-wide historical traffic growth rate chart of the relative traffic volumes from 1967 to 2017. It was observed that the City of Windsor's relative traffic growth has been decreasing or stagnant within the past 15 years (2002 – 2017). However, given the time forecast between the base year (2023) and the final horizon year (2032), and considering the size, scope and location of the subject development, a 1.0% per annum background growth rate has been applied to all movements within the study area.

3.3 Future Background Traffic Volumes

3.3.1 Future Background (2027) Traffic Volumes

The future background (2027) traffic volumes are illustrated in Figure 5.

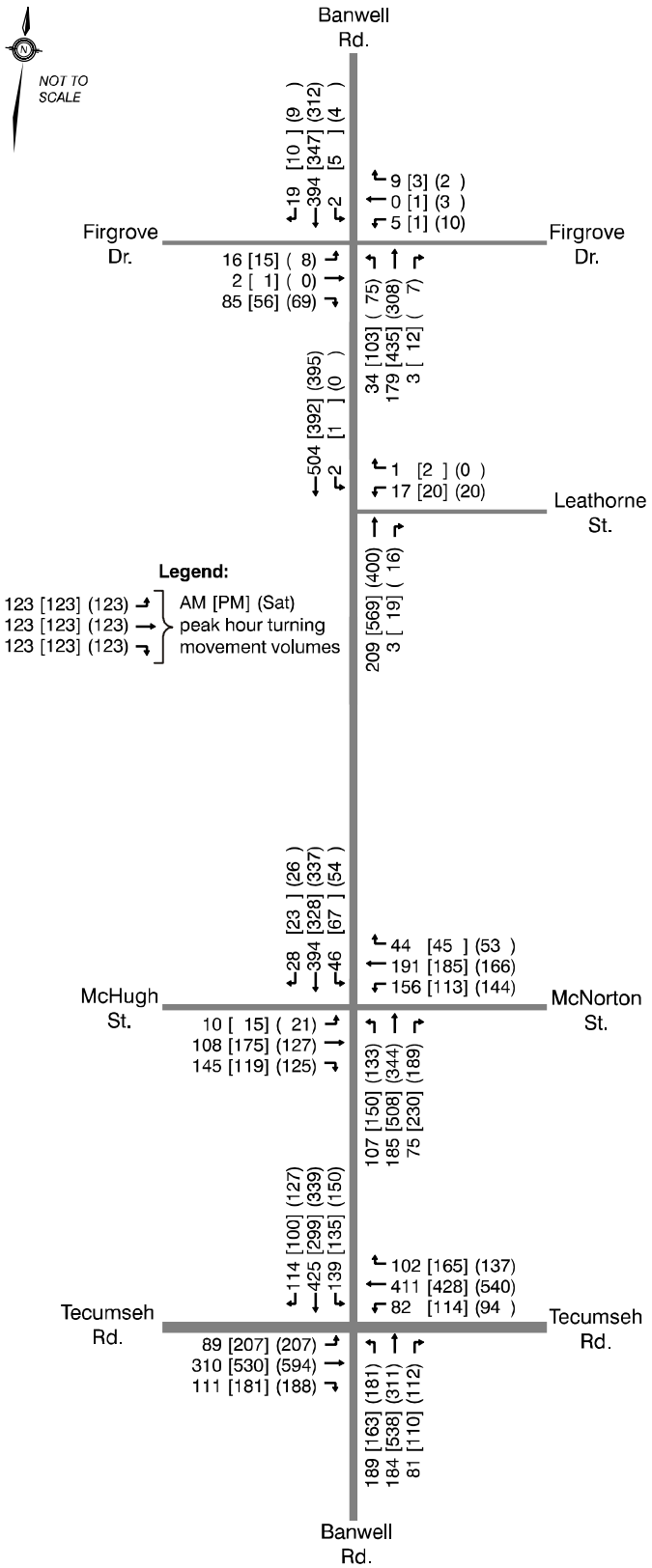


Figure 5: Future Background (2027) Traffic Volumes

3.3.2 Future Background (2032) Traffic Volumes

The future background (2032) traffic volumes are illustrated in Figure 6.

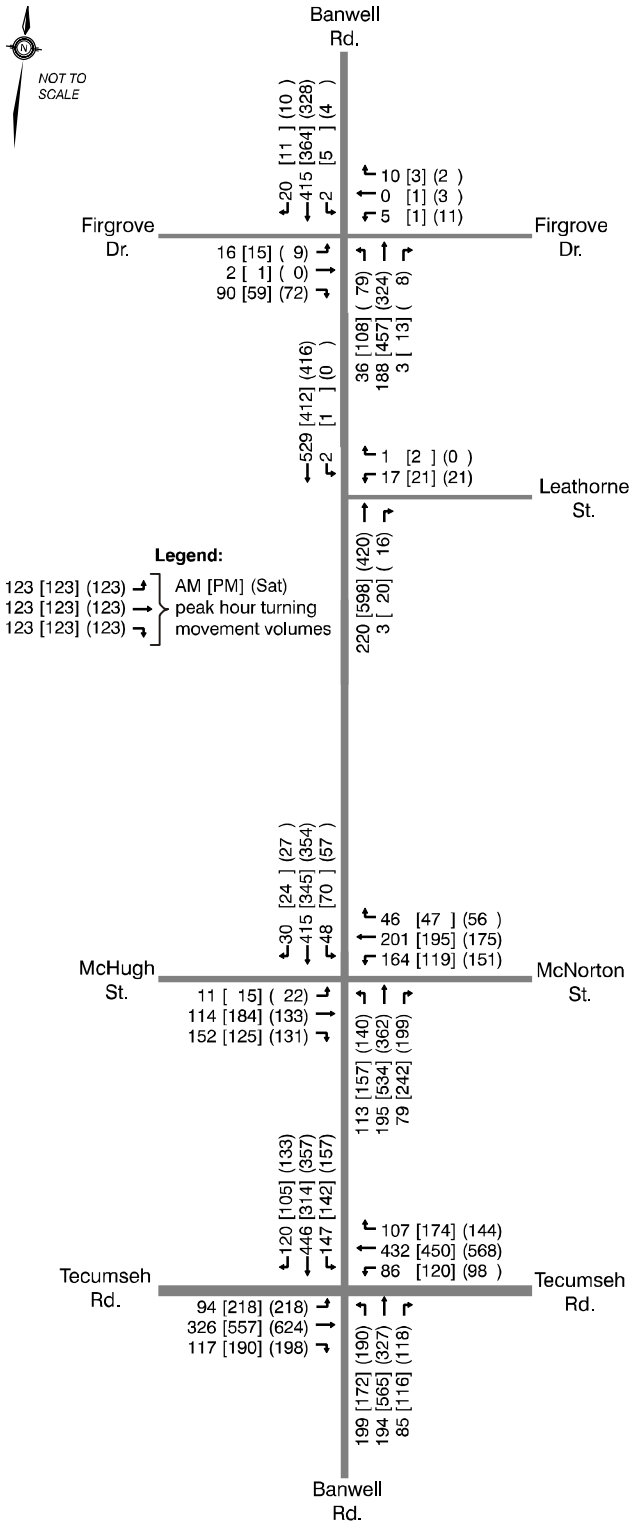


Figure 6: Future Background (2032) Traffic Volumes

3.4 Future Background Operational Analyses

Future background intersection operations for both the 2027 and 2032 horizon years were assessed using the same methodology that was applied in the existing conditions analysis.

3.4.1 Future Background (2027) Intersection Operations

Table 3 summarizes the signalized intersection operations under future background (2027) peak hour traffic volumes.

Table 3: Future Background (2027) Signalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and McHugh Street/McNorton Street	EBL	0.07	C	23.2	5	0.10	C	25.3	7	0.13	C	24.3	8
	EBT	0.29	C	27.4	26	0.48	C	32.7	42	0.34	C	27.9	29
	EBR	0.34	A	6.1	13	0.30	A	6.4	12	0.31	A	6.1	12
	WBL	0.61	D	38.0	40	0.58	D	40.4	32	0.59	D	36.9	36
	WBTR	0.62	C	33.6	52	0.62	C	34.9	52	0.58	C	30.9	46
	NBL	0.19	A	7.0	17	0.25	A	7.1	22	0.23	A	7.1	20
	NBTR	0.14	A	7.6	18	0.41	B	11.4	64	0.29	A	8.5	38
	SBL	0.07	A	6.7	8	0.17	A	7.2	11	0.11	A	6.9	10
	SBT	0.22	B	11.6	35	0.19	B	12.0	30	0.20	B	12.1	31
	SBR	0.03	A	0.1	0	0.03	A	0.0	0	0.03	A	0.1	0
Overall		—	B	17.1	—	—	B	17.0	—	—	B	15.6	—
Banwell Road and Tecumseh Road East	EBL	0.20	B	12.8	20	0.54	C	21.9	46	0.52	B	17.0	45
	EBTR	0.19	B	14.4	27	0.38	C	22.7	58	0.36	B	18.7	62
	WBL	0.17	B	12.6	19	0.34	B	17.2	27	0.28	B	13.6	22
	WBTR	0.24	B	16.5	36	0.32	C	20.9	43	0.33	B	19.7	53
	NBL	0.91	E	68.4	50	0.55	C	29.7	40	0.79	D	50.0	46
	NBTR	0.35	C	24.8	28	0.80	D	44.4	94	0.63	D	38.6	54
	SBL	0.43	C	26.3	32	0.61	C	32.2	33	0.61	D	35.3	37
	SBTR	0.72	D	38.8	67	0.44	C	29.9	49	0.69	D	40.6	60
Overall		—	C	27.2	—	—	C	28.6	—	—	C	27.6	—

Table 4 summarizes the unsignalized intersection operations under future background (2027) peak hour traffic volumes.

Table 4: Future Background (2027) Unsignalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Firgrove Drive (TWSC)	EB approach	0.17	B	11.8	5	0.15	B	13.2	4	0.12	B	10.8	3
	WB approach	0.03	B	11.3	1	0.01	C	15.9	0	0.06	C	18.6	1
	NBL	0.03	A	8.4	1	0.10	A	8.4	3	0.07	A	8.2	2
	SBL	0.00	A	7.6	0	0.00	A	8.4	0	0.00	A	8.0	0
Banwell Road and Leathorne Street (TWSC)	WBLR	0.04	B	12.4	1	0.07	C	16.8	2	0.06	B	14.6	1

Compared to existing (2023) operations, most movements are projected to continue operating in an acceptable manner (LOS D or better). All stop-controlled approaches are anticipated to continue operating at LOS C or better during all three peak periods. For most movements, minimal delay and queuing is projected at the four existing intersections.

During the AM peak hour, the northbound left turn movement at the Banwell Road and Tecumseh Road East intersection is anticipated to continue operating under capacity at LOS E.

3.4.2 Future Background (2032) Intersection Operations

Table 5 summarizes the signalized intersection operations under future background (2032) peak hour traffic volumes.

Table 5: Future Background (2032) Signalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and McHugh Street/McNorton Street	EBL	0.07	C	22.9	5	0.10	C	25.2	7	0.14	C	24.4	8
	EBT	0.30	C	27.0	28	0.50	C	32.6	44	0.36	C	27.8	31
	EBR	0.35	A	5.9	13	0.31	A	6.3	12	0.31	A	5.9	12
	WBL	0.62	D	37.9	42	0.62	D	42.0	34	0.62	D	38.0	38
	WBTR	0.63	C	33.4	54	0.64	D	35.2	55	0.60	C	31.3	48
	NBL	0.21	A	7.3	17	0.27	A	7.3	23	0.24	A	7.3	21
	NBTR	0.15	A	7.8	19	0.44	B	12.0	68	0.32	A	9.4	41
	SBL	0.08	A	7.0	9	0.19	A	7.4	12	0.12	A	7.1	10
	SBT	0.23	B	12.1	36	0.20	B	12.4	32	0.21	B	12.4	32
	SBR	0.04	A	0.3	1	0.03	A	0.1	0	0.03	A	0.1	0
Overall		—	B	17.2	—	—	B	17.5	—	—	B	16.1	—
Banwell Road and Tecumseh Road East	EBL	0.22	B	13.3	21	0.60	C	25.3	#51	0.57	B	19.0	47
	EBTR	0.21	B	15.0	29	0.41	C	23.9	62	0.39	B	19.5	65
	WBL	0.19	B	13.0	20	0.38	B	18.2	28	0.31	B	14.3	23
	WBTR	0.26	B	17.2	39	0.35	C	21.5	46	0.36	C	20.8	56
	NBL	0.97	F	82.3	59	0.58	C	30.4	42	0.84	E	55.8	48
	NBTR	0.36	C	24.9	30	0.81	D	44.5	99	0.64	D	38.5	57
	SBL	0.45	C	26.4	34	0.65	C	34.0	36	0.64	D	36.3	39
	SBTR	0.73	D	38.8	70	0.45	C	29.6	52	0.71	D	40.5	63
Overall		—	C	28.7	—	—	C	29.4	—	—	C	28.6	—

Table 6 summarizes the unsignalized intersection operations under future background (2032) peak hour traffic volumes.

Table 6: Future Background (2032) Unsignalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Firgrove Drive (TWSC)	EB approach	0.19	B	12.0	5	0.16	B	13.6	5	0.13	B	11.1	4
	WB approach	0.03	B	11.4	1	0.02	C	16.7	0	0.07	C	19.8	2
	NBL	0.04	A	8.5	1	0.10	A	8.5	3	0.07	A	8.3	2
	SBL	0.00	A	7.7	0	0.00	A	8.5	0	0.00	A	8.0	0
Banwell Road and Leathorne Street (TWSC)	WBLR	0.04	B	12.7	1	0.08	C	17.3	2	0.06	C	15.1	2

Compared to future background (2027) operations, most movements are projected to continue operating in an acceptable manner (LOS D or better). All stop-controlled approaches are anticipated to continue operating at LOS C or better. For most movements, minimal delay and queuing is once again projected at the four existing intersections.

During the AM peak hour, the northbound left at Banwell Road and Tecumseh Road East intersection is now anticipated to operate slightly under capacity at a v/c ratio of 0.97, with a delay corresponding to LOS F. During the Saturday mid-day peak hour, the movement is now anticipated to operate at LOS E compared to LOS D, but is expected to continue to operate under capacity.

4.0 Proposed Developments

The proposed developments are located northwest and southwest of Banwell Road and McHugh Street intersection. The site proposes four road connections; two connecting to Leathorne Street and two connecting to McHugh Street.

The parcel to the north of McHugh Street includes five mid-rise apartment buildings located adjacent to Banwell Road. The parcel will be bisected by the extension of Leathorne Street between Banwell Road and Questa Drive. The resulting two parcels (north and south of Leathorne Street) will have access to Leathorne Street. The south parcel (immediately north of McHugh Street) will have a driveway to McHugh Street. No driveways to Banwell Road are proposed. Pedestrians can access the site using the connections at each driveway and sidewalk connections that connect directly to Banwell Road.

The parcel to the south of McHugh Street includes two high-rise apartment buildings, two mid-rise apartment buildings, a respite home, and an office building. The high-rise apartment buildings are located adjacent to Banwell Road, the mid-rise apartment buildings are located in the southwest quadrant of the site, and the respite and office buildings are situated along the site's north side, adjacent to McHugh Street. The parcel is proposed to have a single driveway on McHugh Street. Pedestrians can access McHugh Street using the sidewalk connection adjacent to the driveway. Several other pedestrian connections are proposed to connect directly to Banwell Road.

4.1 Trip Distribution

The vehicle trips generated by the proposed developments were distributed to the road network based on travel and demographic characteristics published in the 2005 Essex-Windsor Regional Transportation Master Plan (EWRTMP). The EWRTMP included a geographic distribution of projected 2021 population and employment throughout the City of Windsor and County of Essex, as well as an estimate of the trips made in the Windsor-Essex region during the PM peak period according to the purpose of the trip (e.g., trips from work to home; trips from home to shopping, etc.).

Table 7 lists the overall trip distribution applied to the vehicle trips generated by the proposed developments, noting that trip assignments were calculated separately due to the location of each parcel/block within the subject development.

Table 7: Overall Trip Distribution

To/From:	Trip Distribution %
North: Banwell Road towards Riverside Drive East	10%
South: Banwell Road towards E.C. Row Expressway / County Road 22	20%
East: McNorton Street/Tecumseh Road East towards Lesperance Road	35%
West: McHugh Street/Tecumseh Road East towards Lauzon Parkway	35%
TOTAL	100%

4.2 Parcels North of McHugh Street

For the purposes of this TIS, the two parcels found to the north of McHugh Street are classified into two separate blocks; a north block and a south block. The north block is located on the northwest corner of the Banwell Road and Leathorne Street intersection and proposes two six-storey apartment buildings with a total of 156 dwelling units. The south block is located on the southwest corner of the Banwell Road and Leathorne Street intersection and proposes three six-storey apartment buildings with a total of 180 dwelling units.

4.2.1 Trip Generation – North Parcels

The number of vehicle trips that are expected to be generated by these two blocks was estimated based on trip generation rates published within the Institute of Transportation Engineers' document Trip Generation Manual (11th edition).

Table 8 summarizes the number of vehicle trips anticipated to be generated by the northwest parcel during the AM, PM and Saturday mid-day peak hours. Given the nature of this parcel, ITE Land Use Code 221 (Multifamily Housing (Mid-Rise)) was used.

Table 8: Trip Generation – North Parcels

	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Mid-day Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Two Apartment Buildings (North Block) – 156 units									
In/Out/Rate	23%	77%	0.37	61%	39%	0.39	51%	49%	0.39
Vehicle Trips	13	45	58	37	24	61	31	30	61
Three Apartment Buildings (South Block) – 180 units									
Vehicle Trips	15	52	67	43	27	70	36	34	70
Total Vehicle Trips	28	97	125	80	51	131	67	64	131

These two blocks are forecast to generate 125 vehicle trips (28 inbound, 97 outbound) in the AM peak hour, 131 vehicle trips (80 inbound, 51 outbound) in the PM peak hour and 131 vehicle trips (67 inbound, 64 outbound) during the Saturday mid-day peak hour.

4.2.2 Trip Assignment – North Block

Table 9 lists the trip assignment applied to the vehicle trips generated by the north block within the study area. All trips were assigned to the Leathorne Street driveway.

Table 9: Trip Assignment – North Block

Trip Distribution	Trip Distribution %	Via:	Trip Assignment %
North	10%	Banwell Road via Leathorne Street	100%
South	20%	Banwell Road via Leathorne Street	100%
East	35%	Leathorne Street east of Banwell Road	0%
		McNorton Street via Banwell Road & Leathorne Street	30%
		Tecumseh Road via Banwell Road & Leathorne Street	70%
West	35%	Firgrove Drive via Questa Drive & Leathorne Street	5%
		Leathorne Street west of Questa Drive	0%
		McHugh Street via Questa Drive & Leathorne Street	35%
		Tecumseh Road via Banwell Road & Leathorne Street	60%
TOTAL	100%	-	-

4.2.3 Trip Assignment – South Block

Table 10 lists the trip assignment applied to the vehicle trips generated by the south block within the study area.

Table 10: Trip Assignment – South Block

Trip Distribution	Trip Distribution %	Via:	Trip Assignment %
North	10%	Banwell Road via Leathorne Street	80%
		Banwell Road via McHugh Street	20%
South	20%	Banwell Road via Leathorne Street	20%
		Banwell Road via McHugh Street	80%
East	35%	Leathorne Street east of Banwell Road	0%
		McNorton Street via Banwell Road & Leathorne Street	5%
		McNorton Street/McHugh Street	30%
		Tecumseh Road via Banwell Road & Leathorne Street	20%
		Tecumseh Road via Banwell Road & McHugh Street	45%
West	35%	Firgrove Drive via Questa Drive & Leathorne Street	5%
		Leathorne Street west of Questa Drive	0%
		Tecumseh Road via Banwell Road & Leathorne Street	20%
		Tecumseh Road via Banwell Road & McHugh Street	40%
		McHugh Street	35%
TOTAL	100%	-	-

4.3 Parcel South of McHugh Street

This parcel is located on the southwest corner of the Banwell Road and McHugh Street intersection. The southwest parcel proposes two ten-storey apartment buildings with 240 dwelling units, a six-storey apartment building with 72 dwelling units, an eight-storey apartment building with 96 dwelling units, a respite home with a total gross floor area (GFA) of 499 m^2 (5,371 sq. ft.) and approximately 50 beds, and a two-storey office building with a total GFA of 1,860 m^2 (20,000 sq. ft.).

4.3.1 Trip Generation – South Parcel

The number of vehicle trips that are expected to be generated by the southwest parcel was estimated based on trip generation rates published within the Institute of Transportation Engineers' document Trip Generation Manual (11th edition).

Table 11 summarizes the number of vehicle trips anticipated to be generated by the southwest parcel during the AM, PM and Saturday mid-day peak hours. Given the nature of this parcel, ITE Land Use Code 221 (Multifamily Housing (Mid-Rise)), ITE Land Use Code 222 (Multifamily Housing (High-Rise)), ITE Land Use Code 254 (Assisted Living), and ITE Land Use Code 715 (Single Tenant Office Building) was used.

It was confirmed that the respite home would provide 50 units/beds.

Table 11: Trip Generation – South Parcel

	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Mid-day Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Two Mid-Rise Apartment Buildings – (168 units) – ITE Land Use Code 221									
In/Out/Rate	23%	77%	0.37	61%	39%	0.39	51%	49%	0.39
Vehicle Trips	14	48	62	40	26	66	34	32	66
Two High-Rise Apartment Buildings – (240 units) – ITE Land Use Code 222									
In/Out/Rate	26%	74%	0.27	62%	38%	0.32	57%	43%	0.36
Vehicle Trips	17	48	65	48	29	77	49	37	86
Respite Home – (50 units) – ITE Land Use Code 254									
In/Out/Rate	60%	40%	0.18	39%	61%	0.24	46%	54%	0.27
Vehicle Trips	5	4	9	5	7	12	6	8	14
Office Building– (20,000 sq. ft.) – ITE Land Use Code 715									
In/Out/Rate	89%	11%	1.85	15%	85%	1.76	50%	50%	0.00[2]
Vehicle Trips	33	4	37	5	30	35	0	0	0
Total Vehicle Trips	69	104	173	98	92	190	89	77	166

This parcel is forecast to generate 173 vehicle trips (69 inbound, 104 outbound) in the AM peak hour, 190 vehicle trips (98 inbound, 92 outbound) in the PM peak hour and 166 vehicle trips (89 inbound, 77 outbound) during the Saturday mid-day peak hour.

[2] This building is anticipated to only operate on weekdays. As a result, no vehicle trips would be generated during the Saturday mid-day peak hour.

4.3.2 Trip Assignment – South Parcel

Table 12 lists the trip assignment applied to the vehicle trips generated by the southwest parcel within the study area.

Table 12: Trip Assignment – South Parcel

Trip Distribution	Trip Distribution %	Via:	Trip Assignment %
North	10%	Banwell Road via McHugh Street	100%
South	20%	Banwell Road via McHugh Street	100%
East	35%	McNorton Street/McHugh Street	40%
		Tecumseh Road via Banwell Road & McNorton Street	60%
West	35%	Tecumseh Road via Banwell Road & McHugh Street	30%
		McHugh Street	70%
TOTAL	100%	-	-

4.4 Summary

4.4.1 Site-Generated Vehicle Trips

Together, these developments are forecast to generate 298 vehicle trips (97 inbound, 201 outbound) in the AM peak hour, 321 vehicle trips (178 inbound, 143 outbound) in the PM peak hour and 297 vehicle trips (156 inbound, 141 outbound) during the Saturday mid-day peak hour.

Figure 7 illustrates how the vehicle trips generated by these developments were distributed and assigned through the study area intersections and site driveways.

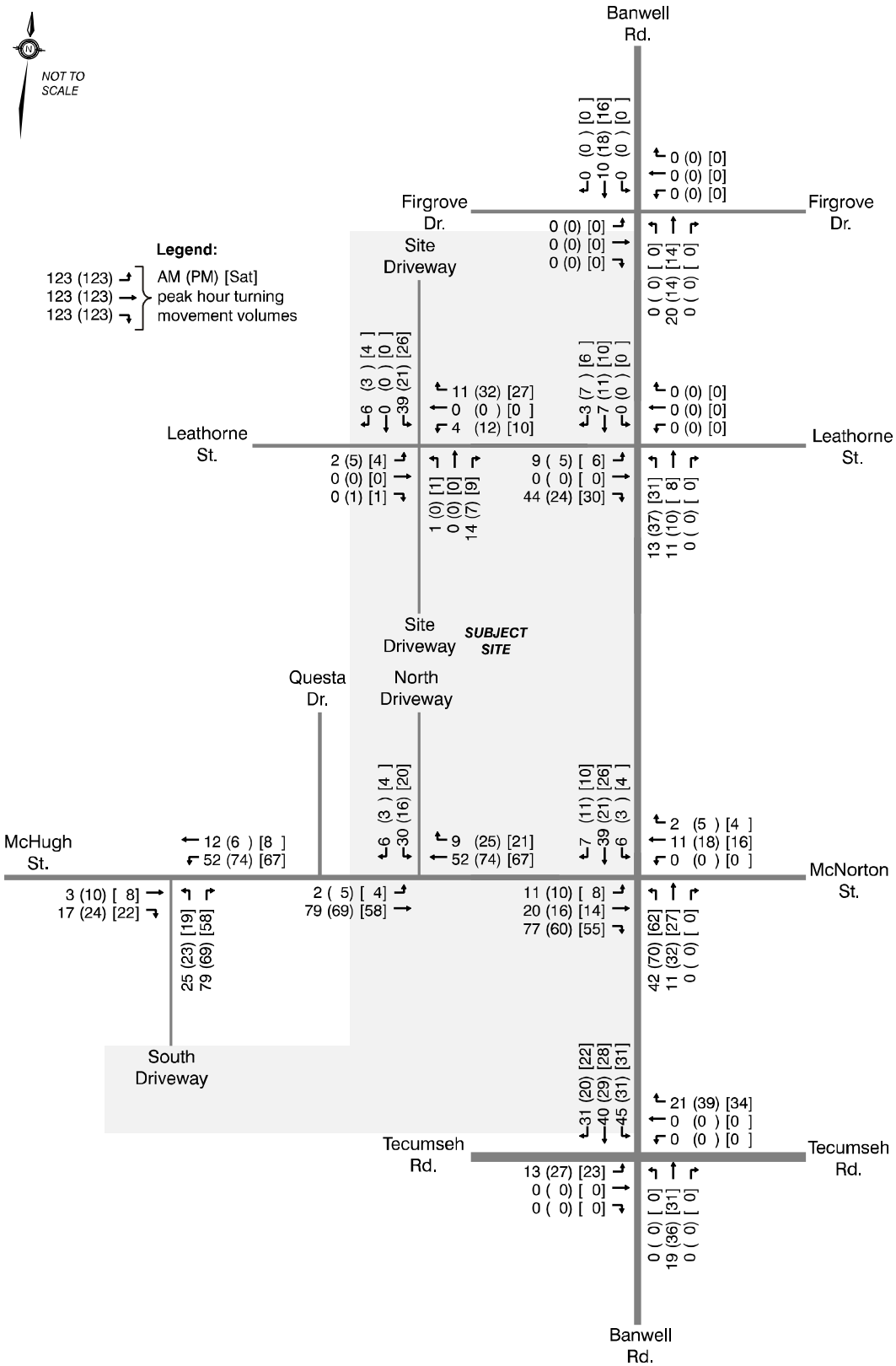


Figure 7: Site-Generated Trips

4.5 Non-Auto Travel

Three sources were reviewed in order to estimate existing modal splits in the Windsor area:

- The Essex-Windsor Regional Transportation Master Plan (EWRTMP) included a travel survey that recorded respondents' mode of travel for trips made during the PM peak period;
- The 2016 Census included questions about the typical mode of travel for the trip to work. This data was available both for the Windsor metropolitan area and for individual census dissemination areas;
- The 2019 Active Transportation Master Plan which notes target mode shares for 2041 for various areas within the city of Windsor:
  - For newer communities, the targeted non-auto mode share in 2041 has been identified as 14%.

Given the location of the developments and the land uses proposed, the non-auto mode share (14%) was broken down as follows:

- 5% for transit;
- 5% for walking; and
- 4% for cycling.

Table 13 summarizes the assumed modal split for the subject developments, noting that the modal split for vehicles is in line with the 2041 target mode shares as found in the City of Windsor's 2019 Active Transportation Master Plan.

Table 13: Projected Site Development Modal Split

Mode	Weekday AM peak hour	Weekday PM peak hour trips	Saturday Mid-day peak hour trips	Modal Split
Auto[3]	298	321	297	86%
Transit	15	16	15	5%
Walking	15	16	15	5%
Cycling	12	13	12	4%
Total	340	366	339	100%

When considering both auto and non-auto modes and a 14% non-auto mode share, the proposed mixed-use development is projected to generate 340 total trips during the AM peak hour, 366 total trips during the PM peak hour and 339 total trips during the Saturday mid-day peak hour.

[3] The number of vehicles being generated by the site as noted in Section 4.4.1.

5.0 Total Future Conditions

5.1 Total Future Traffic Volumes

The total future traffic volumes were calculated by adding the site-generated trips as distributed and assigned to the future background traffic volumes.

As Leathorne Street will be constructed between Questa Drive and Banwell Road, a few existing vehicles may be rerouted. However, given the surrounding land use and road network, it is anticipated that the rerouted volumes along Leathorne Street would be low. As this would have a negligible impact on the total future volumes, no further adjustments were made to the total future traffic volumes.

5.1.1 Total Future (2027) Traffic Volumes

Figure 8 illustrates the total future (2027) traffic volumes.

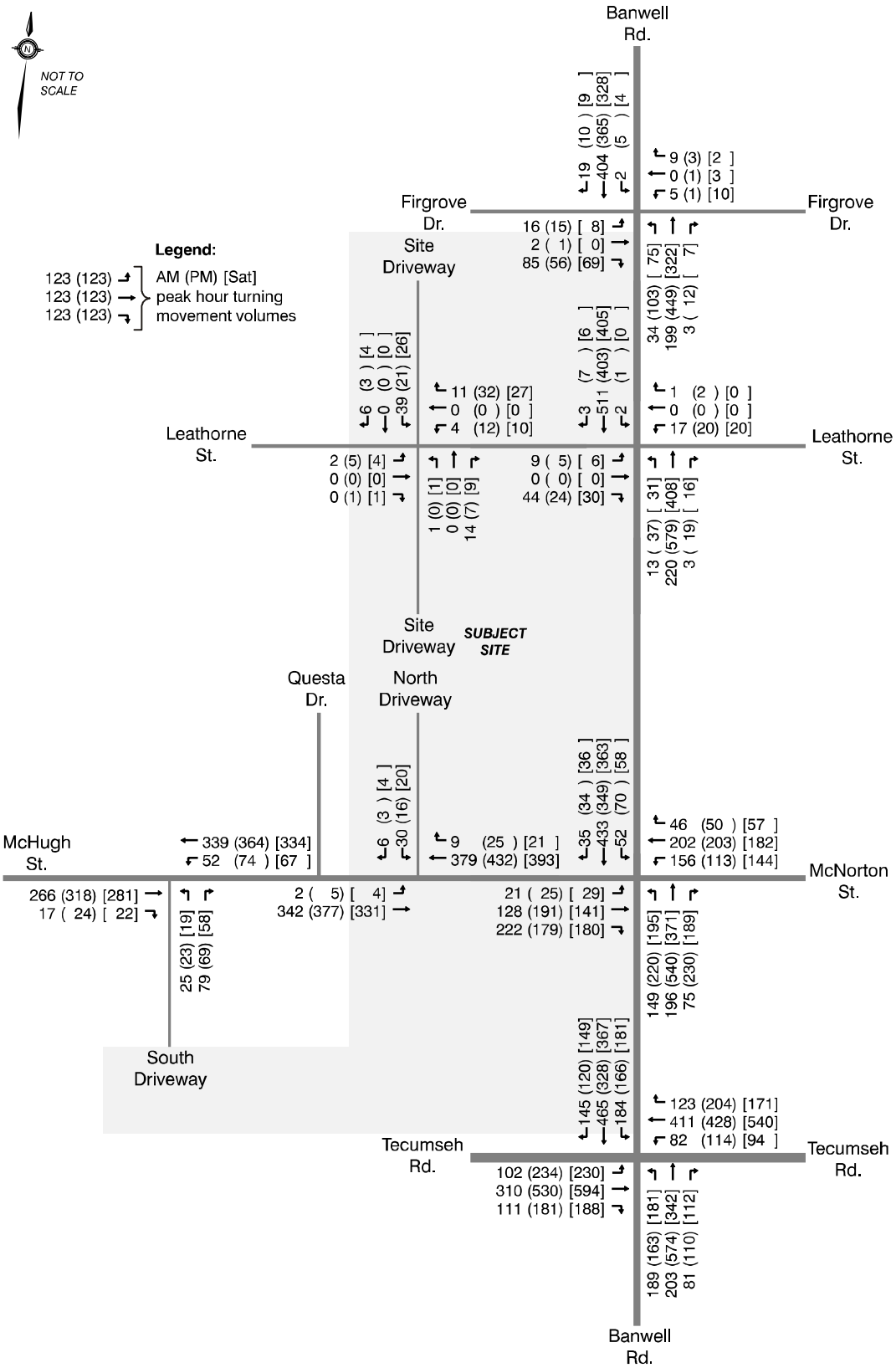


Figure 8: Total Future (2027) Traffic Volumes

5.1.2 Total Future (2032) Traffic Volumes

Figure 9 illustrates the total future (2032) traffic volumes.

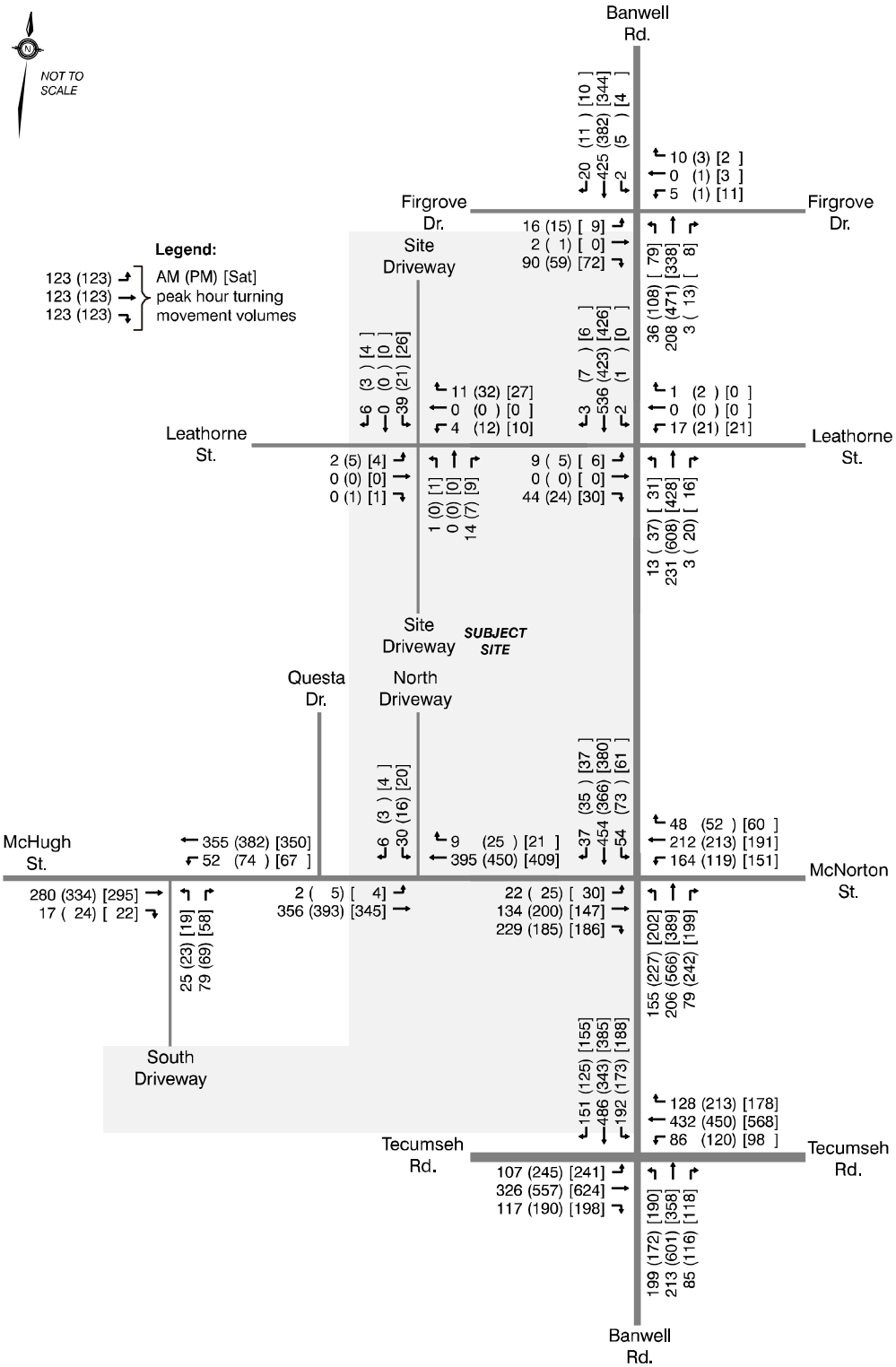


Figure 9: Total Future (2032) Traffic Volumes

5.2 Total Future Operational Analyses

5.2.1 Total Future (2027) Intersection Operations

Table 14 summarizes the signalized intersection operations under total future (2027) peak hour traffic volumes.

Table 14: Total Future (2027) Signalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and McHugh Street/McNorton Street	EBL	0.14	C	25.1	8	0.18	C	27.1	10	0.19	C	26.0	10
	EBT	0.33	C	27.8	31	0.51	C	32.5	46	0.37	C	28.2	32
	EBR	0.45	A	6.0	15	0.39	A	6.1	14	0.40	A	6.0	14
	WBL	0.62	D	38.2	40	0.59	D	40.2	33	0.61	D	37.8	37
	WBTR	0.64	C	33.7	55	0.66	D	35.5	58	0.62	C	32.2	50
	NBL	0.29	A	8.0	22	0.37	A	8.6	32	0.34	A	8.3	29
	NBTR	0.15	A	7.9	19	0.44	B	12.3	69	0.32	A	9.8	42
	SBL	0.09	A	7.0	9	0.19	A	7.7	12	0.12	A	7.1	10
	SBT	0.26	B	12.9	38	0.21	B	13.2	32	0.22	B	12.9	33
	SBR	0.04	A	0.9	2	0.04	A	0.9	2	0.05	A	0.9	2
Overall		—	B	16.9	—	—	B	17.3	—	—	B	16.0	—
Banwell Road and Tecumseh Road East	EBL	0.25	B	14.0	23	0.65	C	28.0	#62	0.60	C	20.6	53
	EBTR	0.20	B	15.2	27	0.40	C	23.7	58	0.37	B	19.5	62
	WBL	0.18	B	13.3	19	0.35	B	18.0	27	0.28	B	14.3	22
	WBTR	0.27	B	17.8	37	0.36	C	21.1	45	0.37	C	21.0	55
	NBL	0.96	E	79.2	60	0.57	C	29.7	40	0.82	D	52.5	46
	NBTR	0.35	C	25.7	31	0.81	D	44.7	100	0.65	D	39.0	59
	SBL	0.55	C	29.0	42	0.74	D	40.8	49	0.74	D	42.3	44
	SBTR	0.75	D	38.7	76	0.47	C	29.6	56	0.72	D	40.4	66
Overall		—	C	28.9	—	—	C	29.9	—	—	C	29.2	—

Table 15 summarizes the unsignalized intersection operations under total future (2027) peak hour traffic volumes.

Table 15: Total Future (2027) Unsignalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Firgrove Drive (TWSC)	EB approach	0.18	B	11.9	5	0.16	B	13.5	4	0.12	B	10.9	3
	WB approach	0.03	B	11.5	1	0.02	C	16.4	0	0.06	C	19.2	2
	NBL	0.03	A	8.4	1	0.10	A	8.5	3	0.07	A	8.3	2
	SBL	0.00	A	7.7	0	0.00	A	8.4	0	0.00	A	8.0	0
Banwell Road and Leathorne Street (TWSC)	EB approach	0.10	B	11.8	3	0.05	B	11.3	1	0.07	B	11.3	2
	WB approach	0.05	C	15.4	1	0.10	C	22.5	3	0.08	C	19.5	2
Leathorne Street and Site Driveways (TWSC)	NB approach	0.01	A	8.4	0	0.01	A	8.3	0	0.01	A	8.4	0
	SB approach	0.05	A	8.9	1	0.03	A	9.0	1	0.03	A	9.0	1
McHugh Street and North Driveway (TWSC)	SB approach	0.09	B	13.5	2	0.05	B	14.4	1	0.06	B	13.6	2
McHugh Street and South Driveway (TWSC)	NB approach	0.16	B	11.3	5	0.16	B	12.1	5	0.13	B	11.4	4

Compared to future background (2027) operations, most movements at the four existing study area intersections are projected to continue operating in an acceptable manner (LOS D or better). All stop-controlled approaches are anticipated to continue operating at LOS C or better during all three peak periods.

Each of the proposed site driveways is projected to operate at LOS B or better with negligible 95th percentile queues.

During the AM peak hour, the northbound left turn movement at the Banwell Road and Tecumseh Road East intersection is anticipated to continue operating under capacity at LOS E; however, the delay for this movement is anticipated to increase by approximately 11 seconds per vehicle.

5.2.2 Total Future (2032) Intersection Operations

Table 16 summarizes the signalized intersection operations under total future (2032) peak hour traffic volumes.

Table 16: Total Future (2032) Signalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and McHugh Street/McNorton Street	EBL	0.15	C	25.2	9	0.18	C	27.1	10	0.20	C	25.8	10
	EBT	0.34	C	27.7	32	0.51	C	32.3	48	0.38	C	27.8	33
	EBR	0.45	A	5.9	16	0.39	A	6.0	15	0.40	A	5.8	14
	WBL	0.65	D	39.5	43	0.62	D	41.6	34	0.63	D	38.1	38
	WBTR	0.65	C	34.0	58	0.67	D	35.9	61	0.63	C	32.1	53
	NBL	0.30	A	8.3	23	0.40	A	9.1	33	0.36	A	8.9	30
	NBTR	0.16	A	8.6	20	0.46	B	12.9	73	0.34	B	10.3	45
	SBL	0.09	A	7.1	10	0.20	A	8.0	12	0.14	A	7.5	11
	SBT	0.27	B	13.2	40	0.22	B	13.7	33	0.23	B	13.5	34
	SBR	0.05	A	1.1	2	0.05	A	1.0	2	0.05	A	1.1	2
Overall		—	B	17.3	—	—	B	17.7	—	—	B	16.3	—
Banwell Road and Tecumseh Road East	EBL	0.27	B	14.5	24	0.72	C	32.2	72	0.65	C	23.0	57
	EBTR	0.22	B	15.8	29	0.42	C	24.6	62	0.40	C	20.2	65
	WBL	0.19	B	13.7	20	0.39	B	18.8	28	0.31	B	15.0	23
	WBTR	0.29	B	18.6	39	0.38	C	21.9	48	0.40	C	22.2	58
	NBL	1.02	F	95.3	70	0.60	C	31.0	42	0.87	E	60.8	56
	NBTR	0.36	C	25.7	33	0.83	D	45.6	106	0.67	D	39.1	62
	SBL	0.57	C	29.3	44	0.76	D	43.1	55	0.77	D	45.3	46
	SBTR	0.76	D	38.6	80	0.48	C	29.5	58	0.74	D	40.8	70
Overall		—	C	30.5	—	—	C	31.0	—	—	C	30.6	—

Table 17 summarizes the unsignalized intersection operations under total future (2032) peak hour traffic volumes.

Table 17: Total Future (2032) Unsignalized Intersection Operations

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-day Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Firgrove Drive (TWSC)	EB approach	0.19	B	12.2	6	0.17	B	13.9	5	0.13	B	11.2	4
	WB approach	0.03	B	11.6	1	0.02	C	17.2	0	0.07	C	20.4	2
	NBL	0.04	A	8.5	1	0.10	A	8.6	3	0.07	A	8.3	2
	SBL	0.00	A	7.7	0	0.00	A	8.5	0	0.00	A	8.1	0
Banwell Road and Leathorne Street (TWSC)	EB approach	0.10	B	12.0	3	0.05	B	11.4	1	0.07	B	11.5	2
	WB approach	0.05	C	15.8	1	0.11	C	23.4	3	0.09	C	20.5	2
Leathorne Street and Site Driveways (TWSC)	NB approach	0.01	A	8.4	0	0.01	A	8.3	0	0.01	A	8.4	0
	SB approach	0.05	A	8.9	1	0.03	A	9.0	1	0.03	A	9.0	1
McHugh Street and North Driveway (TWSC)	SB approach	0.09	B	13.8	2	0.05	B	14.8	1	0.06	B	13.9	2
McHugh Street and South Driveway (TWSC)	NB approach	0.17	B	11.4	5	0.17	B	12.3	5	0.13	B	11.5	4

Compared to future background (2032) operations, most movements in the study area are projected to continue operating in an acceptable manner (LOS D or better). All stop-controlled approaches are anticipated to continue operating at LOS C or better during all three peak periods. For most movements, minimal delay and queuing is once again projected at the four existing intersections.

Compared to the total future (2027) operations, the site driveways are projected to continue operating at LOS B or better with negligible 95th percentile queues. The northbound left-turn movement at the Banwell Road and Tecumseh Road East intersection is now anticipated to operate slightly over capacity and at LOS F, compared to a v/c ratio of 0.97 during 2032 future background conditions. Mitigation measures for this movement are discussed in Section 6.0.

6.0 Mitigation Measures

6.1 Tecumseh Road East and Banwell Road

At the Banwell Road and Tecumseh Road East intersection, the northbound left-turn movement is anticipated to operate slightly over capacity during the weekday AM peak hour beginning in 2032 and under the total future traffic volumes. The signal timing splits were optimized to mitigate this capacity condition at the intersection, while no adjustments were made to the signal's cycle length. The mitigated results are presented in Table 18.

Table 18: Total Future (2032) Signalized Intersection Operations (with Optimized Splits)

Intersection	Movement	Weekday AM Peak Hour			
		v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Banwell Road and Tecumseh Road East	EBL	0.29	B	16.3	25
	EBTR	0.23	B	17.6	31
	WBL	0.20	B	15.4	21
	WBTR	0.32	C	20.7	41
	NBL	0.83	D	47.4	58
	NBTR	0.35	C	24.9	33
	SBL	0.51	C	24.8	41
	SBTR	0.76	D	38.7	80
Overall		—	C	27.3	—

The northbound and southbound left-turn phase lengths were increased (by reducing the maximum green time for the coordinated eastbound and westbound approaches). With the optimized splits, the northbound left-turn movement is anticipated to operate at LOS D with a v/c ratio of 0.83, compared to LOS F with a v/c ratio of 1.02. As a result, all movements would be able to operate at LOS D or better with these signal timing adjustments.

7.0 Active Transportation Considerations

Currently, some existing active transportation infrastructure surrounds the site. The following internal active transportation enhancements should be considered around the proposed developments:

- Construct a sidewalk along one or both sides of the Leathorne Street extension, so it extends between Questa Drive and Banwell Road; and
- Extend the existing south sidewalk along McHugh Street east to Banwell Road, so it extends along the full limits of the development lands.

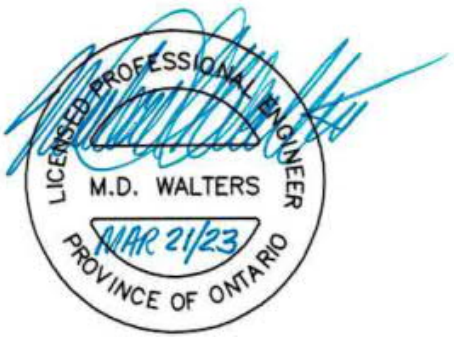
8.0 Summary

Dillon Consulting Limited (Dillon) has been retained by 1027458 Ontario Inc. to undertake a comprehensive Transportation Impact Study (TIS) which reviews the impact of developments located in the city of Windsor, Ontario. This proposed development would be located on vacant lands found northwest and southwest of the Banwell Road and McHugh Street intersection.

With the proposed developments in place, Leathorne Street will be extended between Questa Drive and Banwell, forming a four-legged intersection at Banwell Road. However, based on the surrounding road network and land uses, it is not anticipated there will be a significant number of vehicles diverted to this corridor.

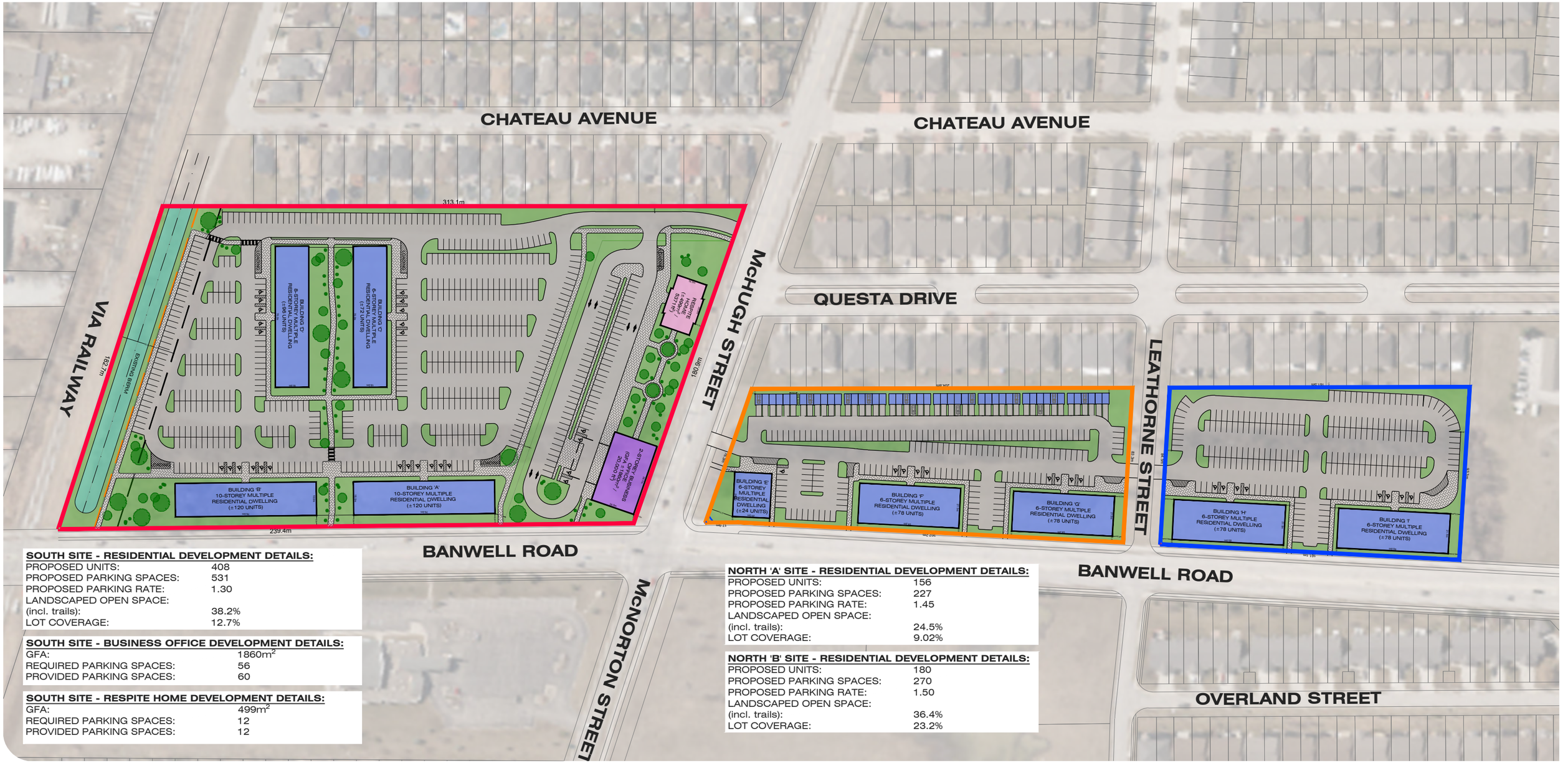
The development parcels are forecast to generate 298 vehicle trips (97 inbound, 201 outbound) in the AM peak hour, 321 vehicle trips (178 inbound, 143 outbound) in the PM peak hour and 297 vehicle trips (156 inbound, 141 outbound) during the Saturday mid-day peak hour. When considering both auto and non-auto modes, these developments are projected to generate 340 total trips during the AM peak hour, 366 total trips during the PM peak hour and 339 total trips during the Saturday mid-day peak hour.

Most movements at the study area intersections are projected to operate in an acceptable manner through to the 2032 horizon year with the developments in place. During the AM peak hour, the northbound left turn movement at the Banwell Road and Tecumseh Road East intersection currently operates under capacity at LOS E but is anticipated to worsen where it will operate slightly over capacity and at LOS F once the parcels are developed as envisioned. As a result, it is recommended that the signal timing splits be optimized at this intersection during the AM peak hour in order to provide the northbound left-turn movement with some additional protected green time. With the optimized splits, the northbound left-turn movement is anticipated to operate at LOS D with a v/c ratio of 0.83 while all other movements at the intersection are anticipated to continue operating at LOS D or better.



Appendix A

Conceptual Development Plan



SOUTH SITE - RESIDENTIAL DEVELOPMENT DETAILS:

PROPOSED UNITS:	408
PROPOSED PARKING SPACES:	531
PROPOSED PARKING RATE:	1.30
LANDSCAPED OPEN SPACE:	
(incl. trails):	38.2%
LOT COVERAGE:	12.7%

SOUTH SITE - BUSINESS OFFICE DEVELOPMENT DETAILS:

GFA:	1860m^2
REQUIRED PARKING SPACES:	56
PROVIDED PARKING SPACES:	60

SOUTH SITE - RESPITE HOME DEVELOPMENT DETAILS:

GFA:	499m^2
REQUIRED PARKING SPACES:	12
PROVIDED PARKING SPACES:	12

NORTH 'A' SITE - RESIDENTIAL DEVELOPMENT DETAILS:

PROPOSED UNITS:	156
PROPOSED PARKING SPACES:	227
PROPOSED PARKING RATE:	1.45
LANDSCAPED OPEN SPACE:	
(incl. trails):	24.5%
LOT COVERAGE:	9.02%

NORTH 'B' SITE - RESIDENTIAL DEVELOPMENT DETAILS:

PROPOSED UNITS:	180
PROPOSED PARKING SPACES:	270
PROPOSED PARKING RATE:	1.50
LANDSCAPED OPEN SPACE:	
(incl. trails):	36.4%
LOT COVERAGE:	23.2%

1027458 ONTARIO LTD.
BANWELL AND McHUGH -
MIXED USE DEVELOPMENTS

CONCEPTUAL DEVELOPMENT PLAN
FEBRUARY 13, 2023

BANWELL AND McHUGH - SOUTH SITE (± 5.35 ha / 13.23 ac)
BANWELL AND McHUGH - NORTH 'A' SITE (±1.43 ha / 3.54 ac)
BANWELL AND McHUGH - NORTH 'B' SITE (±1.66 ha / 4.11 ac)
PROPOSED MULTI-UNIT RESIDENTIAL
PROPOSED LANDSCAPED OPEN SPACE
30m BUFFER FROM RAILWAY
EXTENT OF BERM
EXISTING BERM
PROPOSED BUSINESS OFFICES
PROPOSED RESPITE HOME

File Location:
c:\pw working directory\projects 2022\dillon_32mru\dms63328\22-5144 - banwell and mchugh - v7 - 2022.12.13.dwg
March, 16, 2023 9:55 AM

SOURCE: THE COUNTY OF ESSEX INTERACTIVE MAPPING (2021)

MAP/DRAWING INFORMATION
THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. ALL DIMENSIONS AND BOUNDARY INFORMATION SHOULD BE VERIFIED BY AN O.L.S PRIOR TO CONSTRUCTION.
CREATED BY: MRU
CHECKED BY: TJO
DESIGNED BY: MRU

SCALE: 1: 2000 (11X17)

DILLON CONSULTING

PROJECT: 22-5144
STATUS: DRAFT
DATE: 02/13/2023

Appendix B

Traffic Volume Data

DILLON CONSULTING

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

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

Municipality: Windsor
Site #: 2302900001
Intersection: Banwell Rd & Firgrove Dr
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 595
North Entering: 399
North Peds: 1
Peds Cross: ⋈

Buses	0	5	0	5
Trucks	1	1	0	2
Cars	17	373	2	392
Totals	18	379	2	

Buses	6
Trucks	3
Cars	187
Totals	196

East Leg Total: 21
East Entering: 14
East Peds: 2
Peds Cross: ⧗

Banwell Rd

Buses	Trucks	Cars	Totals
1	1	49	51

Cars	Trucks	Buses	Totals
8	0	1	9
0	0	0	0
5	0	0	5
13	0	1	

Firgrove Dr

N
W E
S

Buses	Trucks	Cars	Totals
1	1	13	15
0	0	2	2
0	0	82	82
1	1	97	

Firgrove Dr

Cars	Trucks	Buses	Totals
7	0	0	7

Banwell Rd

Peds Cross: ⧗
West Peds: 2
West Entering: 99
West Leg Total: 150

Cars	460
Trucks	1
Buses	5
Totals	466

Cars	32	166	3	201
Trucks	0	2	0	2
Buses	1	4	0	5
Totals	33	172	3	

Peds Cross: ⋈
South Peds: 0
South Entering: 208
South Leg Total: 674

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

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

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Windsor
Site #: 2302900001
Intersection: Banwell Rd & Firgrove Dr
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 783
North Entering: 348
North Peds: 0
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	1	2	0	3
Cars	9	331	5	345
Totals	10	333	5	

Buses	0
Trucks	3
Cars	432
Totals	435

East Leg Total: 23
East Entering: 5
East Peds: 2
Peds Cross: ⧗

Banwell Rd

Buses	Trucks	Cars	Totals
0	1	109	110

Firgrove Dr

Cars	Trucks	Buses	Totals
3	0	0	3
1	0	0	1
1	0	0	1
5	0	0	

N
W E
S

Buses	Trucks	Cars	Totals
0	0	14	14
0	0	1	1
0	0	54	54
0	0	69	

Firgrove Dr

Cars	Trucks	Buses	Totals
18	0	0	18

Banwell Rd

Peds Cross: ⧗
West Peds: 2
West Entering: 69
West Leg Total: 179

Cars	386			
Trucks	2			
Buses	0			
Totals	388			

Cars	99	415	12	526
Trucks	0	3	0	3
Buses	0	0	0	0
Totals	99	418	12	

Peds Cross: ⋈
South Peds: 0
South Entering: 529
South Leg Total: 917

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

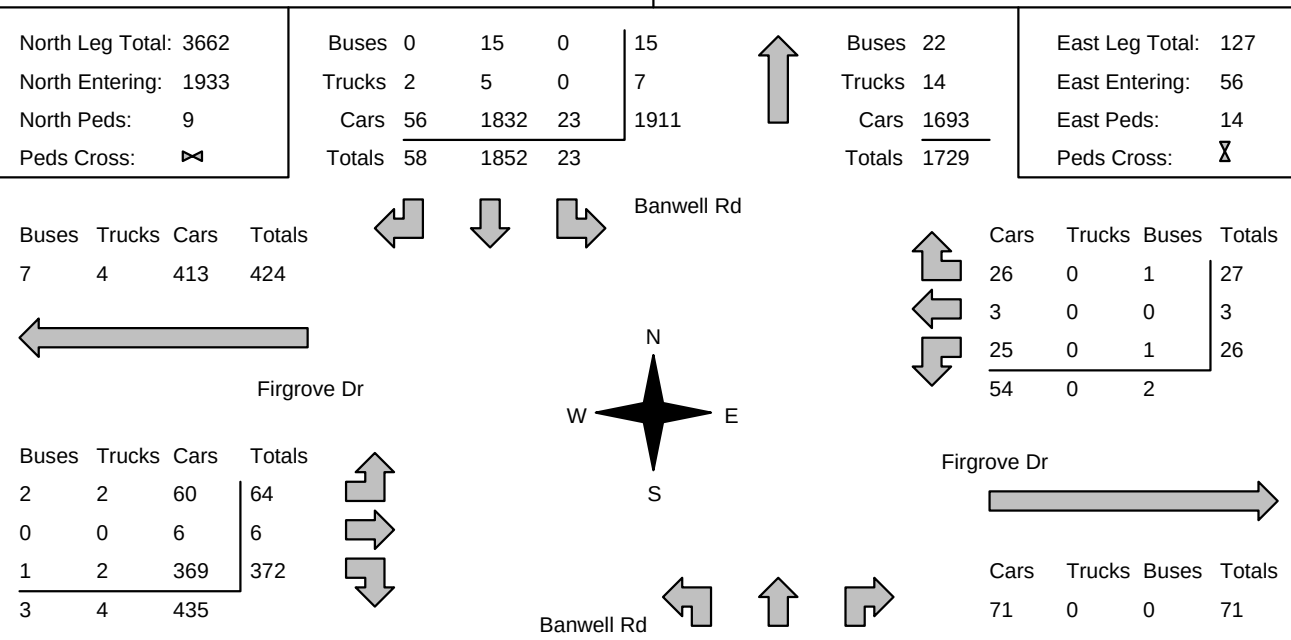
Municipality: Windsor
Site #: 2302900001
Intersection: Banwell Rd & Firgrove Dr
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & Firgrove Dr | **Count Date:** 16-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*1*	*323*	*9*	*333*	*0*
9:00:00	*2*	*354*	*20*	*376*	*1*
10:00:00	*6*	*231*	*3*	*240*	*2*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*7*	*302*	*11*	*320*	*2*
17:00:00	*3*	*317*	*6*	*326*	*2*
18:00:00	*4*	*325*	*9*	*338*	*2*
Totals:	23	1852	58	1933	9

North/South Total Approaches: *0*, *485*, *596*, *426*, *0*, *783*, *831*, *855*, 3976

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*24*	*125*	*3*	*152*	*0*
9:00:00	*35*	*181*	*4*	*220*	*0*
10:00:00	*31*	*152*	*3*	*186*	*0*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*85*	*368*	*10*	*463*	*0*
17:00:00	*99*	*397*	*9*	*505*	*0*
18:00:00	*89*	*415*	*13*	*517*	*0*
S Totals:	363	1638	42	2043	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*4*	*0*	*2*	*6*	*0*
9:00:00	*5*	*1*	*8*	*14*	*2*
10:00:00	*3*	*1*	*8*	*12*	*7*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*11*	*0*	*2*	*13*	*2*
17:00:00	*1*	*0*	*4*	*5*	*2*
18:00:00	*2*	*1*	*3*	*6*	*1*
Totals:	26	3	27	56	14

East/West Total Approaches: *0*, *78*, *121*, *77*, *0*, *83*, *65*, *74*, 498

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*5*	*0*	*67*	*72*	*1*
9:00:00	*19*	*2*	*86*	*107*	*2*
10:00:00	*7*	*1*	*57*	*65*	*1*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*11*	*0*	*59*	*70*	*0*
17:00:00	*8*	*2*	*50*	*60*	*0*
18:00:00	*14*	*1*	*53*	*68*	*2*
W Totals:	64	6	372	442	6

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*10:00*	*15:00*	*16:00*	*17:00*	*18:00*
Crossing Values:	*0*	*9*	*27*	*13*	*0*	*24*	*13*	*19*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	44	44	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	105	61	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	212	107	5	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0
8:00:00	1	1	321	109	9	4	0	0	1	0	0	0	0	0	1	1	0	0	0	0
8:15:00	1	0	421	100	13	4	0	0	2	1	0	0	0	0	4	3	0	0	0	0
8:30:00	1	0	501	80	13	0	0	0	2	0	0	0	0	0	5	1	0	0	0	0
8:45:00	2	1	585	84	22	9	0	0	2	0	1	1	0	0	5	0	0	0	1	1
9:00:00	3	1	669	84	28	6	0	0	2	0	1	0	0	0	6	1	0	0	1	0
9:15:00	3	0	736	67	29	1	0	0	2	0	1	0	0	0	9	3	0	0	1	0
9:30:00	6	3	796	60	30	1	0	0	2	0	1	0	0	0	9	0	0	0	2	1
9:45:00	8	2	854	58	31	1	0	0	2	0	1	0	0	0	9	0	0	0	3	1
10:00:00	9	1	897	43	31	0	0	0	2	0	1	0	0	0	9	0	0	0	3	0
10:15:00	9	0	897	0	31	0	0	0	2	0	1	0	0	0	9	0	0	0	3	0
15:00:00	9	0	897	0	31	0	0	0	2	0	1	0	0	0	9	0	0	0	3	0
15:15:00	12	3	976	79	32	1	0	0	2	0	1	0	0	0	9	0	0	0	4	1
15:30:00	14	2	1049	73	35	3	0	0	2	0	1	0	0	0	9	0	0	0	5	1
15:45:00	16	2	1115	66	40	5	0	0	2	0	1	0	0	0	10	1	0	0	5	0
16:00:00	16	0	1197	82	42	2	0	0	2	0	1	0	0	0	11	1	0	0	5	0
16:15:00	16	0	1272	75	43	1	0	0	3	1	1	0	0	0	14	3	0	0	5	0
16:30:00	16	0	1361	89	46	3	0	0	3	0	1	0	0	0	15	1	0	0	6	1
16:45:00	17	1	1436	75	46	0	0	0	3	0	1	0	0	0	15	0	0	0	7	1
17:00:00	19	2	1509	73	48	2	0	0	3	0	1	0	0	0	15	0	0	0	7	0
17:15:00	19	0	1599	90	53	5	0	0	5	2	2	1	0	0	15	0	0	0	7	0
17:30:00	21	2	1677	78	53	0	0	0	5	0	2	0	0	0	15	0	0	0	7	0
17:45:00	22	1	1767	90	55	2	0	0	5	0	2	0	0	0	15	0	0	0	7	0
18:00:00	23	1	1832	65	56	1	0	0	5	0	2	0	0	0	15	0	0	0	9	2
18:15:00	23	0	1832	0	56	0	0	0	5	0	2	0	0	0	15	0	0	0	9	0
18:15:15	23	0	1832	0	56	0	0	0	5	0	2	0	0	0	15	0	0	0	9	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	4	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	7	3	0	0	4	2	0	0	0	0	0	0	0	0	0	0	1	1	1	1
8:30:00	7	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0
8:45:00	7	0	0	0	8	3	0	0	0	0	0	0	0	0	0	0	1	0	2	1
9:00:00	9	2	1	1	9	1	0	0	0	0	0	0	0	0	0	0	1	0	2	0
9:15:00	9	0	1	0	10	1	0	0	0	0	0	0	0	0	0	0	1	0	6	4
9:30:00	9	0	1	0	12	2	0	0	0	0	0	0	1	1	0	0	1	0	8	2
9:45:00	9	0	2	1	15	3	0	0	0	0	0	0	1	0	0	0	1	0	9	1
10:00:00	11	2	2	0	17	2	0	0	0	0	0	0	1	0	0	0	1	0	9	0
10:15:00	11	0	2	0	17	0	0	0	0	0	0	0	1	0	0	0	1	0	9	0
15:00:00	11	0	2	0	17	0	0	0	0	0	0	0	1	0	0	0	1	0	9	0
15:15:00	17	6	2	0	17	0	0	0	0	0	0	0	1	0	0	0	1	0	10	1
15:30:00	18	1	2	0	19	2	0	0	0	0	0	0	1	0	0	0	1	0	11	1
15:45:00	21	3	2	0	19	0	0	0	0	0	0	0	1	0	0	0	1	0	11	0
16:00:00	22	1	2	0	19	0	0	0	0	0	0	0	1	0	0	0	1	0	11	0
16:15:00	22	0	2	0	21	2	0	0	0	0	0	0	1	0	0	0	1	0	11	0
16:30:00	22	0	2	0	22	1	0	0	0	0	0	0	1	0	0	0	1	0	12	1
16:45:00	22	0	2	0	22	0	0	0	0	0	0	0	1	0	0	0	1	0	12	0
17:00:00	23	1	2	0	23	1	0	0	0	0	0	0	1	0	0	0	1	0	13	1
17:15:00	23	0	2	0	24	1	0	0	0	0	0	0	1	0	0	0	1	0	13	0
17:30:00	23	0	3	1	24	0	0	0	0	0	0	0	1	0	0	0	1	0	13	0
17:45:00	23	0	3	0	25	1	0	0	0	0	0	0	1	0	0	0	1	0	14	1
18:00:00	25	2	3	0	26	1	0	0	0	0	0	0	1	0	0	0	1	0	14	0
18:15:00	25	0	3	0	26	0	0	0	0	0	0	0	1	0	0	0	1	0	14	0
18:15:15	25	0	3	0	26	0	0	0	0	0	0	0	1	0	0	0	1	0	14	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	19	19	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	0
7:30:00	4	3	47	28	0	0	0	0	3	1	0	0	1	1	3	1	0	0	0	0
7:45:00	9	5	78	31	0	0	0	0	4	1	0	0	3	2	8	5	0	0	0	0
8:00:00	21	12	112	34	3	3	0	0	4	0	0	0	3	0	9	1	0	0	0	0
8:15:00	31	10	161	49	3	0	0	0	4	0	0	0	3	0	10	1	0	0	0	0
8:30:00	37	6	203	42	3	0	0	0	5	1	0	0	3	0	10	0	0	0	0	0
8:45:00	41	4	244	41	3	0	0	0	6	1	0	0	4	1	12	2	0	0	0	0
9:00:00	54	13	287	43	7	4	0	0	6	0	0	0	5	1	13	1	0	0	0	0
9:15:00	61	7	323	36	7	0	0	0	7	1	0	0	5	0	13	0	0	0	0	0
9:30:00	66	5	364	41	7	0	0	0	7	0	0	0	5	0	13	0	0	0	0	0
9:45:00	73	7	407	43	9	2	0	0	7	0	0	0	5	0	13	0	0	0	0	0
10:00:00	84	11	438	31	10	1	1	1	7	0	0	0	5	0	13	0	0	0	0	0
10:15:00	84	0	438	0	10	0	1	0	7	0	0	0	5	0	13	0	0	0	0	0
15:00:00	84	0	438	0	10	0	1	0	7	0	0	0	5	0	13	0	0	0	0	0
15:15:00	96	12	529	91	12	2	2	1	7	0	0	0	5	0	14	1	0	0	0	0
15:30:00	113	17	612	83	16	4	2	0	8	1	0	0	5	0	16	2	0	0	0	0
15:45:00	140	27	708	96	19	3	2	0	8	0	0	0	6	1	18	2	0	0	0	0
16:00:00	167	27	799	91	20	1	2	0	8	0	0	0	6	0	19	1	0	0	0	0
16:15:00	190	23	891	92	22	2	2	0	8	0	0	0	7	1	19	0	0	0	0	0
16:30:00	220	30	987	96	25	3	2	0	8	0	0	0	7	0	19	0	0	0	0	0
16:45:00	241	21	1089	102	26	1	2	0	9	1	0	0	7	0	19	0	0	0	0	0
17:00:00	265	24	1194	105	29	3	2	0	10	1	0	0	7	0	19	0	0	0	0	0
17:15:00	284	19	1304	110	34	5	2	0	11	1	0	0	7	0	19	0	0	0	0	0
17:30:00	312	28	1423	119	38	4	2	0	11	0	0	0	7	0	19	0	0	0	0	0
17:45:00	340	28	1504	81	38	0	2	0	12	1	0	0	7	0	19	0	0	0	0	0
18:00:00	354	14	1607	103	42	4	2	0	12	0	0	0	7	0	19	0	0	0	0	0
18:15:00	354	0	1607	0	42	0	2	0	12	0	0	0	7	0	19	0	0	0	0	0
18:15:15	354	0	1607	0	42	0	2	0	12	0	0	0	7	0	19	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	2	1	0	0	23	14	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	5	3	0	0	43	20	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00:00	5	0	0	0	67	24	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15:00	7	2	0	0	87	20	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30:00	12	5	0	0	102	15	0	0	0	0	0	0	0	0	0	0	0	0	2	1
8:45:00	18	6	2	2	125	23	1	1	0	0	0	0	1	1	0	0	0	0	3	1
9:00:00	22	4	2	0	153	28	1	0	0	0	0	0	1	0	0	0	0	0	3	0
9:15:00	23	1	2	0	174	21	1	0	0	0	0	0	1	0	0	0	0	0	3	0
9:30:00	25	2	3	1	187	13	1	0	0	0	0	0	1	0	0	0	0	0	3	0
9:45:00	27	2	3	0	196	9	1	0	0	0	0	0	1	0	0	0	0	0	4	1
10:00:00	28	1	3	0	210	14	2	1	0	0	0	0	1	0	0	0	0	0	4	0
10:15:00	28	0	3	0	210	0	2	0	0	0	0	0	1	0	0	0	0	0	4	0
15:00:00	28	0	3	0	210	0	2	0	0	0	0	0	1	0	0	0	0	0	4	0
15:15:00	33	5	3	0	223	13	2	0	0	0	0	0	1	0	0	0	0	0	4	0
15:30:00	34	1	3	0	238	15	2	0	0	0	0	0	1	0	0	0	0	0	4	0
15:45:00	38	4	3	0	251	13	2	0	0	0	1	1	1	0	0	0	0	0	4	0
16:00:00	39	1	3	0	267	16	2	0	0	0	1	0	1	0	0	0	1	1	4	0
16:15:00	41	2	3	0	279	12	2	0	0	0	1	0	2	1	0	0	1	0	4	0
16:30:00	42	1	4	1	290	11	2	0	0	0	1	0	2	0	0	0	1	0	4	0
16:45:00	45	3	5	1	307	17	2	0	0	0	1	0	2	0	0	0	1	0	4	0
17:00:00	46	1	5	0	317	10	2	0	0	0	1	0	2	0	0	0	1	0	4	0
17:15:00	50	4	6	1	332	15	2	0	0	0	1	0	2	0	0	0	1	0	4	0
17:30:00	54	4	6	0	347	15	2	0	0	0	1	0	2	0	0	0	1	0	6	2
17:45:00	59	5	6	0	361	14	2	0	0	0	1	0	2	0	0	0	1	0	6	0
18:00:00	60	1	6	0	369	8	2	0	0	0	2	1	2	0	0	0	1	0	6	0
18:15:00	60	0	6	0	369	0	2	0	0	0	2	0	2	0	0	0	1	0	6	0
18:15:15	60	0	6	0	369	0	2	0	0	0	2	0	2	0	0	0	1	0	6	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Mid-day Peak Diagram

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

One Hour Peak
From: 13:00:00
To: 14:00:00

Municipality: Windsor
Site #: 2302900001
Intersection: Banwell Rd & Firgrove Dr
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 619
North Entering: 313
North Peds: 0
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	0	1	0	1
Cars	9	299	4	312
Totals	9	300	4	

Buses	0
Trucks	0
Cars	306
Totals	306

East Leg Total: 26
East Entering: 15
East Peds: 1
Peds Cross: ⧖

Banwell Rd

Buses	Trucks	Cars	Totals
0	2	82	84

Cars	Trucks	Buses	Totals
2	0	0	2
3	0	0	3
9	1	0	10
14	1	0	

Firgrove Dr

N
W E
S

Buses	Trucks	Cars	Totals
0	0	8	8
0	0	0	0
0	1	65	66
0	1	73	

Firgrove Dr

Cars	Trucks	Buses	Totals
11	0	0	11

Banwell Rd

Peds Cross: ⧖
West Peds: 0
West Entering: 74
West Leg Total: 158

Cars	373
Trucks	3
Buses	0
Totals	376

Cars	70	296	7	373
Trucks	2	0	0	2
Buses	0	0	0	0
Totals	72	296	7	

Peds Cross: ⋈
South Peds: 3
South Entering: 375
South Leg Total: 751

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

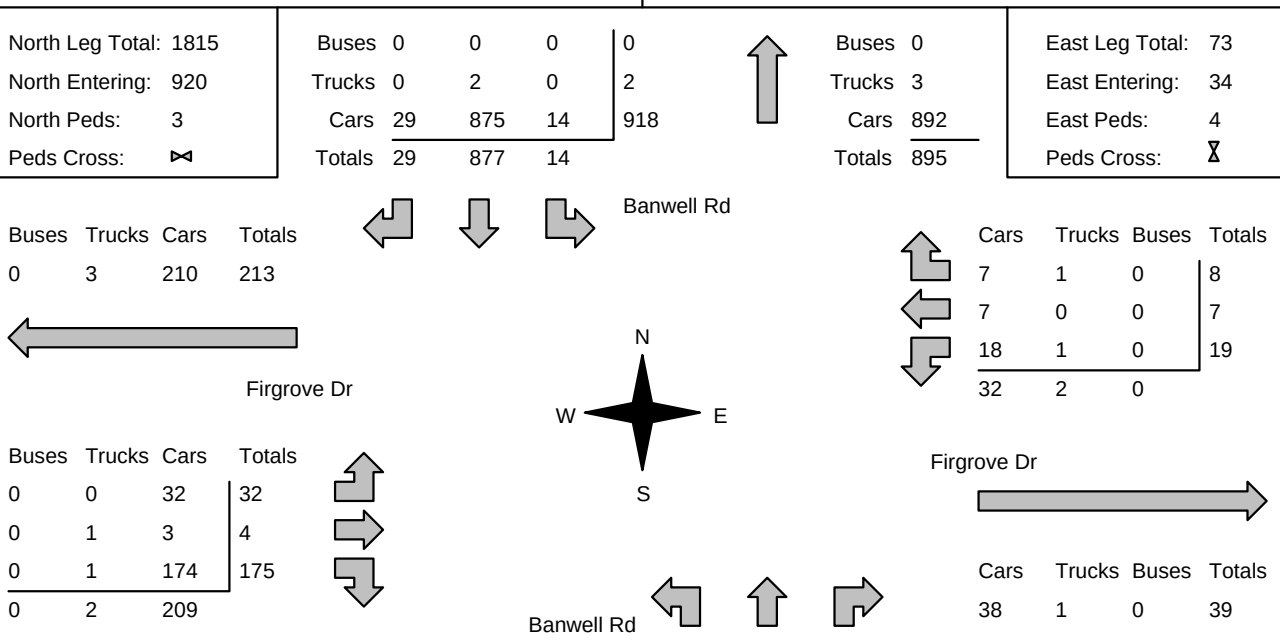
Municipality: Windsor
Site #: 2302900001
Intersection: Banwell Rd & Firgrove Dr
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & Firgrove Dr | **Count Date:** 18-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*5*	*306*	*12*	*323*	*2*
13:00:00	*5*	*271*	*8*	*284*	*1*
14:00:00	*4*	*300*	*9*	*313*	*0*
Totals:	14	877	29	920	3

North/South Total Approaches: 1973

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*53*	*269*	*6*	*328*	*4*
13:00:00	*52*	*290*	*8*	*350*	*2*
14:00:00	*72*	*296*	*7*	*375*	*3*
S Totals:	177	855	21	1053	9

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*4*	*2*	*2*	*8*	*3*
13:00:00	*5*	*2*	*4*	*11*	*0*
14:00:00	*10*	*3*	*2*	*15*	*1*
Totals:	19	7	8	34	4

East/West Total Approaches: 245

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*14*	*1*	*48*	*63*	*2*
13:00:00	*10*	*3*	*61*	*74*	*0*
14:00:00	*8*	*0*	*66*	*74*	*0*
W Totals:	32	4	175	211	2

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*11:00*	*12:00*	*13:00*	*14:00*	*0:00*	*0:00*	*0:00*	*0:00*
Crossing Values:	*0*	*26*	*21*	*24*	*0*	*0*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	2	2	71	71	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	3	1	145	74	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	4	1	230	85	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	5	1	306	76	12	6	0	0	0	0	0	0	0	0	0	0	0	0	2	2
12:15:00	6	1	378	72	15	3	0	0	0	0	0	0	0	0	0	0	0	0	3	1
12:30:00	6	0	443	65	17	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0
12:45:00	7	1	502	59	17	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
13:00:00	10	3	576	74	20	3	0	0	1	1	0	0	0	0	0	0	0	0	3	0
13:15:00	12	2	642	66	23	3	0	0	1	0	0	0	0	0	0	0	0	0	3	0
13:30:00	13	1	717	75	25	2	0	0	1	0	0	0	0	0	0	0	0	0	3	0
13:45:00	14	1	802	85	27	2	0	0	2	1	0	0	0	0	0	0	0	0	3	0
14:00:00	14	0	875	73	29	2	0	0	2	0	0	0	0	0	0	0	0	0	3	0
14:15:00	14	0	875	0	29	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
14:15:15	14	0	875	0	29	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
12:00:00	4	0	2	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	3	1
12:15:00	6	2	3	1	2	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0
12:30:00	6	0	4	1	3	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0
12:45:00	8	2	4	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0
13:00:00	9	1	4	0	5	2	0	0	0	0	1	0	0	0	0	0	0	0	3	0
13:15:00	10	1	5	1	5	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0
13:30:00	11	1	7	2	5	0	0	0	0	0	1	0	0	0	0	0	0	0	4	1
13:45:00	15	4	7	0	6	1	1	1	0	0	1	0	0	0	0	0	0	0	4	0
14:00:00	18	3	7	0	7	1	1	0	0	0	1	0	0	0	0	0	0	0	4	0
14:15:00	18	0	7	0	7	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0
14:15:15	18	0	7	0	7	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	18	18	55	55	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	32	14	131	76	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
11:45:00	43	11	207	76	3	3	0	0	1	0	0	0	0	0	0	0	0	0	1	0
12:00:00	53	10	268	61	6	3	0	0	1	0	0	0	0	0	0	0	0	0	4	3
12:15:00	66	13	342	74	11	5	0	0	1	0	0	0	0	0	0	0	0	0	4	0
12:30:00	79	13	408	66	13	2	1	1	1	0	0	0	0	0	0	0	0	0	5	1
12:45:00	91	12	484	76	13	0	1	0	1	0	0	0	0	0	0	0	0	0	5	0
13:00:00	104	13	557	73	14	1	1	0	2	1	0	0	0	0	0	0	0	0	6	1
13:15:00	123	19	624	67	14	0	1	0	2	0	0	0	0	0	0	0	0	0	6	0
13:30:00	137	14	703	79	18	4	2	1	2	0	0	0	0	0	0	0	0	0	6	0
13:45:00	156	19	771	68	20	2	3	1	2	0	0	0	0	0	0	0	0	0	7	1
14:00:00	174	18	853	82	21	1	3	0	2	0	0	0	0	0	0	0	0	0	9	2
14:15:00	174	0	853	0	21	0	3	0	2	0	0	0	0	0	0	0	0	0	9	0
14:15:15	174	0	853	0	21	0	3	0	2	0	0	0	0	0	0	0	0	0	9	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	4	4	0	0	9	9	0	0	1	1	0	0	0	0	0	0	0	0	1	1
11:30:00	5	1	0	0	20	11	0	0	1	0	0	0	0	0	0	0	0	0	1	0
11:45:00	9	4	0	0	37	17	0	0	1	0	0	0	0	0	0	0	0	0	2	1
12:00:00	14	5	0	0	48	11	0	0	1	0	0	0	0	0	0	0	0	0	2	0
12:15:00	17	3	2	2	58	10	0	0	1	0	0	0	0	0	0	0	0	0	2	0
12:30:00	21	4	3	1	75	17	0	0	1	0	0	0	0	0	0	0	0	0	2	0
12:45:00	21	0	3	0	96	21	0	0	1	0	0	0	0	0	0	0	0	0	2	0
13:00:00	24	3	3	0	109	13	0	0	1	0	0	0	0	0	0	0	0	0	2	0
13:15:00	28	4	3	0	129	20	0	0	1	0	0	0	0	0	0	0	0	0	2	0
13:30:00	31	3	3	0	144	15	0	0	1	0	0	0	0	0	0	0	0	0	2	0
13:45:00	31	0	3	0	163	19	0	0	1	0	1	1	0	0	0	0	0	0	2	0
14:00:00	32	1	3	0	174	11	0	0	1	0	1	0	0	0	0	0	0	0	2	0
14:15:00	32	0	3	0	174	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0
14:15:15	32	0	3	0	174	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

Municipality: Windsor
Site #: 2302900002
Intersection: Banwell Rd & Leathorne St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

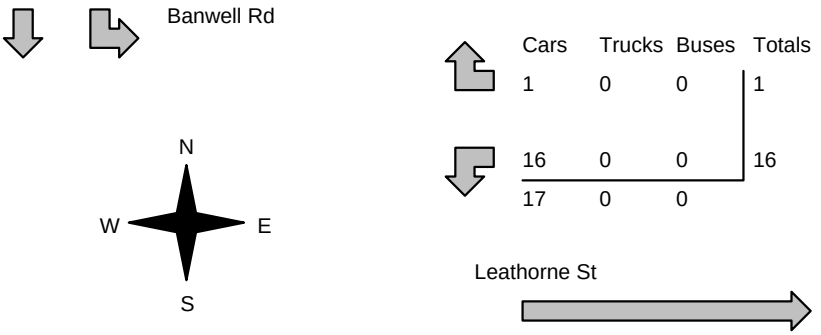
Major Road: Banwell Rd runs N/S

North Leg Total: 688
North Entering: 486
North Peds: 0
Peds Cross: ⋈

Buses	4	1	5
Trucks	2	0	2
Cars	478	1	479
Totals	484	2	

Buses	9
Trucks	2
Cars	191
Totals	202

East Leg Total: 22
East Entering: 17
East Peds: 1
Peds Cross: ⋈



Cars	494
Trucks	2
Buses	4
Totals	500

Cars	190	3	193
Trucks	2	0	2
Buses	9	0	9
Totals	201	3	

Peds Cross: ⋈
South Peds: 0
South Entering: 204
South Leg Total: 704

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

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

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Windsor
Site #: 2302900002
Intersection: Banwell Rd & Leathorne St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

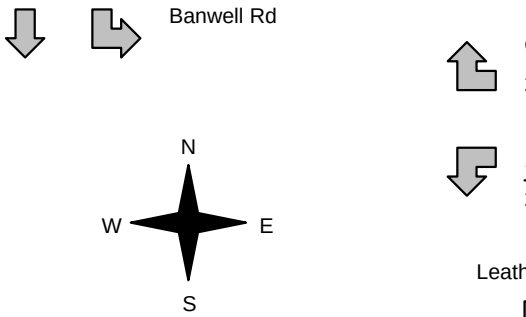
Major Road: Banwell Rd runs N/S

North Leg Total: 927
North Entering: 378
North Peds: 0
Peds Cross: ⋈

Buses	0	0	0
Trucks	2	0	2
Cars	375	1	376
Totals	377	1	

Buses	0
Trucks	3
Cars	546
Totals	549

East Leg Total: 40
East Entering: 21
East Peds: 1
Peds Cross: ⋈



Cars	394		
Trucks	2		
Buses	0		
Totals	396		

Cars	544	18	562
Trucks	3	0	3
Buses	0	0	0
Totals	547	18	

Peds Cross: ⋈
South Peds: 0
South Entering: 565
South Leg Total: 961

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Windsor
Site #: 2302900002
Intersection: Banwell Rd & Leathorne St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 4313
North Entering: 2257
North Peds: 1
Peds Cross: ⋈

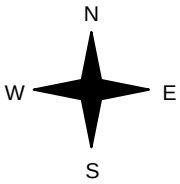
Buses	17	1	18
Trucks	7	0	7
Cars	2225	7	2232
Totals	2249	8	

Buses	29
Trucks	12
Cars	2015
Totals	2056

East Leg Total: 177
East Entering: 102
East Peds: 10
Peds Cross: ⋈

Banwell Rd

Cars	Trucks	Buses	Totals
7	0	0	7
95	0	0	95
102	0	0	

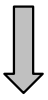


Leathorne St

Cars	Trucks	Buses	Totals
73	0	2	75

Banwell Rd

Cars	2320		
Trucks	7		
Buses	17		
Totals	2344		



Cars	2008	66	2074
Trucks	12	0	12
Buses	29	1	30
Totals	2049	67	

Peds Cross: ⋈
South Peds: 0
South Entering: 2116
South Leg Total: 4460

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & Leathorne St | **Count Date:** 16-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	1	392	0	393	0
9:00:00	1	444	0	445	0
10:00:00	0	293	0	293	0
15:00:00	0	0	0	0	0
16:00:00	4	369	0	373	1
17:00:00	1	369	0	370	0
18:00:00	1	382	0	383	0
Totals:	8	2249	0	2257	1

North/South Total Approaches: 4373

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	0	151	4	155	0
9:00:00	0	219	7	226	0
10:00:00	0	191	6	197	0
15:00:00	0	0	0	0	0
16:00:00	0	464	17	481	0
17:00:00	0	507	16	523	0
18:00:00	0	517	17	534	0
S Totals:	0	2049	67	2116	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	14	0	1	15	0
9:00:00	14	0	1	15	1
10:00:00	21	0	1	22	5
15:00:00	0	0	0	0	0
16:00:00	16	0	0	16	2
17:00:00	16	0	3	19	2
18:00:00	14	0	1	15	0
Totals:	95	0	7	102	10

East/West Total Approaches: 102

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0
10:00:00	0	0	0	0	0
15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0
18:00:00	0	0	0	0	0
W Totals:	0	0	0	0	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	15:00	16:00	17:00	18:00
Crossing Values:	0	14	14	21	0	17	16	14

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	52	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	128	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	1	254	126	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
8:00:00	1	0	390	136	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0
8:15:00	1	0	513	123	0	0	0	0	2	1	0	0	1	1	3	2	0	0	0	0
8:30:00	1	0	606	93	0	0	0	0	2	0	0	0	1	0	4	1	0	0	0	0
8:45:00	1	0	714	108	0	0	0	0	2	0	0	0	1	0	4	0	0	0	0	0
9:00:00	1	0	829	115	0	0	0	0	2	0	0	0	1	0	5	1	0	0	0	0
9:15:00	1	0	917	88	0	0	0	0	2	0	0	0	1	0	8	3	0	0	0	0
9:30:00	1	0	991	74	0	0	0	0	2	0	0	0	1	0	9	1	0	0	0	0
9:45:00	1	0	1059	68	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
10:00:00	1	0	1118	59	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
10:15:00	1	0	1118	0	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
15:00:00	1	0	1118	0	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
15:15:00	1	0	1216	98	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
15:30:00	1	0	1305	89	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0	0
15:45:00	3	2	1385	80	0	0	0	0	3	1	0	0	1	0	10	1	0	0	1	1
16:00:00	5	2	1483	98	0	0	0	0	3	0	0	0	1	0	12	2	0	0	1	0
16:15:00	5	0	1569	86	0	0	0	0	4	1	0	0	1	0	16	4	0	0	1	0
16:30:00	6	1	1669	100	0	0	0	0	4	0	0	0	1	0	17	1	0	0	1	0
16:45:00	6	0	1762	93	0	0	0	0	4	0	0	0	1	0	17	0	0	0	1	0
17:00:00	6	0	1846	84	0	0	0	0	4	0	0	0	1	0	17	0	0	0	1	0
17:15:00	6	0	1951	105	0	0	0	0	6	2	0	0	1	0	17	0	0	0	1	0
17:30:00	7	1	2044	93	0	0	0	0	6	0	0	0	1	0	17	0	0	0	1	0
17:45:00	7	0	2150	106	0	0	0	0	6	0	0	0	1	0	17	0	0	0	1	0
18:00:00	7	0	2225	75	0	0	0	0	7	1	0	0	1	0	17	0	0	0	1	0
18:15:00	7	0	2225	0	0	0	0	0	7	0	0	0	1	0	17	0	0	0	1	0
18:15:15	7	0	2225	0	0	0	0	0	7	0	0	0	1	0	17	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	3	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	9	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	14	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	18	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:30:00	19	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:45:00	25	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:00:00	28	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:15:00	31	3	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	3
9:30:00	39	8	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1
9:45:00	42	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
10:00:00	49	7	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1
10:15:00	49	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
15:00:00	49	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
15:15:00	53	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1
15:30:00	59	6	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1
15:45:00	64	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
16:00:00	65	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
16:15:00	71	6	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1
16:30:00	72	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	9	0
16:45:00	77	5	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	10	1
17:00:00	81	4	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
17:15:00	86	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
17:30:00	91	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
17:45:00	91	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	10	0
18:00:00	95	4	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
18:15:00	95	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
18:15:15	95	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	21	21	2	2	0	0	1	1	0	0	0	0	3	3	0	0	0	0
7:30:00	0	0	51	30	2	0	0	0	1	0	0	0	0	0	6	3	0	0	0	0
7:45:00	0	0	86	35	2	0	0	0	2	1	0	0	0	0	13	7	0	0	0	0
8:00:00	0	0	135	49	4	2	0	0	2	0	0	0	0	0	14	1	0	0	0	0
8:15:00	0	0	196	61	5	1	0	0	2	0	0	0	0	0	15	1	0	0	0	0
8:30:00	0	0	241	45	5	0	0	0	3	1	0	0	0	0	15	0	0	0	0	0
8:45:00	0	0	287	46	7	2	0	0	4	1	0	0	0	0	18	3	0	0	0	0
9:00:00	0	0	346	59	11	4	0	0	4	0	0	0	0	0	20	2	0	0	0	0
9:15:00	0	0	388	42	13	2	0	0	5	1	0	0	0	0	20	0	1	1	0	0
9:30:00	0	0	434	46	13	0	0	0	5	0	0	0	0	0	20	0	1	0	0	0
9:45:00	0	0	487	53	14	1	0	0	5	0	0	0	0	0	20	0	1	0	0	0
10:00:00	0	0	534	47	16	2	0	0	6	1	0	0	0	0	21	1	1	0	0	0
10:15:00	0	0	534	0	16	0	0	0	6	0	0	0	0	0	21	0	1	0	0	0
15:00:00	0	0	534	0	16	0	0	0	6	0	0	0	0	0	21	0	1	0	0	0
15:15:00	0	0	639	105	19	3	0	0	7	1	0	0	0	0	22	1	1	0	0	0
15:30:00	0	0	743	104	26	7	0	0	8	1	0	0	0	0	24	2	1	0	0	0
15:45:00	0	0	871	128	28	2	0	0	8	0	0	0	0	0	27	3	1	0	0	0
16:00:00	0	0	989	118	33	5	0	0	8	0	0	0	0	0	28	1	1	0	0	0
16:15:00	0	0	1111	122	37	4	0	0	8	0	0	0	0	0	29	1	1	0	0	0
16:30:00	0	0	1235	124	41	4	0	0	8	0	0	0	0	0	29	0	1	0	0	0
16:45:00	0	0	1360	125	46	5	0	0	9	1	0	0	0	0	29	0	1	0	0	0
17:00:00	0	0	1493	133	49	3	0	0	10	1	0	0	0	0	29	0	1	0	0	0
17:15:00	0	0	1628	135	55	6	0	0	11	1	0	0	0	0	29	0	1	0	0	0
17:30:00	0	0	1779	151	59	4	0	0	11	0	0	0	0	0	29	0	1	0	0	0
17:45:00	0	0	1887	108	63	4	0	0	12	1	0	0	0	0	29	0	1	0	0	0
18:00:00	0	0	2008	121	66	3	0	0	12	0	0	0	0	0	29	0	1	0	0	0
18:15:00	0	0	2008	0	66	0	0	0	12	0	0	0	0	0	29	0	1	0	0	0
18:15:15	0	0	2008	0	66	0	0	0	12	0	0	0	0	0	29	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Mid-day Peak Diagram

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

One Hour Peak
From: 13:00:00
To: 14:00:00

Municipality: Windsor
Site #: 2302900002
Intersection: Banwell Rd & Leathorne St
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

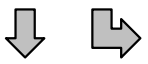
Major Road: Banwell Rd runs N/S

North Leg Total: 764
North Entering: 380
North Peds: 0
Peds Cross: ⋈

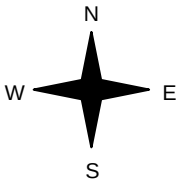
Buses	0	0	0
Trucks	3	0	3
Cars	377	0	377
Totals	380	0	

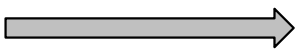
Buses	0
Trucks	2
Cars	382
Totals	384

East Leg Total: 34
East Entering: 19
East Peds: 0
Peds Cross: ⋈



	Cars	Trucks	Buses	Totals
	0	0	0	0
	19	0	0	19
	19	0	0	





	Cars	Trucks	Buses	Totals
	15	0	0	15

Cars	396	Cars	382	15	397
Trucks	3	Trucks	2	0	2
Buses	0	Buses	0	0	0
Totals	399	Totals	384	15	

Peds Cross: ⋈
South Peds: 0
South Entering: 399
South Leg Total: 798

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Windsor
Site #: 2302900002
Intersection: Banwell Rd & Leathorne St
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

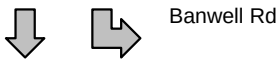
Major Road: Banwell Rd runs N/S

North Leg Total: 2145
North Entering: 1079
North Peds: 1
Peds Cross: ⋈

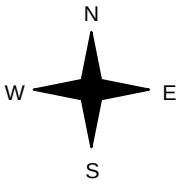
Buses	0	0	0
Trucks	6	0	6
Cars	1073	0	1073
Totals	1079	0	

Buses	0
Trucks	5
Cars	1061
Totals	1066

East Leg Total: 114
East Entering: 65
East Peds: 4
Peds Cross: ⋈



	Cars	Trucks	Buses	Totals
	8	0	0	8
	57	0	0	57
	65	0	0	



Leathorne St

	Cars	Trucks	Buses	Totals
	48	1	0	49

Banwell Rd

Cars	1130		
Trucks	6		
Buses	0		
Totals	1136		

Cars	1053	48	1101
Trucks	5	1	6
Buses	0	0	0
Totals	1058	49	

Peds Cross: ⋈
South Peds: 0
South Entering: 1107
South Leg Total: 2243

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & Leathorne St | **Count Date:** 18-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*0*	*358*	*0*	*358*	*1*
13:00:00	*0*	*341*	*0*	*341*	*0*
14:00:00	*0*	*380*	*0*	*380*	*0*
Totals:	0	1079	0	1079	1

North/South Total Approaches: 2186

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*0*	*325*	*15*	*340*	*0*
13:00:00	*0*	*349*	*19*	*368*	*0*
14:00:00	*0*	*384*	*15*	*399*	*0*
S Totals:	0	1058	49	1107	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*11*	*0*	*5*	*16*	*3*
13:00:00	*27*	*0*	*3*	*30*	*1*
14:00:00	*19*	*0*	*0*	*19*	*0*
Totals:	57	0	8	65	4

East/West Total Approaches: 65

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*0*	*0*	*0*	*0*	*1*
13:00:00	*0*	*0*	*0*	*0*	*0*
14:00:00	*0*	*0*	*0*	*0*	*0*
W Totals:	0	0	0	0	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*11:00*	*12:00*	*13:00*	*14:00*	*0:00*	*0:00*	*0:00*	*0:00*
Crossing Values:	*0*	*12*	*27*	*19*	*0*	*0*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	168	87	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
11:45:00	0	0	270	102	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
12:00:00	0	0	357	87	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
12:15:00	0	0	443	86	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	0
12:30:00	0	0	526	83	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0
12:45:00	0	0	608	82	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0
13:00:00	0	0	696	88	0	0	0	0	3	1	0	0	0	0	0	0	0	0	1	0
13:15:00	0	0	783	87	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0
13:30:00	0	0	877	94	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0
13:45:00	0	0	985	108	0	0	0	0	6	3	0	0	0	0	0	0	0	0	1	0
14:00:00	0	0	1073	88	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0
14:15:00	0	0	1073	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0
14:15:15	0	0	1073	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	3	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	5	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:45:00	9	4	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	3	2
12:00:00	11	2	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0
12:15:00	13	2	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0
12:30:00	20	7	0	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	4	1
12:45:00	28	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
13:00:00	38	10	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
13:15:00	42	4	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
13:30:00	45	3	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
13:45:00	51	6	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
14:00:00	57	6	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
14:15:00	57	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
14:15:15	57	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	72	72	6	6	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	159	87	11	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	250	91	12	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	324	74	14	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0
12:15:00	0	0	413	89	20	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0
12:30:00	0	0	495	82	23	3	0	0	2	1	1	0	0	0	0	0	0	0	0	0
12:45:00	0	0	583	88	28	5	0	0	2	0	1	0	0	0	0	0	0	0	0	0
13:00:00	0	0	671	88	33	5	0	0	3	1	1	0	0	0	0	0	0	0	0	0
13:15:00	0	0	761	90	36	3	0	0	3	0	1	0	0	0	0	0	0	0	0	0
13:30:00	0	0	860	99	40	4	0	0	4	1	1	0	0	0	0	0	0	0	0	0
13:45:00	0	0	949	89	44	4	0	0	5	1	1	0	0	0	0	0	0	0	0	0
14:00:00	0	0	1053	104	48	4	0	0	5	0	1	0	0	0	0	0	0	0	0	0
14:15:00	0	0	1053	0	48	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
14:15:15	0	0	1053	0	48	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Windsor
Site #: 2302900003
Intersection: Banwell Rd & McHugh St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

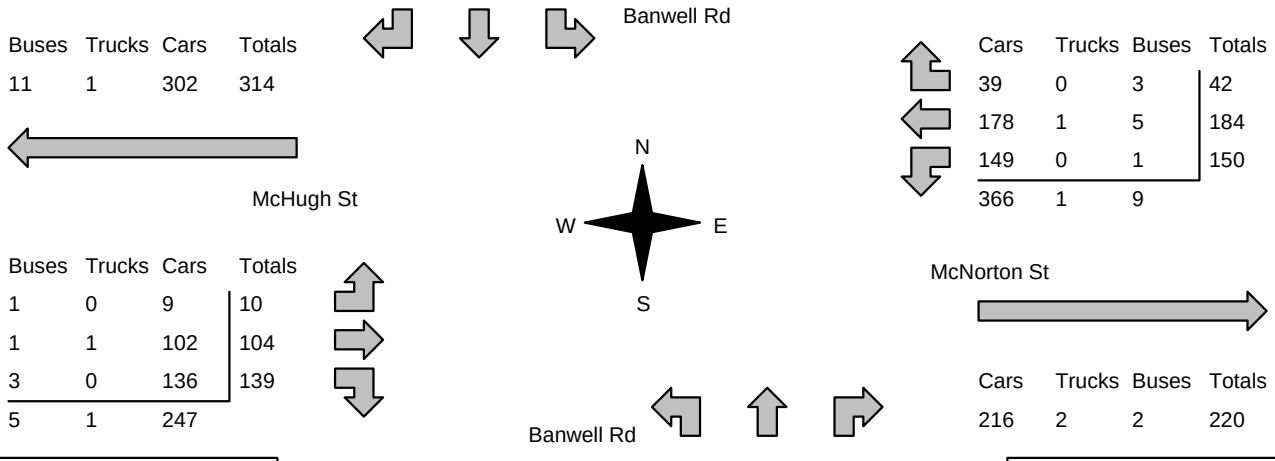
Major Road: Banwell Rd runs N/S

North Leg Total: 680
North Entering: 450
North Peds: 11
Peds Cross: ⋈

Buses	0	4	0	4
Trucks	0	1	0	1
Cars	27	374	44	445
Totals	27	379	44	

Buses	6
Trucks	2
Cars	222
Totals	230

East Leg Total: 596
East Entering: 376
East Peds: 0
Peds Cross: ⧖



Buses	Trucks	Cars	Totals
11	1	302	314

Cars	Trucks	Buses	Totals
39	0	3	42
178	1	5	184
149	0	1	150
366	1	9	

Buses	Trucks	Cars	Totals
1	0	9	10
1	1	102	104
3	0	136	139
5	1	247	

Cars	Trucks	Buses	Totals
216	2	2	220

Peds Cross: ⧖
West Peds: 1
West Entering: 253
West Leg Total: 567

Cars	659			
Trucks	1			
Buses	8			
Totals	668			

Cars	97	174	70	341
Trucks	0	2	1	3
Buses	6	2	1	9
Totals	103	178	72	

Peds Cross: ⋈
South Peds: 5
South Entering: 353
South Leg Total: 1021

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

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

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Windsor
Site #: 2302900003
Intersection: Banwell Rd & McHugh St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 946
North Entering: 401
North Peds: 1
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	0	1	1	2
Cars	22	314	63	399
Totals	22	315	64	

Buses	0
Trucks	1
Cars	544
Totals	545

East Leg Total: 783
East Entering: 330
East Peds: 1
Peds Cross: ⧖

Banwell Rd

Buses	Trucks	Cars	Totals
2	0	342	344

McHugh St

Cars	Trucks	Buses	Totals
43	0	0	43
178	0	0	178
109	0	0	109
330	0	0	

N
W E
S

Buses	Trucks	Cars	Totals
0	0	14	14
0	0	168	168
0	0	114	114
0	0	296	

McNorton St

Cars	Trucks	Buses	Totals
452	1	0	453

Banwell Rd

Peds Cross: ⧖
West Peds: 1
West Entering: 296
West Leg Total: 640

Cars	537			
Trucks	1			
Buses	0			
Totals	538			

Cars	142	487	221	850
Trucks	0	1	0	1
Buses	2	0	0	2
Totals	144	488	221	

Peds Cross: ⋈
South Peds: 1
South Entering: 853
South Leg Total: 1391

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

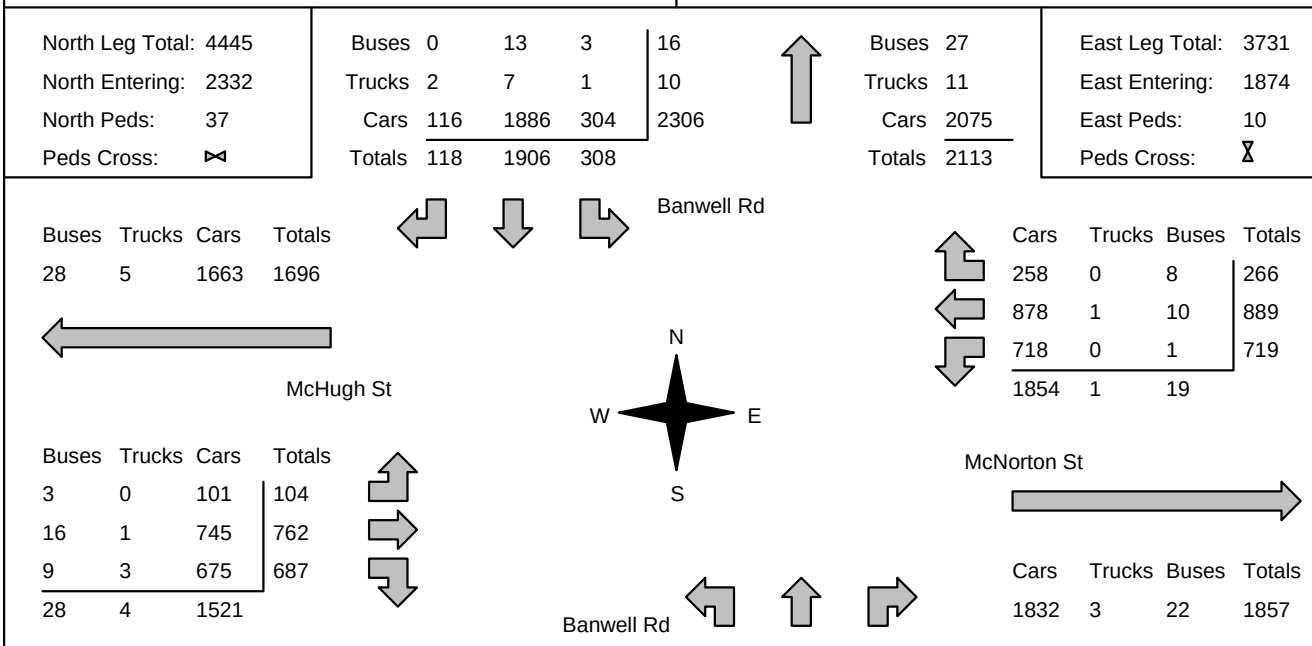
Municipality: Windsor
Site #: 2302900003
Intersection: Banwell Rd & McHugh St
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Banwell Rd runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & McHugh St | **Count Date:** 16-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	30	364	16	410	6
9:00:00	44	379	27	450	11
10:00:00	48	246	23	317	6
15:00:00	0	0	0	0	0
16:00:00	64	297	16	377	10
17:00:00	60	310	12	382	3
18:00:00	62	310	24	396	1
Totals:	308	1906	118	2332	37

North/South Total Approaches: 5551

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	50	114	33	197	0
9:00:00	103	178	72	353	5
10:00:00	78	152	72	302	1
15:00:00	0	0	0	0	0
16:00:00	158	379	200	737	14
17:00:00	147	454	204	805	1
18:00:00	153	466	206	825	0
S Totals:	689	1743	787	3219	21

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	125	103	37	265	1
9:00:00	150	184	42	376	0
10:00:00	98	89	37	224	3
15:00:00	0	0	0	0	0
16:00:00	121	160	56	337	4
17:00:00	110	175	47	332	1
18:00:00	115	178	47	340	1
Totals:	719	889	266	1874	10

East/West Total Approaches: 3427

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	6	75	114	195	0
9:00:00	10	104	139	253	1
10:00:00	10	80	89	179	1
15:00:00	0	0	0	0	0
16:00:00	42	186	133	361	0
17:00:00	19	159	109	287	1
18:00:00	17	158	103	278	0
W Totals:	104	762	687	1553	3

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	15:00	16:00	17:00	18:00
Crossing Values:	0	240	360	204	0	373	308	311

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	11	7	116	66	2	2	0	0	1	1	0	0	0	0	0	0	0	0	6	6
7:45:00	16	5	229	113	10	8	0	0	2	1	0	0	0	0	0	0	0	0	6	0
8:00:00	30	14	361	132	16	6	0	0	2	0	0	0	0	0	1	1	0	0	6	0
8:15:00	44	14	468	107	20	4	0	0	3	1	0	0	0	0	3	2	0	0	9	3
8:30:00	54	10	545	77	26	6	0	0	3	0	0	0	0	0	4	1	0	0	11	2
8:45:00	62	8	635	90	34	8	0	0	3	0	0	0	0	0	4	0	0	0	16	5
9:00:00	74	12	735	100	43	9	0	0	3	0	0	0	0	0	5	1	0	0	17	1
9:15:00	95	21	805	70	46	3	0	0	3	0	0	0	0	0	8	3	0	0	18	1
9:30:00	103	8	872	67	53	7	0	0	3	0	1	1	0	0	9	1	0	0	18	0
9:45:00	113	10	924	52	60	7	0	0	3	0	1	0	0	0	9	0	0	0	22	4
10:00:00	122	9	977	53	65	5	0	0	3	0	1	0	0	0	9	0	0	0	23	1
10:15:00	122	0	977	0	65	0	0	0	3	0	1	0	0	0	9	0	0	0	23	0
15:00:00	122	0	977	0	65	0	0	0	3	0	1	0	0	0	9	0	0	0	23	0
15:15:00	135	13	1063	86	68	3	0	0	3	0	1	0	0	0	9	0	0	0	29	6
15:30:00	153	18	1128	65	74	6	0	0	3	0	1	0	0	0	9	0	0	0	31	2
15:45:00	169	16	1195	67	77	3	0	0	4	1	1	0	0	0	10	1	0	0	32	1
16:00:00	185	16	1272	77	80	3	0	0	4	0	2	1	1	1	10	0	0	0	33	1
16:15:00	197	12	1348	76	81	1	0	0	5	1	2	0	2	1	13	3	0	0	36	3
16:30:00	207	10	1436	88	84	3	0	0	5	0	2	0	3	1	13	0	0	0	36	0
16:45:00	227	20	1509	73	89	5	0	0	5	0	2	0	3	0	13	0	0	0	36	0
17:00:00	243	16	1578	69	92	3	0	0	5	0	2	0	3	0	13	0	0	0	36	0
17:15:00	261	18	1667	89	95	3	1	1	6	1	2	0	3	0	13	0	0	0	36	0
17:30:00	278	17	1742	75	101	6	1	0	6	0	2	0	3	0	13	0	0	0	37	1
17:45:00	290	12	1823	81	111	10	1	0	6	0	2	0	3	0	13	0	0	0	37	0
18:00:00	304	14	1886	63	116	5	1	0	7	1	2	0	3	0	13	0	0	0	37	0
18:15:00	304	0	1886	0	116	0	1	0	7	0	2	0	3	0	13	0	0	0	37	0
18:15:15	304	0	1886	0	116	0	1	0	7	0	2	0	3	0	13	0	0	0	37	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	18	18	12	12	4	4	0	0	0	0	0	0	0	0	1	1	0	0	0	0
7:30:00	42	24	34	22	13	9	0	0	0	0	0	0	0	0	1	0	1	1	1	1
7:45:00	93	51	71	37	20	7	0	0	0	0	0	0	0	0	1	0	5	4	1	0
8:00:00	125	32	102	31	32	12	0	0	0	0	0	0	0	0	1	0	5	0	1	0
8:15:00	167	42	143	41	45	13	0	0	1	1	0	0	0	0	2	1	6	1	1	0
8:30:00	206	39	186	43	51	6	0	0	1	0	0	0	1	1	4	2	6	0	1	0
8:45:00	236	30	242	56	57	6	0	0	1	0	0	0	1	0	5	1	7	1	1	0
9:00:00	274	38	280	38	71	14	0	0	1	0	0	0	1	0	6	1	8	1	1	0
9:15:00	306	32	310	30	78	7	0	0	1	0	0	0	1	0	6	0	8	0	3	2
9:30:00	330	24	331	21	83	5	0	0	1	0	0	0	1	0	6	0	8	0	4	1
9:45:00	350	20	347	16	96	13	0	0	1	0	0	0	1	0	6	0	8	0	4	0
10:00:00	372	22	369	22	108	12	0	0	1	0	0	0	1	0	6	0	8	0	4	0
10:15:00	372	0	369	0	108	0	0	0	1	0	0	0	1	0	6	0	8	0	4	0
15:00:00	372	0	369	0	108	0	0	0	1	0	0	0	1	0	6	0	8	0	4	0
15:15:00	406	34	417	48	120	12	0	0	1	0	0	0	1	0	7	1	8	0	4	0
15:30:00	443	37	459	42	133	13	0	0	1	0	0	0	1	0	8	1	8	0	4	0
15:45:00	466	23	493	34	146	13	0	0	1	0	0	0	1	0	8	0	8	0	6	2
16:00:00	493	27	526	33	164	18	0	0	1	0	0	0	1	0	9	1	8	0	8	2
16:15:00	526	33	564	38	178	14	0	0	1	0	0	0	1	0	10	1	8	0	9	1
16:30:00	559	33	607	43	193	15	0	0	1	0	0	0	1	0	10	0	8	0	9	0
16:45:00	581	22	653	46	201	8	0	0	1	0	0	0	1	0	10	0	8	0	9	0
17:00:00	603	22	700	47	211	10	0	0	1	0	0	0	1	0	10	0	8	0	9	0
17:15:00	630	27	743	43	224	13	0	0	1	0	0	0	1	0	10	0	8	0	9	0
17:30:00	658	28	784	41	233	9	0	0	1	0	0	0	1	0	10	0	8	0	10	1
17:45:00	690	32	831	47	244	11	0	0	1	0	0	0	1	0	10	0	8	0	10	0
18:00:00	718	28	878	47	258	14	0	0	1	0	0	0	1	0	10	0	8	0	10	0
18:15:00	718	0	878	0	258	0	0	0	1	0	0	0	1	0	10	0	8	0	10	0
18:15:15	718	0	878	0	258	0	0	0	1	0	0	0	1	0	10	0	8	0	10	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	18	18	7	7	0	0	1	1	0	0	0	0	3	3	0	0	0	0
7:30:00	21	11	42	24	15	8	0	0	1	0	0	0	3	3	5	2	0	0	0	0
7:45:00	37	16	65	23	26	11	0	0	2	1	0	0	4	1	7	2	0	0	0	0
8:00:00	46	9	104	39	33	7	0	0	2	0	0	0	4	0	8	1	0	0	0	0
8:15:00	64	18	155	51	44	11	0	0	2	0	1	1	5	1	8	0	1	1	1	1
8:30:00	86	22	194	39	64	20	0	0	3	1	1	0	6	1	8	0	1	0	1	0
8:45:00	119	33	235	41	87	23	0	0	4	1	1	0	9	3	10	2	1	0	5	4
9:00:00	143	24	278	43	103	16	0	0	4	0	1	0	10	1	10	0	1	0	5	0
9:15:00	162	19	313	35	115	12	0	0	6	2	1	0	11	1	10	0	1	0	5	0
9:30:00	176	14	354	41	135	20	0	0	6	0	1	0	12	1	10	0	1	0	6	1
9:45:00	195	19	392	38	152	17	0	0	6	0	1	0	12	0	10	0	1	0	6	0
10:00:00	217	22	427	35	175	23	1	1	7	1	1	0	13	1	10	0	1	0	6	0
10:15:00	217	0	427	0	175	0	1	0	7	0	1	0	13	0	10	0	1	0	6	0
15:00:00	217	0	427	0	175	0	1	0	7	0	1	0	13	0	10	0	1	0	6	0
15:15:00	265	48	507	80	229	54	1	0	9	2	1	0	14	1	10	0	1	0	13	7
15:30:00	298	33	595	88	278	49	1	0	9	0	1	0	14	0	12	2	1	0	19	6
15:45:00	325	27	705	110	322	44	2	1	9	0	1	0	15	1	14	2	1	0	20	1
16:00:00	372	47	799	94	373	51	2	0	9	0	1	0	15	0	15	1	3	2	20	0
16:15:00	410	38	903	104	417	44	2	0	9	0	1	0	16	1	16	1	3	0	20	0
16:30:00	442	32	1008	105	460	43	2	0	9	0	1	0	16	0	16	0	3	0	20	0
16:45:00	485	43	1125	117	519	59	2	0	10	1	1	0	16	0	16	0	3	0	20	0
17:00:00	517	32	1250	125	577	58	2	0	11	1	1	0	17	1	16	0	3	0	21	1
17:15:00	548	31	1374	124	630	53	2	0	11	0	1	0	17	0	16	0	3	0	21	0
17:30:00	585	37	1512	138	689	59	2	0	11	0	1	0	18	1	16	0	3	0	21	0
17:45:00	627	42	1612	100	740	51	2	0	11	0	1	0	18	0	16	0	3	0	21	0
18:00:00	669	42	1716	104	783	43	2	0	11	0	1	0	18	0	16	0	3	0	21	0
18:15:00	669	0	1716	0	783	0	2	0	11	0	1	0	18	0	16	0	3	0	21	0
18:15:15	669	0	1716	0	783	0	2	0	11	0	1	0	18	0	16	0	3	0	21	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	14	14	19	19	0	0	0	0	0	0	0	0	1	1	0	0	0	0
7:30:00	3	2	27	13	41	22	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7:45:00	6	3	48	21	80	39	0	0	0	0	0	0	0	0	3	2	0	0	0	0
8:00:00	6	0	70	22	114	34	0	0	0	0	0	0	0	0	5	2	0	0	0	0
8:15:00	8	2	88	18	160	46	0	0	0	0	0	0	0	0	6	1	0	0	0	0
8:30:00	8	0	118	30	187	27	0	0	0	0	0	0	0	0	6	0	1	1	0	0
8:45:00	9	1	146	28	218	31	0	0	1	1	0	0	0	0	6	0	1	0	1	1
9:00:00	15	6	172	26	250	32	0	0	1	0	0	0	1	1	6	0	3	2	1	0
9:15:00	18	3	194	22	273	23	0	0	1	0	0	0	1	0	7	1	3	0	1	0
9:30:00	18	0	208	14	297	24	0	0	1	0	0	0	1	0	7	0	3	0	2	1
9:45:00	21	3	235	27	320	23	0	0	1	0	0	0	1	0	7	0	3	0	2	0
10:00:00	25	4	251	16	338	18	0	0	1	0	1	1	1	0	7	0	3	0	2	0
10:15:00	25	0	251	0	338	0	0	0	1	0	1	0	1	0	7	0	3	0	2	0
15:00:00	25	0	251	0	338	0	0	0	1	0	1	0	1	0	7	0	3	0	2	0
15:15:00	40	15	321	70	381	43	0	0	1	0	2	1	2	1	9	2	5	2	2	0
15:30:00	51	11	357	36	408	27	0	0	1	0	2	0	2	0	10	1	6	1	2	0
15:45:00	58	7	396	39	435	27	0	0	1	0	3	1	3	1	13	3	6	0	2	0
16:00:00	65	7	431	35	464	29	0	0	1	0	3	0	3	0	13	0	8	2	2	0
16:15:00	72	7	466	35	494	30	0	0	1	0	3	0	3	0	14	1	9	1	2	0
16:30:00	77	5	512	46	520	26	0	0	1	0	3	0	3	0	15	1	9	0	2	0
16:45:00	82	5	547	35	538	18	0	0	1	0	3	0	3	0	16	1	9	0	2	0
17:00:00	84	2	587	40	572	34	0	0	1	0	3	0	3	0	16	0	9	0	3	1
17:15:00	88	4	629	42	607	35	0	0	1	0	3	0	3	0	16	0	9	0	3	0
17:30:00	93	5	669	40	628	21	0	0	1	0	3	0	3	0	16	0	9	0	3	0
17:45:00	96	3	715	46	652	24	0	0	1	0	3	0	3	0	16	0	9	0	3	0
18:00:00	101	5	745	30	675	23	0	0	1	0	3	0	3	0	16	0	9	0	3	0
18:15:00	101	0	745	0	675	0	0	0	1	0	3	0	3	0	16	0	9	0	3	0
18:15:15	101	0	745	0	675	0	0	0	1	0	3	0	3	0	16	0	9	0	3	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Mid-day Peak Diagram

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

One Hour Peak
From: 13:00:00
To: 14:00:00

Municipality: Windsor
Site #: 2302900003
Intersection: Banwell Rd & McHugh St
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total: 803
North Entering: 401
North Peds: 3
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	0	3	0	3
Cars	25	321	52	398
Totals	25	324	52	

Buses	0
Trucks	2
Cars	400
Totals	402

East Leg Total: 705
East Entering: 349
East Peds: 0
Peds Cross: ⧗

Banwell Rd

Buses	Trucks	Cars	Totals
1	1	311	313

McHugh St

Cars	Trucks	Buses	Totals
51	0	0	51
160	0	0	160
137	1	0	138
348	1	0	

N
W E
S

Buses	Trucks	Cars	Totals
0	1	19	20
0	0	122	122
0	0	120	120
0	1	261	

McNorton St

Cars	Trucks	Buses	Totals
356	0	0	356

Banwell Rd

Peds Cross: ⧗
West Peds: 0
West Entering: 262
West Leg Total: 575

Cars	578
Trucks	4
Buses	0
Totals	582

Cars	126	330	182	638
Trucks	1	1	0	2
Buses	1	0	0	1
Totals	128	331	182	

Peds Cross: ⋈
South Peds: 1
South Entering: 641
South Leg Total: 1223

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Windsor
Site #: 2302900003
Intersection: Banwell Rd & McHugh St
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Banwell Rd runs N/S

North Leg Total:	2247			
North Entering:	1134			
North Peds:	15			
Peds Cross:	⋈			
Buses	0	0	0	0
Trucks	0	5	0	5
Cars	53	939	137	1129
Totals	53	944	137	
Buses	0			
Trucks	6			
Cars	1107			
Totals	1113			
East Leg Total:	2017			
East Entering:	993			
East Peds:	6			
Peds Cross:	⧖			

Banwell Rd

Buses	Trucks	Cars	Totals
2	2	842	846

McHugh St

Buses	Trucks	Cars	Totals
0	1	51	52
0	0	401	401
0	2	380	382
0	3	832	

Cars	Trucks	Buses	Totals
146	1	0	147
450	1	0	451
394	1	0	395
990	3	0	

N
W E
S

McNorton St

Cars	Trucks	Buses	Totals
1024	0	0	1024

Banwell Rd

Peds Cross:	⧖			
West Peds:	1			
West Entering:	835			
West Leg Total:	1681			
Cars	1713			
Trucks	8			
Buses	0			
Totals	1721			
Cars	339	910	486	1735
Trucks	1	4	0	5
Buses	2	0	0	2
Totals	342	914	486	
Peds Cross:	⋈			
South Peds:	1			
South Entering:	1742			
South Leg Total:	3463			

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Banwell Rd & McHugh St | **Count Date:** 18-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*44*	*311*	*15*	*370*	*7*
13:00:00	*41*	*309*	*13*	*363*	*5*
14:00:00	*52*	*324*	*25*	*401*	*3*
Totals:	137	944	53	1134	15

North/South Total Approaches: *2876*

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*99*	*276*	*142*	*517*	*0*
13:00:00	*115*	*307*	*162*	*584*	*0*
14:00:00	*128*	*331*	*182*	*641*	*1*
S Totals:	342	914	486	1742	1

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*140*	*147*	*50*	*337*	*2*
13:00:00	*117*	*144*	*46*	*307*	*4*
14:00:00	*138*	*160*	*51*	*349*	*0*
Totals:	395	451	147	993	6

East/West Total Approaches: *1828*

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*15*	*128*	*129*	*272*	*1*
13:00:00	*17*	*151*	*133*	*301*	*0*
14:00:00	*20*	*122*	*120*	*262*	*0*
W Totals:	52	401	382	835	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*11:00*	*12:00*	*13:00*	*14:00*	*0:00*	*0:00*	*0:00*	*0:00*
Crossing Values:	*0*	*309*	*290*	*322*	*0*	*0*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	9	9	71	71	3	3	0	0	0	0	0	0	0	0	0	0	0	0	2	2
11:30:00	23	14	146	75	4	1	0	0	1	1	0	0	0	0	0	0	0	0	5	3
11:45:00	34	11	234	88	11	7	0	0	1	0	0	0	0	0	0	0	0	0	7	2
12:00:00	44	10	310	76	15	4	0	0	1	0	0	0	0	0	0	0	0	0	7	0
12:15:00	50	6	386	76	18	3	0	0	1	0	0	0	0	0	0	0	0	0	8	1
12:30:00	61	11	464	78	19	1	0	0	1	0	0	0	0	0	0	0	0	0	9	1
12:45:00	75	14	536	72	22	3	0	0	1	0	0	0	0	0	0	0	0	0	11	2
13:00:00	85	10	618	82	28	6	0	0	2	1	0	0	0	0	0	0	0	0	12	1
13:15:00	98	13	691	73	34	6	0	0	2	0	0	0	0	0	0	0	0	0	12	0
13:30:00	111	13	771	80	38	4	0	0	2	0	0	0	0	0	0	0	0	0	13	1
13:45:00	124	13	865	94	45	7	0	0	5	3	0	0	0	0	0	0	0	0	13	0
14:00:00	137	13	939	74	53	8	0	0	5	0	0	0	0	0	0	0	0	0	15	2
14:15:00	137	0	939	0	53	0	0	0	5	0	0	0	0	0	0	0	0	0	15	0
14:15:15	137	0	939	0	53	0	0	0	5	0	0	0	0	0	0	0	0	0	15	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	36	36	37	37	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	66	30	73	36	20	7	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:45:00	96	30	107	34	39	19	0	0	0	0	0	0	0	0	0	0	0	0	2	1
12:00:00	140	44	147	40	49	10	0	0	0	0	1	1	0	0	0	0	0	0	2	0
12:15:00	161	21	183	36	60	11	0	0	1	1	1	0	0	0	0	0	0	0	2	0
12:30:00	188	27	212	29	68	8	0	0	1	0	1	0	0	0	0	0	0	0	3	1
12:45:00	223	35	253	41	84	16	0	0	1	0	1	0	0	0	0	0	0	0	3	0
13:00:00	257	34	290	37	95	11	0	0	1	0	1	0	0	0	0	0	0	0	6	3
13:15:00	295	38	327	37	110	15	0	0	1	0	1	0	0	0	0	0	0	0	6	0
13:30:00	328	33	368	41	122	12	1	1	1	0	1	0	0	0	0	0	0	0	6	0
13:45:00	355	27	410	42	133	11	1	0	1	0	1	0	0	0	0	0	0	0	6	0
14:00:00	394	39	450	40	146	13	1	0	1	0	1	0	0	0	0	0	0	0	6	0
14:15:00	394	0	450	0	146	0	1	0	1	0	1	0	0	0	0	0	0	0	6	0
14:15:15	394	0	450	0	146	0	1	0	1	0	1	0	0	0	0	0	0	0	6	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	26	26	59	59	28	28	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	53	27	140	81	66	38	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45:00	78	25	209	69	108	42	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:00:00	98	20	275	66	142	34	0	0	1	0	0	0	1	1	0	0	0	0	0	0
12:15:00	126	28	356	81	181	39	0	0	1	0	0	0	1	0	0	0	0	0	0	0
12:30:00	153	27	428	72	229	48	0	0	2	1	0	0	1	0	0	0	0	0	0	0
12:45:00	179	26	502	74	268	39	0	0	2	0	0	0	1	0	0	0	0	0	0	0
13:00:00	213	34	580	78	304	36	0	0	3	1	0	0	1	0	0	0	0	0	0	0
13:15:00	251	38	657	77	353	49	0	0	3	0	0	0	2	1	0	0	0	0	0	0
13:30:00	285	34	744	87	390	37	0	0	4	1	0	0	2	0	0	0	0	0	0	0
13:45:00	312	27	821	77	435	45	1	1	4	0	0	0	2	0	0	0	0	0	0	0
14:00:00	339	27	910	89	486	51	1	0	4	0	0	0	2	0	0	0	0	0	1	1
14:15:00	339	0	910	0	486	0	1	0	4	0	0	0	2	0	0	0	0	0	1	0
14:15:15	339	0	910	0	486	0	1	0	4	0	0	0	2	0	0	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	6	6	27	27	34	34	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:30:00	10	4	60	33	63	29	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:45:00	14	4	92	32	96	33	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:00:00	15	1	128	36	129	33	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:15:00	19	4	177	49	167	38	0	0	0	0	1	1	0	0	0	0	0	0	1	0
12:30:00	24	5	215	38	200	33	0	0	0	0	2	1	0	0	0	0	0	0	1	0
12:45:00	28	4	247	32	230	30	0	0	0	0	2	0	0	0	0	0	0	0	1	0
13:00:00	32	4	279	32	260	30	0	0	0	0	2	0	0	0	0	0	0	0	1	0
13:15:00	34	2	311	32	289	29	0	0	0	0	2	0	0	0	0	0	0	0	1	0
13:30:00	41	7	345	34	318	29	0	0	0	0	2	0	0	0	0	0	0	0	1	0
13:45:00	45	4	375	30	353	35	1	1	0	0	2	0	0	0	0	0	0	0	1	0
14:00:00	51	6	401	26	380	27	1	0	0	0	2	0	0	0	0	0	0	0	1	0
14:15:00	51	0	401	0	380	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0
14:15:15	51	0	401	0	380	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Windsor
Site #: 2302900004
Intersection: Tecumseh Rd E & Banwell Rd
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Tecumseh Rd E runs W/E

North Leg Total: 1013
North Entering: 652
North Peds: 2
Peds Cross: ⋈

Buses	2	3	3	8
Trucks	0	4	0	4
Cars	108	401	131	640
Totals	110	408	134	

Buses	12
Trucks	3
Cars	346
Totals	361

East Leg Total: 1082
East Entering: 572
East Peds: 6
Peds Cross: ⧖

Banwell Rd

Buses	Trucks	Cars	Totals
8	6	673	687

Tecumseh Rd E

Cars	Trucks	Buses	Totals
95	1	2	98
388	2	5	395
76	2	1	79
559	5	8	

N
W E
S

Buses	Trucks	Cars	Totals
5	0	81	86
1	2	295	298
1	5	101	107
7	7	477	

Tecumseh Rd E

Cars	Trucks	Buses	Totals
501	5	4	510

Banwell Rd

Peds Cross: ⧖
West Peds: 0
West Entering: 491
West Leg Total: 1178

Cars	578
Trucks	11
Buses	5
Totals	594

Cars	177	170	75	422
Trucks	4	2	3	9
Buses	1	5	0	6
Totals	182	177	78	

Peds Cross: ⋈
South Peds: 3
South Entering: 437
South Leg Total: 1031

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

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

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Windsor
Site #: 2302900004
Intersection: Tecumseh Rd E & Banwell Rd
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Tecumseh Rd E runs W/E

North Leg Total: 1388
North Entering: 513
North Peds: 4
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	0	1	0	1
Cars	96	286	130	512
Totals	96	287	130	

Buses	2
Trucks	3
Cars	870
Totals	875

East Leg Total: 1425
East Entering: 680
East Peds: 3
Peds Cross: ⧖

Banwell Rd

Buses	Trucks	Cars	Totals
2	8	654	664

Tecumseh Rd E

Cars	Trucks	Buses	Totals
159	0	0	159
408	2	1	411
110	0	0	110
677	2	1	

N
W E
S

Buses	Trucks	Cars	Totals
0	1	198	199
2	4	503	509
0	2	172	174
2	7	873	

Tecumseh Rd E

Cars	Trucks	Buses	Totals
737	6	2	745

Banwell Rd

Peds Cross: ⧖
West Peds: 2
West Entering: 882
West Leg Total: 1546

Cars	568
Trucks	3
Buses	0
Totals	571

Cars	150	513	104	767
Trucks	6	2	2	10
Buses	1	2	0	3
Totals	157	517	106	

Peds Cross: ⋈
South Peds: 1
South Entering: 780
South Leg Total: 1351

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

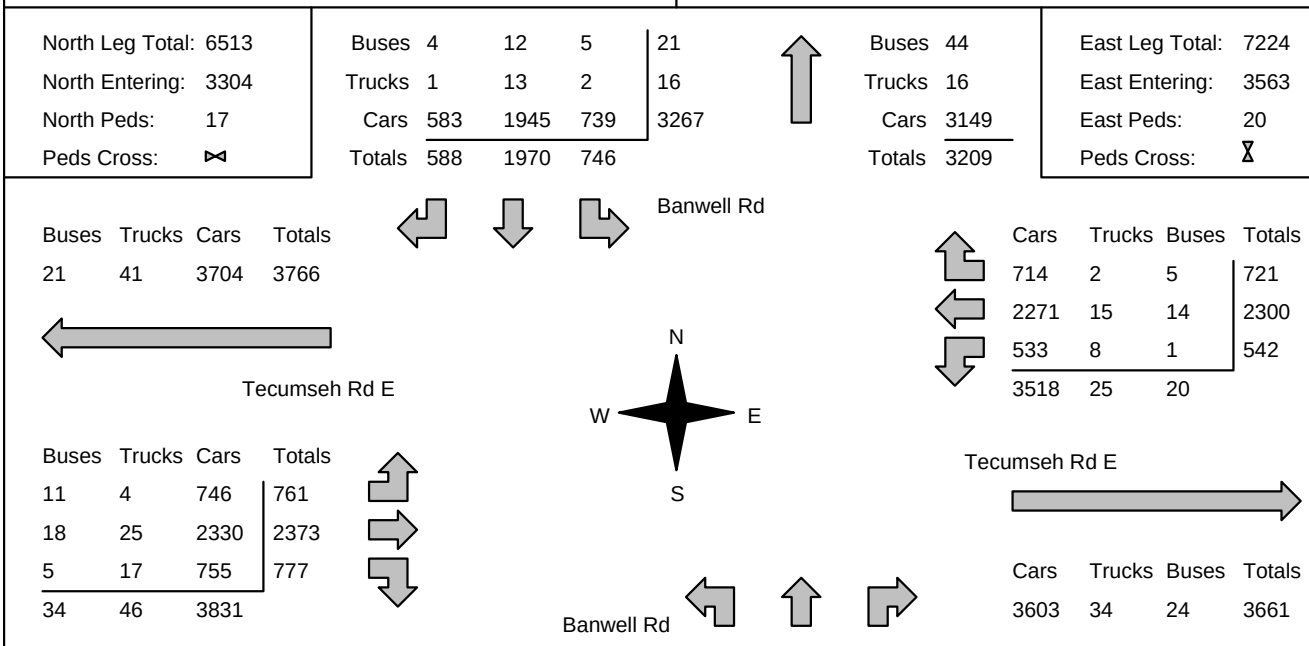
Municipality: Windsor
Site #: 2302900004
Intersection: Tecumseh Rd E & Banwell Rd
TFR File #: 1
Count date: 16-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Tecumseh Rd E runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Tecumseh Rd E & Banwell Rd | **Count Date:** 16-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*96*	*417*	*82*	*595*	*0*
9:00:00	*134*	*408*	*110*	*652*	*2*
10:00:00	*108*	*247*	*80*	*435*	*0*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*157*	*279*	*107*	*543*	*10*
17:00:00	*110*	*331*	*98*	*539*	*3*
18:00:00	*141*	*288*	*111*	*540*	*2*
Totals:	746	1970	588	3304	17

North/South Total Approaches: 6451

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*109*	*114*	*50*	*273*	*0*
9:00:00	*182*	*177*	*78*	*437*	*3*
10:00:00	*148*	*134*	*75*	*357*	*3*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*140*	*378*	*119*	*637*	*2*
17:00:00	*156*	*446*	*110*	*712*	*1*
18:00:00	*143*	*478*	*110*	*731*	*1*
S Totals:	878	1727	542	3147	10

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*65*	*264*	*53*	*382*	*0*
9:00:00	*79*	*395*	*98*	*572*	*6*
10:00:00	*64*	*378*	*89*	*531*	*5*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*123*	*413*	*165*	*701*	*4*
17:00:00	*109*	*439*	*167*	*715*	*1*
18:00:00	*102*	*411*	*149*	*662*	*4*
Totals:	542	2300	721	3563	20

East/West Total Approaches: 7474

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*36*	*217*	*49*	*302*	*0*
9:00:00	*86*	*298*	*107*	*491*	*0*
10:00:00	*78*	*310*	*99*	*487*	*0*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*183*	*563*	*194*	*940*	*4*
17:00:00	*193*	*483*	*169*	*845*	*1*
18:00:00	*185*	*502*	*159*	*846*	*1*
W Totals:	761	2373	777	3911	6

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*10:00*	*15:00*	*16:00*	*17:00*	*18:00*
Crossing Values:	*0*	*622*	*730*	*508*	*0*	*683*	*714*	*767*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	16	16	58	58	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	36	20	129	71	29	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	61	25	279	150	53	24	0	0	1	1	0	0	0	0	0	0	0	0	0	0
8:00:00	96	35	415	136	82	29	0	0	1	0	0	0	0	0	1	1	0	0	0	0
8:15:00	136	40	541	126	108	26	0	0	3	2	0	0	2	2	1	0	0	0	0	0
8:30:00	164	28	622	81	136	28	0	0	4	1	0	0	3	1	1	0	2	2	1	1
8:45:00	184	20	717	95	162	26	0	0	4	0	0	0	3	0	1	0	2	0	2	1
9:00:00	227	43	816	99	190	28	0	0	5	1	0	0	3	0	4	3	2	0	2	0
9:15:00	253	26	893	77	215	25	0	0	5	0	0	0	4	1	5	1	2	0	2	0
9:30:00	281	28	959	66	236	21	0	0	5	0	0	0	4	0	6	1	2	0	2	0
9:45:00	303	22	1013	54	254	18	0	0	5	0	0	0	4	0	6	0	2	0	2	0
10:00:00	334	31	1060	47	270	16	0	0	6	1	0	0	4	0	6	0	2	0	2	0
10:15:00	334	0	1060	0	270	0	0	0	6	0	0	0	4	0	6	0	2	0	2	0
15:00:00	334	0	1060	0	270	0	0	0	6	0	0	0	4	0	6	0	2	0	2	0
15:15:00	379	45	1131	71	305	35	0	0	7	1	1	1	4	0	6	0	3	1	4	2
15:30:00	420	41	1206	75	327	22	0	0	8	1	1	0	4	0	6	0	4	1	7	3
15:45:00	452	32	1269	63	349	22	0	0	10	2	1	0	4	0	7	1	4	0	12	5
16:00:00	491	39	1332	63	374	25	0	0	10	0	1	0	4	0	9	2	4	0	12	0
16:15:00	516	25	1420	88	403	29	1	1	10	0	1	0	5	1	12	3	4	0	12	0
16:30:00	553	37	1512	92	431	28	1	0	11	1	1	0	5	0	12	0	4	0	13	1
16:45:00	571	18	1586	74	454	23	1	0	11	0	1	0	5	0	12	0	4	0	14	1
17:00:00	599	28	1659	73	472	18	1	0	11	0	1	0	5	0	12	0	4	0	15	1
17:15:00	643	44	1736	77	500	28	1	0	12	1	1	0	5	0	12	0	4	0	15	0
17:30:00	683	40	1798	62	527	27	1	0	12	0	1	0	5	0	12	0	4	0	17	2
17:45:00	715	32	1873	75	554	27	2	1	12	0	1	0	5	0	12	0	4	0	17	0
18:00:00	739	24	1945	72	583	29	2	0	13	1	1	0	5	0	12	0	4	0	17	0
18:15:00	739	0	1945	0	583	0	2	0	13	0	1	0	5	0	12	0	4	0	17	0
18:15:15	739	0	1945	0	583	0	2	0	13	0	1	0	5	0	12	0	4	0	17	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	12	12	33	33	11	11	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:30:00	26	14	93	60	21	10	1	1	1	1	0	0	0	0	1	1	2	1	0	0
7:45:00	40	14	172	79	39	18	1	0	3	2	0	0	0	0	2	1	2	0	0	0
8:00:00	64	24	259	87	51	12	1	0	3	0	0	0	0	0	2	0	2	0	0	0
8:15:00	80	16	340	81	74	23	1	0	3	0	0	0	0	0	3	1	3	1	1	1
8:30:00	99	19	438	98	92	18	1	0	3	0	0	0	0	0	4	1	3	0	1	0
8:45:00	126	27	553	115	117	25	2	1	3	0	1	1	0	0	6	2	4	1	2	1
9:00:00	140	14	647	94	146	29	3	1	5	2	1	0	1	1	7	1	4	0	6	4
9:15:00	157	17	729	82	167	21	5	2	5	0	1	0	1	0	7	0	4	0	7	1
9:30:00	170	13	817	88	193	26	5	0	7	2	1	0	1	0	8	1	4	0	8	1
9:45:00	186	16	923	106	218	25	5	0	9	2	1	0	1	0	9	1	4	0	10	2
10:00:00	202	16	1018	95	235	17	5	0	9	0	1	0	1	0	10	1	4	0	11	1
10:15:00	202	0	1018	0	235	0	5	0	9	0	1	0	1	0	10	0	4	0	11	0
15:00:00	202	0	1018	0	235	0	5	0	9	0	1	0	1	0	10	0	4	0	11	0
15:15:00	233	31	1133	115	278	43	5	0	10	1	2	1	1	0	10	0	4	0	13	2
15:30:00	265	32	1214	81	319	41	5	0	10	0	2	0	1	0	10	0	4	0	13	0
15:45:00	299	34	1315	101	361	42	5	0	11	1	2	0	1	0	11	1	5	1	15	2
16:00:00	324	25	1427	112	398	37	6	1	12	1	2	0	1	0	11	0	5	0	15	0
16:15:00	351	27	1539	112	442	44	6	0	12	0	2	0	1	0	11	0	5	0	16	1
16:30:00	381	30	1657	118	483	41	6	0	12	0	2	0	1	0	12	1	5	0	16	0
16:45:00	411	30	1763	106	528	45	6	0	12	0	2	0	1	0	12	0	5	0	16	0
17:00:00	433	22	1864	101	565	37	6	0	12	0	2	0	1	0	13	1	5	0	16	0
17:15:00	463	30	1974	110	603	38	6	0	12	0	2	0	1	0	13	0	5	0	16	0
17:30:00	491	28	2065	91	642	39	6	0	14	2	2	0	1	0	13	0	5	0	19	3
17:45:00	514	23	2163	98	679	37	7	1	14	0	2	0	1	0	14	1	5	0	20	1
18:00:00	533	19	2271	108	714	35	8	1	15	1	2	0	1	0	14	0	5	0	20	0
18:15:00	533	0	2271	0	714	0	8	0	15	0	2	0	1	0	14	0	5	0	20	0
18:15:15	533	0	2271	0	714	0	8	0	15	0	2	0	1	0	14	0	5	0	20	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	15	15	17	17	8	8	1	1	1	1	0	0	0	0	3	3	0	0	0	0
7:30:00	41	26	44	27	17	9	2	1	1	0	0	0	0	0	6	3	0	0	0	0
7:45:00	66	25	73	29	28	11	2	0	2	1	0	0	0	0	8	2	0	0	0	0
8:00:00	106	40	102	29	50	22	2	0	2	0	0	0	1	1	10	2	0	0	0	0
8:15:00	144	38	147	45	69	19	4	2	3	1	1	1	1	0	12	2	0	0	1	1
8:30:00	182	38	191	44	89	20	5	1	4	1	2	1	1	0	12	0	0	0	1	0
8:45:00	237	55	238	47	108	19	5	0	4	0	2	0	2	1	14	2	0	0	2	1
9:00:00	283	46	272	34	125	17	6	1	4	0	3	1	2	0	15	1	0	0	3	1
9:15:00	322	39	305	33	144	19	9	3	6	2	4	1	2	0	16	1	0	0	4	1
9:30:00	359	37	330	25	158	14	11	2	6	0	4	0	2	0	16	0	0	0	4	0
9:45:00	392	33	358	28	181	23	12	1	6	0	4	0	2	0	17	1	0	0	6	2
10:00:00	425	33	401	43	199	18	12	0	7	1	4	0	2	0	17	0	0	0	6	0
10:15:00	425	0	401	0	199	0	12	0	7	0	4	0	2	0	17	0	0	0	6	0
15:00:00	425	0	401	0	199	0	12	0	7	0	4	0	2	0	17	0	0	0	6	0
15:15:00	462	37	486	85	231	32	14	2	7	0	4	0	2	0	18	1	0	0	6	0
15:30:00	483	21	577	91	266	35	16	2	7	0	4	0	2	0	19	1	0	0	7	1
15:45:00	522	39	662	85	291	25	17	1	8	1	4	0	2	0	20	1	0	0	8	1
16:00:00	560	38	772	110	317	26	17	0	8	0	4	0	2	0	23	3	1	1	8	0
16:15:00	595	35	861	89	344	27	18	1	8	0	4	0	2	0	25	2	1	0	8	0
16:30:00	626	31	959	98	369	25	19	1	8	0	4	0	2	0	25	0	1	0	8	0
16:45:00	667	41	1080	121	400	31	21	2	9	1	6	2	2	0	26	1	1	0	9	1
17:00:00	710	43	1213	133	425	25	23	2	10	1	6	0	2	0	26	0	1	0	9	0
17:15:00	744	34	1333	120	448	23	24	1	10	0	6	0	3	1	26	0	1	0	9	0
17:30:00	776	32	1472	139	473	25	25	1	10	0	6	0	3	0	27	1	1	0	9	0
17:45:00	818	42	1579	107	505	32	25	0	10	0	6	0	3	0	27	0	1	0	9	0
18:00:00	850	32	1689	110	534	29	25	0	10	0	7	1	3	0	28	1	1	0	10	1
18:15:00	850	0	1689	0	534	0	25	0	10	0	7	0	3	0	28	0	1	0	10	0
18:15:15	850	0	1689	0	534	0	25	0	10	0	7	0	3	0	28	0	1	0	10	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 16-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	34	34	7	7	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:30:00	13	7	78	44	15	8	1	1	3	1	1	1	2	2	0	0	0	0	0	0
7:45:00	17	4	146	68	34	19	1	0	5	2	1	0	3	1	2	2	0	0	0	0
8:00:00	32	15	209	63	48	14	1	0	5	0	1	0	3	0	3	1	0	0	0	0
8:15:00	46	14	281	72	63	15	1	0	5	0	1	0	3	0	3	0	1	1	0	0
8:30:00	65	19	345	64	90	27	1	0	5	0	1	0	5	2	3	0	1	0	0	0
8:45:00	91	26	412	67	121	31	1	0	5	0	5	4	8	3	3	0	1	0	0	0
9:00:00	113	22	504	92	149	28	1	0	7	2	6	1	8	0	4	1	1	0	0	0
9:15:00	125	12	574	70	177	28	1	0	8	1	8	2	9	1	6	2	3	2	0	0
9:30:00	149	24	650	76	201	24	1	0	9	1	8	0	9	0	7	1	3	0	0	0
9:45:00	169	20	719	69	225	24	1	0	12	3	9	1	9	0	9	2	3	0	0	0
10:00:00	189	20	800	81	243	18	2	1	15	3	9	0	9	0	10	1	3	0	0	0
10:15:00	189	0	800	0	243	0	2	0	15	0	9	0	9	0	10	0	3	0	0	0
15:00:00	189	0	800	0	243	0	2	0	15	0	9	0	9	0	10	0	3	0	0	0
15:15:00	241	52	932	132	301	58	3	1	16	1	12	3	9	0	12	2	3	0	1	1
15:30:00	279	38	1077	145	344	43	3	0	17	1	12	0	10	1	12	0	3	0	1	0
15:45:00	329	50	1217	140	387	43	3	0	19	2	12	0	11	1	12	0	3	0	4	3
16:00:00	369	40	1355	138	432	45	3	0	20	1	13	1	11	0	13	1	4	1	4	0
16:15:00	419	50	1478	123	485	53	3	0	21	1	13	0	11	0	13	0	4	0	4	0
16:30:00	461	42	1608	130	528	43	3	0	21	0	13	0	11	0	13	0	5	1	4	0
16:45:00	508	47	1710	102	566	38	3	0	21	0	14	1	11	0	13	0	5	0	5	1
17:00:00	562	54	1837	127	598	32	3	0	21	0	15	1	11	0	13	0	5	0	5	0
17:15:00	601	39	1983	146	654	56	3	0	23	2	15	0	11	0	15	2	5	0	5	0
17:30:00	659	58	2111	128	700	46	4	1	25	2	15	0	11	0	15	0	5	0	6	1
17:45:00	702	43	2211	100	725	25	4	0	25	0	16	1	11	0	17	2	5	0	6	0
18:00:00	746	44	2330	119	755	30	4	0	25	0	17	1	11	0	18	1	5	0	6	0
18:15:00	746	0	2330	0	755	0	4	0	25	0	17	0	11	0	18	0	5	0	6	0
18:15:15	746	0	2330	0	755	0	4	0	25	0	17	0	11	0	18	0	5	0	6	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Mid-day Peak Diagram

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

One Hour Peak
From: 13:00:00
To: 14:00:00

Municipality: Windsor
Site #: 2302900004
Intersection: Tecumseh Rd E & Banwell Rd
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Tecumseh Rd E runs W/E

North Leg Total: 1222
North Entering: 592
North Peds: 0
Peds Cross: ⋈

Buses	0	0	0	0
Trucks	1	3	0	4
Cars	121	323	144	588
Totals	122	326	144	

Buses	1
Trucks	2
Cars	627
Totals	630

East Leg Total: 1564
East Entering: 741
East Peds: 3
Peds Cross: ⧖

Banwell Rd

Buses	Trucks	Cars	Totals
0	2	813	815

Tecumseh Rd E

Cars	Trucks	Buses	Totals
131	1	0	132
519	0	0	519
90	0	0	90
740	1	0	

N
W E
S

Buses	Trucks	Cars	Totals
0	0	199	199
1	1	569	571
0	2	179	181
1	3	947	

Tecumseh Rd E

Cars	Trucks	Buses	Totals
821	1	1	823

Banwell Rd

Peds Cross: ⧖
West Peds: 0
West Entering: 951
West Leg Total: 1766

Cars	592
Trucks	5
Buses	0
Totals	597

Cars	173	297	108	578
Trucks	1	1	0	2
Buses	0	1	0	1
Totals	174	299	108	

Peds Cross: ⋈
South Peds: 7
South Entering: 581
South Leg Total: 1178

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

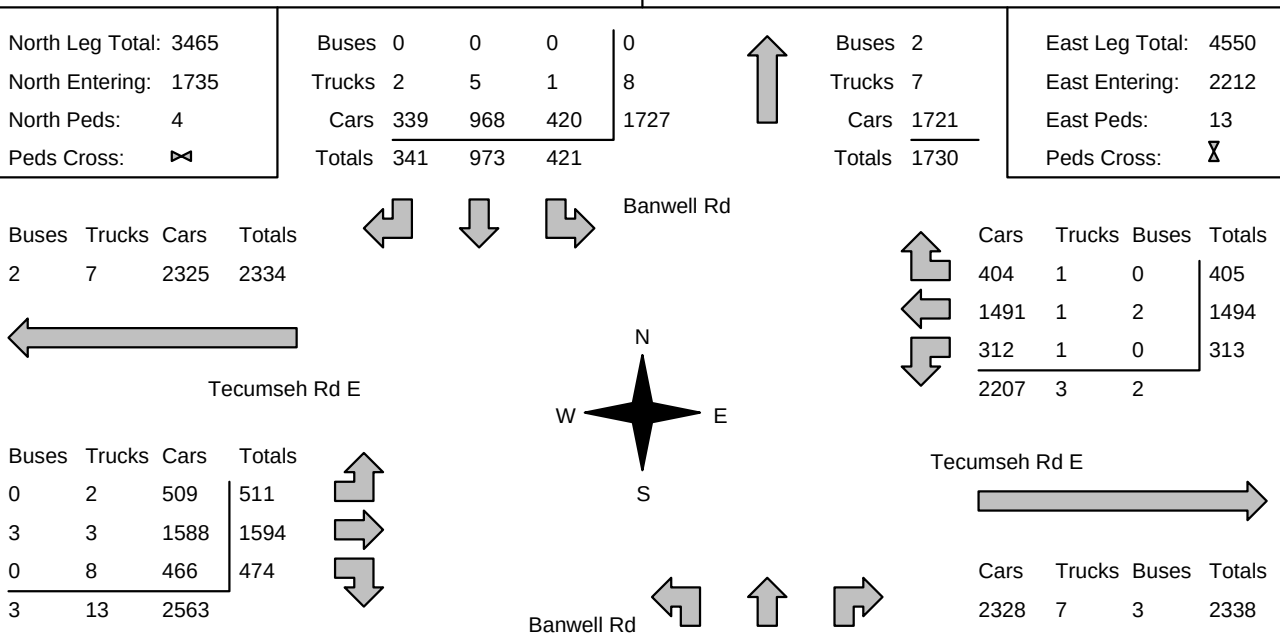
Municipality: Windsor
Site #: 2302900004
Intersection: Tecumseh Rd E & Banwell Rd
TFR File #: 1
Count date: 18-Feb-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Tecumseh Rd E runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Tecumseh Rd E & Banwell Rd | **Count Date:** 18-Feb-23 | **Municipality:** Windsor

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*150*	*313*	*123*	*586*	*3*
13:00:00	*127*	*334*	*96*	*557*	*1*
14:00:00	*144*	*326*	*122*	*592*	*0*
Totals:	421	973	341	1735	4

North/South Total Approaches: 3371

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*165*	*246*	*103*	*514*	*9*
13:00:00	*160*	*269*	*112*	*541*	*8*
14:00:00	*174*	*299*	*108*	*581*	*7*
S Totals:	499	814	323	1636	24

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*113*	*464*	*131*	*708*	*5*
13:00:00	*110*	*511*	*142*	*763*	*5*
14:00:00	*90*	*519*	*132*	*741*	*3*
Totals:	313	1494	405	2212	13

East/West Total Approaches: 4791

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Buses				Total Peds
	Left	Thru	Right	Grand Total	
11:00:00	*0*	*0*	*0*	*0*	*0*
12:00:00	*149*	*498*	*138*	*785*	*4*
13:00:00	*163*	*525*	*155*	*843*	*0*
14:00:00	*199*	*571*	*181*	*951*	*0*
W Totals:	511	1594	474	2579	4

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*11:00*	*12:00*	*13:00*	*14:00*	*0:00*	*0:00*	*0:00*	*0:00*
Crossing Values:	*0*	*637*	*626*	*647*	*0*	*0*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	32	32	76	76	31	31	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:30:00	71	39	138	62	58	27	0	0	0	0	1	1	0	0	0	0	0	0	1	0
11:45:00	115	44	230	92	85	27	0	0	0	0	1	0	0	0	0	0	0	0	1	0
12:00:00	150	35	313	83	122	37	0	0	0	0	1	0	0	0	0	0	0	0	3	2
12:15:00	184	34	390	77	144	22	0	0	1	1	1	0	0	0	0	0	0	0	3	0
12:30:00	214	30	477	87	168	24	0	0	2	1	1	0	0	0	0	0	0	0	3	0
12:45:00	243	29	559	82	187	19	0	0	2	0	1	0	0	0	0	0	0	0	3	0
13:00:00	276	33	645	86	218	31	1	1	2	0	1	0	0	0	0	0	0	0	4	1
13:15:00	317	41	732	87	242	24	1	0	2	0	1	0	0	0	0	0	0	0	4	0
13:30:00	355	38	803	71	276	34	1	0	3	1	1	0	0	0	0	0	0	0	4	0
13:45:00	392	37	875	72	307	31	1	0	5	2	2	1	0	0	0	0	0	0	4	0
14:00:00	420	28	968	93	339	32	1	0	5	0	2	0	0	0	0	0	0	0	4	0
14:15:00	420	0	968	0	339	0	1	0	5	0	2	0	0	0	0	0	0	0	4	0
14:15:15	420	0	968	0	339	0	1	0	5	0	2	0	0	0	0	0	0	0	4	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	24	24	108	108	31	31	0	0	0	0	0	0	0	0	0	0	0	0	3	3
11:30:00	50	26	231	123	61	30	1	1	0	0	0	0	0	0	0	0	0	0	3	0
11:45:00	79	29	341	110	94	33	1	0	1	1	0	0	0	0	0	0	0	0	3	0
12:00:00	112	33	463	122	131	37	1	0	1	0	0	0	0	0	0	0	0	0	5	2
12:15:00	141	29	582	119	166	35	1	0	1	0	0	0	0	0	1	1	0	0	5	0
12:30:00	170	29	707	125	204	38	1	0	1	0	0	0	0	0	1	0	0	0	7	2
12:45:00	194	24	841	134	241	37	1	0	1	0	0	0	0	0	1	0	0	0	8	1
13:00:00	222	28	972	131	273	32	1	0	1	0	0	0	0	0	2	1	0	0	10	2
13:15:00	237	15	1117	145	306	33	1	0	1	0	0	0	0	0	2	0	0	0	12	2
13:30:00	264	27	1238	121	345	39	1	0	1	0	1	1	0	0	2	0	0	0	12	0
13:45:00	286	22	1382	144	370	25	1	0	1	0	1	0	0	0	2	0	0	0	12	0
14:00:00	312	26	1491	109	404	34	1	0	1	0	1	0	0	0	2	0	0	0	13	1
14:15:00	312	0	1491	0	404	0	1	0	1	0	1	0	0	0	2	0	0	0	13	0
14:15:15	312	0	1491	0	404	0	1	0	1	0	1	0	0	0	2	0	0	0	13	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	41	41	53	53	22	22	0	0	1	1	0	0	0	0	0	0	0	0	2	2
11:30:00	87	46	121	68	49	27	1	1	2	1	0	0	0	0	0	0	0	0	2	0
11:45:00	125	38	193	72	76	27	2	1	2	0	2	2	0	0	0	0	0	0	4	2
12:00:00	163	38	243	50	101	25	2	0	2	0	2	0	0	0	1	1	0	0	9	5
12:15:00	198	35	304	61	124	23	2	0	2	0	2	0	0	0	1	0	0	0	9	0
12:30:00	243	45	383	79	151	27	2	0	3	1	2	0	0	0	1	0	0	0	13	4
12:45:00	284	41	450	67	181	30	3	1	3	0	2	0	0	0	1	0	0	0	14	1
13:00:00	322	38	511	61	212	31	3	0	3	0	3	1	0	0	1	0	0	0	17	3
13:15:00	366	44	600	89	232	20	3	0	3	0	3	0	0	0	2	1	0	0	18	1
13:30:00	408	42	677	77	259	27	3	0	3	0	3	0	0	0	2	0	0	0	24	6
13:45:00	447	39	737	60	294	35	3	0	4	1	3	0	0	0	2	0	0	0	24	0
14:00:00	495	48	808	71	320	26	4	1	4	0	3	0	0	0	2	0	0	0	24	0
14:15:00	495	0	808	0	320	0	4	0	4	0	3	0	0	0	2	0	0	0	24	0
14:15:15	495	0	808	0	320	0	4	0	4	0	3	0	0	0	2	0	0	0	24	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Feb-23 Site #: 2302900004

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Buses - 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
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	29	29	114	114	27	27	0	0	1	1	1	1	0	0	1	1	0	0	2	2
11:30:00	74	45	251	137	58	31	1	1	1	0	2	1	0	0	1	0	0	0	3	1
11:45:00	105	31	350	99	93	35	1	0	1	0	3	1	0	0	1	0	0	0	4	1
12:00:00	148	43	496	146	135	42	1	0	1	0	3	0	0	0	1	0	0	0	4	0
12:15:00	191	43	635	139	169	34	1	0	1	0	3	0	0	0	1	0	0	0	4	0
12:30:00	226	35	772	137	202	33	1	0	1	0	3	0	0	0	2	1	0	0	4	0
12:45:00	272	46	886	114	245	43	1	0	1	0	4	1	0	0	2	0	0	0	4	0
13:00:00	310	38	1019	133	287	42	2	1	2	1	6	2	0	0	2	0	0	0	4	0
13:15:00	357	47	1147	128	326	39	2	0	2	0	6	0	0	0	3	1	0	0	4	0
13:30:00	405	48	1291	144	369	43	2	0	2	0	6	0	0	0	3	0	0	0	4	0
13:45:00	459	54	1446	155	414	45	2	0	2	0	7	1	0	0	3	0	0	0	4	0
14:00:00	509	50	1588	142	466	52	2	0	3	1	8	1	0	0	3	0	0	0	4	0
14:15:00	509	0	1588	0	466	0	2	0	3	0	8	0	0	0	3	0	0	0	4	0
14:15:15	509	0	1588	0	466	0	2	0	3	0	8	0	0	0	3	0	0	0	4	0

Appendix C

Level of Service (LOS) Definitions

LEVEL OF SERVICE[1]

Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. This concept was introduced in the 1965 *Highway Capacity Manual* as a criteria for interrupted flow conditions. The 2000 *Highway Capacity Manual* changed the basis for measuring Level of Service at intersections to control delay[2].

Six Levels of Service are defined with LOS A representing the best operating conditions, and LOS F the worst (briefly described below). It should be noted that there is often significant variability in the amount of delay experienced by individual drivers.

LOS A: This Level of Service describes the highest quality of traffic flow and is referred to as free flow. The approach appears open, turning movements are easily made and drivers have freedom of operation. Control delay is less than 10 seconds/vehicle.

LOS B: This Level of Service is referred to as a stable flow. Drivers feel somewhat restricted and occasionally may have to wait to complete the minor movement. Control delay is 10-15 seconds/vehicle for unsignalized intersections and 10-20 seconds/vehicle for signalized intersections.

LOS C: At this level, the operation is stable. Drivers feel more restricted and may have to wait, with queues developing for short periods. Control delay is 15-25 seconds/vehicle at unsignalized intersections and 20-35 seconds/vehicle at signalized intersections.

LOS D: At this level, traffic is approaching unstable flow. The motorist experiences increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period, but there are enough gaps to lower demand to permit occasional clearance of developing queues and prevent excessive back-ups. Control delay is 25-35 seconds/vehicle at unsignalized intersections and 35-55 seconds/vehicle at signalized intersections.

LOS E: At this level capacity occurs. Long queues of vehicles exist and delays to vehicles may extend. Control delay is 35-50 seconds/vehicle at unsignalized intersections and 55-80 seconds/vehicle at signalized intersections.

LOS F: At this Level of Service, the intersection has failed. Capacity of the intersection has been exceeded. Control delay exceeds 50 seconds/vehicle at unsignalized intersections and exceeds 80 seconds/vehicle at signalized intersections.

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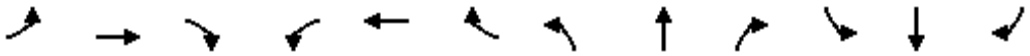
[1] *Transportation Research Board: Highway Capacity Manual 1965, 2000*

[2] *Control delay is defined as the component of delay that results when a control signal causes a lane group to reduce speed or to stop; it is measured by comparison with the uncontrolled condition.*

Appendix D

Synchro Analysis Worksheets

DILLON CONSULTING



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2	82	5	0	9	33	172	3	2	379	18
Future Volume (Veh/h)	15	2	82	5	0	9	33	172	3	2	379	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	2	89	5	0	10	36	187	3	2	412	20
Pedestrians		2			2						1	
Lane Width (m)		4.0			3.3						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	604	692	218	562	700	98	434			192		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	604	692	218	562	700	98	434			192		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	89	99	100	99	97			100		
cM capacity (veh/h)	366	352	785	351	348	937	1120			1377		

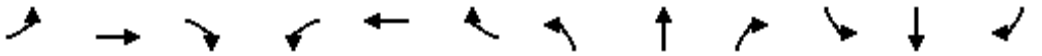
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	107	15	36	125	65	2	275	157
Volume Left	16	5	36	0	0	2	0	0
Volume Right	89	10	0	0	3	0	0	20
cSH	657	602	1120	1700	1700	1377	1700	1700
Volume to Capacity	0.16	0.02	0.03	0.07	0.04	0.00	0.16	0.09
Queue Length 95th (m)	4.6	0.6	0.8	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	11.5	11.1	8.3	0.0	0.0	7.6	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	11.5	11.1	1.3			0.0		
Approach LOS	B	B						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	31.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	1	201	3	2	484
Future Volume (Veh/h)	16	1	201	3	2	484
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	1	218	3	2	526
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	488	112			222	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488	112			222	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	508	920			1343	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	18	145	76	177	351
Volume Left	17	0	0	2	0
Volume Right	1	0	3	0	0
cSH	521	1700	1700	1343	1700
Volume to Capacity	0.03	0.09	0.04	0.00	0.21
Queue Length 95th (m)	0.9	0.0	0.0	0.0	0.0
Control Delay (s)	12.2	0.0	0.0	0.1	0.0
Lane LOS	B			A	
Approach Delay (s)	12.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		

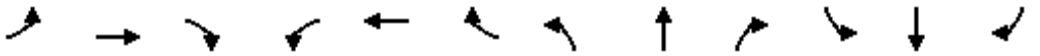


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	104	139	150	184	42	103	178	72	44	379	27
Future Volume (vph)	10	104	139	150	184	42	103	178	72	44	379	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00	1.00		1.00					0.99
Frt			0.850		0.972			0.957				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1843	0	1652	3387	0	1652	3539	1583
Flt Permitted	0.423			0.684			0.490			0.585		
Satd. Flow (perm)	783	1863	1557	1283	1843	0	851	3387	0	1017	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151		15			78				78
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.0			445.1			511.3			254.9	
Travel Time (s)		13.2			32.0			36.8			18.4	
Confl. Peds. (#/hr)	11		5	5		11	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	113	151	163	200	46	112	193	78	48	412	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	113	151	163	246	0	112	271	0	48	412	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	41.0		10.0	41.0	41.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%		11.9%	48.8%		11.9%	48.8%	48.8%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		6.0	36.0		6.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	5	5	5	11	11			0			1	1
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0		55.1	49.8		53.1	47.2	47.2
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.66	0.59		0.63	0.56	0.56
v/c Ratio	0.07	0.28	0.33	0.59	0.61		0.18	0.13		0.07	0.21	0.03
Control Delay	23.3	27.5	6.1	37.5	33.2		6.9	7.5		6.6	11.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.3	27.5	6.1	37.5	33.2		6.9	7.5		6.6	11.3	0.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		15.6			34.9			7.3			10.2	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	1.5	16.3	0.0	25.4	36.0		5.3	7.4		2.2	17.5	0.0
Queue Length 95th (m)	4.9	25.5	12.4	38.0	49.8		15.9	17.6		8.2	33.2	0.0
Internal Link Dist (m)		159.0			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	261	621	619	427	624		623	2039		690	1986	911
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	0.04	0.18	0.24	0.38	0.39		0.18	0.13		0.07	0.21	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 84			
Actuated Cycle Length: 84			
Offset: 53 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

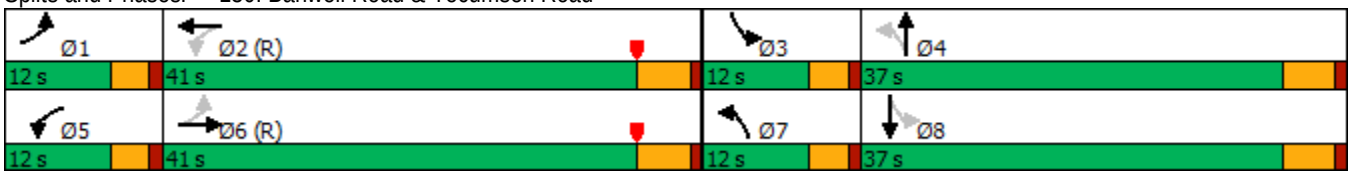


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	298	107	79	395	98	182	177	78	134	408	110
Future Volume (vph)	86	298	107	79	395	98	182	177	78	134	408	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.970			0.954			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4974	0	1691	3395	0	1711	3502	0
Flt Permitted	0.425			0.484			0.232			0.530		
Satd. Flow (perm)	765	4971	0	860	4974	0	413	3395	0	951	3502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			66			72			35	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	324	116	86	429	107	198	192	85	146	443	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	440	0	86	536	0	198	277	0	146	563	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	41.0		12.0	41.0		12.0	37.0		12.0	37.0	
Total Split (%)	11.8%	40.2%		11.8%	40.2%		11.8%	36.3%		11.8%	36.3%	
Maximum Green (s)	8.0	36.0		8.0	36.0		8.0	32.0		8.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	55.3	47.7		55.2	47.7		31.5	22.5		31.5	22.5	
Actuated g/C Ratio	0.54	0.47		0.54	0.47		0.31	0.22		0.31	0.22	
v/c Ratio	0.19	0.18		0.16	0.23		0.87	0.34		0.41	0.70	
Control Delay	12.5	13.9		12.3	16.0		60.8	24.5		26.3	38.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.5	13.9		12.3	16.0		60.8	24.5		26.3	38.7	
LOS	B	B		B	B		E	C		C	D	
Approach Delay		13.7			15.5			39.7			36.1	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	7.9	14.6		7.3	20.8		30.8	19.0		21.9	54.6	
Queue Length 95th (m)	19.5	26.1		18.4	34.7		#50.5	26.8		31.3	63.8	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	490	2379		531	2360		227	1114		353	1122	
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	0.19	0.18		0.16	0.23		0.87	0.25		0.41	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 102			
Actuated Cycle Length: 102			
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 74.0%		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: 130: Banwell Road & Tecumseh Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1	54	1	1	3	99	418	12	5	333	10
Future Volume (Veh/h)	14	1	54	1	1	3	99	418	12	5	333	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	1	59	1	1	3	108	454	13	5	362	11
Pedestrians		2			2							
Lane Width (m)		4.0			3.3							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	826	1064	188	929	1064	236	375			469		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	826	1064	188	929	1064	236	375			469		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	99	93	99	99	100	91			100		
cM capacity (veh/h)	242	199	820	190	200	765	1178			1087		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	75	5	108	303	164	5	241	132
Volume Left	15	1	108	0	0	5	0	0
Volume Right	59	3	0	0	13	0	0	11
cSH	540	352	1178	1700	1700	1087	1700	1700
Volume to Capacity	0.14	0.01	0.09	0.18	0.10	0.00	0.14	0.08
Queue Length 95th (m)	3.8	0.3	2.4	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	12.7	15.4	8.4	0.0	0.0	8.3	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	12.7	15.4	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	31.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	2	547	18	1	377
Future Volume (Veh/h)	19	2	547	18	1	377
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	2	595	20	1	410
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked	0.99	0.99			0.99	
vC, conflicting volume	813	308			616	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	795	287			597	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	100			100	
cM capacity (veh/h)	321	704			967	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	23	397	218	138	273
Volume Left	21	0	0	1	0
Volume Right	2	0	20	0	0
cSH	337	1700	1700	967	1700
Volume to Capacity	0.07	0.23	0.13	0.00	0.16
Queue Length 95th (m)	1.7	0.0	0.0	0.0	0.0
Control Delay (s)	16.4	0.0	0.0	0.1	0.0
Lane LOS	C			A	
Approach Delay (s)	16.4	0.0		0.0	
Approach LOS	C				

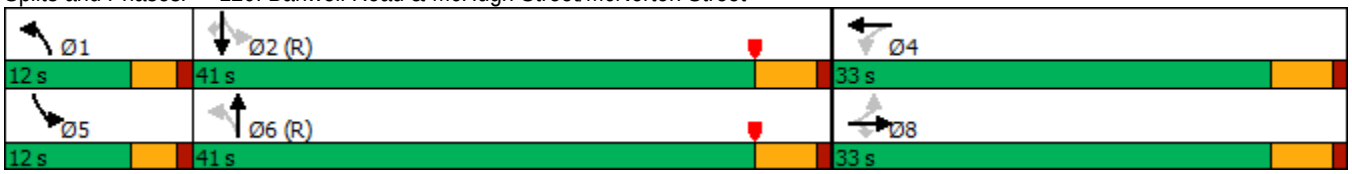
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

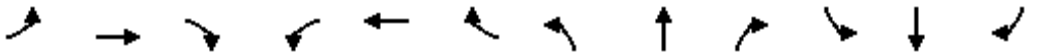
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	168	114	109	178	43	144	488	221	64	315	22
Future Volume (vph)	14	168	114	109	178	43	144	488	221	64	315	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00		1.00	0.99		1.00		0.99
Frt			0.850		0.971			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1844	0	1652	3350	0	1652	3539	1583
Flt Permitted	0.423			0.545			0.521			0.331		
Satd. Flow (perm)	787	1863	1563	1026	1844	0	905	3350	0	575	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124		15			105				76
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	183	124	118	193	47	157	530	240	70	342	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	183	124	118	240	0	157	770	0	70	342	24
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		12.0	41.0		12.0	41.0	41.0
Total Split (%)	38.4%	38.4%	38.4%	38.4%	38.4%		14.0%	47.7%		14.0%	47.7%	47.7%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		8.0	36.0		8.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	1	1			1			1	1
Act Effct Green (s)	17.9	17.9	17.9	17.9	17.9		56.9	49.4		54.1	46.4	46.4
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.66	0.57		0.63	0.54	0.54
v/c Ratio	0.09	0.47	0.29	0.55	0.61		0.24	0.39		0.16	0.18	0.03
Control Delay	25.2	32.6	6.5	39.0	34.5		6.9	11.0		7.0	11.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.2	32.6	6.5	39.0	34.5		6.9	11.0		7.0	11.8	0.0
LOS	C	C	A	D	C		A	B		A	B	A
Approach Delay		22.2			36.0			10.3			10.4	
Approach LOS		C			D			B			B	
Queue Length 50th (m)	2.1	28.5	0.0	18.7	36.1		7.7	30.7		3.2	14.6	0.0
Queue Length 95th (m)	6.2	40.3	11.7	30.7	50.2		21.4	60.5		10.8	28.9	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	256	606	592	334	610		672	1967		470	1908	878
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.06	0.30	0.21	0.35	0.39		0.23	0.39		0.15	0.18	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 86			
Offset: 27 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



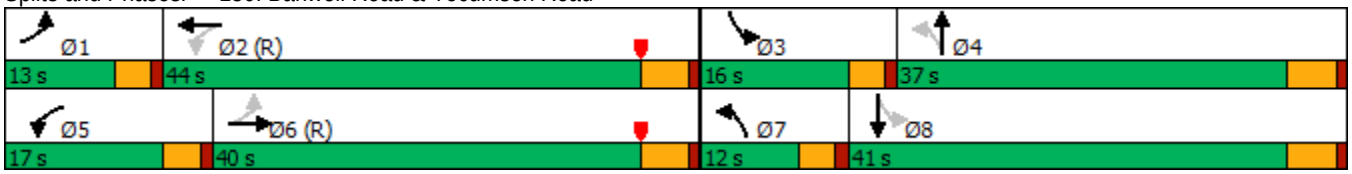


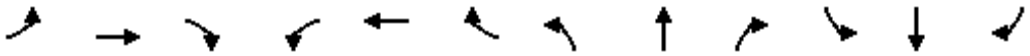
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	509	174	110	411	159	157	517	106	130	287	96
Future Volume (vph)	199	509	174	110	411	159	157	517	106	130	287	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.962			0.958			0.975			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4984	0	1691	4904	0	1691	3480	0	1711	3468	0
Flt Permitted	0.359			0.309			0.445			0.150		
Satd. Flow (perm)	645	4984	0	550	4904	0	791	3480	0	270	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			99			22			44	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	4		1	1		4	2		3	3		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	553	189	120	447	173	171	562	115	141	312	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	742	0	120	620	0	171	677	0	141	416	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	13.0	40.0		17.0	44.0		12.0	37.0		16.0	41.0	
Total Split (%)	11.8%	36.4%		15.5%	40.0%		10.9%	33.6%		14.5%	37.3%	
Maximum Green (s)	9.0	35.0		13.0	39.0		8.0	32.0		12.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		1			4			3			2	
Act Effct Green (s)	56.0	44.5		54.8	43.9		35.8	26.8		41.3	29.6	
Actuated g/C Ratio	0.51	0.40		0.50	0.40		0.33	0.24		0.38	0.27	
v/c Ratio	0.50	0.36		0.32	0.31		0.53	0.78		0.58	0.43	
Control Delay	20.3	21.9		16.5	20.2		29.4	44.2		31.3	30.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	21.9		16.5	20.2		29.4	44.2		31.3	30.1	
LOS	C	C		B	C		C	D		C	C	
Approach Delay		21.6			19.6			41.2			30.4	
Approach LOS		C			B			D			C	
Queue Length 50th (m)	25.2	37.5		13.2	30.4		25.5	72.8		20.6	35.8	
Queue Length 95th (m)	44.5	55.4		25.9	41.5		38.4	89.2		32.2	47.1	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	432	2066		423	2018		323	1027		261	1164	
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	0.50	0.36		0.28	0.31		0.53	0.66		0.54	0.36	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 79.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	66	10	3	2	72	296	7	4	300	9
Future Volume (Veh/h)	8	0	66	10	3	2	72	296	7	4	300	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	72	11	3	2	78	322	8	4	326	10
Pedestrians					1			3				
Lane Width (m)					3.3			3.5				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	660	826	171	729	827	166	336			331		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	660	826	171	729	827	166	336			331		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	91	96	99	100	94			100		
cM capacity (veh/h)	327	285	841	269	285	849	1220			1224		

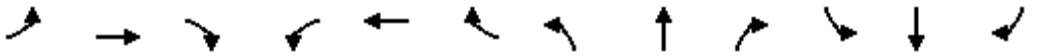
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	81	16	78	215	115	4	217	119
Volume Left	9	11	78	0	0	4	0	0
Volume Right	72	2	0	0	8	0	0	10
cSH	716	297	1220	1700	1700	1224	1700	1700
Volume to Capacity	0.11	0.05	0.06	0.13	0.07	0.00	0.13	0.07
Queue Length 95th (m)	3.0	1.4	1.6	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	10.7	17.8	8.2	0.0	0.0	8.0	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	10.7	17.8	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	28.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	0	384	15	0	380
Future Volume (Veh/h)	19	0	384	15	0	380
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	417	16	0	413
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	632	216			433	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	632	216			433	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	413	788			1123	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	21	278	155	138	275
Volume Left	21	0	0	0	0
Volume Right	0	0	16	0	0
cSH	413	1700	1700	1123	1700
Volume to Capacity	0.05	0.16	0.09	0.00	0.16
Queue Length 95th (m)	1.3	0.0	0.0	0.0	0.0
Control Delay (s)	14.2	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	14.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		

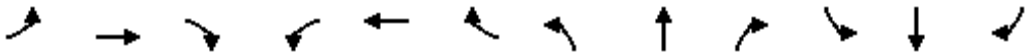


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	122	120	138	160	51	128	331	182	52	324	25
Future Volume (vph)	20	122	120	138	160	51	128	331	182	52	324	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00							
Frt			0.850		0.964			0.947				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1829	0	1652	3352	0	1652	3539	1583
Flt Permitted	0.459			0.666			0.503			0.443		
Satd. Flow (perm)	853	1863	1563	1253	1829	0	874	3352	0	770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		21			152				80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	3		1	1		3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	133	130	150	174	55	139	360	198	57	352	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	133	130	150	229	0	139	558	0	57	352	27
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		11.0	38.0		11.0	38.0	38.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	40.2%		13.4%	46.3%		13.4%	46.3%	46.3%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		7.0	33.0		7.0	33.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	3	3			0			0	0
Act Effct Green (s)	17.4	17.4	17.4	17.4	17.4		53.9	48.2		50.7	43.4	43.4
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.66	0.59		0.62	0.53	0.53
v/c Ratio	0.12	0.34	0.30	0.57	0.57		0.22	0.27		0.10	0.19	0.03
Control Delay	24.3	28.0	6.2	36.0	30.5		7.0	8.2		6.8	11.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.3	28.0	6.2	36.0	30.5		7.0	8.2		6.8	11.9	0.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		17.7			32.7			8.0			10.5	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	3.0	19.1	0.0	22.8	31.5		6.4	16.3		2.5	14.4	0.0
Queue Length 95th (m)	7.6	28.5	11.3	34.2	43.9		19.5	36.0		9.3	29.2	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	291	636	619	427	638		645	2032		557	1871	874
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.08	0.21	0.21	0.35	0.36		0.22	0.27		0.10	0.19	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 82			
Actuated Cycle Length: 82			
Offset: 27 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

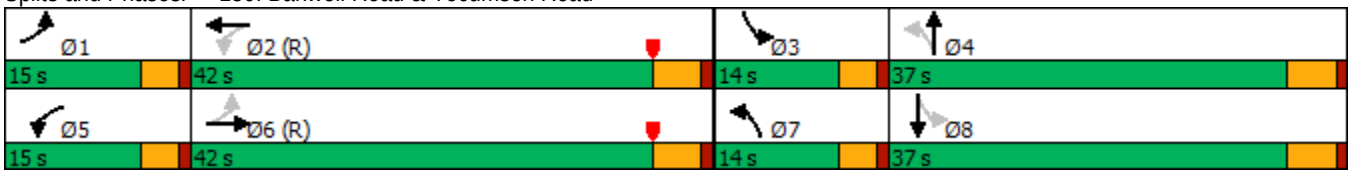


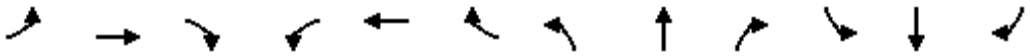
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	571	181	90	519	132	174	299	108	144	326	122
Future Volume (vph)	199	571	181	90	519	132	174	299	108	144	326	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.964			0.970			0.960			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4989	0	1691	4988	0	1691	3422	0	1711	3470	0
Flt Permitted	0.319			0.300			0.257			0.317		
Satd. Flow (perm)	574	4989	0	533	4988	0	457	3422	0	570	3470	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			63			48			51	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)			7	7					3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	621	197	98	564	143	189	325	117	157	354	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	818	0	98	707	0	189	442	0	157	487	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	15.0	42.0		15.0	42.0		14.0	37.0		14.0	37.0	
Total Split (%)	13.9%	38.9%		13.9%	38.9%		13.0%	34.3%		13.0%	34.3%	
Maximum Green (s)	11.0	37.0		11.0	37.0		10.0	32.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		7			0			3			0	
Act Effct Green (s)	61.9	50.2		58.1	48.2		32.2	21.3		31.7	21.0	
Actuated g/C Ratio	0.57	0.46		0.54	0.45		0.30	0.20		0.29	0.19	
v/c Ratio	0.49	0.35		0.26	0.31		0.76	0.62		0.58	0.68	
Control Delay	15.9	18.1		13.1	19.1		46.3	38.4		34.3	40.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.9	18.1		13.1	19.1		46.3	38.4		34.3	40.3	
LOS	B	B		B	B		D	D		C	D	
Approach Delay		17.7			18.3			40.8			38.8	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	20.2	35.2		8.5	32.1		31.9	43.2		25.9	48.4	
Queue Length 95th (m)	42.9	58.7		21.0	50.9		42.5	51.7		35.5	57.1	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	455	2361		415	2261		250	1047		274	1064	
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	0.47	0.35		0.24	0.31		0.76	0.42		0.57	0.46	

Intersection Summary			
Area Type:	Other		
Cycle Length: 108			
Actuated Cycle Length: 108			
Offset: 37 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	85	5	0	9	34	179	3	2	394	19
Future Volume (Veh/h)	16	2	85	5	0	9	34	179	3	2	394	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	2	92	5	0	10	37	195	3	2	428	21
Pedestrians		2			2						1	
Lane Width (m)		4.0			3.3						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	627	718	226	584	728	102	451			200		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	627	718	226	584	728	102	451			200		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	88	99	100	99	97			100		
cM capacity (veh/h)	352	340	775	336	336	931	1104			1367		

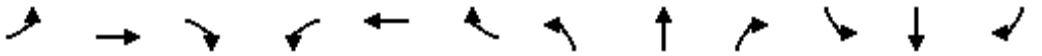
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	111	15	37	130	68	2	285	164
Volume Left	17	5	37	0	0	2	0	0
Volume Right	92	10	0	0	3	0	0	21
cSH	642	586	1104	1700	1700	1367	1700	1700
Volume to Capacity	0.17	0.03	0.03	0.08	0.04	0.00	0.17	0.10
Queue Length 95th (m)	5.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	11.8	11.3	8.4	0.0	0.0	7.6	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	11.8	11.3	1.3			0.0		
Approach LOS	B	B						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	31.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	1	209	3	2	504
Future Volume (Veh/h)	17	1	209	3	2	504
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	1	227	3	2	548
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	508	116			231	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	508	116			231	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			100	
cM capacity (veh/h)	493	913			1333	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	19	151	79	185	365
Volume Left	18	0	0	2	0
Volume Right	1	0	3	0	0
cSH	506	1700	1700	1333	1700
Volume to Capacity	0.04	0.09	0.05	0.00	0.21
Queue Length 95th (m)	0.9	0.0	0.0	0.0	0.0
Control Delay (s)	12.4	0.0	0.0	0.1	0.0
Lane LOS	B			A	
Approach Delay (s)	12.4	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

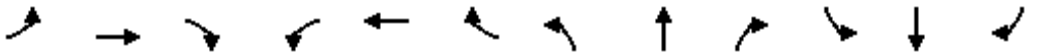


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	108	145	156	191	44	107	185	75	46	394	28
Future Volume (vph)	10	108	145	156	191	44	107	185	75	46	394	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00	1.00		1.00					0.99
Frt			0.850		0.972			0.957				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1843	0	1652	3387	0	1652	3539	1583
Flt Permitted	0.407			0.682			0.478			0.578		
Satd. Flow (perm)	753	1863	1557	1280	1843	0	831	3387	0	1005	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158		15			82				78
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.0			445.1			511.3			254.9	
Travel Time (s)		13.2			32.0			36.8			18.4	
Confl. Peds. (#/hr)	11		5	5		11	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	117	158	170	208	48	116	201	82	50	428	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	117	158	170	256	0	116	283	0	50	428	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	41.0		10.0	41.0	41.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%		11.9%	48.8%		11.9%	48.8%	48.8%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		6.0	36.0		6.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	5	5	5	11	11			0			1	1
Act Effct Green (s)	18.3	18.3	18.3	18.3	18.3		54.9	49.5		52.8	46.8	46.8
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.65	0.59		0.63	0.56	0.56
v/c Ratio	0.07	0.29	0.34	0.61	0.62		0.19	0.14		0.07	0.22	0.03
Control Delay	23.2	27.4	6.1	38.0	33.6		7.0	7.6		6.7	11.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.2	27.4	6.1	38.0	33.6		7.0	7.6		6.7	11.6	0.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		15.4			35.3			7.4			10.4	
Approach LOS		B			D			A			B	
Queue Length 50th (m)	1.5	16.8	0.0	26.5	37.5		5.6	7.8		2.3	18.6	0.0
Queue Length 95th (m)	5.0	26.3	12.7	39.7	51.7		16.5	18.3		8.4	34.5	0.2
Internal Link Dist (m)		159.0			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	251	621	624	426	624		610	2029		680	1973	905
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	0.04	0.19	0.25	0.40	0.41		0.19	0.14		0.07	0.22	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 84			
Actuated Cycle Length: 84			
Offset: 53 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 17.1		Intersection LOS: B	
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

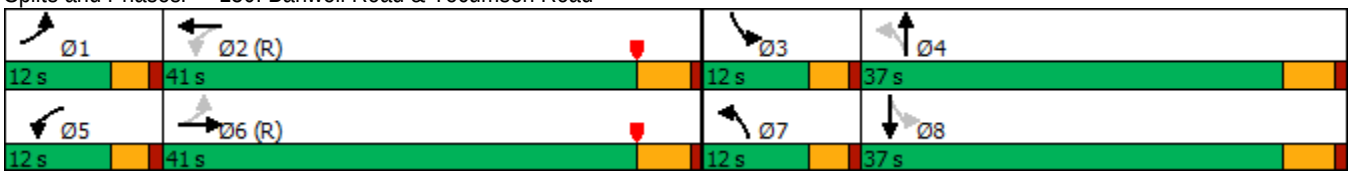


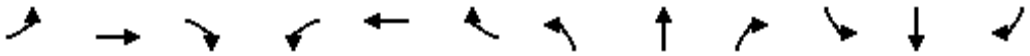
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	310	111	82	411	102	189	184	81	139	425	114
Future Volume (vph)	89	310	111	82	411	102	189	184	81	139	425	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.970			0.954			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4974	0	1691	3396	0	1711	3502	0
Flt Permitted	0.412			0.471			0.220			0.519		
Satd. Flow (perm)	741	4971	0	837	4974	0	392	3396	0	931	3502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			65			71			35	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	337	121	89	447	111	205	200	88	151	462	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	458	0	89	558	0	205	288	0	151	586	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	41.0		12.0	41.0		12.0	37.0		12.0	37.0	
Total Split (%)	11.8%	40.2%		11.8%	40.2%		11.8%	36.3%		11.8%	36.3%	
Maximum Green (s)	8.0	36.0		8.0	36.0		8.0	32.0		8.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	54.8	47.2		54.7	47.1		32.1	23.1		32.1	23.1	
Actuated g/C Ratio	0.54	0.46		0.54	0.46		0.31	0.23		0.31	0.23	
v/c Ratio	0.20	0.19		0.17	0.24		0.91	0.35		0.43	0.72	
Control Delay	12.8	14.4		12.6	16.5		68.4	24.8		26.3	38.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.8	14.4		12.6	16.5		68.4	24.8		26.3	38.8	
LOS	B	B		B	B		E	C		C	D	
Approach Delay		14.1			16.0			43.0			36.3	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	8.5	15.7		7.7	22.3		31.6	20.0		22.5	57.0	
Queue Length 95th (m)	20.3	27.2		18.9	36.3		#50.2	28.2		32.3	66.6	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	476	2351		517	2331		225	1114		353	1122	
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	0.20	0.19		0.17	0.24		0.91	0.26		0.43	0.52	

Intersection Summary			
Area Type:	Other		
Cycle Length: 102			
Actuated Cycle Length: 102			
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 75.0%		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: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	56	1	1	3	103	435	12	5	347	10
Future Volume (Veh/h)	15	1	56	1	1	3	103	435	12	5	347	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	1	61	1	1	3	112	473	13	5	377	11
Pedestrians		2			2							
Lane Width (m)		4.0			3.3							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	858	1106	196	966	1106	245	390			488		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	858	1106	196	966	1106	245	390			488		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	92	99	99	100	90			100		
cM capacity (veh/h)	228	187	811	177	188	754	1163			1070		

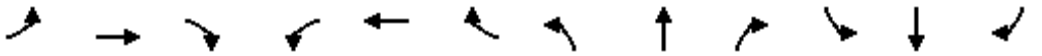
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	78	5	112	315	171	5	251	137
Volume Left	16	1	112	0	0	5	0	0
Volume Right	61	3	0	0	13	0	0	11
cSH	518	334	1163	1700	1700	1070	1700	1700
Volume to Capacity	0.15	0.01	0.10	0.19	0.10	0.00	0.15	0.08
Queue Length 95th (m)	4.2	0.4	2.6	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	13.2	15.9	8.4	0.0	0.0	8.4	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	13.2	15.9	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	31.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	2	569	19	1	392
Future Volume (Veh/h)	20	2	569	19	1	392
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	2	618	21	1	426
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked	0.98	0.98			0.98	
vC, conflicting volume	844	320			640	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	807	274			599	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	100			100	
cM capacity (veh/h)	313	711			957	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	412	227	143	284
Volume Left	22	0	0	1	0
Volume Right	2	0	21	0	0
cSH	329	1700	1700	957	1700
Volume to Capacity	0.07	0.24	0.13	0.00	0.17
Queue Length 95th (m)	1.9	0.0	0.0	0.0	0.0
Control Delay (s)	16.8	0.0	0.0	0.1	0.0
Lane LOS	C			A	
Approach Delay (s)	16.8	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

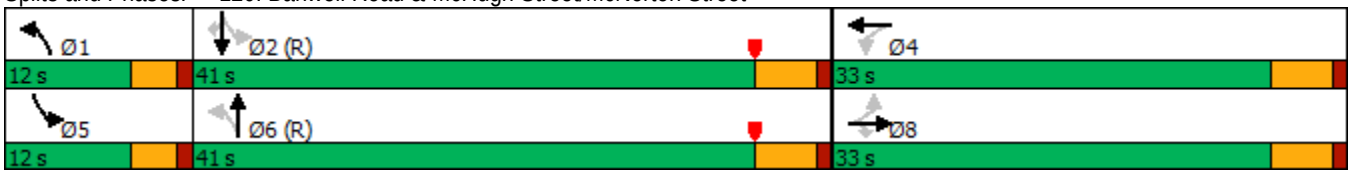


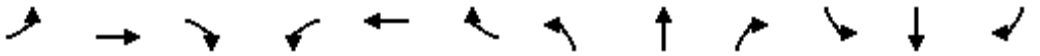
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	175	119	113	185	45	150	508	230	67	328	23
Future Volume (vph)	15	175	119	113	185	45	150	508	230	67	328	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00		1.00	0.99		1.00		0.99
Frt			0.850		0.971			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1844	0	1652	3350	0	1652	3539	1583
Flt Permitted	0.405			0.532			0.513			0.316		
Satd. Flow (perm)	754	1863	1563	1001	1844	0	891	3350	0	549	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129		15			105				76
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	190	129	123	201	49	163	552	250	73	357	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	190	129	123	250	0	163	802	0	73	357	25
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		12.0	41.0		12.0	41.0	41.0
Total Split (%)	38.4%	38.4%	38.4%	38.4%	38.4%		14.0%	47.7%		14.0%	47.7%	47.7%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		8.0	36.0		8.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	1	1			1			1	1
Act Effct Green (s)	18.1	18.1	18.1	18.1	18.1		56.7	49.0		53.7	46.0	46.0
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.66	0.57		0.62	0.53	0.53
v/c Ratio	0.10	0.48	0.30	0.58	0.62		0.25	0.41		0.17	0.19	0.03
Control Delay	25.3	32.7	6.4	40.4	34.9		7.1	11.4		7.2	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.3	32.7	6.4	40.4	34.9		7.1	11.4		7.2	12.0	0.0
LOS	C	C	A	D	C		A	B		A	B	A
Approach Delay		22.2			36.7			10.7			10.6	
Approach LOS		C			D			B			B	
Queue Length 50th (m)	2.3	29.5	0.0	19.6	37.7		8.1	33.2		3.4	15.5	0.0
Queue Length 95th (m)	6.6	41.9	11.8	32.1	52.2		22.2	63.9		11.2	30.1	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	245	606	595	325	610		662	1955		453	1892	871
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	0.07	0.31	0.22	0.38	0.41		0.25	0.41		0.16	0.19	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 86			
Offset: 27 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



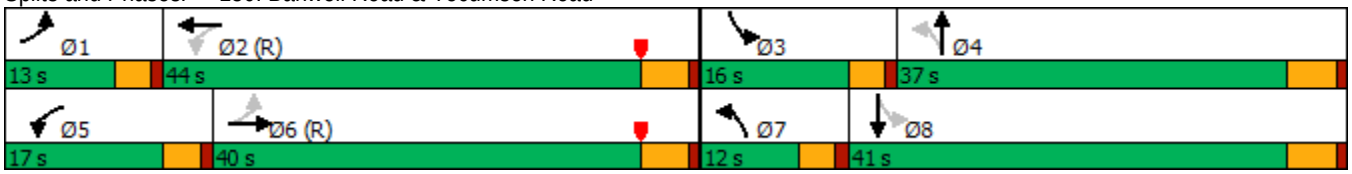


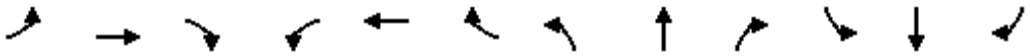
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	530	181	114	428	165	163	538	110	135	299	100
Future Volume (vph)	207	530	181	114	428	165	163	538	110	135	299	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.962			0.958			0.974			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4984	0	1691	4904	0	1691	3477	0	1711	3468	0
Flt Permitted	0.345			0.291			0.433			0.140		
Satd. Flow (perm)	620	4984	0	518	4904	0	770	3477	0	252	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			98			22			45	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	4		1	1		4	2		3	3		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	225	576	197	124	465	179	177	585	120	147	325	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	773	0	124	644	0	177	705	0	147	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	13.0	40.0		17.0	44.0		12.0	37.0		16.0	41.0	
Total Split (%)	11.8%	36.4%		15.5%	40.0%		10.9%	33.6%		14.5%	37.3%	
Maximum Green (s)	9.0	35.0		13.0	39.0		8.0	32.0		12.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		1			4			3			2	
Act Effct Green (s)	55.2	43.7		54.1	43.1		36.5	27.5		42.2	30.4	
Actuated g/C Ratio	0.50	0.40		0.49	0.39		0.33	0.25		0.38	0.28	
v/c Ratio	0.54	0.38		0.34	0.32		0.55	0.80		0.61	0.44	
Control Delay	21.9	22.7		17.2	20.9		29.7	44.4		32.2	29.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	22.7		17.2	20.9		29.7	44.4		32.2	29.9	
LOS	C	C		B	C		C	D		C	C	
Approach Delay		22.6			20.3			41.5			30.4	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	26.9	40.4		13.9	32.7		26.0	75.8		21.2	37.2	
Queue Length 95th (m)	46.2	58.2		26.6	43.4		39.6	93.5		33.4	49.2	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	416	2027		407	1982		322	1027		258	1165	
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	0.54	0.38		0.30	0.32		0.55	0.69		0.57	0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	69	10	3	2	75	308	7	4	312	9
Future Volume (Veh/h)	8	0	69	10	3	2	75	308	7	4	312	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	75	11	3	2	82	335	8	4	339	10
Pedestrians					1			3				
Lane Width (m)					3.3			3.5				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	687	860	178	760	861	172	349			344		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	687	860	178	760	861	172	349			344		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	91	96	99	100	93			100		
cM capacity (veh/h)	311	271	833	253	271	840	1207			1211		

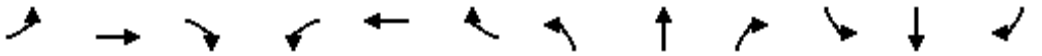
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	84	16	82	223	120	4	226	123
Volume Left	9	11	82	0	0	4	0	0
Volume Right	75	2	0	0	8	0	0	10
cSH	706	281	1207	1700	1700	1211	1700	1700
Volume to Capacity	0.12	0.06	0.07	0.13	0.07	0.00	0.13	0.07
Queue Length 95th (m)	3.2	1.4	1.7	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	10.8	18.6	8.2	0.0	0.0	8.0	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	10.8	18.6	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	28.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	0	400	16	0	395
Future Volume (Veh/h)	20	0	400	16	0	395
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	0	435	17	0	429
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	658	226			452	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	658	226			452	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	100			100	
cM capacity (veh/h)	397	777			1105	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	22	290	162	143	286
Volume Left	22	0	0	0	0
Volume Right	0	0	17	0	0
cSH	397	1700	1700	1105	1700
Volume to Capacity	0.06	0.17	0.10	0.00	0.17
Queue Length 95th (m)	1.4	0.0	0.0	0.0	0.0
Control Delay (s)	14.6	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	14.6	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

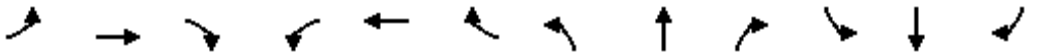


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	127	125	144	166	53	133	344	189	54	337	26
Future Volume (vph)	21	127	125	144	166	53	133	344	189	54	337	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00							
Frt			0.850		0.963			0.947				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1827	0	1652	3352	0	1652	3539	1583
Flt Permitted	0.444			0.656			0.496			0.434		
Satd. Flow (perm)	826	1863	1563	1235	1827	0	862	3352	0	755	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136		21			151				80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	3		1	1		3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	138	136	157	180	58	145	374	205	59	366	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	138	136	157	238	0	145	579	0	59	366	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		11.0	38.0		11.0	38.0	38.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	40.2%		13.4%	46.3%		13.4%	46.3%	46.3%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		7.0	33.0		7.0	33.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	3	3			0			0	0
Act Effct Green (s)	17.6	17.6	17.6	17.6	17.6		53.7	47.9		50.3	43.0	43.0
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.65	0.58		0.61	0.52	0.52
v/c Ratio	0.13	0.34	0.31	0.59	0.58		0.23	0.29		0.11	0.20	0.03
Control Delay	24.3	27.9	6.1	36.9	30.9		7.1	8.5		6.9	12.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.3	27.9	6.1	36.9	30.9		7.1	8.5		6.9	12.1	0.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		17.6			33.3			8.2			10.7	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	3.1	19.8	0.0	23.8	32.7		6.9	17.6		2.6	15.4	0.0
Queue Length 95th (m)	7.9	29.3	11.5	36.0	45.6		20.2	38.0		9.6	30.5	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	282	636	623	421	637		637	2020		545	1855	867
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	0.08	0.22	0.22	0.37	0.37		0.23	0.29		0.11	0.20	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 82			
Actuated Cycle Length: 82			
Offset: 27 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

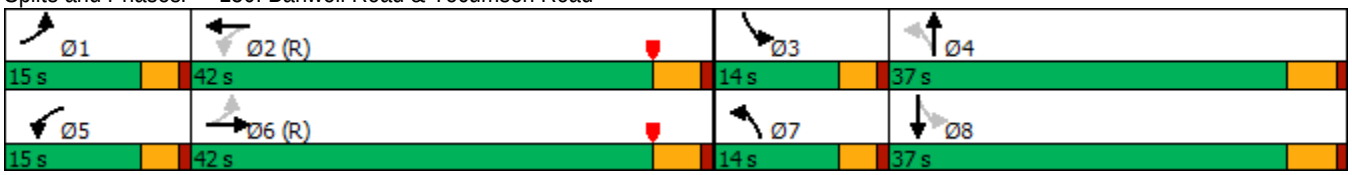


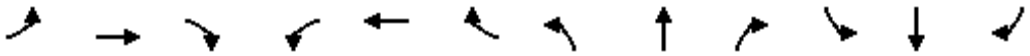
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	594	188	94	540	137	181	311	112	150	339	127
Future Volume (vph)	207	594	188	94	540	137	181	311	112	150	339	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.964			0.970			0.960			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4989	0	1691	4988	0	1691	3422	0	1711	3470	0
Flt Permitted	0.303			0.287			0.246			0.301		
Satd. Flow (perm)	546	4989	0	510	4988	0	438	3422	0	541	3470	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			62			48			51	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)			7	7					3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	225	646	204	102	587	149	197	338	122	163	368	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	850	0	102	736	0	197	460	0	163	506	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	15.0	42.0		15.0	42.0		14.0	37.0		14.0	37.0	
Total Split (%)	13.9%	38.9%		13.9%	38.9%		13.0%	34.3%		13.0%	34.3%	
Maximum Green (s)	11.0	37.0		11.0	37.0		10.0	32.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		7			0			3			0	
Act Effct Green (s)	61.6	49.6		57.4	47.5		32.7	21.7		32.2	21.5	
Actuated g/C Ratio	0.57	0.46		0.53	0.44		0.30	0.20		0.30	0.20	
v/c Ratio	0.52	0.36		0.28	0.33		0.79	0.63		0.61	0.69	
Control Delay	17.0	18.7		13.6	19.7		50.0	38.6		35.3	40.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.0	18.7		13.6	19.7		50.0	38.6		35.3	40.6	
LOS	B	B		B	B		D	D		D	D	
Approach Delay		18.3			19.0			42.0			39.3	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	21.4	37.5		9.0	34.5		33.2	45.2		26.8	50.5	
Queue Length 95th (m)	44.6	61.5		21.7	53.3		#45.8	54.1		36.9	59.6	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	441	2336		401	2226		248	1047		271	1064	
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	0.51	0.36		0.25	0.33		0.79	0.44		0.60	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 108			
Actuated Cycle Length: 108			
Offset: 37 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 27.6		Intersection LOS: C	
Intersection Capacity Utilization 72.6%		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.			

Splits and Phases: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	90	5	0	10	36	188	3	2	415	20
Future Volume (Veh/h)	16	2	90	5	0	10	36	188	3	2	415	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	2	98	5	0	11	39	204	3	2	451	22
Pedestrians		2			2						1	
Lane Width (m)		4.0			3.3						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	660	755	238	614	764	106	475			209		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	660	755	238	614	764	106	475			209		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	87	98	100	99	96			100		
cM capacity (veh/h)	333	323	761	315	319	925	1081			1357		

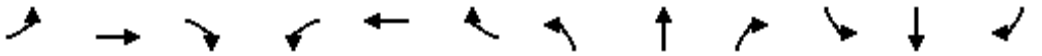
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	117	16	39	136	71	2	301	172
Volume Left	17	5	39	0	0	2	0	0
Volume Right	98	11	0	0	3	0	0	22
cSH	629	577	1081	1700	1700	1357	1700	1700
Volume to Capacity	0.19	0.03	0.04	0.08	0.04	0.00	0.18	0.10
Queue Length 95th (m)	5.4	0.7	0.9	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.0	11.4	8.5	0.0	0.0	7.7	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.0	11.4	1.3			0.0		
Approach LOS	B	B						

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	32.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	1	220	3	2	529
Future Volume (Veh/h)	17	1	220	3	2	529
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	1	239	3	2	575
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	533	122			243	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	533	122			243	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			100	
cM capacity (veh/h)	476	905			1319	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	19	159	83	194	383
Volume Left	18	0	0	2	0
Volume Right	1	0	3	0	0
cSH	488	1700	1700	1319	1700
Volume to Capacity	0.04	0.09	0.05	0.00	0.23
Queue Length 95th (m)	1.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.7	0.0	0.0	0.1	0.0
Lane LOS	B			A	
Approach Delay (s)	12.7	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

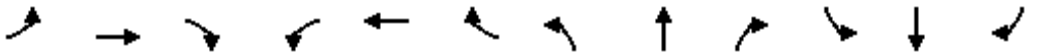


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	114	152	164	201	46	113	195	79	48	415	30
Future Volume (vph)	11	114	152	164	201	46	113	195	79	48	415	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00	1.00		1.00					0.99
Frt			0.850		0.972			0.957				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1843	0	1652	3387	0	1652	3539	1583
Flt Permitted	0.393			0.677			0.463			0.570		
Satd. Flow (perm)	727	1863	1557	1270	1843	0	804	3387	0	991	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165		15			86				78
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.0			445.1			511.3			254.9	
Travel Time (s)		13.2			32.0			36.8			18.4	
Confl. Peds. (#/hr)	11		5	5		11	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	124	165	178	218	50	123	212	86	52	451	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	124	165	178	268	0	123	298	0	52	451	33
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	41.0		10.0	41.0	41.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%		11.9%	48.8%		11.9%	48.8%	48.8%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		6.0	36.0		6.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	5	5	5	11	11			0			1	1
Act Effct Green (s)	18.9	18.9	18.9	18.9	18.9		54.3	48.8		52.1	46.1	46.1
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.65	0.58		0.62	0.55	0.55
v/c Ratio	0.07	0.30	0.35	0.62	0.63		0.21	0.15		0.08	0.23	0.04
Control Delay	22.9	27.0	5.9	37.9	33.4		7.3	7.8		7.0	12.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.9	27.0	5.9	37.9	33.4		7.3	7.8		7.0	12.1	0.3
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		15.3			35.2			7.7			10.9	
Approach LOS		B			D			A			B	
Queue Length 50th (m)	1.6	17.8	0.0	27.6	39.3		6.2	8.5		2.5	20.2	0.0
Queue Length 95th (m)	5.2	27.7	12.9	41.8	54.4		17.3	19.1		8.7	36.4	0.8
Internal Link Dist (m)		159.0			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	242	621	629	423	624		591	2005		664	1940	892
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.05	0.20	0.26	0.42	0.43		0.21	0.15		0.08	0.23	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 84			
Actuated Cycle Length: 84			
Offset: 53 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

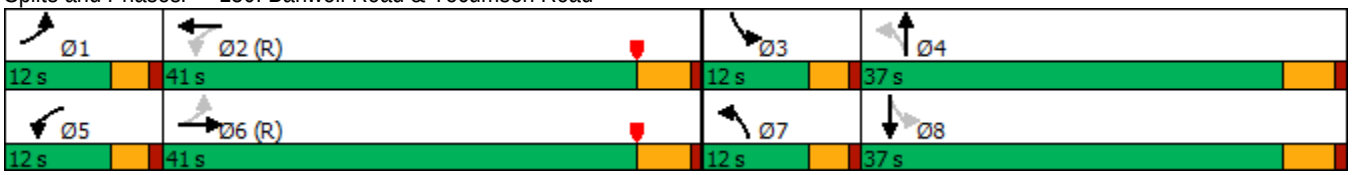


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	326	117	86	432	107	199	194	85	147	446	120
Future Volume (vph)	94	326	117	86	432	107	199	194	85	147	446	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.970			0.954			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4974	0	1691	3396	0	1711	3502	0
Flt Permitted	0.395			0.457			0.206			0.506		
Satd. Flow (perm)	711	4971	0	812	4974	0	367	3396	0	908	3502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			64			71			34	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	354	127	93	470	116	216	211	92	160	485	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	481	0	93	586	0	216	303	0	160	615	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	41.0		12.0	41.0		12.0	37.0		12.0	37.0	
Total Split (%)	11.8%	40.2%		11.8%	40.2%		11.8%	36.3%		11.8%	36.3%	
Maximum Green (s)	8.0	36.0		8.0	36.0		8.0	32.0		8.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	54.0	46.3		53.8	46.2		32.9	23.9		32.9	23.9	
Actuated g/C Ratio	0.53	0.45		0.53	0.45		0.32	0.23		0.32	0.23	
v/c Ratio	0.22	0.21		0.19	0.26		0.97	0.36		0.45	0.73	
Control Delay	13.3	15.0		13.0	17.2		82.3	24.9		26.4	38.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.3	15.0		13.0	17.2		82.3	24.9		26.4	38.8	
LOS	B	B		B	B		F	C		C	D	
Approach Delay		14.7			16.6			48.8			36.2	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	9.3	17.4		8.5	24.6		32.7	21.0		23.3	59.3	
Queue Length 95th (m)	21.1	28.9		19.5	38.5		#59.2	29.8		34.2	70.4	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	458	2309		499	2287		222	1114		355	1122	
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	0.22	0.21		0.19	0.26		0.97	0.27		0.45	0.55	

Intersection Summary			
Area Type:	Other		
Cycle Length: 102			
Actuated Cycle Length: 102			
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		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: 130: Banwell Road & Tecumseh Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	59	1	1	3	108	457	13	5	364	11
Future Volume (Veh/h)	15	1	59	1	1	3	108	457	13	5	364	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	1	64	1	1	3	117	497	14	5	396	12
Pedestrians		2			2							
Lane Width (m)		4.0			3.3							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	900	1161	206	1012	1160	258	410			513		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	900	1161	206	1012	1160	258	410			513		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	99	92	99	99	100	90			100		
cM capacity (veh/h)	212	173	799	162	173	740	1143			1047		

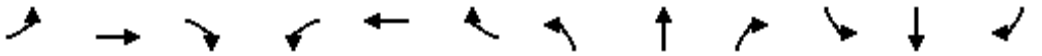
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	81	5	117	331	180	5	264	144
Volume Left	16	1	117	0	0	5	0	0
Volume Right	64	3	0	0	14	0	0	12
cSH	502	312	1143	1700	1700	1047	1700	1700
Volume to Capacity	0.16	0.02	0.10	0.19	0.11	0.00	0.16	0.08
Queue Length 95th (m)	4.6	0.4	2.7	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	13.6	16.7	8.5	0.0	0.0	8.5	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	13.6	16.7	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	32.6%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	2	598	20	1	412
Future Volume (Veh/h)	21	2	598	20	1	412
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	2	650	22	1	448
Pedestrians	1					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked	0.97	0.97			0.97	
vC, conflicting volume	888	337			673	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	821	253			600	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	302	723			943	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	25	433	239	150	299
Volume Left	23	0	0	1	0
Volume Right	2	0	22	0	0
cSH	317	1700	1700	943	1700
Volume to Capacity	0.08	0.25	0.14	0.00	0.18
Queue Length 95th (m)	2.0	0.0	0.0	0.0	0.0
Control Delay (s)	17.3	0.0	0.0	0.1	0.0
Lane LOS	C			A	
Approach Delay (s)	17.3	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

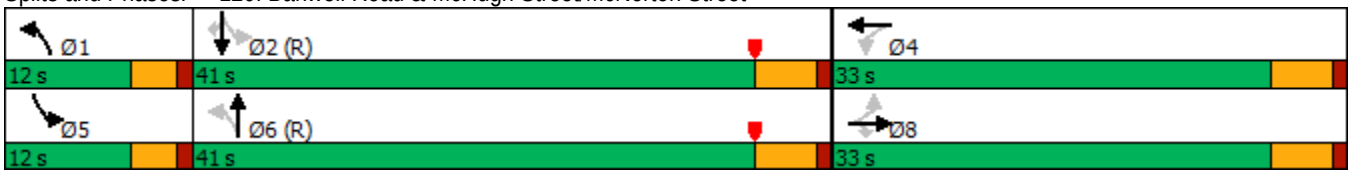


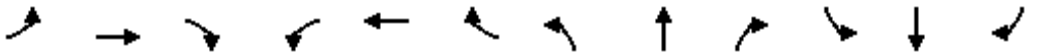
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	184	125	119	195	47	157	534	242	70	345	24
Future Volume (vph)	15	184	125	119	195	47	157	534	242	70	345	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00		1.00	0.99		1.00		0.99
Frt			0.850		0.971			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1844	0	1652	3350	0	1652	3539	1583
Flt Permitted	0.387			0.516			0.504			0.296		
Satd. Flow (perm)	720	1863	1563	971	1844	0	876	3350	0	514	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136		15			105				76
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	200	136	129	212	51	171	580	263	76	375	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	200	136	129	263	0	171	843	0	76	375	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		12.0	41.0		12.0	41.0	41.0
Total Split (%)	38.4%	38.4%	38.4%	38.4%	38.4%		14.0%	47.7%		14.0%	47.7%	47.7%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		8.0	36.0		8.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	1	1			1			1	1
Act Effct Green (s)	18.6	18.6	18.6	18.6	18.6		56.3	48.5		53.1	45.4	45.4
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.65	0.56		0.62	0.53	0.53
v/c Ratio	0.10	0.50	0.31	0.62	0.64		0.27	0.44		0.19	0.20	0.03
Control Delay	25.2	32.6	6.3	42.0	35.2		7.3	12.0		7.4	12.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.2	32.6	6.3	42.0	35.2		7.3	12.0		7.4	12.4	0.1
LOS	C	C	A	D	D		A	B		A	B	A
Approach Delay		22.1			37.5			11.2			11.0	
Approach LOS		C			D			B			B	
Queue Length 50th (m)	2.3	31.0	0.0	20.6	39.7		8.8	36.5		3.7	16.8	0.0
Queue Length 95th (m)	6.6	44.0	12.1	33.8	55.1		23.2	68.4		11.5	31.5	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	234	606	600	316	610		650	1936		430	1867	860
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	0.07	0.33	0.23	0.41	0.43		0.26	0.44		0.18	0.20	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 86			
Offset: 27 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 65.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



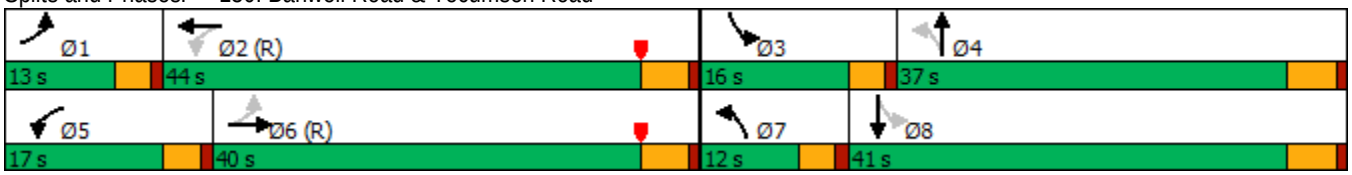


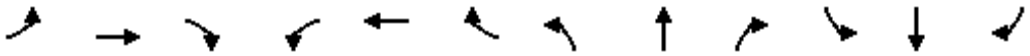
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	557	190	120	450	174	172	565	116	142	314	105
Future Volume (vph)	218	557	190	120	450	174	172	565	116	142	314	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.962			0.958			0.974			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4984	0	1691	4904	0	1691	3477	0	1711	3468	0
Flt Permitted	0.331			0.267			0.420			0.128		
Satd. Flow (perm)	595	4984	0	475	4904	0	747	3477	0	230	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			99			22			44	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	4		1	1		4	2		3	3		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	237	605	207	130	489	189	187	614	126	154	341	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	812	0	130	678	0	187	740	0	154	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	13.0	40.0		17.0	44.0		12.0	37.0		16.0	41.0	
Total Split (%)	11.8%	36.4%		15.5%	40.0%		10.9%	33.6%		14.5%	37.3%	
Maximum Green (s)	9.0	35.0		13.0	39.0		8.0	32.0		12.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		1			4			3			2	
Act Effct Green (s)	53.6	42.4		53.7	42.5		37.4	28.4		43.4	31.4	
Actuated g/C Ratio	0.49	0.39		0.49	0.39		0.34	0.26		0.39	0.29	
v/c Ratio	0.60	0.41		0.38	0.35		0.58	0.81		0.65	0.45	
Control Delay	25.3	23.9		18.2	21.5		30.4	44.5		34.0	29.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.3	23.9		18.2	21.5		30.4	44.5		34.0	29.6	
LOS	C	C		B	C		C	D		C	C	
Approach Delay		24.2			21.0			41.7			30.7	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	29.4	44.1		15.0	35.0		27.1	79.7		21.8	38.9	
Queue Length 95th (m)	#51.3	61.6		27.6	46.0		41.7	98.9		36.1	52.0	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	392	1972		387	1954		322	1027		254	1164	
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	0.60	0.41		0.34	0.35		0.58	0.72		0.61	0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 82.5%		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: 130: Banwell Road & Tecumseh Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	72	11	3	2	79	324	8	4	328	10
Future Volume (Veh/h)	9	0	72	11	3	2	79	324	8	4	328	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	78	12	3	2	86	352	9	4	357	11
Pedestrians					1			3				
Lane Width (m)					3.3			3.5				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	722	904	187	797	906	182	368			362		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	722	904	187	797	906	182	368			362		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	91	95	99	100	93			100		
cM capacity (veh/h)	293	254	821	236	254	829	1187			1192		

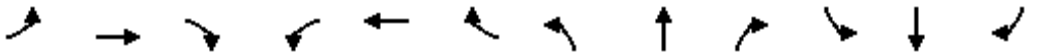
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	88	17	86	235	126	4	238	130
Volume Left	10	12	86	0	0	4	0	0
Volume Right	78	2	0	0	9	0	0	11
cSH	681	261	1187	1700	1700	1192	1700	1700
Volume to Capacity	0.13	0.07	0.07	0.14	0.07	0.00	0.14	0.08
Queue Length 95th (m)	3.5	1.7	1.9	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	11.1	19.8	8.3	0.0	0.0	8.0	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	11.1	19.8	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	29.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	0	420	16	0	416
Future Volume (Veh/h)	21	0	420	16	0	416
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	0	457	17	0	452
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			255			
pX, platoon unblocked						
vC, conflicting volume	692	237			474	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	692	237			474	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	100			100	
cM capacity (veh/h)	378	764			1084	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	23	305	169	151	301
Volume Left	23	0	0	0	0
Volume Right	0	0	17	0	0
cSH	378	1700	1700	1084	1700
Volume to Capacity	0.06	0.18	0.10	0.00	0.18
Queue Length 95th (m)	1.5	0.0	0.0	0.0	0.0
Control Delay (s)	15.1	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	15.1	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

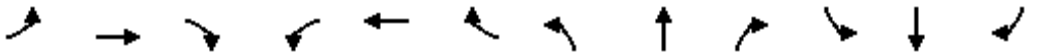


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	133	131	151	175	56	140	362	199	57	354	27
Future Volume (vph)	22	133	131	151	175	56	140	362	199	57	354	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00							
Frt			0.850		0.964			0.947				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1829	0	1652	3352	0	1652	3539	1583
Flt Permitted	0.423			0.642			0.498			0.413		
Satd. Flow (perm)	787	1863	1563	1208	1829	0	866	3352	0	718	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			142		21			151				80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	3		1	1		3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	145	142	164	190	61	152	393	216	62	385	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	145	142	164	251	0	152	609	0	62	385	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		11.0	38.0		11.0	38.0	38.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	40.2%		13.4%	46.3%		13.4%	46.3%	46.3%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		7.0	33.0		7.0	33.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	3	3			0			0	0
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0		52.8	45.5		49.9	42.5	42.5
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.64	0.55		0.61	0.52	0.52
v/c Ratio	0.14	0.36	0.31	0.62	0.60		0.24	0.32		0.12	0.21	0.03
Control Delay	24.4	27.8	5.9	38.0	31.3		7.3	9.4		7.1	12.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.4	27.8	5.9	38.0	31.3		7.3	9.4		7.1	12.4	0.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		17.6			34.0			9.0			11.0	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	3.3	20.6	0.0	25.0	34.7		7.4	19.4		2.9	16.6	0.0
Queue Length 95th (m)	8.1	30.5	11.8	37.9	48.3		21.0	40.7		10.0	32.0	0.0
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	268	636	627	412	638		631	1927		522	1835	859
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	0.09	0.23	0.23	0.40	0.39		0.24	0.32		0.12	0.21	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 82			
Actuated Cycle Length: 82			
Offset: 27 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

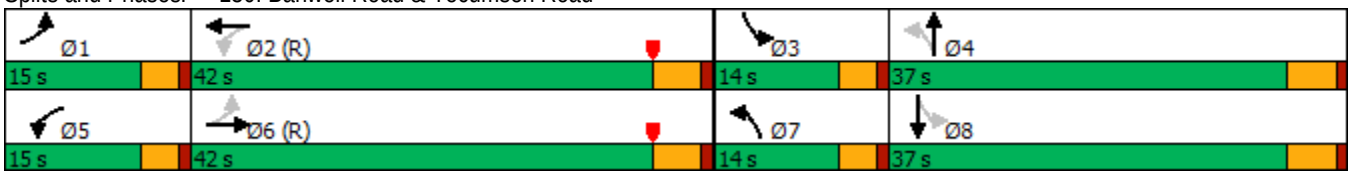


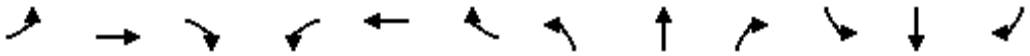
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	624	198	98	568	144	190	327	118	157	357	133
Future Volume (vph)	218	624	198	98	568	144	190	327	118	157	357	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.964			0.970			0.960			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4989	0	1691	4988	0	1691	3422	0	1711	3470	0
Flt Permitted	0.281			0.270			0.232			0.287		
Satd. Flow (perm)	506	4989	0	480	4988	0	413	3422	0	516	3470	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			63			48			51	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)			7	7					3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	237	678	215	107	617	157	207	355	128	171	388	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	893	0	107	774	0	207	483	0	171	533	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	15.0	42.0		15.0	42.0		14.0	37.0		14.0	37.0	
Total Split (%)	13.9%	38.9%		13.9%	38.9%		13.0%	34.3%		13.0%	34.3%	
Maximum Green (s)	11.0	37.0		11.0	37.0		10.0	32.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		7			0			3			0	
Act Effct Green (s)	61.0	48.7		56.1	46.1		33.5	22.5		33.1	22.3	
Actuated g/C Ratio	0.56	0.45		0.52	0.43		0.31	0.21		0.31	0.21	
v/c Ratio	0.57	0.39		0.31	0.36		0.84	0.64		0.64	0.71	
Control Delay	19.0	19.5		14.3	20.8		55.8	38.5		36.3	40.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.0	19.5		14.3	20.8		55.8	38.5		36.3	40.5	
LOS	B	B		B	C		E	D		D	D	
Approach Delay		19.4			20.0			43.7			39.5	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	23.3	40.8		9.7	37.8		34.6	47.5		27.9	53.5	
Queue Length 95th (m)	47.0	65.2		22.6	56.3		#47.8	57.2		38.5	63.3	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	423	2295		381	2166		246	1047		269	1064	
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	0.56	0.39		0.28	0.36		0.84	0.46		0.64	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 108			
Actuated Cycle Length: 108			
Offset: 37 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 73.8%		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: 130: Banwell Road & Tecumseh Road

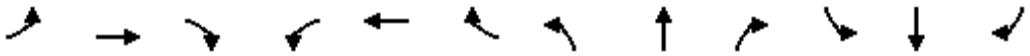




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	85	5	0	9	34	199	3	2	404	19
Future Volume (Veh/h)	16	2	85	5	0	9	34	199	3	2	404	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	2	92	5	0	10	37	216	3	2	439	21
Pedestrians		2			2						1	
Lane Width (m)		4.0			3.3						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	648	750	232	610	760	112	462			221		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	648	750	232	610	760	112	462			221		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	88	98	100	99	97			100		
cM capacity (veh/h)	340	325	769	321	321	917	1093			1343		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	111	15	37	144	75	2	293	167
Volume Left	17	5	37	0	0	2	0	0
Volume Right	92	10	0	0	3	0	0	21
cSH	631	567	1093	1700	1700	1343	1700	1700
Volume to Capacity	0.18	0.03	0.03	0.08	0.04	0.00	0.17	0.10
Queue Length 95th (m)	5.1	0.7	0.8	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	11.9	11.5	8.4	0.0	0.0	7.7	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	11.9	11.5	1.2			0.0		
Approach LOS	B	B						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	32.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	44	17	0	1	13	220	3	2	511	3
Future Volume (Veh/h)	9	0	44	17	0	1	13	220	3	2	511	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	48	18	0	1	14	239	3	2	555	3
Pedestrians					1							
Lane Width (m)					3.8							
Walking Speed (m/s)					1.2							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked												
vC, conflicting volume	709	832	279	599	832	122	558			243		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	709	832	279	599	832	122	558			243		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	93	95	100	100	99			100		
cM capacity (veh/h)	317	299	718	355	299	905	1009			1319		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	19	134	122	280	280
Volume Left	10	18	14	0	2	0
Volume Right	48	1	0	3	0	3
cSH	589	367	1009	1700	1319	1700
Volume to Capacity	0.10	0.05	0.01	0.07	0.00	0.17
Queue Length 95th (m)	2.6	1.3	0.3	0.0	0.0	0.0
Control Delay (s)	11.8	15.4	1.0	0.0	0.1	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	11.8	15.4	0.5		0.0	
Approach LOS	B	C				

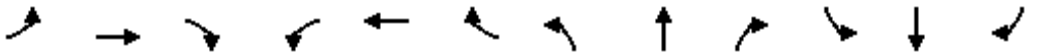
Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	26.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	128	222	156	202	46	149	196	75	52	433	35
Future Volume (vph)	21	128	222	156	202	46	149	196	75	52	433	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00	1.00		1.00					0.99
Frt			0.850		0.972			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1843	0	1652	3391	0	1652	3539	1583
Flt Permitted	0.388			0.652			0.431			0.572		
Satd. Flow (perm)	718	1863	1557	1223	1843	0	749	3391	0	994	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			241		15			82				78
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	11		5	5		11	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	139	241	170	220	50	162	213	82	57	471	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	139	241	170	270	0	162	295	0	57	471	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	41.0		10.0	41.0	41.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%		11.9%	48.8%		11.9%	48.8%	48.8%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		6.0	36.0		6.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	5	5	5	11	11			0			1	1
Act Effct Green (s)	18.8	18.8	18.8	18.8	18.8		54.7	48.9		50.8	43.6	43.6
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.65	0.58		0.60	0.52	0.52
v/c Ratio	0.14	0.33	0.45	0.62	0.64		0.29	0.15		0.09	0.26	0.04
Control Delay	25.1	27.8	6.0	38.2	33.7		8.0	7.9		7.0	12.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.1	27.8	6.0	38.2	33.7		8.0	7.9		7.0	12.9	0.9
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		14.6			35.5			7.9			11.5	
Approach LOS		B			D			A			B	
Queue Length 50th (m)	3.2	20.1	0.0	26.4	39.7		8.4	8.5		2.7	21.7	0.0
Queue Length 95th (m)	8.4	30.5	15.2	40.1	54.7		22.2	19.1		9.3	38.0	1.5
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	239	621	679	407	624		568	2006		651	1837	849
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	0.10	0.22	0.35	0.42	0.43		0.29	0.15		0.09	0.26	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 84			
Actuated Cycle Length: 84			
Offset: 53 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 68.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



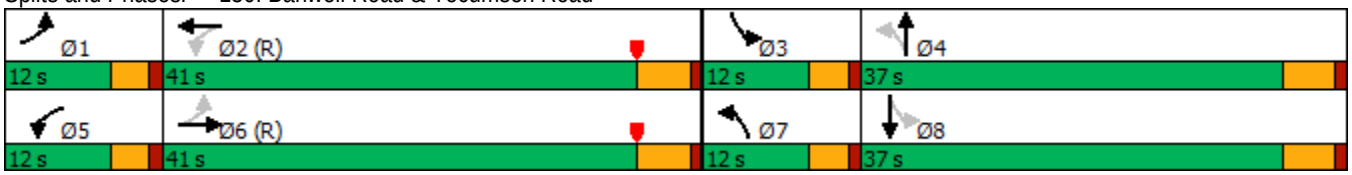
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	310	111	82	411	123	189	203	81	184	465	145
Future Volume (vph)	102	310	111	82	411	123	189	203	81	184	465	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.965			0.957			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4946	0	1691	3407	0	1711	3488	0
Flt Permitted	0.376			0.479			0.181			0.503		
Satd. Flow (perm)	677	4971	0	851	4946	0	322	3407	0	902	3488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			82			60			43	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	337	121	89	447	134	205	221	88	200	505	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	458	0	89	581	0	205	309	0	200	663	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	41.0		12.0	41.0		12.0	37.0		12.0	37.0	
Total Split (%)	11.8%	40.2%		11.8%	40.2%		11.8%	36.3%		11.8%	36.3%	
Maximum Green (s)	8.0	36.0		8.0	36.0		8.0	32.0		8.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

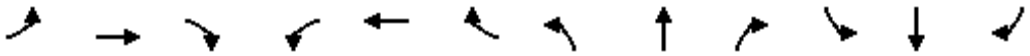
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	53.2	45.3		51.9	42.7		33.8	24.8		33.8	24.8	
Actuated g/C Ratio	0.52	0.44		0.51	0.42		0.33	0.24		0.33	0.24	
v/c Ratio	0.25	0.20		0.18	0.27		0.96	0.35		0.55	0.75	
Control Delay	14.0	15.2		13.3	17.8		79.2	25.7		29.0	38.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.0	15.2		13.3	17.8		79.2	25.7		29.0	38.7	
LOS	B	B		B	B		E	C		C	D	
Approach Delay		14.9			17.2			47.0			36.4	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	10.5	16.6		8.3	24.1		30.1	22.3		29.3	63.3	
Queue Length 95th (m)	22.7	27.2		18.9	37.0		#59.8	31.4		41.9	76.2	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	439	2264		500	2116		214	1110		362	1123	
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	0.25	0.20		0.18	0.27		0.96	0.28		0.55	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 102
Actuated Cycle Length: 102
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 77.1% 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: 130: Banwell Road & Tecumseh Road

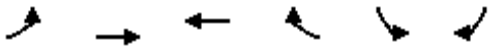




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	4	0	11	1	0	14	39	0	6
Future Volume (Veh/h)	2	0	0	4	0	11	1	0	14	39	0	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	0	4	0	12	1	0	15	42	0	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	12			0			25	24	0	33	18	6
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			0			25	24	0	33	18	6
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	96	100	99
cM capacity (veh/h)	1607			1623			977	866	1085	958	873	1077

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	2	16	16	49
Volume Left	2	4	1	42
Volume Right	0	12	15	7
cSH	1607	1623	1078	973
Volume to Capacity	0.00	0.00	0.01	0.05
Queue Length 95th (m)	0.0	0.1	0.4	1.3
Control Delay (s)	7.2	1.8	8.4	8.9
Lane LOS	A	A	A	A
Approach Delay (s)	7.2	1.8	8.4	8.9
Approach LOS			A	A

Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	19.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	342	379	9	30	6
Future Volume (Veh/h)	2	342	379	9	30	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	372	412	10	33	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	422				607	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	422				607	211
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				92	99
cM capacity (veh/h)	1134				427	794

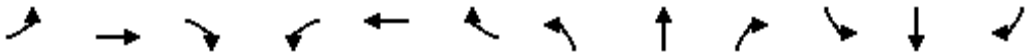
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	126	248	275	147	40
Volume Left	2	0	0	0	33
Volume Right	0	0	0	10	7
cSH	1134	1700	1700	1700	465
Volume to Capacity	0.00	0.15	0.16	0.09	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	2.2
Control Delay (s)	0.1	0.0	0.0	0.0	13.5
Lane LOS	A				B
Approach Delay (s)	0.0		0.0		13.5
Approach LOS					B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	266	17	52	339	25	79
Future Volume (Veh/h)	266	17	52	339	25	79
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	289	18	57	368	27	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			307		596	154
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			307		596	154
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		93	90
cM capacity (veh/h)			1250		415	865

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	193	114	180	245	113
Volume Left	0	0	57	0	27
Volume Right	0	18	0	0	86
cSH	1700	1700	1250	1700	687
Volume to Capacity	0.11	0.07	0.05	0.14	0.16
Queue Length 95th (m)	0.0	0.0	1.1	0.0	4.7
Control Delay (s)	0.0	0.0	2.8	0.0	11.3
Lane LOS			A		B
Approach Delay (s)	0.0		1.2		11.3
Approach LOS					B

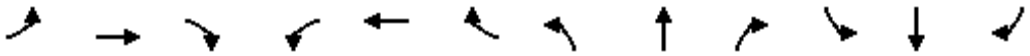
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	56	1	1	3	103	449	12	5	365	10
Future Volume (Veh/h)	15	1	56	1	1	3	103	449	12	5	365	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	1	61	1	1	3	112	488	13	5	397	11
Pedestrians		2			2							
Lane Width (m)		4.0			3.3							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	886	1142	206	990	1140	252	410			503		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	886	1142	206	990	1140	252	410			503		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	92	99	99	100	90			100		
cM capacity (veh/h)	218	178	799	169	178	746	1143			1056		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	78	5	112	325	176	5	265	143
Volume Left	16	1	112	0	0	5	0	0
Volume Right	61	3	0	0	13	0	0	11
cSH	502	322	1143	1700	1700	1056	1700	1700
Volume to Capacity	0.16	0.02	0.10	0.19	0.10	0.00	0.16	0.08
Queue Length 95th (m)	4.4	0.4	2.6	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	13.5	16.4	8.5	0.0	0.0	8.4	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	13.5	16.4	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	32.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	24	20	0	2	37	579	19	1	403	7
Future Volume (Veh/h)	5	0	24	20	0	2	37	579	19	1	403	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	26	22	0	2	40	629	21	1	438	8
Pedestrians					1							
Lane Width (m)					3.8							
Walking Speed (m/s)					1.2							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked	0.96	0.96		0.96	0.96	0.96				0.96		
vC, conflicting volume	840	1175	223	968	1168	326	446			651		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	751	1099	223	883	1092	215	446			553		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	97	90	100	100	96			100		
cM capacity (veh/h)	279	195	780	216	197	758	1111			972		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	31	24	354	336	220	227
Volume Left	5	22	40	0	1	0
Volume Right	26	2	0	21	0	8
cSH	605	230	1111	1700	972	1700
Volume to Capacity	0.05	0.10	0.04	0.20	0.00	0.13
Queue Length 95th (m)	1.3	2.8	0.9	0.0	0.0	0.0
Control Delay (s)	11.3	22.5	1.3	0.0	0.0	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	11.3	22.5	0.7		0.0	
Approach LOS	B	C				

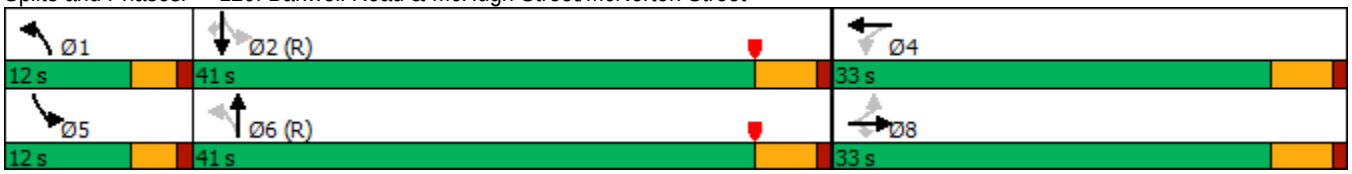
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	43.8%	ICU Level of Service		A
Analysis Period (min)	15			

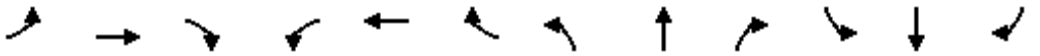
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	191	179	113	203	50	220	540	230	70	349	34
Future Volume (vph)	25	191	179	113	203	50	220	540	230	70	349	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00		1.00	0.99		1.00		0.99
Frt			0.850		0.971			0.955				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1844	0	1652	3358	0	1652	3539	1583
Flt Permitted	0.370			0.504			0.486			0.305		
Satd. Flow (perm)	689	1863	1563	949	1844	0	844	3358	0	530	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			195		15			94				76
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	208	195	123	221	54	239	587	250	76	379	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	208	195	123	275	0	239	837	0	76	379	37
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		12.0	41.0		12.0	41.0	41.0
Total Split (%)	38.4%	38.4%	38.4%	38.4%	38.4%		14.0%	47.7%		14.0%	47.7%	47.7%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		8.0	36.0		8.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	1	1			1			1	1
Act Effct Green (s)	19.0	19.0	19.0	19.0	19.0		56.7	48.1		51.7	43.9	43.9
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.66	0.56		0.60	0.51	0.51
v/c Ratio	0.18	0.51	0.39	0.59	0.66		0.37	0.44		0.19	0.21	0.04
Control Delay	27.1	32.5	6.1	40.2	35.5		8.6	12.3		7.7	13.2	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.1	32.5	6.1	40.2	35.5		8.6	12.3		7.7	13.2	0.9
LOS	C	C	A	D	D		A	B		A	B	A
Approach Delay		20.2			37.0			11.5			11.5	
Approach LOS		C			D			B			B	
Queue Length 50th (m)	3.9	32.1	0.0	19.3	41.7		13.3	37.5		3.8	18.1	0.0
Queue Length 95th (m)	9.6	45.5	14.4	32.5	57.7		32.3	68.7		11.5	31.8	1.6
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	224	606	640	308	610		644	1918		430	1805	834
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	0.12	0.34	0.30	0.40	0.45		0.37	0.44		0.18	0.21	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 86			
Offset: 27 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



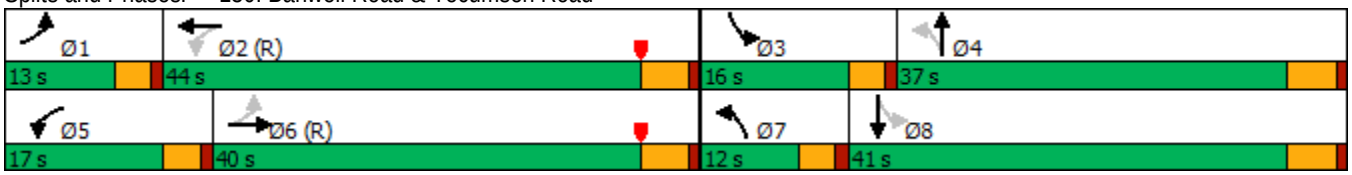


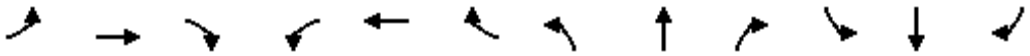
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	530	181	114	428	204	163	574	110	166	328	120
Future Volume (vph)	234	530	181	114	428	204	163	574	110	166	328	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.962			0.952			0.976			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4984	0	1691	4870	0	1691	3484	0	1711	3460	0
Flt Permitted	0.320			0.286			0.399			0.125		
Satd. Flow (perm)	575	4984	0	509	4870	0	709	3484	0	225	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			121			20			50	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	4		1	1		4	2		3	3		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	254	576	197	124	465	222	177	624	120	180	357	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	254	773	0	124	687	0	177	744	0	180	487	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	13.0	40.0		17.0	44.0		12.0	37.0		16.0	41.0	
Total Split (%)	11.8%	36.4%		15.5%	40.0%		10.9%	33.6%		14.5%	37.3%	
Maximum Green (s)	9.0	35.0		13.0	39.0		8.0	32.0		12.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		1			4			3			2	
Act Effct Green (s)	53.5	42.1		52.7	41.6		37.5	28.5		44.2	31.9	
Actuated g/C Ratio	0.49	0.38		0.48	0.38		0.34	0.26		0.40	0.29	
v/c Ratio	0.65	0.40		0.35	0.36		0.57	0.81		0.74	0.47	
Control Delay	28.0	23.7		18.0	21.1		29.7	44.7		40.8	29.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.0	23.7		18.0	21.1		29.7	44.7		40.8	29.6	
LOS	C	C		B	C		C	D		D	C	
Approach Delay		24.8			20.7			41.8			32.6	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	32.0	41.4		14.3	34.2		25.4	80.3		25.9	41.6	
Queue Length 95th (m)	#62.4	58.2		26.6	45.3		39.6	99.9		#49.4	55.5	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	388	1956		396	1918		312	1027		253	1166	
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	0.65	0.40		0.31	0.36		0.57	0.72		0.71	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 29.9		Intersection LOS: C	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 130: Banwell Road & Tecumseh Road

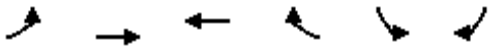




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	1	12	0	32	0	0	7	21	0	3
Future Volume (Veh/h)	5	0	1	12	0	32	0	0	7	21	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	1	13	0	35	0	0	8	23	0	3
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	35			1			57	72	0	62	54	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			1			57	72	0	62	54	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	97	100	100
cM capacity (veh/h)	1576			1622			929	810	1084	918	827	1061

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	6	48	8	26
Volume Left	5	13	0	23
Volume Right	1	35	8	3
cSH	1576	1622	1084	933
Volume to Capacity	0.00	0.01	0.01	0.03
Queue Length 95th (m)	0.1	0.2	0.2	0.7
Control Delay (s)	6.1	2.0	8.3	9.0
Lane LOS	A	A	A	A
Approach Delay (s)	6.1	2.0	8.3	9.0
Approach LOS			A	A

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	377	432	25	16	3
Future Volume (Veh/h)	5	377	432	25	16	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	410	470	27	17	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	497				698	248
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	497				698	248
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1063				373	751

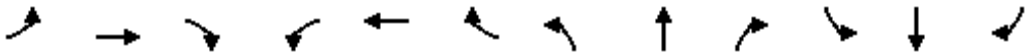
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	142	273	313	184	20
Volume Left	5	0	0	0	17
Volume Right	0	0	0	27	3
cSH	1063	1700	1700	1700	403
Volume to Capacity	0.00	0.16	0.18	0.11	0.05
Queue Length 95th (m)	0.1	0.0	0.0	0.0	1.2
Control Delay (s)	0.3	0.0	0.0	0.0	14.4
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		14.4
Approach LOS					B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	318	24	74	364	23	69
Future Volume (Veh/h)	318	24	74	364	23	69
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	346	26	80	396	25	75
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			372		717	186
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			372		717	186
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		93	91
cM capacity (veh/h)			1183		340	824

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	231	141	212	264	100
Volume Left	0	0	80	0	25
Volume Right	0	26	0	0	75
cSH	1700	1700	1183	1700	608
Volume to Capacity	0.14	0.08	0.07	0.16	0.16
Queue Length 95th (m)	0.0	0.0	1.7	0.0	4.7
Control Delay (s)	0.0	0.0	3.5	0.0	12.1
Lane LOS			A		B
Approach Delay (s)	0.0		1.6		12.1
Approach LOS					B

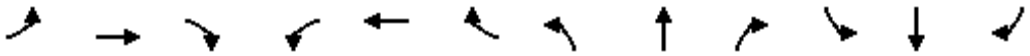
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	69	10	3	2	75	322	7	4	328	9
Future Volume (Veh/h)	8	0	69	10	3	2	75	322	7	4	328	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	75	11	3	2	82	350	8	4	357	10
Pedestrians					1			3				
Lane Width (m)					3.3			3.5				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	712	893	186	784	894	180	367			359		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	712	893	186	784	894	180	367			359		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	91	95	99	100	93			100		
cM capacity (veh/h)	298	259	822	243	259	831	1188			1195		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	84	16	82	233	125	4	238	129
Volume Left	9	11	82	0	0	4	0	0
Volume Right	75	2	0	0	8	0	0	10
cSH	692	270	1188	1700	1700	1195	1700	1700
Volume to Capacity	0.12	0.06	0.07	0.14	0.07	0.00	0.14	0.08
Queue Length 95th (m)	3.3	1.5	1.8	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	10.9	19.2	8.3	0.0	0.0	8.0	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	10.9	19.2	1.5			0.1		
Approach LOS	B	C						

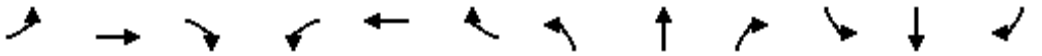
Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	29.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	30	20	0	0	31	408	16	0	405	6
Future Volume (Veh/h)	6	0	30	20	0	0	31	408	16	0	405	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	33	22	0	0	34	443	17	0	440	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked												
vC, conflicting volume	733	972	224	772	966	230	447			460		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	733	972	224	772	966	230	447			460		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	96	92	100	100	97			100		
cM capacity (veh/h)	301	244	780	270	245	772	1110			1097		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	40	22	256	238	220	227
Volume Left	7	22	34	0	0	0
Volume Right	33	0	0	17	0	7
cSH	610	270	1110	1700	1097	1700
Volume to Capacity	0.07	0.08	0.03	0.14	0.00	0.13
Queue Length 95th (m)	1.7	2.1	0.8	0.0	0.0	0.0
Control Delay (s)	11.3	19.5	1.4	0.0	0.0	0.0
Lane LOS	B	C	A			
Approach Delay (s)	11.3	19.5	0.7		0.0	
Approach LOS	B	C				

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A	
Analysis Period (min)	15			

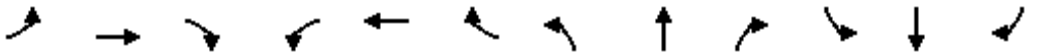


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	141	180	144	182	57	195	371	189	58	363	36
Future Volume (vph)	29	141	180	144	182	57	195	371	189	58	363	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00							
Frt			0.850		0.964			0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1829	0	1652	3359	0	1652	3539	1583
Flt Permitted	0.405			0.625			0.481			0.421		
Satd. Flow (perm)	753	1863	1563	1176	1829	0	836	3359	0	732	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			196		21			131				80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	3		1	1		3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	153	196	157	198	62	212	403	205	63	395	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	153	196	157	260	0	212	608	0	63	395	39
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		11.0	38.0		11.0	38.0	38.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	40.2%		13.4%	46.3%		13.4%	46.3%	46.3%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		7.0	33.0		7.0	33.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	3	3			0			0	0
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0		53.5	45.5		49.1	41.7	41.7
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.65	0.55		0.60	0.51	0.51
v/c Ratio	0.19	0.37	0.40	0.61	0.62		0.34	0.32		0.12	0.22	0.05
Control Delay	26.0	28.2	6.0	37.8	32.2		8.3	9.8		7.1	12.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.0	28.2	6.0	37.8	32.2		8.3	9.8		7.1	12.9	0.9
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		16.6			34.3			9.4			11.3	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	4.4	21.9	0.0	23.8	36.2		10.8	20.5		2.9	17.8	0.0
Queue Length 95th (m)	10.2	32.1	13.6	36.6	50.1		28.9	42.1		10.1	32.8	1.6
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	257	636	662	401	638		629	1921		522	1798	843
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	0.12	0.24	0.30	0.39	0.41		0.34	0.32		0.12	0.22	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 82			
Actuated Cycle Length: 82			
Offset: 27 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

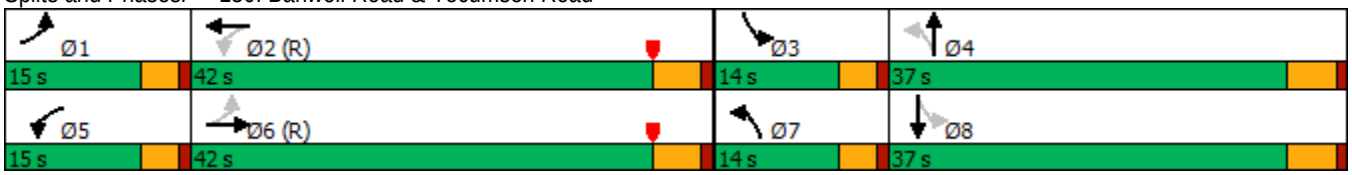


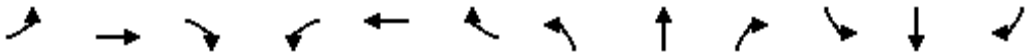
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	594	188	94	540	171	181	342	112	181	367	149
Future Volume (vph)	230	594	188	94	540	171	181	342	112	181	367	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.964			0.964			0.963			0.957	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4989	0	1691	4957	0	1691	3433	0	1711	3462	0
Flt Permitted	0.275			0.290			0.215			0.277		
Satd. Flow (perm)	495	4989	0	515	4957	0	383	3433	0	498	3462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			81			42			58	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)			7	7					3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	646	204	102	587	186	197	372	122	197	399	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	250	850	0	102	773	0	197	494	0	197	561	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	15.0	42.0		15.0	42.0		14.0	37.0		14.0	37.0	
Total Split (%)	13.9%	38.9%		13.9%	38.9%		13.0%	34.3%		13.0%	34.3%	
Maximum Green (s)	11.0	37.0		11.0	37.0		10.0	32.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		7			0			3			0	
Act Effct Green (s)	60.7	48.2		54.9	44.9		33.8	22.8		33.8	22.8	
Actuated g/C Ratio	0.56	0.45		0.51	0.42		0.31	0.21		0.31	0.21	
v/c Ratio	0.60	0.37		0.28	0.37		0.82	0.65		0.74	0.72	
Control Delay	20.6	19.5		14.3	21.0		52.5	39.0		42.3	40.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.6	19.5		14.3	21.0		52.5	39.0		42.3	40.4	
LOS	C	B		B	C		D	D		D	D	
Approach Delay		19.7			20.2			42.9			40.9	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	25.2	38.8		9.3	37.7		32.4	49.2		32.3	55.8	
Queue Length 95th (m)	#52.8	61.5		21.7	55.0		#46.1	59.2		43.9	66.3	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	421	2270		391	2109		241	1046		268	1066	
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	0.59	0.37		0.26	0.37		0.82	0.47		0.74	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 108			
Actuated Cycle Length: 108			
Offset: 37 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 74.1%		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: 130: Banwell Road & Tecumseh Road

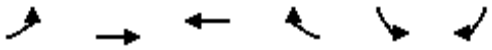




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	1	10	0	27	1	0	9	26	0	4
Future Volume (Veh/h)	4	0	1	10	0	27	1	0	9	26	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	1	11	0	29	1	0	10	28	0	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	29			1			49	60	0	55	46	14
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	29			1			49	60	0	55	46	14
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	97	100	100
cM capacity (veh/h)	1584			1622			941	824	1084	927	838	1065

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	5	40	11	32
Volume Left	4	11	1	28
Volume Right	1	29	10	4
cSH	1584	1622	1069	943
Volume to Capacity	0.00	0.01	0.01	0.03
Queue Length 95th (m)	0.1	0.2	0.2	0.8
Control Delay (s)	5.8	2.0	8.4	9.0
Lane LOS	A	A	A	A
Approach Delay (s)	5.8	2.0	8.4	9.0
Approach LOS			A	A

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	18.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	331	393	21	20	4
Future Volume (Veh/h)	4	331	393	21	20	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	360	427	23	22	4
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	450				626	225
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	450				626	225
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	99
cM capacity (veh/h)	1107				414	778

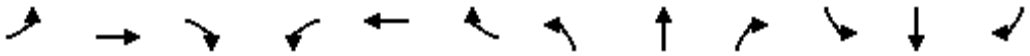
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	124	240	285	165	26
Volume Left	4	0	0	0	22
Volume Right	0	0	0	23	4
cSH	1107	1700	1700	1700	447
Volume to Capacity	0.00	0.14	0.17	0.10	0.06
Queue Length 95th (m)	0.1	0.0	0.0	0.0	1.5
Control Delay (s)	0.3	0.0	0.0	0.0	13.6
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		13.6
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	281	22	67	334	19	58
Future Volume (Veh/h)	281	22	67	334	19	58
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	305	24	73	363	21	63
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			329		644	164
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			329		644	164
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		94	93
cM capacity (veh/h)			1227		381	851

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	203	126	194	242	84
Volume Left	0	0	73	0	21
Volume Right	0	24	0	0	63
cSH	1700	1700	1227	1700	650
Volume to Capacity	0.12	0.07	0.06	0.14	0.13
Queue Length 95th (m)	0.0	0.0	1.5	0.0	3.5
Control Delay (s)	0.0	0.0	3.4	0.0	11.4
Lane LOS			A		B
Approach Delay (s)	0.0		1.5		11.4
Approach LOS					B

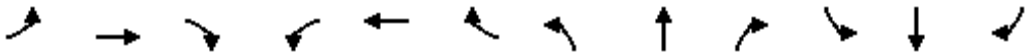
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	90	5	0	10	36	208	3	2	425	20
Future Volume (Veh/h)	16	2	90	5	0	10	36	208	3	2	425	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	2	98	5	0	11	39	226	3	2	462	22
Pedestrians		2			2						1	
Lane Width (m)		4.0			3.3						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	682	788	244	642	798	118	486			231		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	682	788	244	642	798	118	486			231		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	87	98	100	99	96			100		
cM capacity (veh/h)	321	309	755	301	305	910	1071			1332		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	117	16	39	151	78	2	308	176
Volume Left	17	5	39	0	0	2	0	0
Volume Right	98	11	0	0	3	0	0	22
cSH	618	557	1071	1700	1700	1332	1700	1700
Volume to Capacity	0.19	0.03	0.04	0.09	0.05	0.00	0.18	0.10
Queue Length 95th (m)	5.5	0.7	0.9	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.2	11.6	8.5	0.0	0.0	7.7	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.2	11.6	1.2			0.0		
Approach LOS	B	B						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	33.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	44	17	0	1	13	231	3	2	536	3
Future Volume (Veh/h)	9	0	44	17	0	1	13	231	3	2	536	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	48	18	0	1	14	251	3	2	583	3
Pedestrians					1							
Lane Width (m)					3.8							
Walking Speed (m/s)					1.2							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked												
vC, conflicting volume	743	872	293	625	872	128	586			255		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	743	872	293	625	872	128	586			255		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	93	95	100	100	99			100		
cM capacity (veh/h)	299	283	703	339	283	897	985			1306		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	19	140	128	294	294
Volume Left	10	18	14	0	2	0
Volume Right	48	1	0	3	0	3
cSH	571	351	985	1700	1306	1700
Volume to Capacity	0.10	0.05	0.01	0.08	0.00	0.17
Queue Length 95th (m)	2.7	1.4	0.3	0.0	0.0	0.0
Control Delay (s)	12.0	15.8	1.0	0.0	0.1	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	12.0	15.8	0.5		0.0	
Approach LOS	B	C				

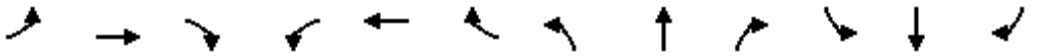
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	27.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	134	229	164	212	48	155	206	79	54	454	37
Future Volume (vph)	22	134	229	164	212	48	155	206	79	54	454	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00	1.00		1.00					0.99
Frt			0.850		0.972			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1843	0	1652	3391	0	1652	3539	1583
Flt Permitted	0.372			0.639			0.427			0.563		
Satd. Flow (perm)	689	1863	1557	1199	1843	0	742	3391	0	979	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			249		15			84				78
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	11		5	5		11	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	146	249	178	230	52	168	224	86	59	493	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	146	249	178	282	0	168	310	0	59	493	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	41.0		10.0	41.0	41.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%		11.9%	48.8%		11.9%	48.8%	48.8%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		6.0	36.0		6.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	5	5	5	11	11			0			1	1
Act Effct Green (s)	19.2	19.2	19.2	19.2	19.2		53.8	46.4		50.3	43.1	43.1
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.64	0.55		0.60	0.51	0.51
v/c Ratio	0.15	0.34	0.45	0.65	0.65		0.30	0.16		0.09	0.27	0.05
Control Delay	25.2	27.7	5.9	39.5	34.0		8.3	8.6		7.1	13.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.2	27.7	5.9	39.5	34.0		8.3	8.6		7.1	13.2	1.1
LOS	C	C	A	D	C		A	A		A	B	A
Approach Delay		14.6			36.1			8.5			11.8	
Approach LOS		B			D			A			B	
Queue Length 50th (m)	3.3	21.0	0.0	27.7	41.5		8.9	9.3		2.9	23.4	0.0
Queue Length 95th (m)	8.5	31.8	15.5	42.5	57.5		22.9	20.1		9.6	39.8	1.8
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	229	621	685	399	624		558	1912		638	1816	840
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	0.10	0.24	0.36	0.45	0.45		0.30	0.16		0.09	0.27	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 84			
Actuated Cycle Length: 84			
Offset: 53 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street

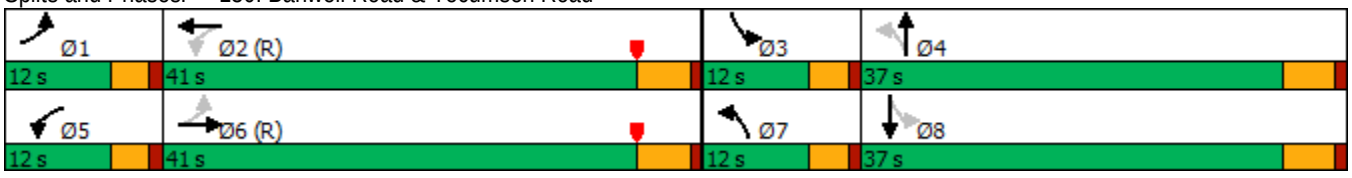


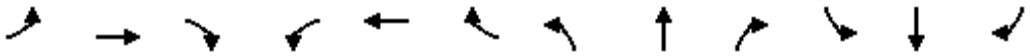
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	326	117	86	432	128	199	213	85	192	486	151
Future Volume (vph)	107	326	117	86	432	128	199	213	85	192	486	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.966			0.957			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4951	0	1691	3408	0	1711	3488	0
Flt Permitted	0.360			0.468			0.170			0.491		
Satd. Flow (perm)	648	4971	0	832	4951	0	303	3408	0	881	3488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		99			81			60			42	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	354	127	93	470	139	216	232	92	209	528	164
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	481	0	93	609	0	216	324	0	209	692	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	41.0		12.0	41.0		12.0	37.0		12.0	37.0	
Total Split (%)	11.8%	40.2%		11.8%	40.2%		11.8%	36.3%		11.8%	36.3%	
Maximum Green (s)	8.0	36.0		8.0	36.0		8.0	32.0		8.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	52.5	44.5		51.1	41.8		34.6	25.6		34.6	25.6	
Actuated g/C Ratio	0.51	0.44		0.50	0.41		0.34	0.25		0.34	0.25	
v/c Ratio	0.27	0.22		0.19	0.29		1.02	0.36		0.57	0.76	
Control Delay	14.5	15.8		13.7	18.6		95.3	25.7		29.3	38.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.5	15.8		13.7	18.6		95.3	25.7		29.3	38.6	
LOS	B	B		B	B		F	C		C	D	
Approach Delay		15.6			18.0			53.5			36.5	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	11.3	18.1		8.9	26.2		~32.5	23.5		30.4	66.3	
Queue Length 95th (m)	23.5	28.9		19.5	39.0		#69.6	33.1		43.8	80.1	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	422	2222		486	2074		211	1110		364	1123	
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	0.27	0.22		0.19	0.29		1.02	0.29		0.57	0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 102			
Actuated Cycle Length: 102			
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 30.5		Intersection LOS: C	
Intersection Capacity Utilization 78.4%		ICU Level of Service D	
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: 130: Banwell Road & Tecumseh Road

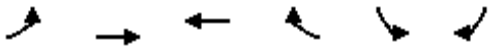




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	4	0	11	1	0	14	39	0	6
Future Volume (Veh/h)	2	0	0	4	0	11	1	0	14	39	0	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	0	4	0	12	1	0	15	42	0	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	12			0			25	24	0	33	18	6
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			0			25	24	0	33	18	6
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	96	100	99
cM capacity (veh/h)	1607			1623			977	866	1085	958	873	1077

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	2	16	16	49
Volume Left	2	4	1	42
Volume Right	0	12	15	7
cSH	1607	1623	1078	973
Volume to Capacity	0.00	0.00	0.01	0.05
Queue Length 95th (m)	0.0	0.1	0.4	1.3
Control Delay (s)	7.2	1.8	8.4	8.9
Lane LOS	A	A	A	A
Approach Delay (s)	7.2	1.8	8.4	8.9
Approach LOS			A	A

Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	19.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	356	395	9	30	6
Future Volume (Veh/h)	2	356	395	9	30	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	387	429	10	33	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	439				632	220
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439				632	220
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				92	99
cM capacity (veh/h)	1117				412	785

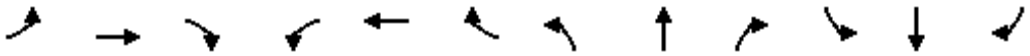
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	131	258	286	153	40
Volume Left	2	0	0	0	33
Volume Right	0	0	0	10	7
cSH	1117	1700	1700	1700	450
Volume to Capacity	0.00	0.15	0.17	0.09	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	2.3
Control Delay (s)	0.1	0.0	0.0	0.0	13.8
Lane LOS	A				B
Approach Delay (s)	0.0		0.0		13.8
Approach LOS					B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	280	17	52	355	25	79
Future Volume (Veh/h)	280	17	52	355	25	79
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	304	18	57	386	27	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			322		620	161
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			322		620	161
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		93	90
cM capacity (veh/h)			1235		401	855

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	203	119	186	257	113
Volume Left	0	0	57	0	27
Volume Right	0	18	0	0	86
cSH	1700	1700	1235	1700	673
Volume to Capacity	0.12	0.07	0.05	0.15	0.17
Queue Length 95th (m)	0.0	0.0	1.2	0.0	4.8
Control Delay (s)	0.0	0.0	2.8	0.0	11.4
Lane LOS			A		B
Approach Delay (s)	0.0		1.2		11.4
Approach LOS					B

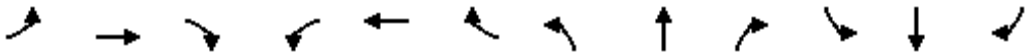
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	59	1	1	3	108	471	13	5	382	11
Future Volume (Veh/h)	15	1	59	1	1	3	108	471	13	5	382	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	1	64	1	1	3	117	512	14	5	415	12
Pedestrians		2			2							
Lane Width (m)		4.0			3.3							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	926	1195	216	1037	1194	265	429			528		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	926	1195	216	1037	1194	265	429			528		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	99	92	99	99	100	90			100		
cM capacity (veh/h)	202	164	788	155	165	732	1125			1034		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	81	5	117	341	185	5	277	150
Volume Left	16	1	117	0	0	5	0	0
Volume Right	64	3	0	0	14	0	0	12
cSH	487	301	1125	1700	1700	1034	1700	1700
Volume to Capacity	0.17	0.02	0.10	0.20	0.11	0.00	0.16	0.09
Queue Length 95th (m)	4.7	0.4	2.8	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	13.9	17.2	8.6	0.0	0.0	8.5	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	13.9	17.2	1.6			0.1		
Approach LOS	B	C						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	33.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	24	21	0	2	37	608	20	1	423	7
Future Volume (Veh/h)	5	0	24	21	0	2	37	608	20	1	423	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	26	23	0	2	40	661	22	1	460	8
Pedestrians					1							
Lane Width (m)					3.8							
Walking Speed (m/s)					1.2							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked	0.95	0.95		0.95	0.95	0.95				0.95		
vC, conflicting volume	878	1230	234	1011	1223	342	468			684		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	760	1131	234	900	1124	194	468			554		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	97	89	100	100	96			100		
cM capacity (veh/h)	271	184	768	207	186	771	1090			958		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	31	25	370	352	231	238
Volume Left	5	23	40	0	1	0
Volume Right	26	2	0	22	0	8
cSH	592	220	1090	1700	958	1700
Volume to Capacity	0.05	0.11	0.04	0.21	0.00	0.14
Queue Length 95th (m)	1.3	3.0	0.9	0.0	0.0	0.0
Control Delay (s)	11.4	23.4	1.3	0.0	0.0	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	11.4	23.4	0.6		0.0	
Approach LOS	B	C				

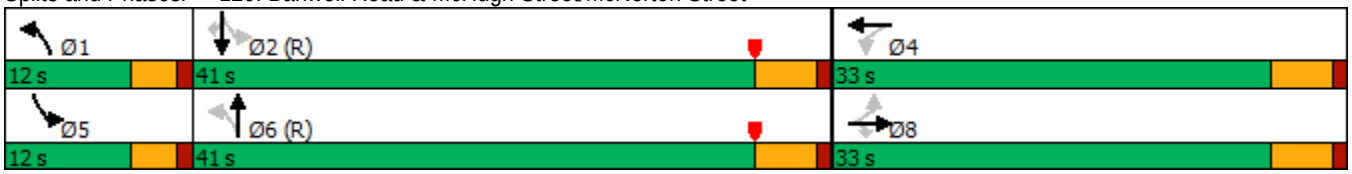
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	45.4%	ICU Level of Service		A
Analysis Period (min)	15			

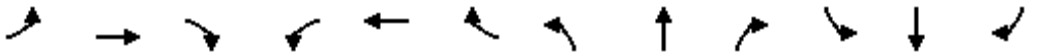
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	200	185	119	213	52	227	566	242	73	366	35
Future Volume (vph)	25	200	185	119	213	52	227	566	242	73	366	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00		1.00	0.99		1.00		0.99
Frt			0.850		0.970			0.955				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1842	0	1652	3358	0	1652	3539	1583
Flt Permitted	0.352			0.491			0.471			0.286		
Satd. Flow (perm)	655	1863	1563	924	1842	0	818	3358	0	497	3539	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			201		15			95				76
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	217	201	129	232	57	247	615	263	79	398	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	217	201	129	289	0	247	878	0	79	398	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		12.0	41.0		12.0	41.0	41.0
Total Split (%)	38.4%	38.4%	38.4%	38.4%	38.4%		14.0%	47.7%		14.0%	47.7%	47.7%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		8.0	36.0		8.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	1	1			1			1	1
Act Effct Green (s)	19.5	19.5	19.5	19.5	19.5		56.3	47.5		51.0	43.2	43.2
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.65	0.55		0.59	0.50	0.50
v/c Ratio	0.18	0.51	0.39	0.62	0.67		0.40	0.46		0.20	0.22	0.05
Control Delay	27.1	32.3	6.0	41.6	35.9		9.1	12.9		8.0	13.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.1	32.3	6.0	41.6	35.9		9.1	12.9		8.0	13.7	1.0
LOS	C	C	A	D	D		A	B		A	B	A
Approach Delay		20.1			37.7			12.1			11.9	
Approach LOS		C			D			B			B	
Queue Length 50th (m)	3.8	33.3	0.0	20.3	43.9		14.3	41.1		4.1	19.6	0.0
Queue Length 95th (m)	9.6	47.6	14.5	34.4	60.9		33.2	73.1		12.0	33.4	1.8
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	213	606	644	300	609		627	1898		408	1776	822
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	0.13	0.36	0.31	0.43	0.47		0.39	0.46		0.19	0.22	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 86			
Offset: 27 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



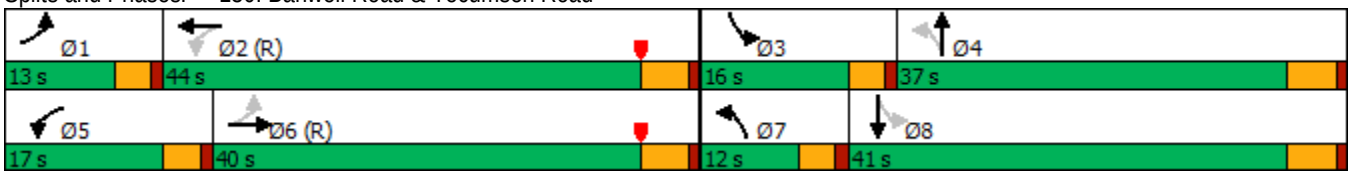


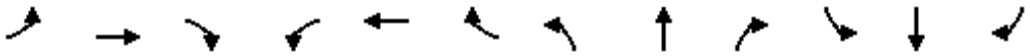
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	557	190	120	450	213	172	601	116	173	343	125
Future Volume (vph)	245	557	190	120	450	213	172	601	116	173	343	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.962			0.952			0.976			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4984	0	1691	4870	0	1691	3484	0	1711	3460	0
Flt Permitted	0.302			0.265			0.386			0.122		
Satd. Flow (perm)	543	4984	0	472	4870	0	686	3484	0	220	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		82			121			20			50	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	4		1	1		4	2		3	3		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	266	605	207	130	489	232	187	653	126	188	373	136
Shared Lane Traffic (%)												
Lane Group Flow (vph)	266	812	0	130	721	0	187	779	0	188	509	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	13.0	40.0		17.0	44.0		12.0	37.0		16.0	41.0	
Total Split (%)	11.8%	36.4%		15.5%	40.0%		10.9%	33.6%		14.5%	37.3%	
Maximum Green (s)	9.0	35.0		13.0	39.0		8.0	32.0		12.0	36.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		1			4			3			2	
Act Effct Green (s)	52.5	41.1		52.1	40.9		38.1	29.1		45.2	32.6	
Actuated g/C Ratio	0.48	0.37		0.47	0.37		0.35	0.26		0.41	0.30	
v/c Ratio	0.72	0.42		0.39	0.38		0.60	0.83		0.76	0.48	
Control Delay	32.2	24.6		18.8	21.9		31.0	45.6		43.1	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	24.6		18.8	21.9		31.0	45.6		43.1	29.5	
LOS	C	C		B	C		C	D		D	C	
Approach Delay		26.5			21.4			42.8			33.2	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	34.4	45.0		15.4	36.5		26.6	84.2		26.7	43.5	
Queue Length 95th (m)	#71.5	61.6		27.6	48.0		41.7	105.6		#55.0	58.1	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	371	1915		379	1884		310	1027		253	1166	
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	0.72	0.42		0.34	0.38		0.60	0.76		0.74	0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 80 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 31.0		Intersection LOS: C	
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 130: Banwell Road & Tecumseh Road

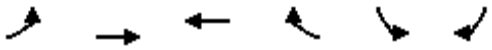




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	1	12	0	32	0	0	7	21	0	3
Future Volume (Veh/h)	5	0	1	12	0	32	0	0	7	21	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	1	13	0	35	0	0	8	23	0	3
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	35			1			57	72	0	62	54	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			1			57	72	0	62	54	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	97	100	100
cM capacity (veh/h)	1576			1622			929	810	1084	918	827	1061

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	6	48	8	26
Volume Left	5	13	0	23
Volume Right	1	35	8	3
cSH	1576	1622	1084	933
Volume to Capacity	0.00	0.01	0.01	0.03
Queue Length 95th (m)	0.1	0.2	0.2	0.7
Control Delay (s)	6.1	2.0	8.3	9.0
Lane LOS	A	A	A	A
Approach Delay (s)	6.1	2.0	8.3	9.0
Approach LOS			A	A

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	393	450	25	16	3
Future Volume (Veh/h)	5	393	450	25	16	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	427	489	27	17	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	516				726	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	516				726	258
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1046				358	741

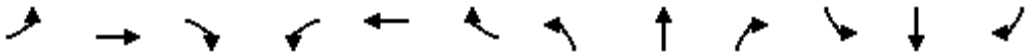
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	147	285	326	190	20
Volume Left	5	0	0	0	17
Volume Right	0	0	0	27	3
cSH	1046	1700	1700	1700	388
Volume to Capacity	0.00	0.17	0.19	0.11	0.05
Queue Length 95th (m)	0.1	0.0	0.0	0.0	1.3
Control Delay (s)	0.3	0.0	0.0	0.0	14.8
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		14.8
Approach LOS					B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	334	24	74	382	23	69
Future Volume (Veh/h)	334	24	74	382	23	69
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	363	26	80	415	25	75
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			389		744	194
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			389		744	194
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		92	91
cM capacity (veh/h)			1166		326	814

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	242	147	218	277	100
Volume Left	0	0	80	0	25
Volume Right	0	26	0	0	75
cSH	1700	1700	1166	1700	593
Volume to Capacity	0.14	0.09	0.07	0.16	0.17
Queue Length 95th (m)	0.0	0.0	1.8	0.0	4.8
Control Delay (s)	0.0	0.0	3.4	0.0	12.3
Lane LOS			A		B
Approach Delay (s)	0.0		1.5		12.3
Approach LOS					B

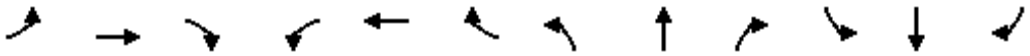
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	72	11	3	2	79	338	8	4	344	10
Future Volume (Veh/h)	9	0	72	11	3	2	79	338	8	4	344	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	78	12	3	2	86	367	9	4	374	11
Pedestrians					1			3				
Lane Width (m)					3.3			3.5				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	746	936	196	820	938	189	385			377		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	746	936	196	820	938	189	385			377		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	90	95	99	100	93			100		
cM capacity (veh/h)	281	243	811	226	243	820	1170			1177		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	88	17	86	245	131	4	249	136
Volume Left	10	12	86	0	0	4	0	0
Volume Right	78	2	0	0	9	0	0	11
cSH	668	250	1170	1700	1700	1177	1700	1700
Volume to Capacity	0.13	0.07	0.07	0.14	0.08	0.00	0.15	0.08
Queue Length 95th (m)	3.6	1.7	1.9	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	11.2	20.4	8.3	0.0	0.0	8.1	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	11.2	20.4	1.5			0.1		
Approach LOS	B	C						

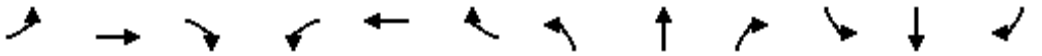
Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	30.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	30	21	0	0	31	428	16	0	426	6
Future Volume (Veh/h)	6	0	30	21	0	0	31	428	16	0	426	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	33	23	0	0	34	465	17	0	463	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								255				
pX, platoon unblocked												
vC, conflicting volume	767	1016	235	806	1012	241	470			482		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	767	1016	235	806	1012	241	470			482		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	96	91	100	100	97			100		
cM capacity (veh/h)	285	229	767	255	230	760	1088			1077		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	40	23	266	250	232	238
Volume Left	7	23	34	0	0	0
Volume Right	33	0	0	17	0	7
cSH	591	255	1088	1700	1077	1700
Volume to Capacity	0.07	0.09	0.03	0.15	0.00	0.14
Queue Length 95th (m)	1.7	2.4	0.8	0.0	0.0	0.0
Control Delay (s)	11.5	20.5	1.3	0.0	0.0	0.0
Lane LOS	B	C	A			
Approach Delay (s)	11.5	20.5	0.7		0.0	
Approach LOS	B	C				

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	40.2%	ICU Level of Service	A	
Analysis Period (min)	15			

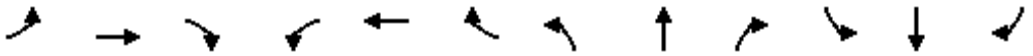


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	147	186	151	191	60	202	389	199	61	380	37
Future Volume (vph)	30	147	186	151	191	60	202	389	199	61	380	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.7	3.8	3.6	3.0	3.6	3.6	3.0	3.6	3.6
Storage Length (m)	20.0		0.0	25.0		0.0	45.0		0.0	30.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	1.00							
Frt			0.850		0.964			0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1789	1829	0	1652	3359	0	1652	3539	1583
Flt Permitted	0.390			0.614			0.465			0.404		
Satd. Flow (perm)	725	1863	1563	1156	1829	0	808	3359	0	702	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		21			132				80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.4			445.1			511.3			254.9	
Travel Time (s)		5.9			32.0			36.8			18.4	
Confl. Peds. (#/hr)	3		1	1		3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	160	202	164	208	65	220	423	216	66	413	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	160	202	164	273	0	220	639	0	66	413	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			5.3			5.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.99	0.97	1.00	1.09	1.00	1.00	1.09	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Detector Phase	8	8	8	4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		9.0	27.0		9.0	27.0	27.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		11.0	38.0		11.0	38.0	38.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	40.2%		13.4%	46.3%		13.4%	46.3%	46.3%
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0		7.0	33.0		7.0	33.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
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)	5.0	5.0	5.0	5.0	5.0		4.0	5.0		4.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	1	1	1	3	3			0			0	0
Act Effct Green (s)	18.6	18.6	18.6	18.6	18.6		53.0	44.8		48.3	40.8	40.8
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.65	0.55		0.59	0.50	0.50
v/c Ratio	0.20	0.38	0.40	0.63	0.63		0.36	0.34		0.14	0.23	0.05
Control Delay	25.8	27.8	5.8	38.1	32.1		8.9	10.3		7.5	13.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.8	27.8	5.8	38.1	32.1		8.9	10.3		7.5	13.5	1.1
LOS	C	C	A	D	C		A	B		A	B	A
Approach Delay		16.4			34.3			9.9			11.8	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	4.5	22.7	0.0	24.8	38.2		11.6	22.5		3.2	19.2	0.0
Queue Length 95th (m)	10.4	33.4	13.7	38.3	52.8		30.0	44.8		10.6	34.3	1.8
Internal Link Dist (m)		58.4			421.1			487.3			230.9	
Turn Bay Length (m)	20.0			25.0			45.0			30.0		20.0
Base Capacity (vph)	247	636	666	394	638		611	1895		500	1762	828
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	0.13	0.25	0.30	0.42	0.43		0.36	0.34		0.13	0.23	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 82			
Actuated Cycle Length: 82			
Offset: 27 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.3		Intersection LOS: B	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 120: Banwell Road & McHugh Street/McNorton Street



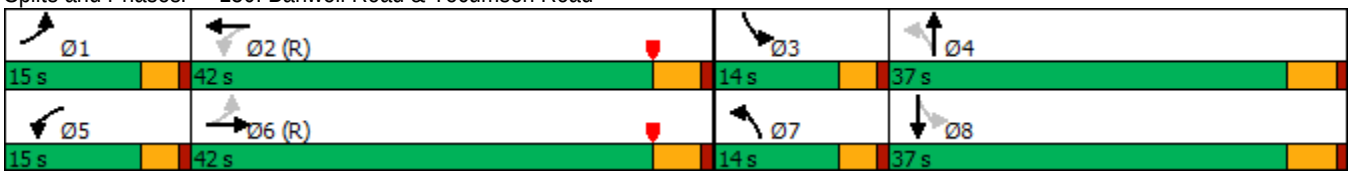
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	624	198	98	568	178	190	358	118	188	385	155
Future Volume (vph)	241	624	198	98	568	178	190	358	118	188	385	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.964			0.964			0.963			0.957	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4989	0	1691	4957	0	1691	3433	0	1711	3462	0
Flt Permitted	0.252			0.275			0.201			0.263		
Satd. Flow (perm)	454	4989	0	489	4957	0	358	3433	0	473	3462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			80			42			57	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)			7	7					3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	262	678	215	107	617	193	207	389	128	204	418	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	262	893	0	107	810	0	207	517	0	204	586	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	15.0	42.0		15.0	42.0		14.0	37.0		14.0	37.0	
Total Split (%)	13.9%	38.9%		13.9%	38.9%		13.0%	34.3%		13.0%	34.3%	
Maximum Green (s)	11.0	37.0		11.0	37.0		10.0	32.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

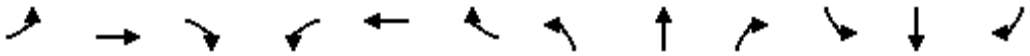
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		7			0			3			0	
Act Effct Green (s)	60.3	47.5		53.6	43.5		34.4	23.4		34.4	23.4	
Actuated g/C Ratio	0.56	0.44		0.50	0.40		0.32	0.22		0.32	0.22	
v/c Ratio	0.65	0.40		0.31	0.40		0.87	0.67		0.77	0.74	
Control Delay	23.0	20.2		15.0	22.2		60.8	39.1		45.3	40.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.0	20.2		15.0	22.2		60.8	39.1		45.3	40.8	
LOS	C	C		B	C		E	D		D	D	
Approach Delay		20.8			21.3			45.3			41.9	
Approach LOS		C			C			D			D	
Queue Length 50th (m)	27.2	42.1		10.0	41.5		33.8	51.6		33.2	58.7	
Queue Length 95th (m)	#57.4	65.2		22.6	58.2		#55.5	62.3		#46.4	69.8	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	408	2239		373	2045		237	1046		265	1065	
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	0.64	0.40		0.29	0.40		0.87	0.49		0.77	0.55	

Intersection Summary

Area Type: Other
Cycle Length: 108
Actuated Cycle Length: 108
Offset: 37 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 75.3% 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.

Splits and Phases: 130: Banwell Road & Tecumseh Road

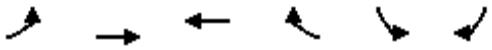




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	1	10	0	27	1	0	9	26	0	4
Future Volume (Veh/h)	4	0	1	10	0	27	1	0	9	26	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	1	11	0	29	1	0	10	28	0	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	29			1			49	60	0	55	46	14
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	29			1			49	60	0	55	46	14
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	97	100	100
cM capacity (veh/h)	1584			1622			941	824	1084	927	838	1065

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	5	40	11	32
Volume Left	4	11	1	28
Volume Right	1	29	10	4
cSH	1584	1622	1069	943
Volume to Capacity	0.00	0.01	0.01	0.03
Queue Length 95th (m)	0.1	0.2	0.2	0.8
Control Delay (s)	5.8	2.0	8.4	9.0
Lane LOS	A	A	A	A
Approach Delay (s)	5.8	2.0	8.4	9.0
Approach LOS			A	A

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	18.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	345	409	21	20	4
Future Volume (Veh/h)	4	345	409	21	20	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	375	445	23	22	4
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			82			
pX, platoon unblocked						
vC, conflicting volume	468				652	234
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	468				652	234
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	99
cM capacity (veh/h)	1090				399	768

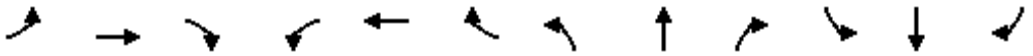
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	129	250	297	171	26
Volume Left	4	0	0	0	22
Volume Right	0	0	0	23	4
cSH	1090	1700	1700	1700	431
Volume to Capacity	0.00	0.15	0.17	0.10	0.06
Queue Length 95th (m)	0.1	0.0	0.0	0.0	1.5
Control Delay (s)	0.3	0.0	0.0	0.0	13.9
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		13.9
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	295	22	67	350	19	58
Future Volume (Veh/h)	295	22	67	350	19	58
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	321	24	73	380	21	63
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				183		
pX, platoon unblocked						
vC, conflicting volume			345		669	172
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			345		669	172
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		94	93
cM capacity (veh/h)			1211		367	841

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	214	131	200	253	84
Volume Left	0	0	73	0	21
Volume Right	0	24	0	0	63
cSH	1700	1700	1211	1700	636
Volume to Capacity	0.13	0.08	0.06	0.15	0.13
Queue Length 95th (m)	0.0	0.0	1.5	0.0	3.6
Control Delay (s)	0.0	0.0	3.3	0.0	11.5
Lane LOS			A		B
Approach Delay (s)	0.0		1.5		11.5
Approach LOS					B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	326	117	86	432	128	199	213	85	192	486	151
Future Volume (vph)	107	326	117	86	432	128	199	213	85	192	486	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.8	3.6	3.2	3.7	3.6	3.2	3.7	3.6	3.3	3.8	3.6
Storage Length (m)	60.0		35.0	75.0		70.0	45.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00		
Frt		0.960			0.966			0.957			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	4971	0	1691	4951	0	1691	3408	0	1711	3488	0
Flt Permitted	0.351			0.468			0.166			0.513		
Satd. Flow (perm)	632	4971	0	832	4951	0	295	3408	0	920	3488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			77			61			42	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		323.0			462.5			180.5			511.3	
Travel Time (s)		19.4			27.8			13.0			36.8	
Confl. Peds. (#/hr)	2		3	3		2			6	6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	354	127	93	470	139	216	232	92	209	528	164
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	481	0	93	609	0	216	324	0	209	692	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.3			5.3			5.3			5.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.04	0.97	1.00	1.06	0.99	1.00	1.06	0.99	1.00	1.04	0.97	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	8.0	11.0		8.0	11.0		8.0	11.0		8.0	11.0	
Minimum Split (s)	12.0	38.0		12.0	38.0		12.0	37.0		12.0	37.0	
Total Split (s)	12.0	38.0		12.0	38.0		15.0	38.0		14.0	37.0	
Total Split (%)	11.8%	37.3%		11.8%	37.3%		14.7%	37.3%		13.7%	36.3%	
Maximum Green (s)	8.0	33.0		8.0	33.0		11.0	33.0		10.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		26.0			26.0			25.0			25.0	
Pedestrian Calls (#/hr)		3			2			6			0	
Act Effct Green (s)	49.6	41.5		48.1	38.7		38.5	26.6		36.6	25.6	
Actuated g/C Ratio	0.49	0.41		0.47	0.38		0.38	0.26		0.36	0.25	
v/c Ratio	0.29	0.23		0.20	0.32		0.83	0.35		0.51	0.76	
Control Delay	16.3	17.6		15.4	20.7		47.4	24.9		24.8	38.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.3	17.6		15.4	20.7		47.4	24.9		24.8	38.7	
LOS	B	B		B	C		D	C		C	D	
Approach Delay		17.4			20.0			33.9			35.5	
Approach LOS		B			B			C			D	
Queue Length 50th (m)	12.1	19.4		9.6	28.1		29.9	23.1		28.7	66.3	
Queue Length 95th (m)	24.9	30.6		20.6	41.2		#58.4	32.6		41.4	80.4	
Internal Link Dist (m)		299.0			438.5			156.5			487.3	
Turn Bay Length (m)	60.0			75.0			45.0			75.0		
Base Capacity (vph)	400	2077		463	1928		262	1143		407	1123	
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	0.23		0.20	0.32		0.82	0.28		0.51	0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 102			
Actuated Cycle Length: 102			
Offset: 73 (72%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 27.3		Intersection LOS: C	
Intersection Capacity Utilization 78.4%		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: 130: Banwell Road & Tecumseh Road