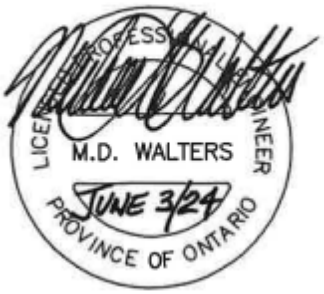
DILLON CONSULTING

LAKEFRONT HEIGHTS INC.

Official Plan and Zoning By-law Amendments

Transportation Impact Study
0 Wyandotte Street East



June 2024 – 21-2104

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1.0 Introduction

1.1 Purpose

Dillon Consulting Limited (Dillon) has been retained by Lakefront Heights Inc. (the "client") to undertake a transportation impact study (TIS) which reviews the impact of a proposed residential development in the city of Windsor, Ontario. This proposed development, which contains 239 residential dwelling units, features 220 dwelling units located within a 13-storey residential building while the remaining dwelling units would be in the form of 19 townhouse units. This development is proposed on vacant lands found to the immediate south of the existing Riverside Sportsman Club (located at 10835 Riverside Drive East).

However, this development would be completely separate from the existing facility and would have a single driveway to Wyandotte Street East.

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 residential development is located to the immediate south of the existing Riverside Sportsman Club. This proposed development, which contains a total of 239 residential dwelling units, features 220 dwelling units within a new 13-storey residential building while the remaining dwellings would be in the form of 19 townhouse units.

The severed parcel is proposed to have access to Wyandotte Street East while no access would be provided on the north side of the parcel (through the existing Riverside Sportsman Club facility).

The conceptual development plan can be seen in **Appendix A**.

1.3 Scope of Analyses

The report documents the following:

- Existing traffic volumes, and traffic projections for the study area intersections and accesses;
- Intersection capacity analyses under existing conditions, future background conditions, and total future conditions;
- Existing transit and active transportation facilities near the site;
- The need for a left-turn lane at the proposed driveway; and
- The need for any mitigation (changes to laning, traffic control, etc.) at any of the study area intersections.

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

- Wyandotte Street East and Florence Avenue (unsignalized);
- Wyandotte Street East and Clover Avenue (unsignalized);
- Wyandotte Street East and Banwell Road (unsignalized);
- Clover Avenue and Riverside Drive (unsignalized);
- Clover Avenue and Little River Boulevard (unsignalized); and
- Banwell Road and Little River Boulevard (unsignalized)

An existing single-detached house has a driveway which utilizes the south leg of the Wyandotte Street East and Clover Street intersection. As a result, there is only a minor amount of traffic currently using the south leg of the intersection, although it is known that Clover Street will ultimately extend further south and connect to both McHugh Street and Tecumseh Street East in the future. The southern extension will be known as Clover Avenue.

Traffic projections and intersection analyses were completed for the weekday PM peak hour. The proposed residential development is anticipated to be fully built out by 2026. Therefore, within this report and associated analyses, the final horizon year has been identified as 2031 (five years following the complete build out).

2.0 Existing (2024) Conditions

2.1 Existing Transportation Network Characteristics

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

Wyandotte Street 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 Huron Church Road (Wyandotte Street West) to Banwell Road (Wyandotte Street East). Within the study area, Wyandotte Street East features a two-lane cross-section (one lane per direction) with bicycle lanes in both directions. Near the site, the posted speed limit is 50 km/h.

Florence Avenue is a north-south local road that is under the jurisdiction of the City of Windsor. It connects Riverside Drive East to Wyandotte Street East. Within the study area, Florence Avenue features a two-lane cross-section with on-street parking permitted on the east side of the road between Wyandotte Street East and Menard Street. As no speed limit signage is present, the speed limit would default to the statutory limit of 50 km/h.

Clover Street is a north-south Class I Collector Road that is under the jurisdiction of the City of Windsor. The road connects Riverside Drive East to Wyandotte Street East. Within the study area, Clover Street features a two-lane cross-section with on-street parking permitted on both sides of the road between Wyandotte Street East and Clairview Avenue. As no speed limit signage is present, the speed limit would default to the statutory limit of 50 km/h.

Little River Boulevard is an east-west Class I Collector Road that is under the jurisdiction of the City of Windsor. The road extends east from Florence Avenue to Lesperance Road in the town of Tecumseh. Within the study area, Little River Boulevard features a two-lane cross-section. A sidewalk is present on the north side of the road, and a multi-use path is along the south side of the road. As no speed limit signage is present, the speed limit would default to the statutory limit of 50 km/h.

Riverside Drive is an east-west road under the jurisdiction of the City of Windsor. It is classified as scenic drive. Within the study area, Riverside Drive features a two-lane cross-section. As no speed limit signage is present, the speed limit would default to the statutory limit of 50 km/h.

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 two-lane cross-section (one lane per direction

from Wyandotte Street to Little River Boulevard) and a four-lane cross-section (two lanes per direction south of Little River Boulevard). The posted speed limit is 50 km/h.

Figure 1 illustrates the existing lane configurations and traffic controls at the study area intersections.

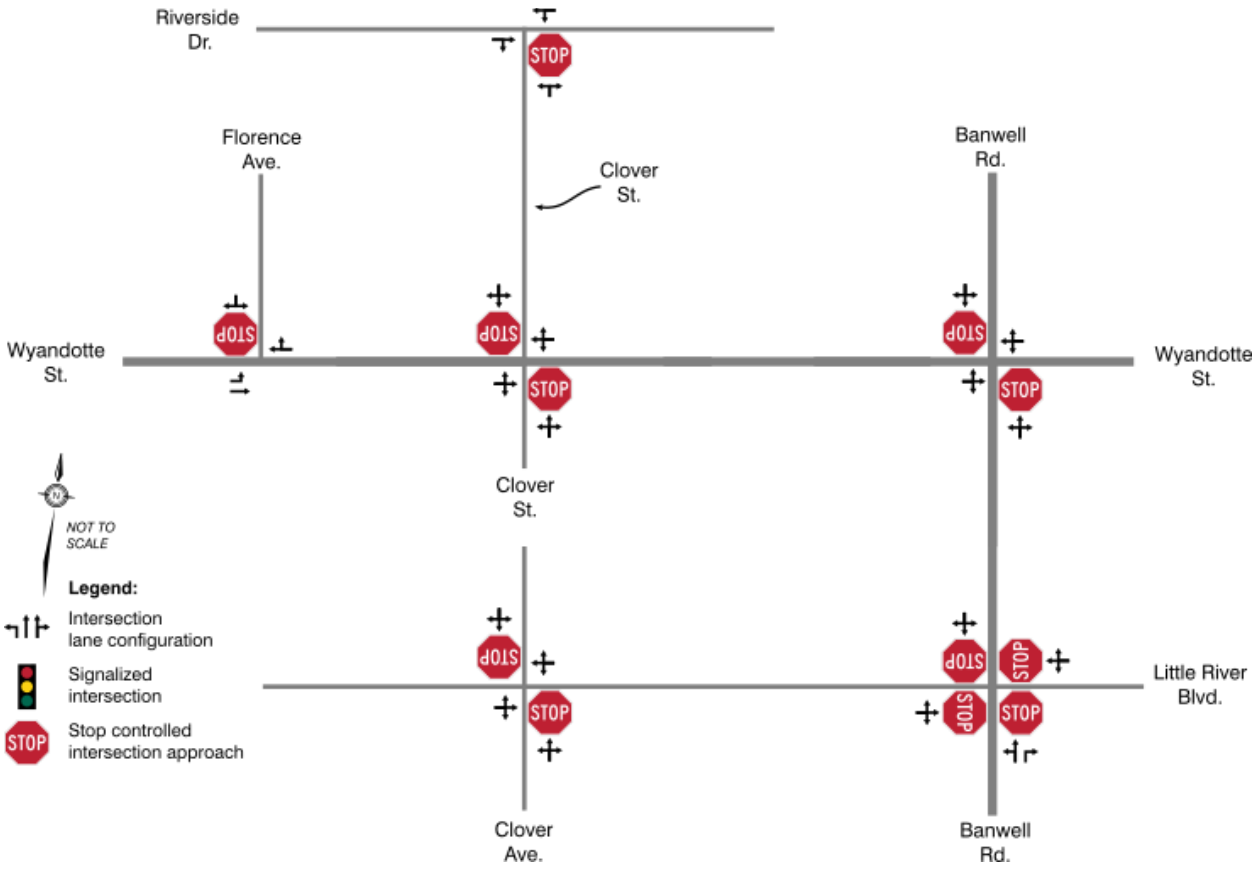


Figure 1: Existing (2024) Laning and Traffic Control

The intersection of Wyandotte Street and Banwell Road is depicted as a four-legged intersection; however, Wyandotte Street continues east of Banwell Road for approximately 40 metres before terminating. No driveways exist along this portion of road, therefore a negligible amount of traffic is anticipated to use this section of Wyandotte Street.

2.2 Existing Facilities

2.2.1 Existing Active 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:

Wyandotte Street East: Within the study area, sidewalks and bicycle lanes exist on both sides of the road. A multi-use path, the Ganatchio Trail, runs north-south, crossing Wyandotte Street East to the west of Florence Avenue.

Florence Avenue: Within the study area, a sidewalk exists on the west side of the road.

Clover Street: Within the study area, sidewalks exist on both sides of the road starting approximately 60 metres north of Wyandotte Street East. No sidewalks are present to the immediate north of Wyandotte Street East.

Riverside Drive: Within the study area, no sidewalks are present. A multi-use trail, known as the Ganatchio Trail is present on the south side of Riverside Drive.

Little River Boulevard*:* Within the study area, a sidewalk is present on the north side of the roadway. A multi-use trail is present on the south side of Little River Boulevard.

Banwell Road: Within the study area, a sidewalk exists on both sides of the road between Wyandotte Street East and Little River Boulevard. South of Little River Boulevard, a sidewalk is present on the east side of the road and a multi-use path exists on the west side of the road.

2.2.2 Existing Transit Services

Lauzon 10:

This route travels westbound along Wyandotte Street East in the study area. The three transit stops in the study area are located along Wyandotte west of Florence Avenue, west of Clover Street and along Clover Avenue south of Little River Boulevard. 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 2 shows the routing of Lauzon 10 transit route sourced from Transit Windsor's website[1].

[1] https://www.citywindsor.ca/documents/residents/transit-windsor/routes-and-schedules/Schedule/Lauzon10.pdf

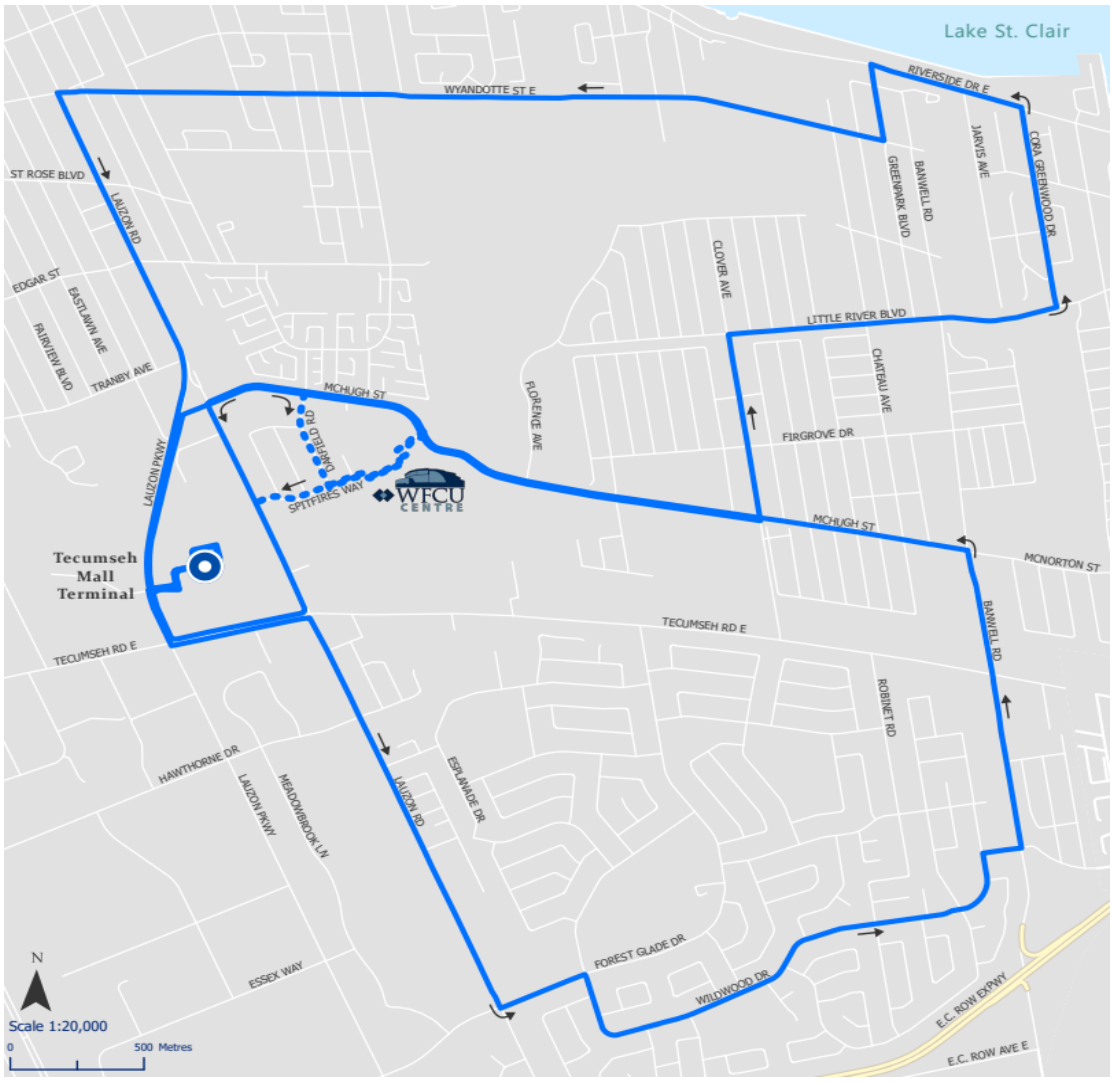


Figure 2: Windsor Transit Network within Study Area

2.3 Traffic Data Collection

Turning movement count (TMC) data was collected by Horizon Data Services Ltd. The TMC data can be found in **Appendix B**.

TMC data was collected at the following locations:

- Wyandotte Street East and Florence Avenue (unsignalized);
- Wyandotte Street East and Clover Avenue (unsignalized);
- Wyandotte Street East and Banwell Road (unsignalized);
- Clover Avenue and Riverside Drive (unsignalized);
- Clover Avenue and Little River Boulevard (unsignalized); and
- Banwell Road and Little River Boulevard (unsignalized).

The data was collected on Wednesday May 8, 2024 between 3:00 PM and 6:00 PM

2.4 Existing (2024) Traffic Volumes

Figure 3 illustrates the existing (2024) traffic volumes at the two study area intersections during the weekday PM peak hour.

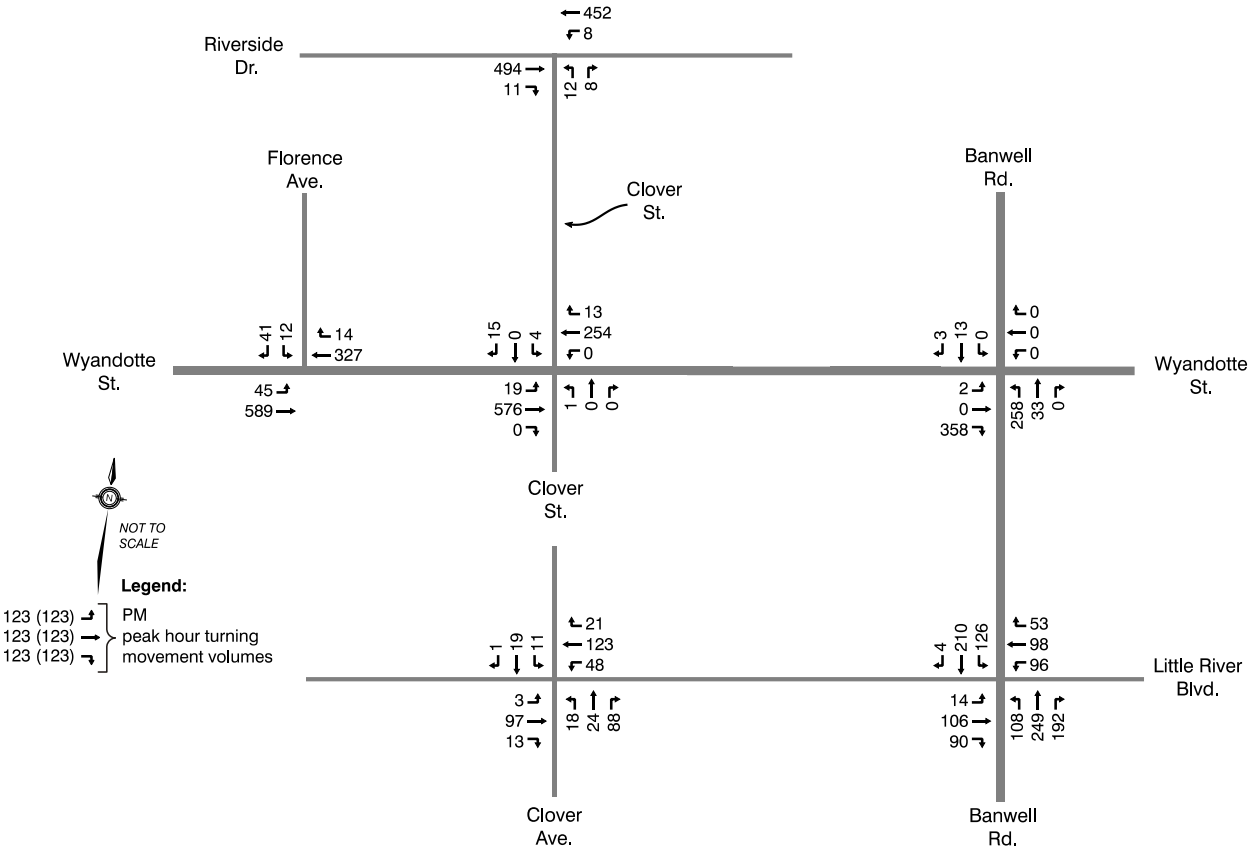


Figure 3: Existing (2024) Traffic Volumes

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 2026 and 2031 horizon years without the subject development in place.

Typically, this is comprised of two components:

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

3.1 Background Growth

As for traffic growth that wouldn't 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 (2024) and horizon year (2031), and considering the size, scope and location of the subject development, a 1.0% per annum background growth rate has been applied to the traffic movements at all intersections located within the study area.

3.2 Background Developments

It is understood that a separate Environmental Assessment (EA) study is being conducted for the extension of Florence Avenue south of Wyandotte Street East. It is anticipated that this study will incorporate the development potential for lands within the East Riverside Secondary Plan area. As a result, these matters were not explicitly considered within this assessment.

Given the location of the proposed subdivision it has been confirmed that a number of background developments are in the midst of being planned and constructed within and close to the study area. As a result, three (3) separate background developments were identified.

The three (3) background developments included:

- The Ganatchio Gardens residential development found southwest of the Florence Avenue and Wyandotte Street East intersection:
  - This residential development proposes the construction of 28 townhome units and a single 16-storey apartment building featuring 275 dwelling units.
- The VGA residential development found on the southeast corner of the Florence Avenue and Wyandotte Street East intersection:

- This residential development proposes the construction of a single four (4) storey apartment building with 15 dwelling units.

- The 'North Neighbourhood Subdivision' found south of Wyandotte Street East, east of Florence Avenue and north of Beverly Glen Street:
  - This residential subdivision proposes a significant number of dwellings, where:
    - Phase 1 includes 81 single-family dwellings
    - Phase 2 includes 82 single-family dwellings
    - Phase 3 includes 117 townhome dwelling units
    - Phase 4 includes 11 single-family dwellings
    - Phase 5 includes 30 townhome dwelling units
    - Phase 6 includes 477 apartment dwelling units in five apartment buildings
    - Phase 7 includes 308 apartment dwelling units in two apartment buildings.

3.2.1 Ganatchio Gardens Residential Development

In March 2023, Dillon Consulting Limited developed a transportation impact study to support a proposed residential development located in the southwest quadrant of the Florence Avenue and Wyandotte Street East intersection. The proposed development includes 28 townhome units and a single 16-storey multi-residential building featuring 275 apartments.

Table 1 summarizes the number of vehicle trips that are projected to be generated by this proposed residential development. Given the nature of the proposed development, ITE Land Use Code 222 (Multifamily Housing (High-Rise)) was used for the 275 apartments while Land Use Code 215 (Single-Family Attached Housing) was used for the 28 townhouse units.

Table 1: Trip Generation – Ganatchio Gardens Residential Development

	Weekday PM peak hour		
	In	Out	Total
Multifamily Housing Building (High-Rise) - (275 dwelling units) – ITE Land Use Code 222			
In/Out/Rate	62%	38%	0.32
Vehicle Trips	55	33	88
Single-Family Attached units – (28 units) – ITE Land Use Code 215			
In/Out/Rate	59%	41%	0.57
Vehicle Trips	9	7	16
Total Vehicle Trips	**64**	**40**	**104**

The Ganatchio Gardens residential development is forecast to generate 104 vehicle trips in the PM peak hour (64 inbound, 40 outbound).

3.2.2 VGA Residential Development

A small residential development is proposed on the southeast corner of the Wyandotte Street East and Florence Avenue intersection. Here, the construction of a single four (4) storey apartment building with 15 dwelling units is proposed.

Table 2 summarizes the number of vehicle trips that are projected to be generated by the proposed VGA residential development. Given the nature of this background development, ITE Land Use code 220 – Multifamily Housing (Low-Rise) was used.

Table 2: Trip Generation – VGA Residential Development

	Weekday PM Peak Hour		
	In	Out	Total
One Apartment Building (15 units) – ITE Land Use Code 220			
In/Out/Rate	63%	37%	0.51
Total Vehicle Trips	**5**	**3**	**8**

The proposed VGA residential development is projected to generate 8 vehicle trips in the PM peak hour.

3.2.3 'North Neighbourhood Subdivision'

In 2022, Dillon prepared a comprehensive TIS for the proposed 'North Neighbourhood Subdivision' which will be located to the south of Wyandotte Street East, east of Florence Avenue and north of Beverly Glen Street. Within this study, it was assumed the entire subdivision would be completed by 2030. However, after reviewing some phasing plans within this background development, it has been confirmed that Phase 2, Phase 3, and Phase 5 will be completed by 2025, while Phase 1, Phase 4, Phase 6, and Phase 7 are anticipated to be constructed by 2030.

Phases constructed by 2026:

- Phase 2 includes 82 single-family dwellings
- Phase 3 includes 117 townhome dwelling units
- Phase 5 includes 30 townhome dwelling units.

Phases constructed by 2031:

- Phase 1 includes 81 single-family dwellings
- Phase 4 includes 11 single-family dwellings
- Phase 6 includes 477 apartments in five apartment buildings
- Phase 7 includes 308 apartments in two apartment buildings.

Phase 2, Phase 3, and Phase 5 were calculated to generate 161 vehicle trips during the PM peak hour.

Phase 1, Phase 4, Phase 6, and Phase 7 were calculated to generate 342 vehicle trips during the PM peak hour.

Based on the stages of the construction phases, the Clover Avenue and Florence Avenue extensions are expected to be completed by 2026. Therefore, the southerly extension of both roadways was taken into consideration for both the 2026 and 2031 horizon years. In both cases, these streets would connect to the existing roadways found south of Beverly Glen Street and north of Wyandotte Street East.

The 2022 'North Neighbourhood Subdivision' TIS did not include the Wyandotte Street East and Banwell Road and Little River Boulevard and Banwell Road intersections. This TIS did include the future Wyandotte Street East and Icewater Avenue intersection and the Little River Boulevard and Icewater Avenue intersection. Volumes heading to/from the east at these intersections was extrapolated through the Wyandotte Street and Banwell Road and Little River Boulevard and Banwell Road intersections.

3.2.4 Background Developments Summary

The future vehicle trips that would be generated by each of these three residential background developments were included within the future background traffic volumes for both the 2026 and 2031 horizon years.

Figure 4 and **Figure 5** show how these trips were distributed and assigned by these three background developments through the study area for the 2026 and 2031 horizon years, respectively.

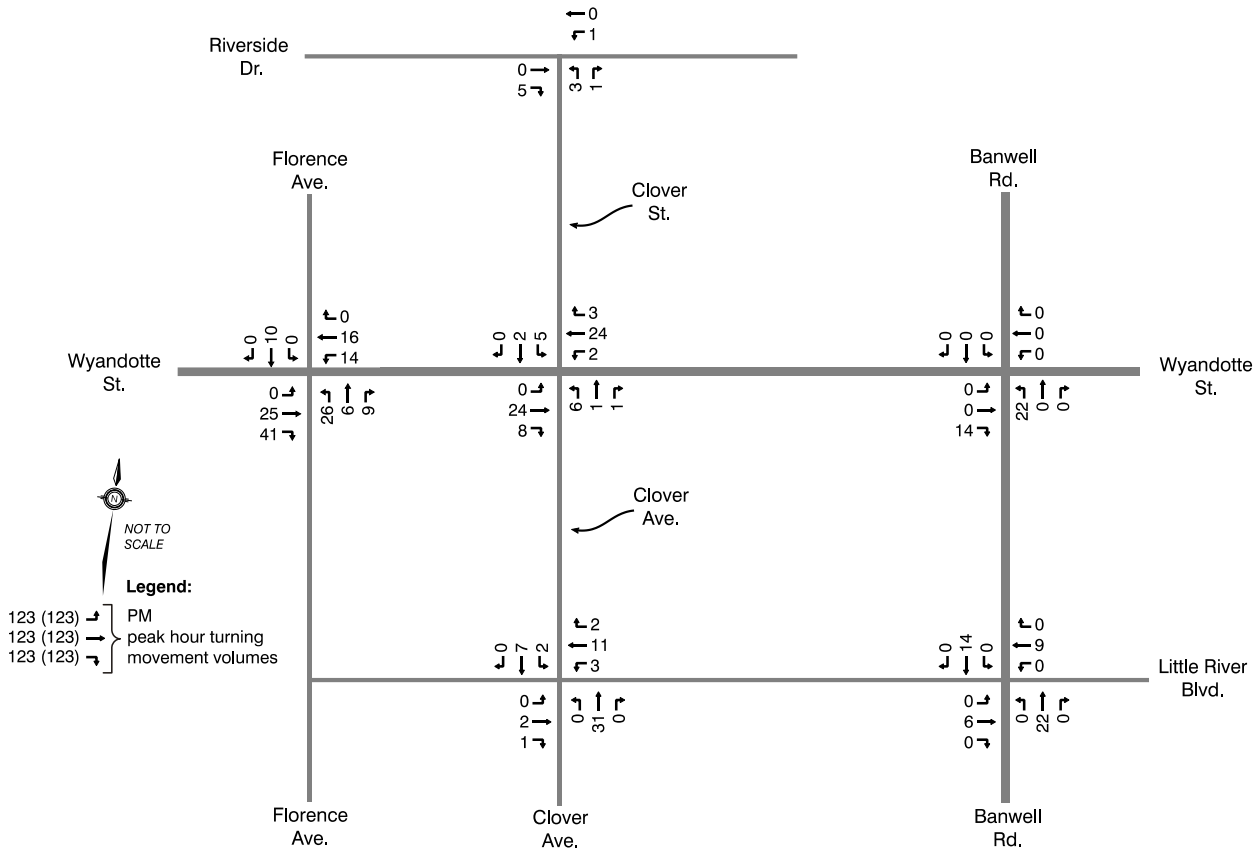


Figure 4: Background Developments (2026) Traffic Volumes

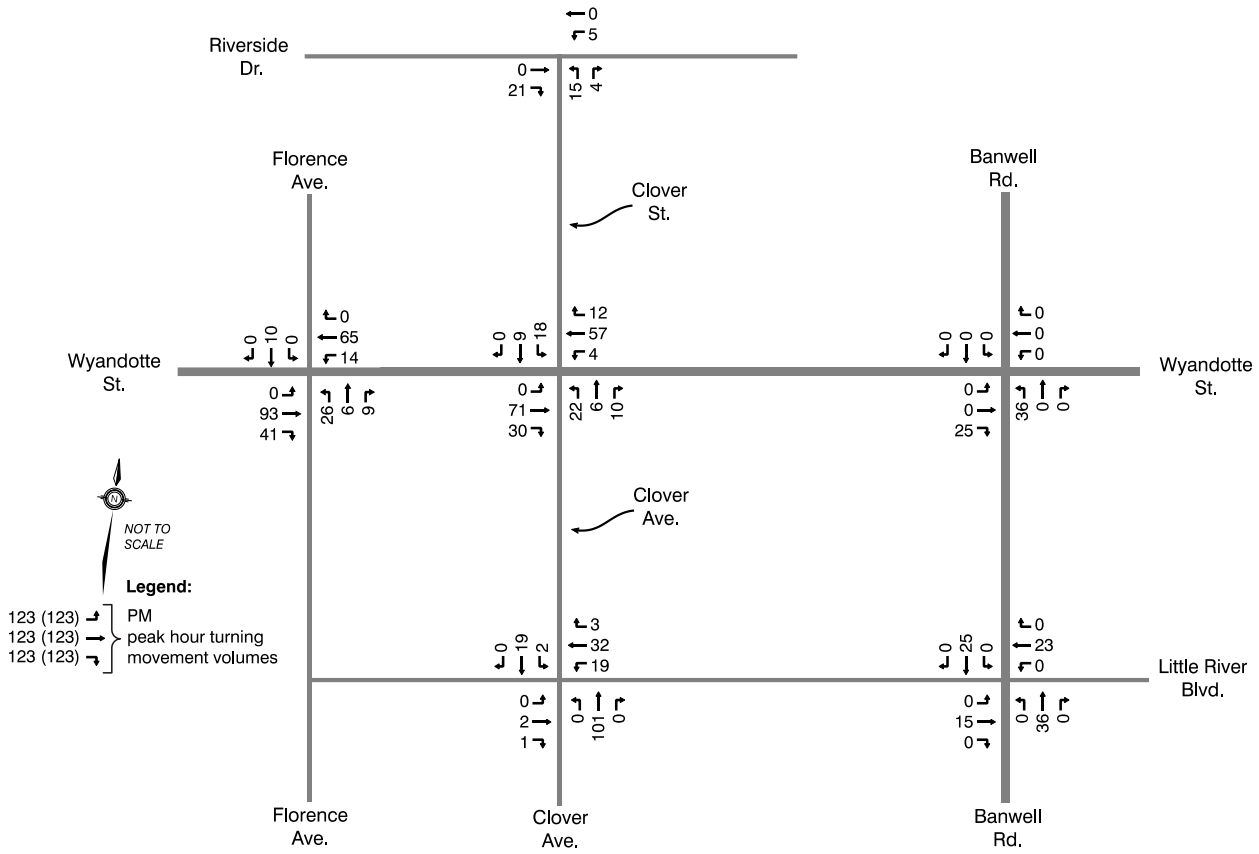


Figure 5: Background Developments (2031) Traffic Volumes

3.3 Future Background Traffic Volumes

3.3.1 Future Background (2026) Traffic Volumes

The future background (2026) traffic volumes are illustrated in **Figure 6**.

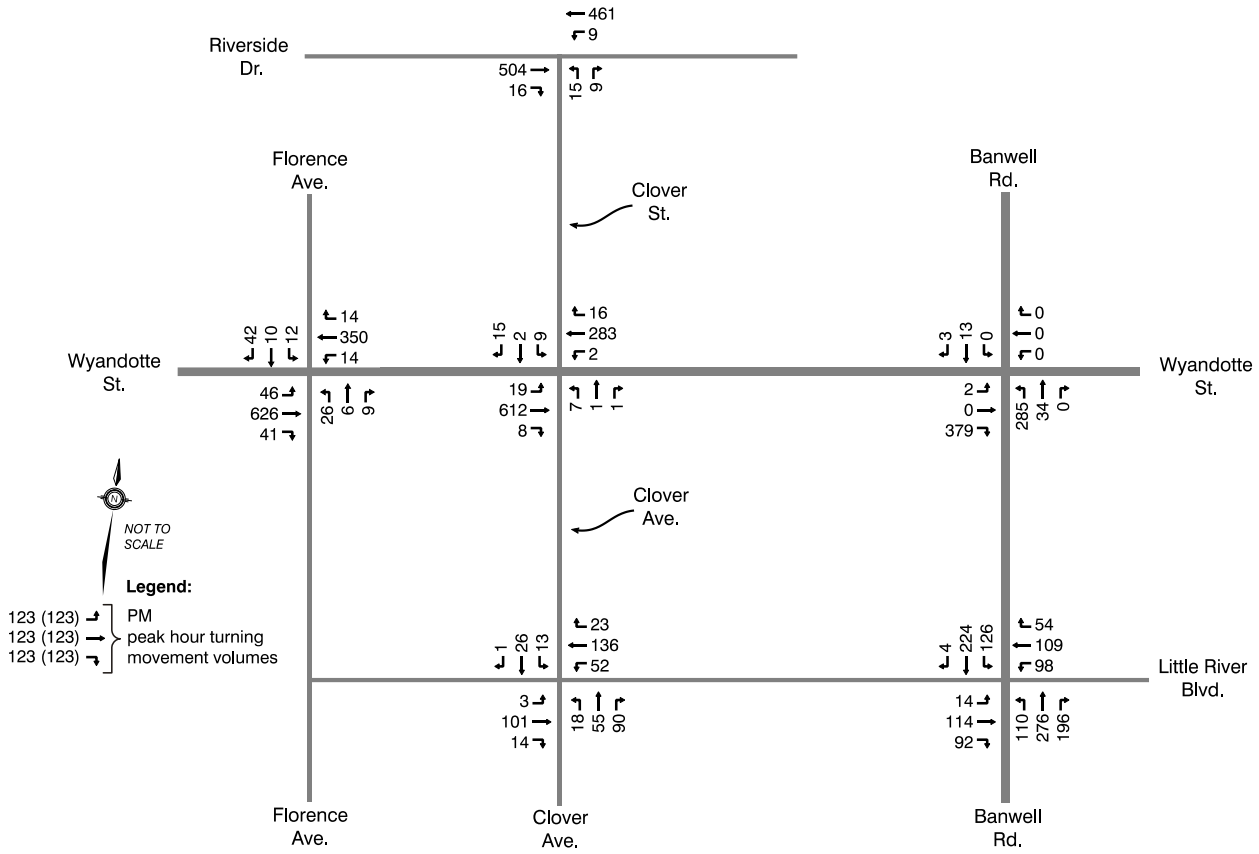


Figure 6: Future Background (2026) Traffic Volumes

3.3.2 Future Background (2031) Traffic Volumes

The future background (2031) traffic volumes are illustrated in **Figure 7**.

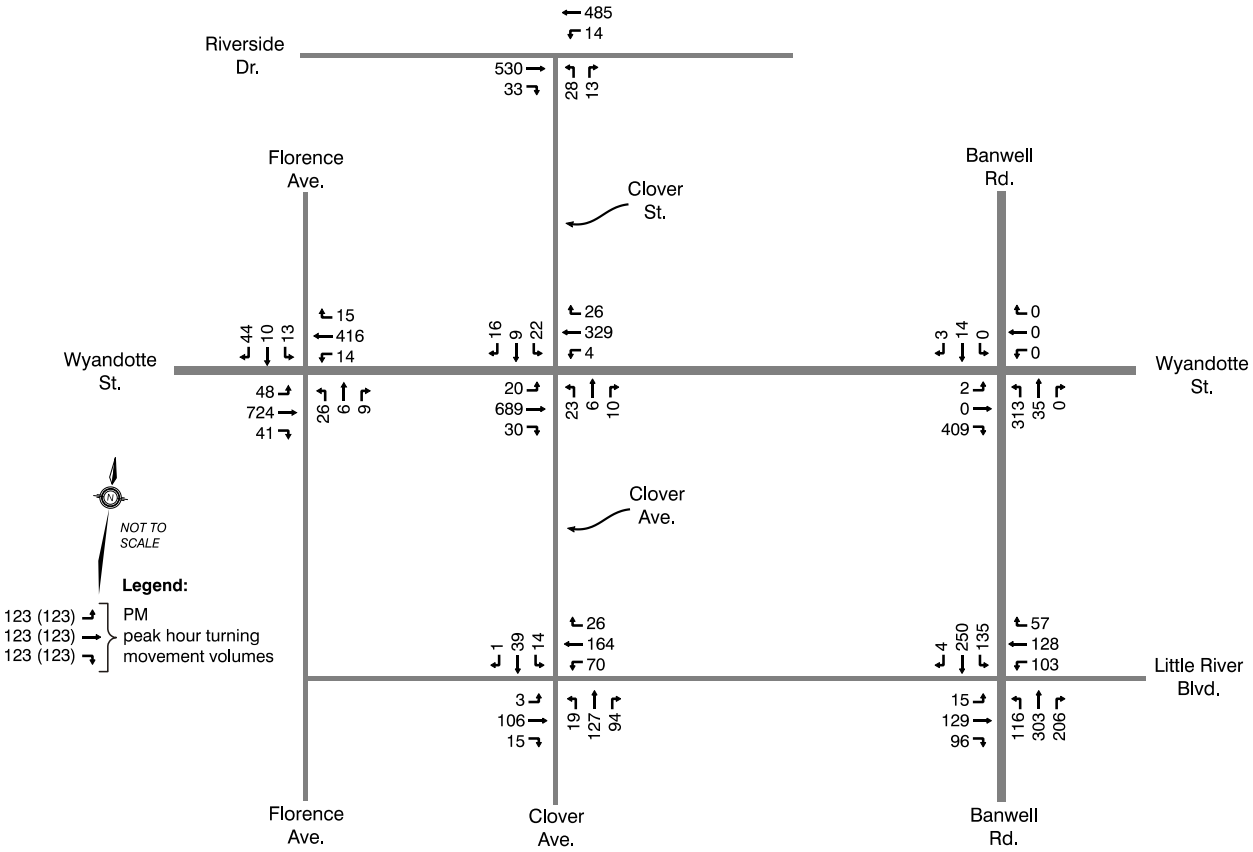


Figure 7: Future Background (2031) Traffic Volumes

4.0 Proposed Development

The proposed residential development is located to the immediate south of the existing Riverside Sportsman Club. This proposed development features 220 dwelling units within a 13-storey residential building while an additional 19 townhouse units are also proposed. On the site, a total of 380 parking spaces, 56 bicycle parking spaces and four loading spaces are proposed.

The site is proposed to have a single driveway to Wyandotte Street East while no access would be provided to the north (and through the existing Riverside Sportsman Club).

4.1 Trip Generation

The number of vehicle trips that are expected to be generated by the proposed residential development was estimated based on trip generation rates published within the Institute of Transportation Engineers' document *Trip Generation Manual* (11th edition). The proposed development includes the construction of a new 13-storey apartment building with 220 dwelling units and an additional 19 townhouse units.

Table 3 summarizes the number of vehicle trips anticipated to be generated by the proposed residential development during the PM peak hour. Given the nature of the proposed development, ITE Land Use Code 222 (Multifamily Housing (High-Rise)) was used for the 220 apartment units while Land Use Code 215 (Single-Family Attached Housing) was used for the 19 townhouse units.

Table 3: Trip Generation – Riverside Sportsman Residential Development

	Weekday PM peak hour		
	In	Out	Total
Multifamily Housing Building (High-Rise) - (226 dwelling units) – ITE Land Use Code 222			
In/Out/Rate	62%	38%	0.32
Vehicle Trips	43	27	70
Single-Family Attached units – (18 units) – ITE Land Use Code 215			
In/Out/Rate	59%	41%	0.57
Vehicle Trips	6	5	11
Total Vehicle Trips	**49**	**32**	**81**

The proposed residential development is forecast to generate 81 vehicle trips in the PM peak hour (49 inbound, 32 outbound).

4.1.1 Non-Auto Travel

The total trips were adjusted to reflect trips generated by non-auto modes. The subject site is in proximity to few transit routes. Using the City's May 2019 Active Transportation Master Plan as a reference, a 14% modal split was used, which reflects the 2041 target mode share for newer communities. The 14% non-auto trips were added to the vehicle trips (which were estimated using ITE trip rates).

Table 4 summarizes the assumed modal split for the subject site development, 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 4: Projected Site Development Modal Split

	Weekday PM peak hour		
	In	Out	Total
Multifamily Housing Building (High-Rise) - (226 dwelling units) – ITE Land Use Code 222			
In/Out/Rate	62%	38%	0.32
Vehicle Trips	43	27	70
Single-Family Attached units – (18 units) – ITE Land Use Code 215			
In/Out/Rate	59%	41%	0.57
Vehicle Trips	6	5	11
Total Vehicle Trips	49	32	81
Modal Split	14%	14%	14%
Non-auto trips	7	4	11
Total Person Trips	56	36	92

The proposed residential development is projected to generate 92 total trips during the weekday PM peak hour.

4.2 Vehicle Trip Distribution & Assignment

The vehicle trips generated by the proposed development 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 5 lists the trip distribution applied to the vehicle trips generated by the proposed residential development within the study area.

Table 5: Trip Distribution

To/From:	Trip Distribution %
West: Wyandotte Street East towards Lauzon Road	65%
East: Wyandotte Street East towards Banwell Road	25%
North: Florence Avenue towards Riverside Drive East	0%
North: Clover Street towards Riverside Drive East	10%
TOTAL	100%

Given the layout of the proposed development, all site trips will need to access the road network via the proposed driveway to Wyandotte Street East. ***Table 6*** summarizes the assumptions utilized for the purpose of trip assignment.

Table 6: Trip Assignment Assumptions

To/From:	Trip Assignment Assumptions
West	All vehicles heading west will utilize Wyandotte Street East
East	Vehicles heading east are envisioned to head towards Banwell Road using Wyandotte Street East or the future Clover Avenue extension and Little River Boulevard
North	All vehicles are projected to use Clover Street. It is assumed that no vehicles will use Florence Avenue as Clover Street provides direct access to Riverside Drive East and is in closer proximity to the proposed development
Other notes	No vehicles will travel to/from the south via the future Florence Avenue Extension

4.3 Site-Generated Vehicle Trips

Figure 8 illustrates how these vehicle trips were distributed and assigned through the study area intersections and site driveway.

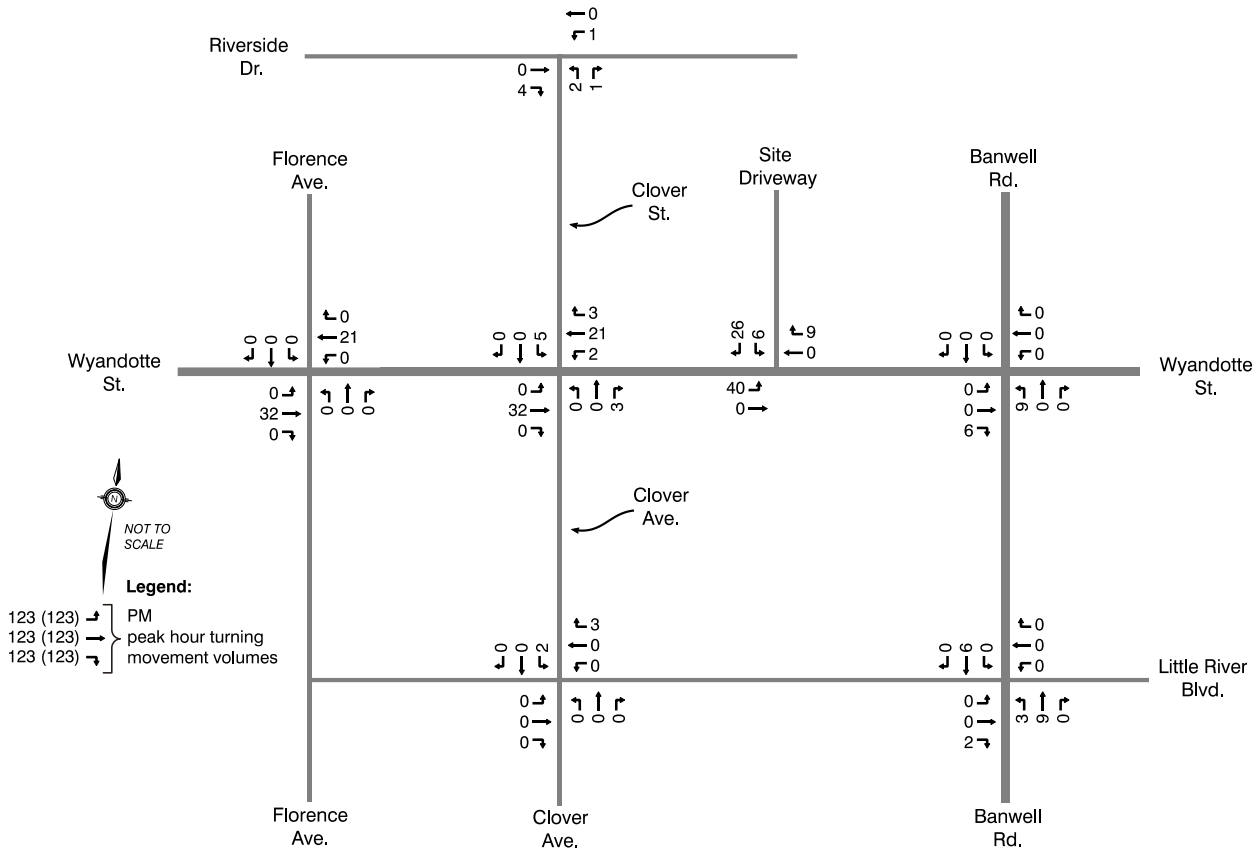


Figure 8: Site-Generated Trips

5.0 Total Future Conditions

5.1 Total Future Traffic Volumes

The total future traffic volumes were calculated by adding the site trips to the future background traffic volumes for the 2026 and 2031 horizon years.

5.1.1 Total Future (2026) Traffic Volumes

Figure 9 illustrates the total future (2026) traffic volumes.

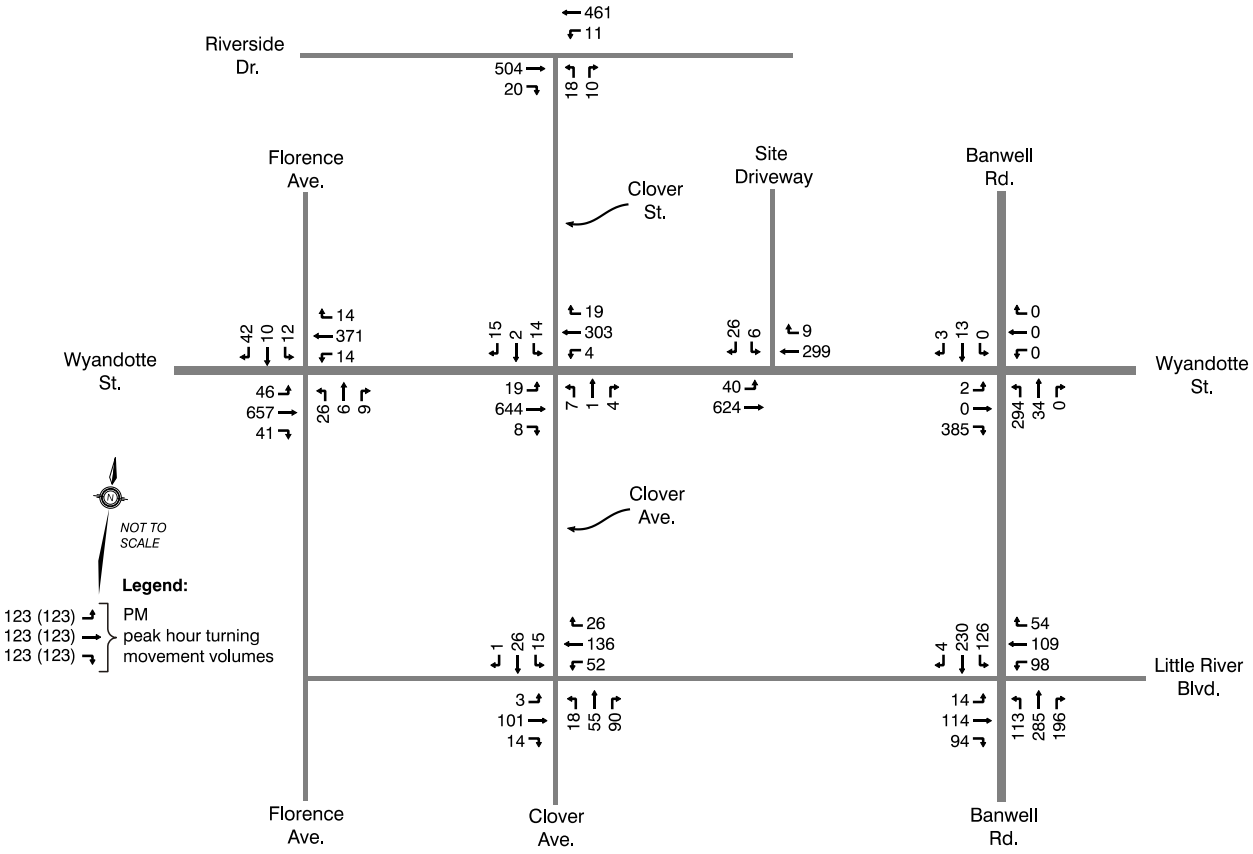


Figure 9: Total Future (2025) Traffic Volumes

5.1.2 Total Future (2031) Traffic Volumes

Figure 10 illustrates the total future (2031) traffic volumes.

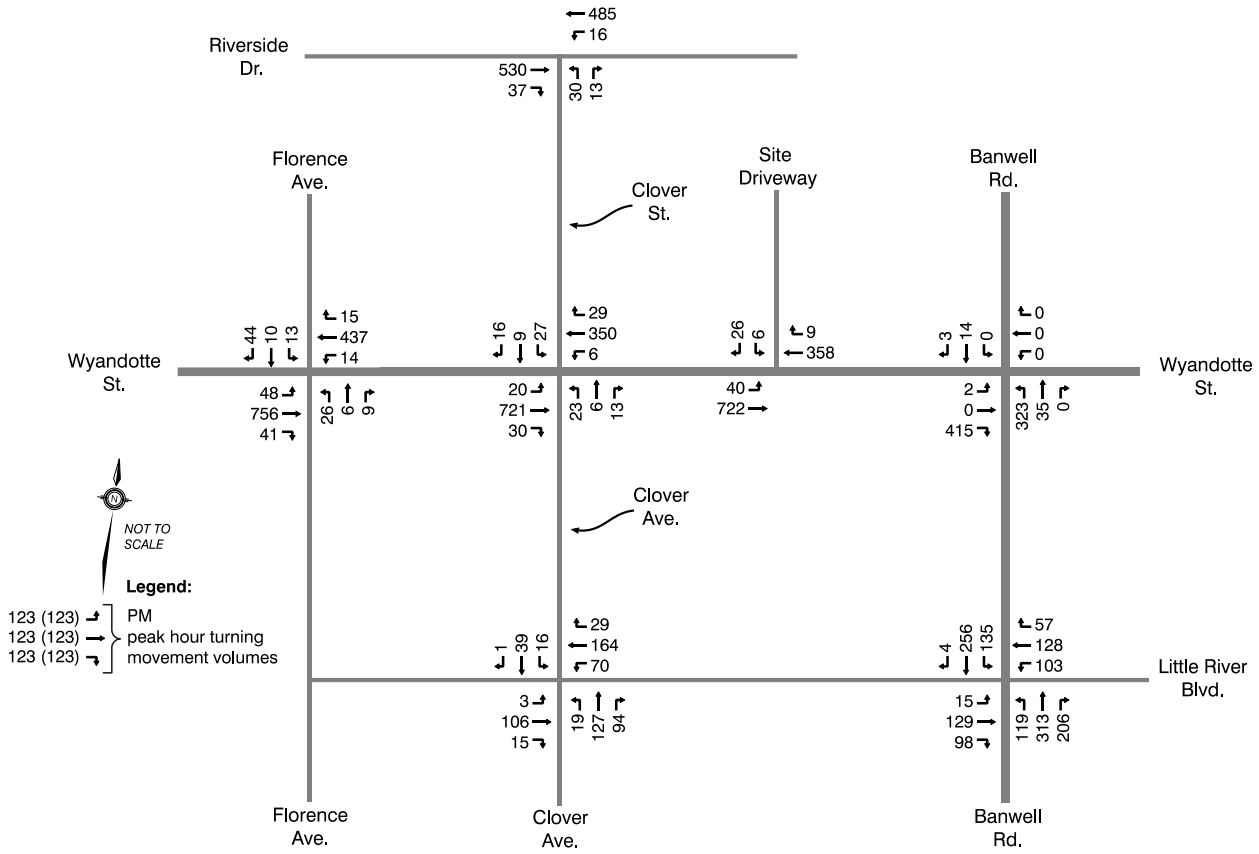


Figure 10: Total Future (2031) Traffic Volumes

6.0 Intersection Operations

Intersection operational analyses were completed for the study area intersections using Trafficware's Synchro software (version 11).

For each movement, the volume-to-capacity ratio, level of service, average delay and 95th percentile queue was noted. The 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 at an unsignalized intersection operating at LOS E or LOS F
- Any turning movement with a 95th percentile queue exceeding the available storage

6.1 Riverside Drive and Clover Avenue

Table 7 summarizes the operations at the Riverside Drive and Clover Avenue intersection.

Table 7: Intersection Operations - Riverside Drive and Clover Avenue

Movement	PM peak hour			
	v/c	LOS	Delay *(s/veh)*	95th %ile queue *(m)*
Existing (2024)				
NB approach	0.07	C	17.1	2
Future Background (2026)				
NB approach	0.09	C	18.0	2
Total Future (2026)				
NB approach	0.11	C	18.6	3
Future Background (2031)				
NB approach	0.17	C	21.4	5
Total Future (2031)				
NB approach	0.18	C	22.1	5

The northbound approach at the Riverside Drive and Clover Avenue intersection is projected to operate in a reasonable manner (LOS C) through to the 2031 horizon year. Minimal delays and queues are anticipated.

6.2 Wyandotte Street East and Florence Avenue

Table 8 summarizes the operations at the Wyandotte Street East and Florence Avenue intersection.

For the future background intersection operations for both the 2026 and 2031 horizon year, it has been assumed that new left-turn lanes on Wyandotte Avenue East will be introduced due to the proposed extension of Florence Avenue south of Wyandotte Avenue East. The Florence Avenue extension is anticipated to be completed by 2026. Therefore, the new left-turn lanes have been incorporated into the 2026 and 2031 horizon years.

Table 8: Intersection Operations - Wyandotte Street East and Florence Avenue

Movement	PM peak hour			
	v/c	LOS	Delay *(s/veh)*	95th %ile queue *(m)*
Existing (2024)				
SB approach	0.12	B	13.8	3
EB left	0.04	A	8.2	1
Future Background (2026)				
NB approach	0.29	E	37.7	9
SB approach	0.23	C	20.1	7
EB left	0.04	A	8.2	1
WB left	0.02	A	9.2	0
Total Future (2026)				
NB approach	0.32	E	42.1	10
SB approach	0.24	C	21.5	8
EB left	0.04	A	8.3	1
WB left	0.02	A	9.3	0
Future Background (2031)				
NB approach	0.40	F	55.9	13
SB approach	0.30	D	26.0	10
EB left	0.05	A	8.5	1
WB left	0.02	A	9.6	1
Total Future (2031)				
NB approach	0.44	F	64.3	15
SB approach	0.32	D	28.4	11
EB left	0.05	A	8.5	1
WB left	0.02	A	9.7	1

Under existing conditions, the southbound approach currently operates at a good level of service (LOS B). The eastbound left-turn operates at an excellent LOS (LOS A). Minimal delays and queues are present.

In the short term (2026) under future background conditions, the new south leg (northbound approach) is anticipated to operate with a critical LOS (LOS E), but well under capacity with a v/c ratio of 0.29. All other movements are anticipated to operate with LOS C or better and minimal delay and queuing.

The additional background traffic projected to 2031 is anticipated to change the level of service for the northbound approach from LOS E to LOS F. The southbound approach operations are also expected to

worsen from LOS C to LOS D. Both the eastbound and westbound left-turn movements are projected to operate at LOS A.

Traffic generated by the subject site is not anticipated to significantly impact this intersection. The increase in overall delay is anticipated to be negligible (no greater than a 2 second increase for all movements) and all individual movements, except for the northbound approach are anticipated to continue operating at good levels of service.

6.3 Wyandotte Street East and Clover Street

Table 9 summarizes the operations at the Wyandotte Street East and Clover Street intersection.

For the future background intersection operations for both the 2026 and 2030 horizon year, it has been assumed that new left-turn lanes on Wyandotte Avenue East will be introduced due to the proposed extension of Clover Street south of Wyandotte Avenue East. The extension will be known as Clover Avenue. The Clover Avenue extension is anticipated to be completed by 2026. Therefore, the new left-turn lanes have been incorporated into the 2026 and 2031 horizon years.

Table 9: Intersection Operations - Wyandotte Street East and Clover Street

Movement	PM peak hour			
	v/c	LOS	Delay *(s/veh)*	95th %ile queue *(m)*
Existing (2024)				
NB approach	0.00	C	21.0	0
SB approach	0.04	B	12.1	1
Future Background (2026)				
NB approach	0.05	C	22.7	1
SB approach	0.08	C	16.0	2
EB left	0.02	A	8.0	0
WB left	0.00	A	8.9	0
Total Future (2026)				
NB approach	0.06	C	22.1	2
SB approach	0.11	C	18.9	3
EB left	0.02	A	8.0	0
WB left	0.00	A	9.1	0
Future Background (2031)				
NB approach	0.23	D	30.5	7
SB approach	0.24	D	26.9	7
EB left	0.02	A	8.1	1
WB left	0.00	A	9.3	0
Total Future (2031)				
NB approach	0.27	D	33.2	8
SB approach	0.30	D	32.6	10
EB left	0.02	A	8.2	1
WB left	0.01	A	9.5	0

Under existing conditions, the northbound approach (which serves an existing single detached house) currently operates at a reasonable level of service (LOS C) while the southbound approach operates at a good level of service (LOS B).

In all future horizon years and with the addition of site traffic, individual movements are projected to operate at LOS D or better with no critical movements.

6.4 Wyandotte Street East and Banwell Road

Table 10 summarizes the operations at the Wyandotte Street East and Banwell Road intersection.

Table 10: Intersection Operations - Wyandotte Street East and Banwell Road

Movement	PM peak hour			
	v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Existing (2024)				
NB approach	0.43	B	13.7	18
SB approach	0.03	B	11.2	1
Future Background (2026)				
NB approach	0.49	B	14.7	21
SB approach	0.03	B	11.4	1
Total Future (2026)				
NB approach	0.50	C	15.0	23
SB approach	0.03	B	11.5	1
Future Background (2031)				
NB approach	0.54	C	16.2	26
SB approach	0.03	B	11.7	1
Total Future (2031)				
NB approach	0.56	C	16.6	28
SB approach	0.03	B	11.8	1

The northbound and southbound approach at Wyandotte Street East and Banwell Road are projected to operate at a good LOS (LOS B) with minimal delay and queuing. In all future horizon years, the approaches are anticipated to operate at LOS C or better with no critical movements.

6.5 Little River Boulevard and Clover Avenue

Table 11 summarizes the operations at the Little River Boulevard and Clover Avenue intersection.

Table 11: Intersection Operations - Little River Boulevard and Clover Avenue

Movement	PM peak hour			
	v/c	LOS	Delay *(s/veh)*	95th %ile queue *(m)*
Existing (2024)				
NB approach	0.19	B	10.8	6
SB approach	0.07	B	12.8	2
Future Background (2026)				
NB approach	0.26	B	12.2	8
SB approach	0.09	B	13.7	3
Total Future (2026)				
NB approach	0.26	B	12.2	8
SB approach	0.10	B	13.9	3
Future Background (2031)				
NB approach	0.46	C	16.7	19
SB approach	0.15	C	16.1	4
Total Future (2031)				
NB approach	0.46	C	16.8	20
SB approach	0.16	C	16.5	5

The northbound and southbound approach at Little River Boulevard and Clover Avenue are projected to operate at a good LOS (LOS B) with minimal delay and queuing. In all future horizon years, the approaches are anticipated to operate at LOS C or better with no critical movements.

6.6 Little River Boulevard and Banwell Road

Table 12 summarizes the operations at the Little River Boulevard and Banwell Road intersection.

Table 12: Intersection Operations - Little River Boulevard and Banwell Road

Movement	PM peak hour v/c	LOS	Delay (s/veh)	95th %ile queue (m)
Existing (2024)				
NB through	0.81	E	35.5	8
NB right	0.39	B	13.6	2
SB approach	0.75	D	29.3	6
EB approach	0.48	C	17.6	3
WB approach	0.57	C	20.3	4
Future Background (2026)				
NB through	0.91	F	51.7	10
NB right	0.42	B	14.6	2
SB approach	0.82	E	37.3	8
EB approach	0.54	C	19.9	3
WB approach	0.63	C	23.8	4
Total Future (2026)				
NB through	0.95	F	59.4	11
NB right	0.42	B	14.9	2
SB approach	0.84	E	40.3	8
EB approach	0.55	C	20.6	3
WB approach	0.64	C	24.5	4
Future Background (2031)				
NB through	1.06	F	95.0	15
NB right	0.48	C	17.2	3
SB approach	0.97	F	62.0	11
EB approach	0.64	D	25.4	4
WB approach	0.75	D	32.5	6
Total Future (2031)				
NB through	1.11	F	109.0	17
NB right	0.48	C	17.4	3
SB approach	1.00	F	66.9	12
EB approach	0.65	D	26.1	4
WB approach	0.76	D	33.3	6

Even though there is only a single approach lane for southbound movements at this intersection, the radius and lane widths are generous enough that a right-turning vehicle can slip around another vehicle waiting to turn left or travel through the intersection. The HCM methodology refers to these conditions as “right turn flares”. Since a southbound right-turn lane is not marked on the pavement, the intersection was analyzed as a single southbound lane; however, actual conditions in the field may be better since a southbound right turning motorist can utilize the “right turn flare” space simultaneously with a southbound through or left-turning motorist.

Under existing conditions, the northbound through movement operates with a critical LOS E, but under capacity with a v/c ratio of 0.81. All other movements operate at a LOS D or better.

Under future background conditions in the short term (2026), the northbound through movement is expected to worsen from LOS E to LOS F, but operate under capacity with a v/c ratio of 0.91. The southbound approach is anticipated to begin operating at LOS E.

Under 2031 future background volumes, the northbound through movement is anticipated to begin operating over capacity with a v/c ratio of 1.06. The level of service for the southbound approach is anticipated to change from LOS E to LOS F, with v/c ratio of 0.97.

Traffic generated by the subject site is not anticipated to significantly impact this intersection. The southbound approach is anticipated to begin operating at capacity, with a v/c ratio of 1.00. However, this movement was deemed critical as a result of background traffic growth. No critical movements result from the addition of site traffic.

6.7 Site Driveway

Table 13 summarizes the operations at the proposed site driveway on Wyandotte Street East.

Table 13: Intersection Operations - Proposed Site Driveway

Movement	PM peak hour			
	v/c	LOS	Delay *(s/veh)*	95th %ile queue *(m)*
Total Future (2026)				
SB approach	0.07	B	12.7	2
Total Future (2031)				
SB approach	0.08	B	14.1	2

The southbound stop-controlled approach at the proposed Wyandotte Street East driveway is projected to operate at a good level of service (LOS B), with 95th percentile queues not exceeding a single vehicle.

7.0 Mitigation

7.1 Little River Boulevard and Banwell Road

Even though there is only a single approach lane for southbound movements at this intersection, the radius and lane widths are generous enough that a right-turning motorist can slip around another vehicle waiting to turn left or travel through the intersection. The HCM methodology refers to these conditions as “right turn flares”. Since a southbound right-turn lane is not currently marked on the pavement, the intersection was analyzed as a single southbound through lane.

To improve conditions at the Little River Boulevard and Banwell Road intersection, consideration should be given to change the traffic control from an all-way STOP control to a signal.

7.1.1 Traffic Signal Warrant

As per the guidelines provided within the Ontario Traffic Manual: Book 12 – *Traffic Signals*, there are a few ways to conduct a traffic signal warrant depending on the amount of traffic volume data available.

If volumes from a full eight-hour count are used, then Justifications 1 through 3 are used. Justification 4 considers traffic volumes during the busiest four hours of the day. If only the peak hour volumes are available or utilized, then Justification 7 is used (which looks at the warrant from an average hourly volume (AHV) perspective).

Given the context of the study area, the traffic signal warrant was conducted using the base traffic volumes prescribed under the restricted flow (urban) conditions, which is utilized for roads with operating speeds of less than 70 km/hr.

7.1.1.1 Justification 7: Using Average Hourly Volumes

Average hourly volumes (AHV) were used in the Justification 7 calculations. Only PM peak hour volumes were collected for the purpose of this TIS. Based on the guidelines within OTM Book 12, the PM peak hour volumes can be converted into average hourly volume for a typical day using the following formula:

$$AHV = \frac{PHV}{2}$$

Given the intersection of Little River Boulevard and Banwell Road is an existing intersection, and when average hourly volumes are used, the methodology of OTM Book 12 notes that the traffic signal warrants needs to use Justification 7. With this justification, the traffic signal warrant requires that 120% of the warrant must be met. There are two parts of the warrant that need to be met, the first is confirming there is sufficient minimum volume (Justification 1) while there also needs to be a delay to cross traffic (Justification 2).

The signal warrant was completed using the future horizon year volumes. **Table 14** provides a summary of the signal warrant results using Justification 7.

Table 14: Traffic Signal Warrant - Justification 7, Little River Boulevard and Banwell Road

	Future Background (2026)	Total Future (2026)	Future Background (2031)	Total Future (2031)
Justification 7 – Part 1 %	82%	89%	83%	90%
Justification 7 – Part 2 %	118%	119%	129%	130%
Warranted?	**NO**	**NO**	**YES**	**YES**

Considering the forecast hourly volumes for this intersection for all future horizon years, a traffic signal will be warranted at this location starting in 2031 when Justification 7 is used, as justification 2 exceeds 120% of the thresholds.

7.2 Eastbound Left-Turn Lane at Site Driveway

An analysis of the need for a left-turn lane on Wyandotte Street East at the site driveway was undertaken using the warrant methodology published by the Ministry of Transportation, Ontario (MTO) in their design supplement to the Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads,* 2017.

Since the posted speed limit is 50 km/h on Wyandotte Avenue East fronting the proposed development, a 60 km/h design speed (posted speed limit + 10 km/h) was utilized in the warrant calculations.

Figure 11 shows the left-turn lane warrant results when considering the total future (2031) traffic volumes during the PM peak hour.

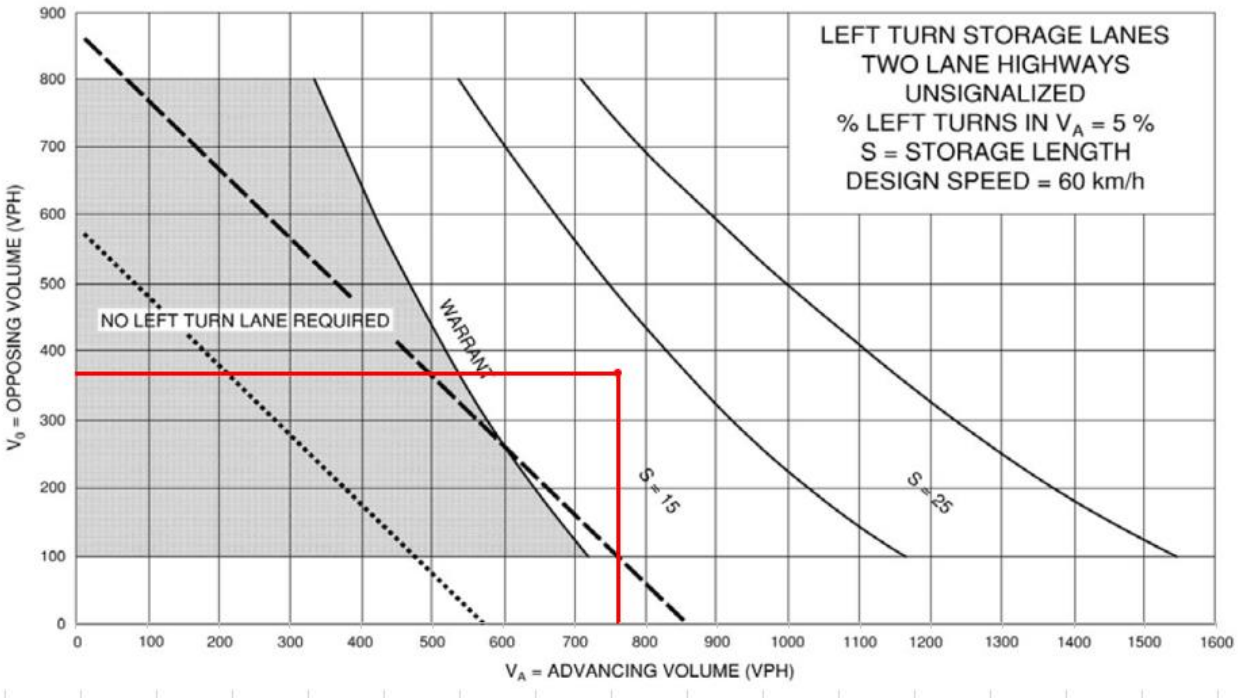


Figure 11: Eastbound Left-Turn Lane Warrant Results – Total Future (2031) Traffic Volumes

The left-turn lane warrant analysis concluded that an eastbound left-turn lane with 15 metres of storage is warranted at the proposed site driveway.

8.0 Summary

Dillon Consulting Limited (Dillon) has been retained by Lakefront Heights Inc. (the "client") to undertake a transportation impact study (TIS) which reviews the impact of a proposed residential development in the city of Windsor, Ontario. The proposed residential development is located to the immediate south of the existing Riverside Sportsman Club.

This proposed development, which contains 239 residential dwelling units, features 220 dwelling units within a 13-storey residential building and the remaining dwelling units would be in the form of 19 townhouse units. A single driveway to Wyandotte Street East is proposed. No access is proposed to the north (and through the existing Riverside Sportsman Club).

The proposed development is forecast to generate 81 vehicle trips in the PM peak hour (49 inbound, 32 outbound). A small number of trips are also projected to be in the form of walking, cycling or transit trips.

Ultimately, Clover Street and Florence Avenue will be extended south of Wyandotte Avenue East, with both extensions expected to be completed by the 2026 horizon year.

The intersection of Wyandotte Street East and Florence Avenue is projected to have critical movements starting in 2026 resulting from future background growth.

The intersection of Little River Boulevard and Banwell Road is anticipated to have critical movements under existing conditions. A signal warrant analysis was undertaken and it was found that a traffic signal will be warranted at this location starting in 2031 when Justification 7 is used, as justification 2 exceeds 120% of the thresholds.

Acceptable levels of vehicle delay and queuing are projected at the remaining intersections, as well as at the proposed site driveway.

At the proposed site driveway, an eastbound left-turn lane on Wyandotte Street East with 15 metres of storage is warranted.

Appendix A

Conceptual Development Plan

SITE DATA MATRIX

BUILDING INFORMATION		ZONING DATA	REQUIRED	PROVIDED
BUILDING CLASSIFICATION	GROUP C - RESIDENTIAL	MINIMUM LOT AREA	NA	16,633 SM
FACING STREET(S)	1	MINIMUM LOT FRONTAGE	NA	129.4 m
PRINCIPAL ENTRY	SEE PLAN	MINIMUM LOT DEPTH	NA	116.2 m
PRIMARY FIREFIGHTER'S ENTRY	SEE PLAN			
BARRIER FREE ENTRY	SEE PLAN	**SETBACKS**		
		FRONT YARD	6.0 m	6.0 m
BUILDING AREA		INTERIOR SIDE YARD	6.0 m	6.0 m
FIRST FLOOR TO SECOND FLOOR	100,546 SF / 9,341 SM	INTERIOR SIDE YARD	6.0 m	6.0 m
THIRD FLOOR	90,955 SF / 8,450 SM	REAR YARD	7.5 m	7.5 m
FOURTH FLOOR TO TENTH FLOOR	30,765 SF / 2,858 SM	MAX. BUILDING HEIGHT	62.0 m	33.6 m
ELEVENTH FLOOR	19,547 SF / 1,816 SM			
TOTAL BUILDING	526,936 SF / 48,954 SM	MAX. LOT COVERAGE	NA	56%
		LANDSCAPE OPEN SPACE	NA	34%
SITE INFORMATION		MAX. GROSS FLOOR AREA RATIO	4:1	3.1
CURRENT ZONING	CD1.5 - CLUB			
PROPOSED USE	RD3.9	**PARKING**		
		PARKING PROVIDED	TABLE 24.20.5.1 277	304
BUILDING INFORMATION - MULTIPLE DWELLING UNITS		VISITOR PARKING	24.22.1.1 41	68
TOWN HOUSE UNITS	19	BARRIER FREE (TYPE A)	TABLE 24.24.1 4	4
1 BR UNITS	70	BARRIER FREE (TYPE B)	TABLE 24.24.1 4	4
2 BR UNITS	140	BICYCLE SPACES	TABLE 24.30.1 15	56
3 BR UNITS	10	LOADING SPACES	TABLE 24.40.1.5 4	4
TOTAL	239			

LEGEND

- LANDSCAPING (SEE LANDSCAPE DRAWINGS)
- ASPHALT SURFACE
- EXISTING BUILDING COVERAGE
- CONCRETE SURFACE
- NEW BUILDING COVERAGE

B.F. - "BARRIER FREE PARKING" SIGN
F.R. - "FIRE-ROUTE - NO PARKING" SIGN
B.D.O. - "BUS DROP OFF ZONE" SIGN
S.S. - "STOP" SIGN

REFER TO PLAN FOR LOCATION OF ALL SIGNAGE
(REVIEW w/ ARCHITECT PRIOR TO FINAL PLACEMENT)

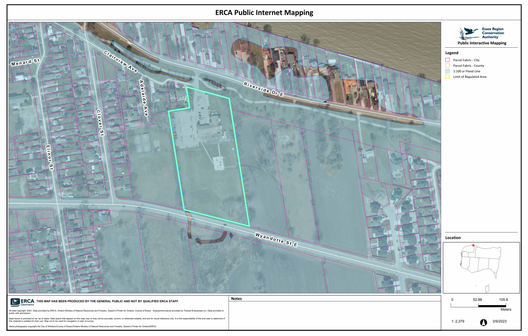
NOTES:
1. REFER TO CIVIL DRAWINGS FOR ALL PAVEMENT MATERIAL PROFILES AND BASE MATERIALS

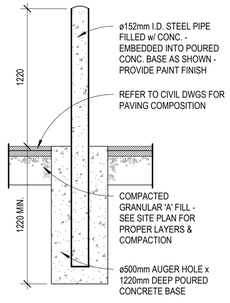
2. REFER TO LANDSCAPE PLAN FOR LANDSCAPE INFORMATION.

3. REFER TO CIVIL DRAWINGS FOR ALL PROPOSED GRADES.

4. ALL CONCRETE APRONS AT EXTERIOR DOOR OPENINGS TO MEET FLUSH (BARRIER FREE).

5. PROVIDE BARRIER FREE CURB DROPS WHERE SIDEWALKS MEET ASPHALT PAVEMENT.





TYP. BOLLARD DETAIL
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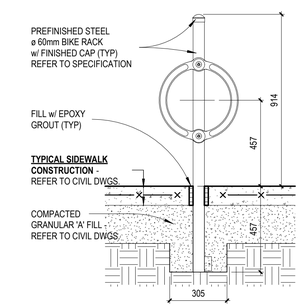

TYP. BIKE RACK DETAIL
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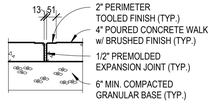
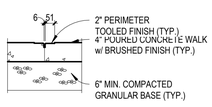
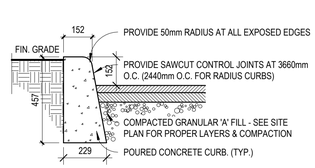


EXPANSION JOINT DETAIL

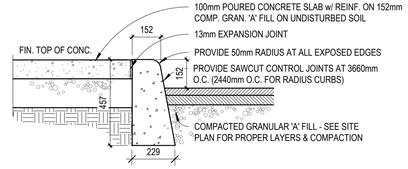


CONTROL JOINT DETAIL

CONC. SIDEWALK JOINT DETAILS
SCALE: 1 : 15

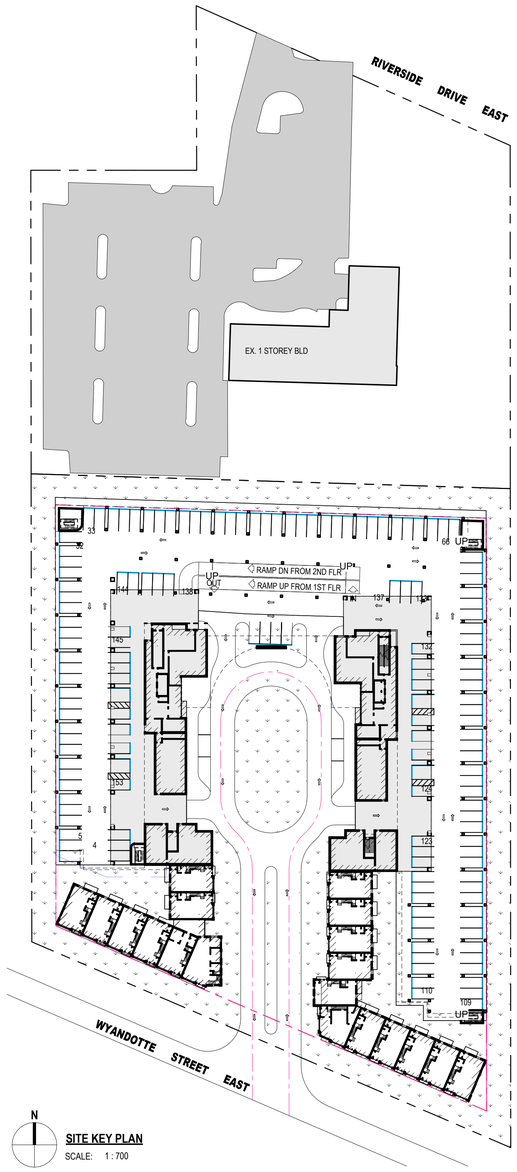


TYP. DETAIL GRADE CURB/ASPHALT



TYP. DETAIL SIDEWALK/ASPHALT

TYP. CURB DETAILS
SCALE: 1 : 15



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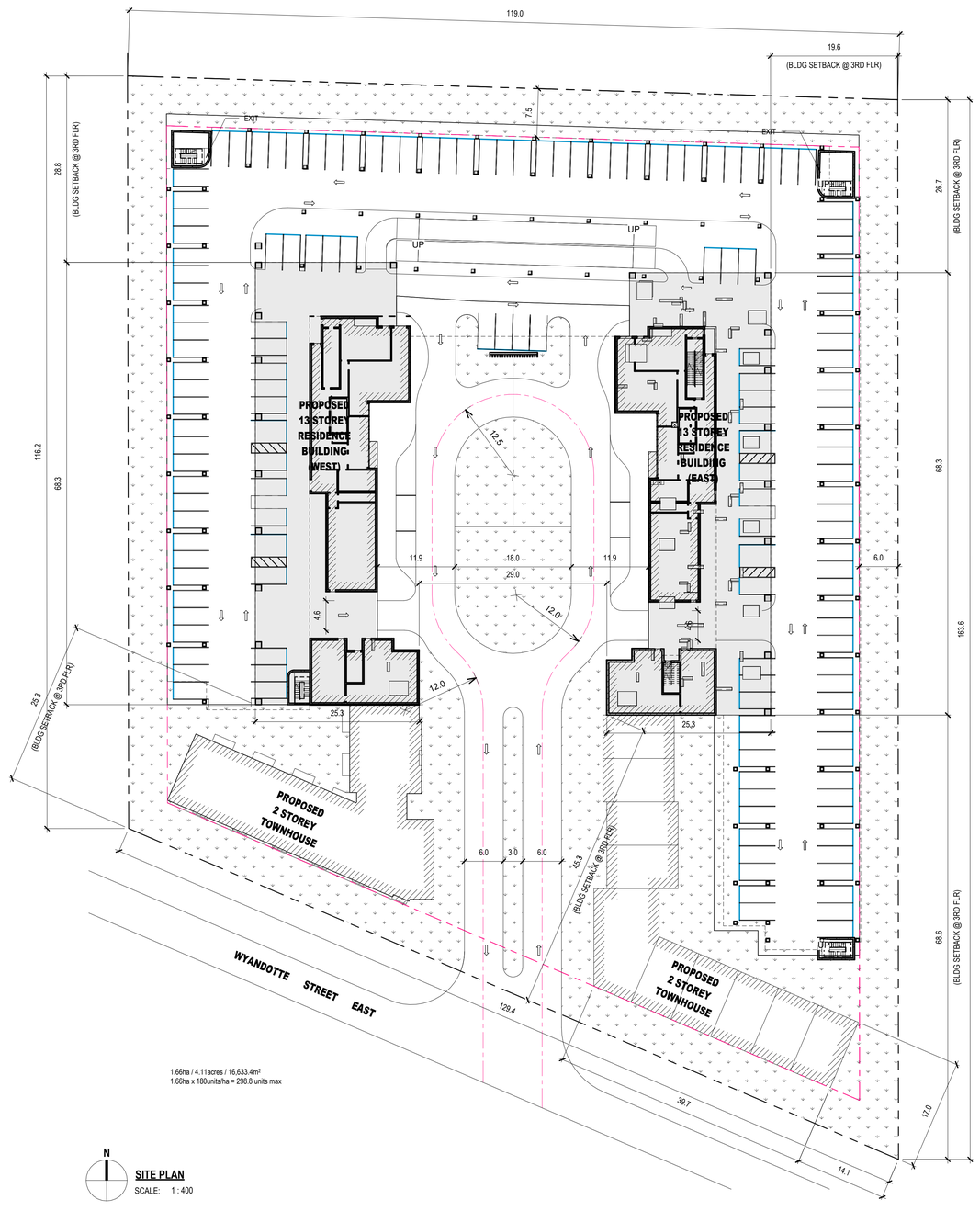
SITE KEY PLAN
SCALE: 1 : 700



1.66ha / 4.11acres / 16,633.4m²
1.66ha x 180units/ha = 298.8 units max

N
SITE PLAN
SCALE: 1 : 400

architectura a+e
180 Eugenie Street West
Windsor, ON N8X 2X6
519.258.1390

Issued For (YYYY.MM.DD)

Revision Schedule
No. | Description | Date

SHEET NAME
ARCHITECTURAL SITE PLAN

Lankor Horizons Development
Lakefront Heights
Wyandotte Street East - Sportsman Club

Drawn By Ai | Checked By Ai
Project No 2259
Sheet No **A101**

Appendix B

Traffic Volume Data

Horizon Data Services Ltd

(416) 840-6619

Your Traffic Count Specialist

File Name : Riverside Drive at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

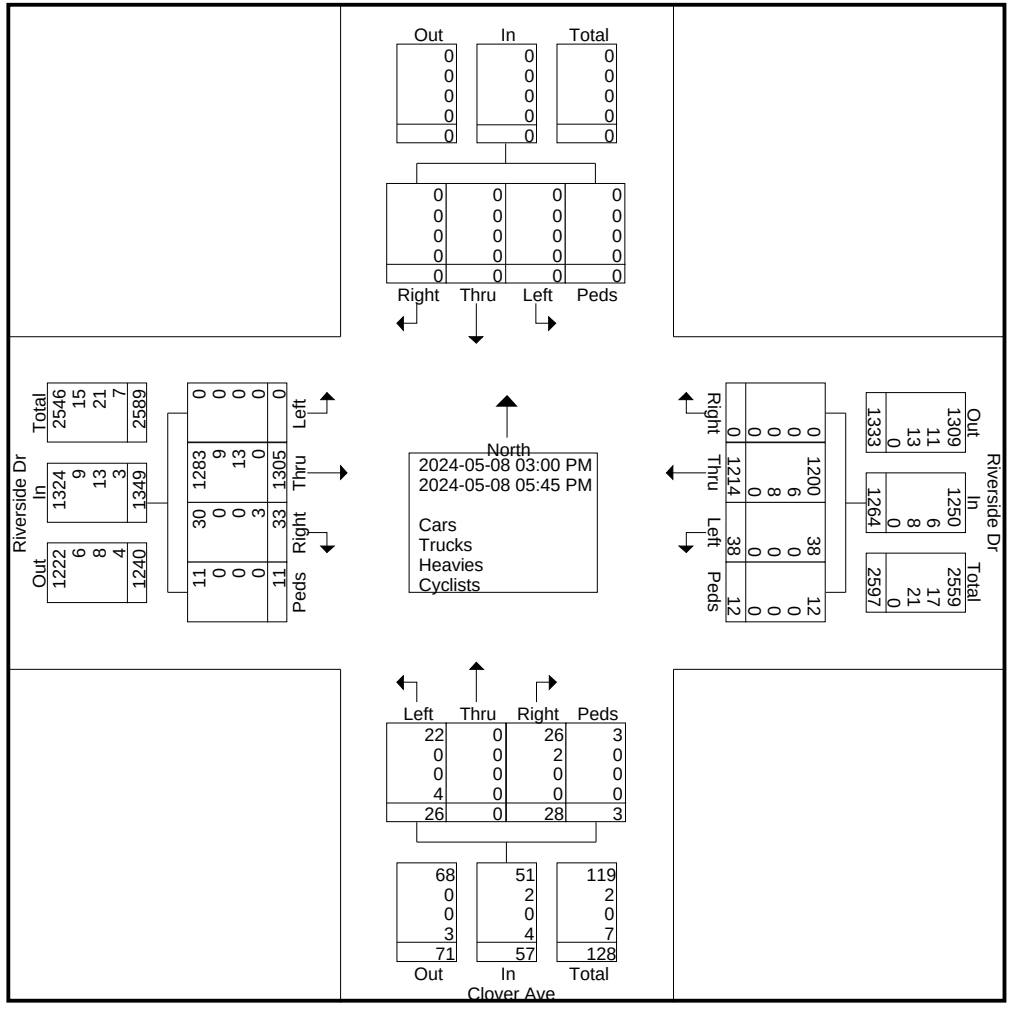
	From North					Riverside Dr From East					Clover Ave From South					Riverside Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	101	7	0	108	3	0	1	0	4	3	108	0	3	114	226
03:15 PM	0	0	0	0	0	0	124	5	2	131	1	0	5	0	6	3	126	0	0	129	266
03:30 PM	0	0	0	0	0	0	92	4	0	96	2	0	3	0	5	5	92	0	2	99	200
03:45 PM	0	0	0	0	0	0	103	2	0	105	3	0	5	0	8	5	110	0	0	115	228
Total	0	0	0	0	0	0	420	18	2	440	9	0	14	0	23	16	436	0	5	457	920
04:00 PM	0	0	0	0	0	0	86	3	2	91	6	0	0	0	6	2	111	0	0	113	210
04:15 PM	0	0	0	0	0	0	110	0	4	114	3	0	2	0	5	3	119	0	2	124	243
04:30 PM	0	0	0	0	0	0	95	3	0	98	1	0	2	0	3	4	114	0	0	118	219
04:45 PM	0	0	0	0	0	0	112	3	0	115	1	0	4	0	5	0	97	0	0	97	217
Total	0	0	0	0	0	0	403	9	6	418	11	0	8	0	19	9	441	0	2	452	889
05:00 PM	0	0	0	0	0	0	109	2	0	111	3	0	3	0	6	3	135	0	0	138	255
05:15 PM	0	0	0	0	0	0	98	2	4	104	2	0	0	0	2	2	100	0	0	102	208
05:30 PM	0	0	0	0	0	0	89	5	0	94	1	0	0	3	4	2	125	0	2	129	227
05:45 PM	0	0	0	0	0	0	95	2	0	97	2	0	1	0	3	1	68	0	2	71	171
Total	0	0	0	0	0	0	391	11	4	406	8	0	4	3	15	8	428	0	4	440	861
Grand Total	0	0	0	0	0	0	1214	38	12	1264	28	0	26	3	57	33	1305	0	11	1349	2670
Apprch %	0	0	0	0		0	96	3	0.9		49.1	0	45.6	5.3		2.4	96.7	0	0.8		
Total %	0	0	0	0	0	0	45.5	1.4	0.4	47.3	1	0	1	0.1	2.1	1.2	48.9	0	0.4	50.5	
Cars	0	0	0	0	0	0	1200	38	12	1250	26	0	22	3	51	30	1283	0	11	1324	2625
% Cars	0	0	0	0	0	0	98.8	100	100	98.9	92.9	0	84.6	100	89.5	90.9	98.3	0	100	98.1	98.3
Trucks	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	9	0	0	9	17
% Trucks	0	0	0	0	0	0	0.5	0	0	0.5	7.1	0	0	0	3.5	0	0.7	0	0	0.7	0.6
Heavies	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	13	0	0	13	21
% Heavies	0	0	0	0	0	0	0.7	0	0	0.6	0	0	0	0	0	0	1	0	0	1	0.8
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	3	0	0	0	3	7
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	15.4	0	7	9.1	0	0	0	0.2	0.3

Horizon Data Services Ltd

(416) 840-6619

Your Traffic Count Specialist

File Name : Riverside Drive at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 2



Horizon Data Services Ltd

(416) 840-6619

Your Traffic Count Specialist

File Name : Riverside Drive at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08

	From North					Riverside Dr From East					Clover Ave From South					Riverside Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	0	0	0	0	110	0	**4**	114	**3**	0	2	0	5	3	119	0	**2**	124	243
04:30 PM	0	0	0	0	0	0	95	**3**	0	98	1	0	2	0	3	**4**	114	0	0	118	219
04:45 PM	0	0	0	0	0	0	**112**	3	0	**115**	1	0	**4**	0	5	0	97	0	0	97	217
05:00 PM	0	0	0	0	0	0	109	2	0	111	3	0	3	0	**6**	3	**135**	0	0	**138**	**255**
Total Volume	0	0	0	0	0	0	426	8	4	438	8	0	11	0	19	10	465	0	2	477	934
% App. Total	0	0	0	0		0	97.3	1.8	0.9		42.1	0	57.9	0		2.1	97.5	0	0.4		
PHF	.000	.000	.000	.000	.000	.000	.951	.667	.250	.952	.667	.000	.688	.000	.792	.625	.861	.000	.250	.864	.916
Cars	0	0	0	0	0	0	425	8	4	437	8	0	9	0	17	10	460	0	2	472	926
% Cars	0	0	0	0	0	0	99.8	100	100	99.8	100	0	81.8	0	89.5	100	98.9	0	100	99.0	99.1
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.6	0.3
Heavies	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
% Heavies	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.4	0.3
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	18.2	0	10.5	0	0	0	0	0	0.2

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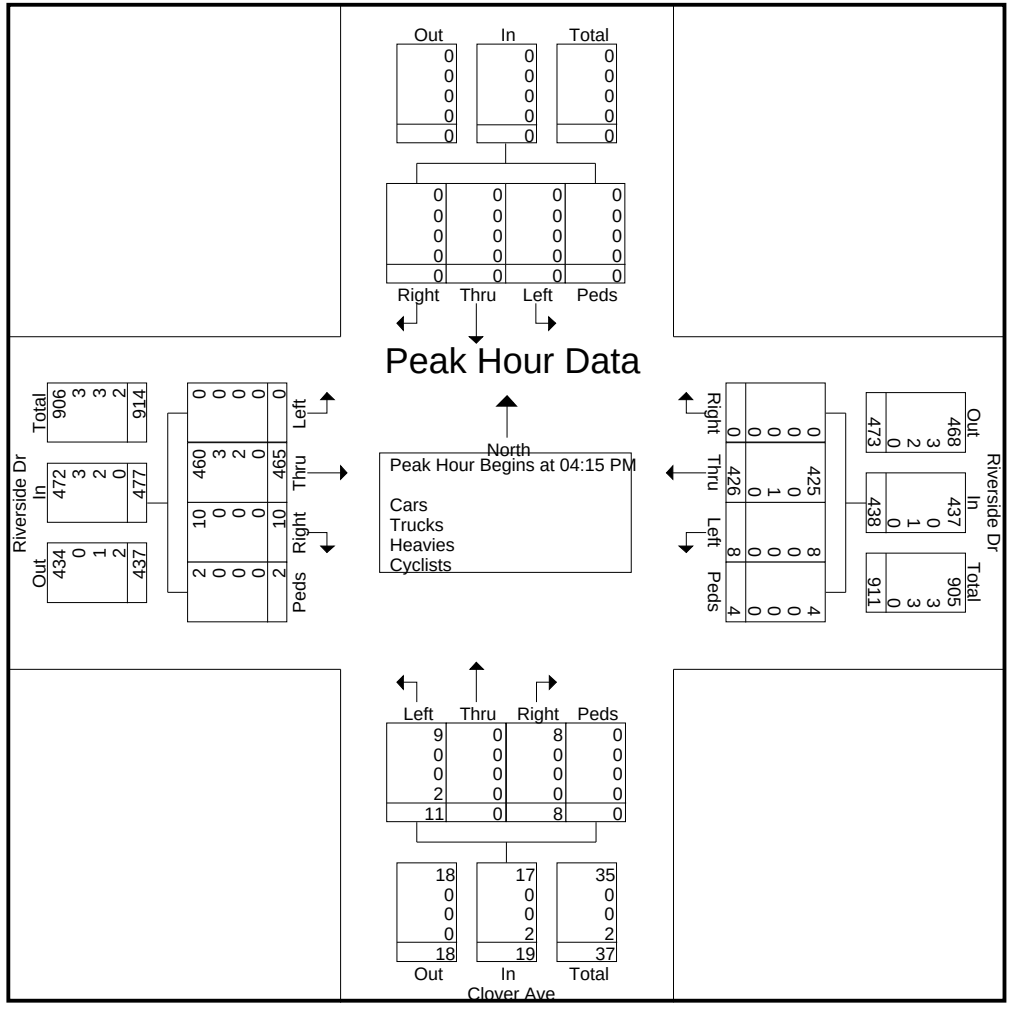
Your Traffic Count Specialist

File Name : Riverside Drive at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 4



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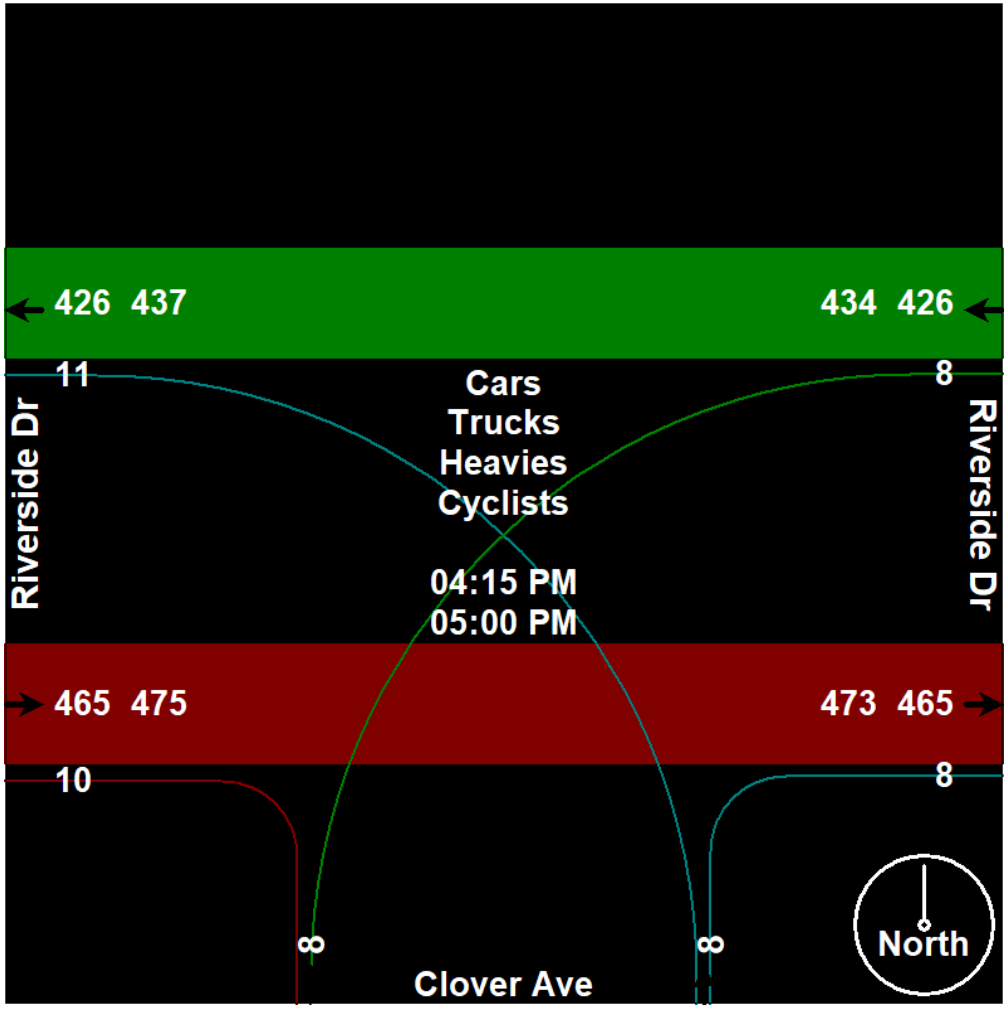
Your Traffic Count Specialist

File Name : Riverside Drive at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 5



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Your Traffic Count Specialist

File Name : Wyandotte Street E at Florence Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

	Florence Ave From North					Wyandotte St E From East					Florence Ave From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	8	0	3	0	11	4	85	0	0	89	0	1	0	0	1	0	120	4	0	124	225
03:15 PM	10	0	2	0	12	6	78	0	0	84	0	0	0	0	0	0	117	7	0	124	220
03:30 PM	6	0	5	0	11	2	51	0	1	54	0	0	0	0	0	0	113	11	0	124	189
03:45 PM	9	0	4	0	13	1	60	0	0	61	0	0	0	0	0	0	129	6	3	138	212
Total	33	0	14	0	47	13	274	0	1	288	0	1	0	0	1	0	479	28	3	510	846
04:00 PM	7	1	2	0	10	2	68	0	0	70	0	0	0	0	0	0	119	10	0	129	209
04:15 PM	8	0	7	0	15	2	70	0	0	72	0	1	0	0	1	0	126	10	0	136	224
04:30 PM	13	0	5	4	22	1	93	0	0	94	0	0	0	0	0	0	141	7	0	148	264
04:45 PM	11	0	3	0	14	3	62	0	0	65	0	0	0	0	0	0	116	13	0	129	208
Total	39	1	17	4	61	8	293	0	0	301	0	1	0	0	1	0	502	40	0	542	905
05:00 PM	10	0	1	0	11	5	75	0	0	80	0	0	0	0	0	0	161	10	0	171	262
05:15 PM	5	0	2	0	7	4	78	0	0	82	0	0	0	0	0	0	137	12	0	149	238
05:30 PM	7	0	2	0	9	5	88	0	0	93	0	0	0	0	0	0	112	10	0	122	224
05:45 PM	10	0	2	1	13	1	67	0	0	68	0	0	0	0	0	0	128	11	0	139	220
Total	32	0	7	1	40	15	308	0	0	323	0	0	0	0	0	0	538	43	0	581	944
Grand Total	104	1	38	5	148	36	875	0	1	912	0	2	0	0	2	0	1519	111	3	1633	2695
Apprch %	70.3	0.7	25.7	3.4		3.9	95.9	0	0.1		0	100	0	0		0	93	6.8	0.2		
Total %	3.9	0	1.4	0.2	5.5	1.3	32.5	0	0	33.8	0	0.1	0	0	0.1	0	56.4	4.1	0.1	60.6	
Cars	102	0	38	5	145	36	863	0	1	900	0	0	0	0	0	0	1510	111	3	1624	2669
% Cars	98.1	0	100	100	98	100	98.6	0	100	98.7	0	0	0	0	0	0	99.4	100	100	99.4	99
Trucks	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	7	0	0	7	11
% Trucks	1	0	0	0	0.7	0	0.3	0	0	0.3	0	0	0	0	0	0	0.5	0	0	0.4	0.4
Heavies	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	11
% Heavies	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0.1	0	0	0.1	0.4
Cyclists	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Cyclists	1	100	0	0	1.4	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0.1

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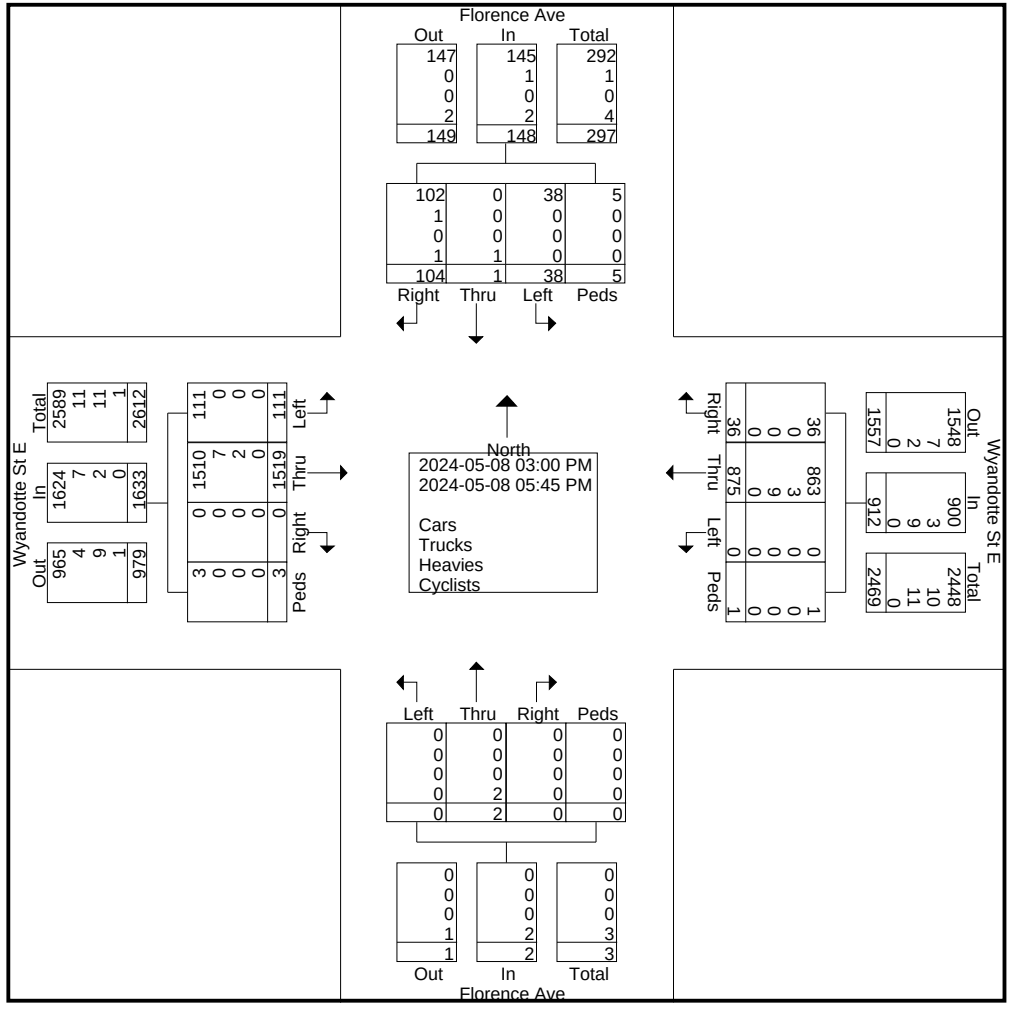
Your Traffic Count Specialist

File Name : Wyandotte Street E at Florence Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 2



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Your Traffic Count Specialist

File Name : Wyandotte Street E at Florence Avenue
Site Code : 00000000
Start Date : 2024-05-08

	Florence Ave From North					Wyandotte St E From East					Florence Ave From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	**13**	0	**5**	**4**	**22**	1	**93**	0	0	**94**	0	0	0	0	0	0	141	7	0	148	**264**
04:45 PM	11	0	3	0	14	3	62	0	0	65	0	0	0	0	0	0	116	**13**	0	129	208
05:00 PM	10	0	1	0	11	**5**	75	0	0	80	0	0	0	0	0	0	**161**	10	0	**171**	262
05:15 PM	5	0	2	0	7	4	78	0	0	82	0	0	0	0	0	0	137	12	0	149	238
Total Volume	39	0	11	4	54	13	308	0	0	321	0	0	0	0	0	0	555	42	0	597	972
% App. Total	72.2	0	20.4	7.4		4	96	0	0		0	0	0	0		0	93	7	0		
PHF	.750	.000	.550	.250	.614	.650	.828	.000	.000	.854	.000	.000	.000	.000	.000	.000	.862	.808	.000	.873	.920
Cars	38	0	11	4	53	13	306	0	0	319	0	0	0	0	0	0	552	42	0	594	966
% Cars	97.4	0	100	100	98.1	100	99.4	0	0	99.4	0	0	0	0	0	0	99.5	100	0	99.5	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0.3
Heavies	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% Heavies	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0.2
Cyclists	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	2.6	0	0	0	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

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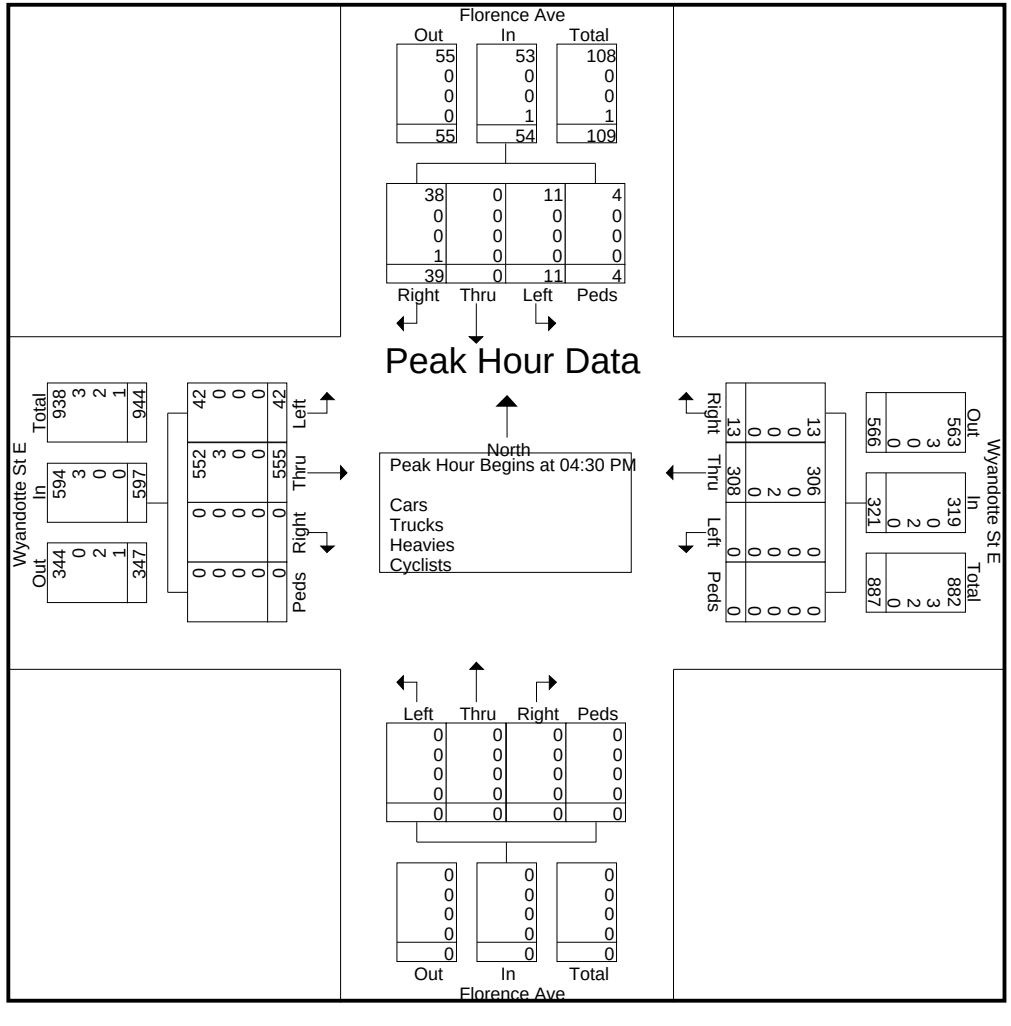
Your Traffic Count Specialist

File Name : Wyandotte Street E at Florence Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 4



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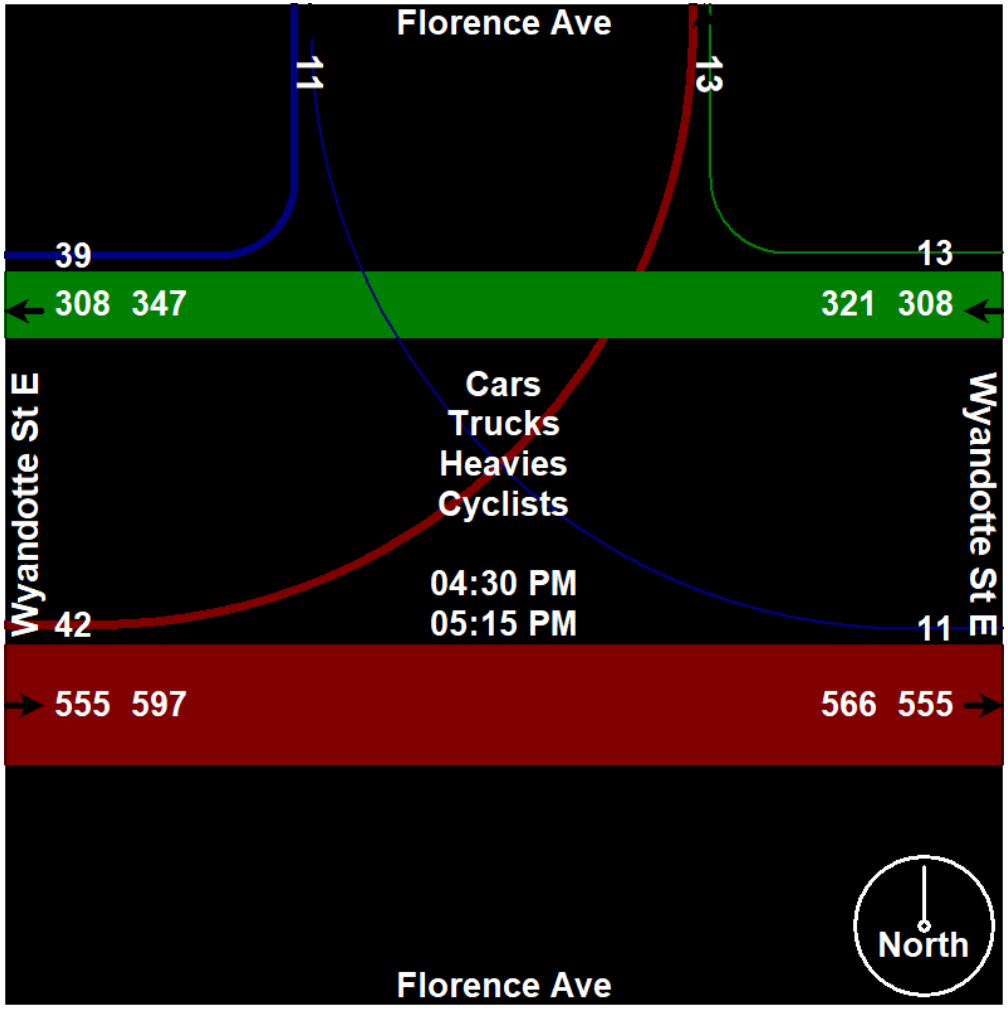
Your Traffic Count Specialist

File Name : Wyandotte Street E at Florence Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 5



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Your Traffic Count Specialist

File Name : Wyandotte Street E at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

	Clover St From North					Wyandotte St E From East					Clover St From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	5	0	3	0	8	4	84	0	0	88	0	0	0	0	0	0	115	3	0	118	214
03:15 PM	5	0	2	0	7	4	80	0	0	84	0	0	1	0	1	0	117	4	0	121	213
03:30 PM	3	0	3	0	6	5	52	0	1	58	0	0	0	0	0	0	114	4	0	118	182
03:45 PM	3	0	6	0	9	2	58	0	0	60	0	0	0	0	0	0	127	5	0	132	201
Total	16	0	14	0	30	15	274	0	1	290	0	0	1	0	1	0	473	16	0	489	810
04:00 PM	6	0	0	0	6	4	62	0	0	66	0	0	0	0	0	0	115	3	0	118	190
04:15 PM	6	0	0	0	6	1	72	0	0	73	0	0	0	0	0	0	125	2	0	127	206
04:30 PM	2	0	3	2	7	3	85	0	0	88	0	0	0	0	0	0	134	5	0	139	234
04:45 PM	4	0	0	0	4	2	57	0	0	59	0	0	0	0	0	0	119	4	1	124	187
Total	18	0	3	2	23	10	276	0	0	286	0	0	0	0	0	0	493	14	1	508	817
05:00 PM	4	0	1	0	5	5	77	0	0	82	0	0	1	0	1	0	148	4	0	152	240
05:15 PM	4	0	0	0	4	2	74	0	0	76	0	0	0	2	2	0	142	5	0	147	229
05:30 PM	7	0	3	0	10	2	85	0	0	87	0	0	0	0	0	0	110	4	0	114	211
05:45 PM	1	0	0	0	1	4	66	0	0	70	0	0	0	2	2	0	125	5	0	130	203
Total	16	0	4	0	20	13	302	0	0	315	0	0	1	4	5	0	525	18	0	543	883
Grand Total	50	0	21	2	73	38	852	0	1	891	0	0	2	4	6	0	1491	48	1	1540	2510
Apprch %	68.5	0	28.8	2.7		4.3	95.6	0	0.1		0	0	33.3	66.7		0	96.8	3.1	0.1		
Total %	2	0	0.8	0.1	2.9	1.5	33.9	0	0	35.5	0	0	0.1	0.2	0.2	0	59.4	1.9	0	61.4	
Cars	50	0	21	2	73	35	839	0	1	875	0	0	2	4	6	0	1476	48	1	1525	2479
% Cars	100	0	100	100	100	92.1	98.5	0	100	98.2	0	0	100	100	100	0	99	100	100	99	98.8
Trucks	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	6	0	0	6	10
% Trucks	0	0	0	0	0	5.3	0.2	0	0	0.4	0	0	0	0	0	0	0.4	0	0	0.4	0.4
Heavies	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	11
% Heavies	0	0	0	0	0	0	1.1	0	0	1	0	0	0	0	0	0	0.1	0	0	0.1	0.4
Cyclists	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	7	0	0	7	10
% Cyclists	0	0	0	0	0	2.6	0.2	0	0	0.3	0	0	0	0	0	0	0.5	0	0	0.5	0.4

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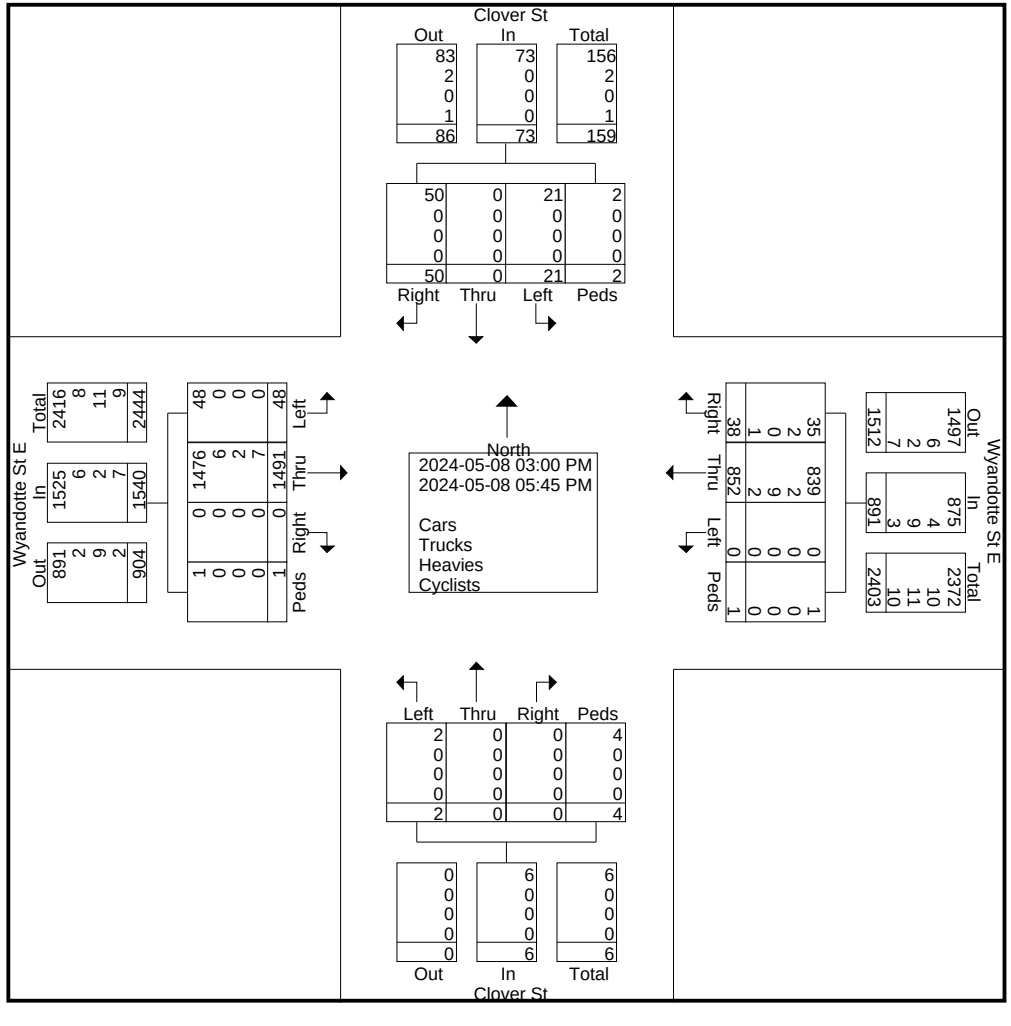
Your Traffic Count Specialist

File Name : Wyandotte Street E at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 2



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Your Traffic Count Specialist

File Name : Wyandotte Street E at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 3

	Clover St From North					Wyandotte St E From East					Clover St From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	0	**3**	**2**	**7**	3	**85**	0	0	**88**	0	0	0	0	0	0	134	**5**	0	139	234
04:45 PM	**4**	0	0	0	4	2	57	0	0	59	0	0	0	0	0	0	119	4	**1**	124	187
05:00 PM	4	0	1	0	5	**5**	77	0	0	82	0	0	**1**	0	1	0	**148**	4	0	**152**	**240**
05:15 PM	4	0	0	0	4	2	74	0	0	76	0	0	0	**2**	**2**	0	142	5	0	147	229
Total Volume	14	0	4	2	20	12	293	0	0	305	0	0	1	2	3	0	543	18	1	562	890
% App. Total	70	0	20	10		3.9	96.1	0	0		0	0	33.3	66.7		0	96.6	3.2	0.2		
PHF	.875	.000	.333	.250	.714	.600	.862	.000	.000	.866	.000	.000	.250	.250	.375	.000	.917	.900	.250	.924	.927
Cars	14	0	4	2	20	11	290	0	0	301	0	0	1	2	3	0	538	18	1	557	881
% Cars	100	0	100	100	100	91.7	99.0	0	0	98.7	0	0	100	100	100	0	99.1	100	100	99.1	99.0
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.5	0.3
Heavies	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% Heavies	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.2
Cyclists	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
% Cyclists	0	0	0	0	0	8.3	0.3	0	0	0.7	0	0	0	0	0	0	0.4	0	0	0.4	0.4

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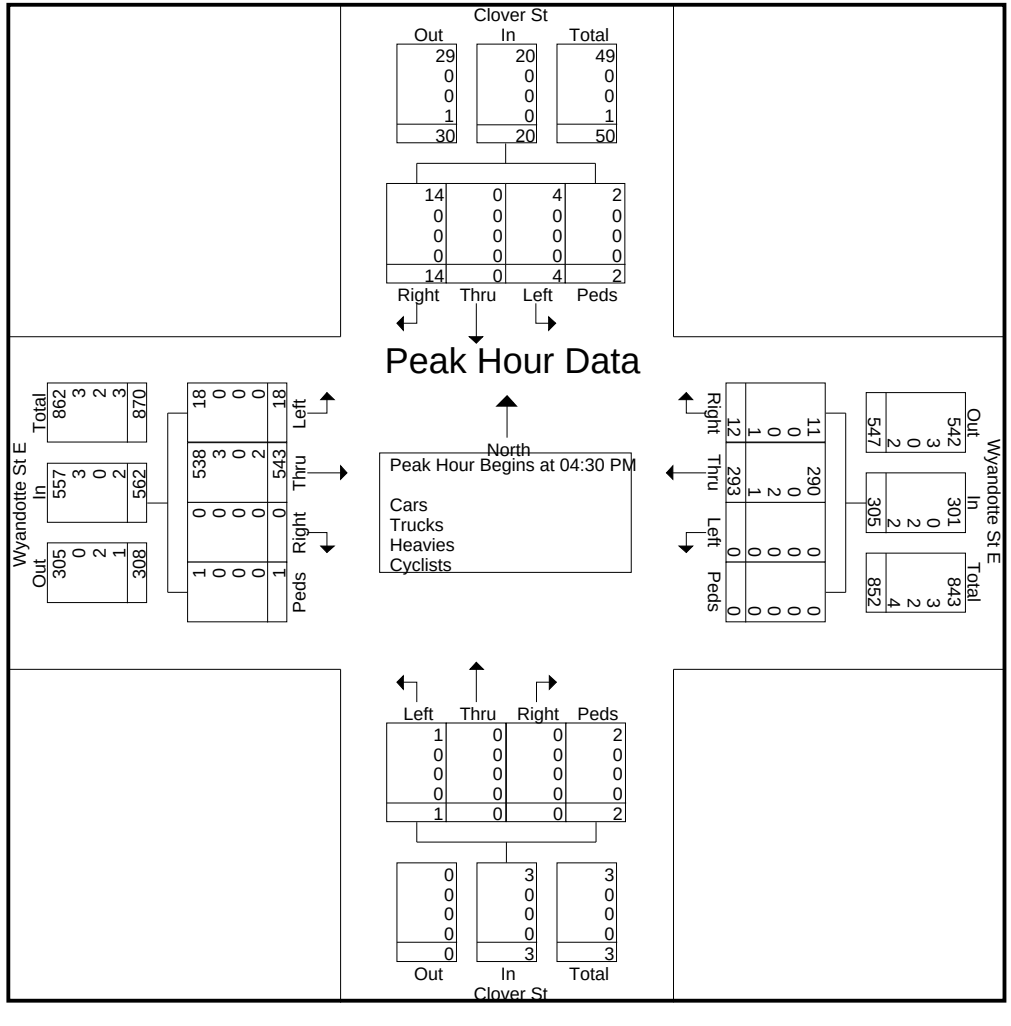
Your Traffic Count Specialist

File Name : Wyandotte Street E at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 4



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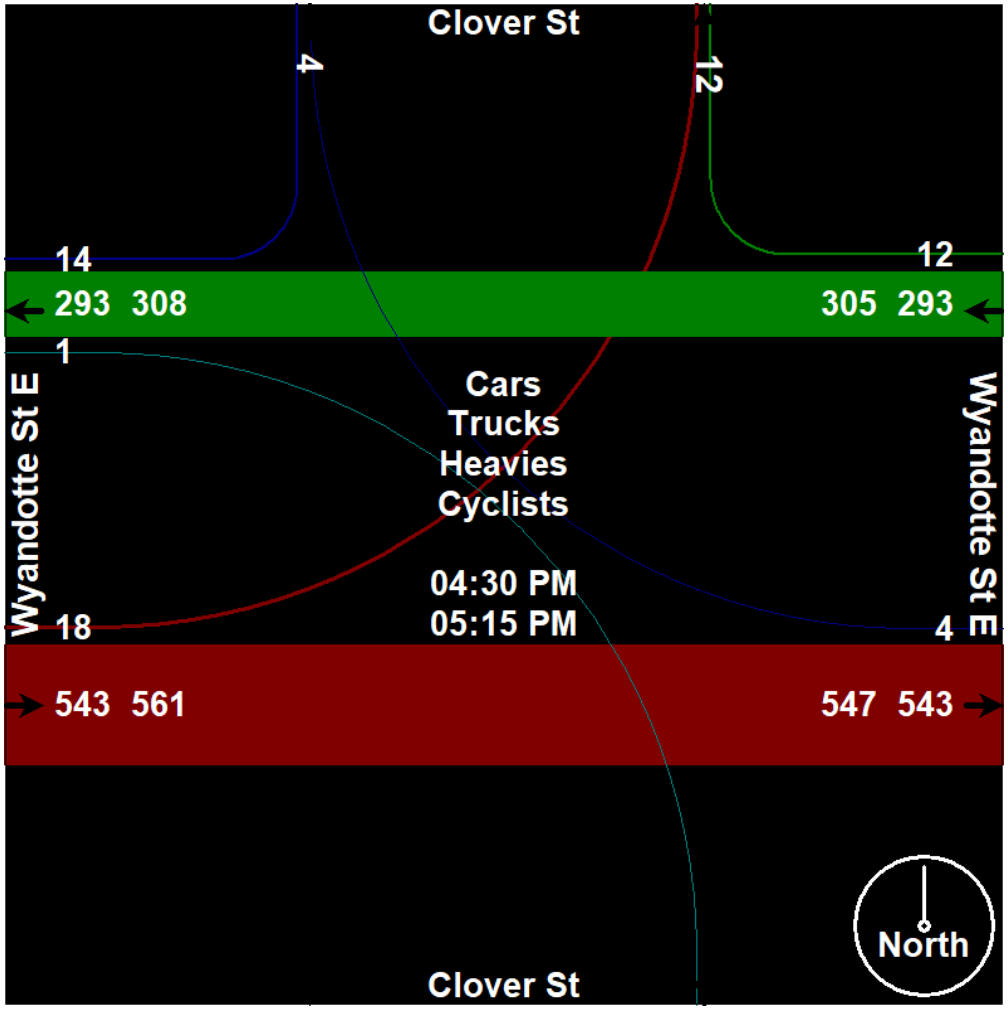
Your Traffic Count Specialist

File Name : Wyandotte Street E at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 5



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Your Traffic Count Specialist

File Name : Wyandotte Street E at Banwell Road
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

	Banwell Rd From North					Wyandotte St E From East					Banwell Rd From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	1	5	0	0	6	0	0	0	0	0	0	7	60	0	67	76	0	0	0	76	149
03:15 PM	1	2	0	0	3	0	0	0	0	0	0	4	55	0	59	74	0	0	0	74	136
03:30 PM	0	0	0	0	0	0	0	0	1	1	0	5	53	0	58	71	0	3	0	74	133
03:45 PM	0	3	0	0	3	0	0	0	0	0	0	7	50	2	59	67	0	1	0	68	130
Total	2	10	0	0	12	0	0	0	1	1	0	23	218	2	243	288	0	4	0	292	548
04:00 PM	1	2	0	0	3	0	0	0	1	1	0	7	53	0	60	73	0	4	0	77	141
04:15 PM	1	2	0	0	3	0	0	0	0	0	0	11	57	0	68	89	0	1	0	90	161
04:30 PM	1	3	0	0	4	0	0	0	0	0	0	6	68	0	74	90	0	1	0	91	169
04:45 PM	1	4	0	0	5	0	0	0	1	1	0	5	45	0	50	75	0	0	0	75	131
Total	4	11	0	0	15	0	0	0	2	2	0	29	223	0	252	327	0	6	0	333	602
05:00 PM	0	3	0	0	3	0	0	0	3	3	0	9	73	2	84	83	0	0	0	83	173
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	60	0	65	85	1	2	0	88	153
05:30 PM	1	6	0	0	7	0	0	0	1	1	0	7	70	1	78	68	0	2	0	70	156
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	4	55	4	63	67	0	2	0	69	133
Total	1	10	0	0	11	0	0	0	4	4	0	25	258	7	290	303	1	6	0	310	615
Grand Total	7	31	0	0	38	0	0	0	7	7	0	77	699	9	785	918	1	16	0	935	1765
Apprch %	18.4	81.6	0	0		0	0	0	100		0	9.8	89	1.1		98.2	0.1	1.7	0		
Total %	0.4	1.8	0	0	2.2	0	0	0	0.4	0.4	0	4.4	39.6	0.5	44.5	52	0.1	0.9	0	53	
Cars	6	28	0	0	34	0	0	0	7	7	0	74	694	9	777	909	1	14	0	924	1742
% Cars	85.7	90.3	0	0	89.5	0	0	0	100	100	0	96.1	99.3	100	99	99	100	87.5	0	98.8	98.7
Trucks	1	0	0	0	1	0	0	0	0	0	0	1	4	0	5	5	0	0	0	5	11
% Trucks	14.3	0	0	0	2.6	0	0	0	0	0	0	1.3	0.6	0	0.6	0.5	0	0	0	0.5	0.6
Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
% Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1	0.1
Cyclists	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	3	0	2	0	5	11
% Cyclists	0	9.7	0	0	7.9	0	0	0	0	0	0	2.6	0.1	0	0.4	0.3	0	12.5	0	0.5	0.6

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Your Traffic Count Specialist

File Name : Wyandotte Street E at Banwell Road
Site Code : 00000000
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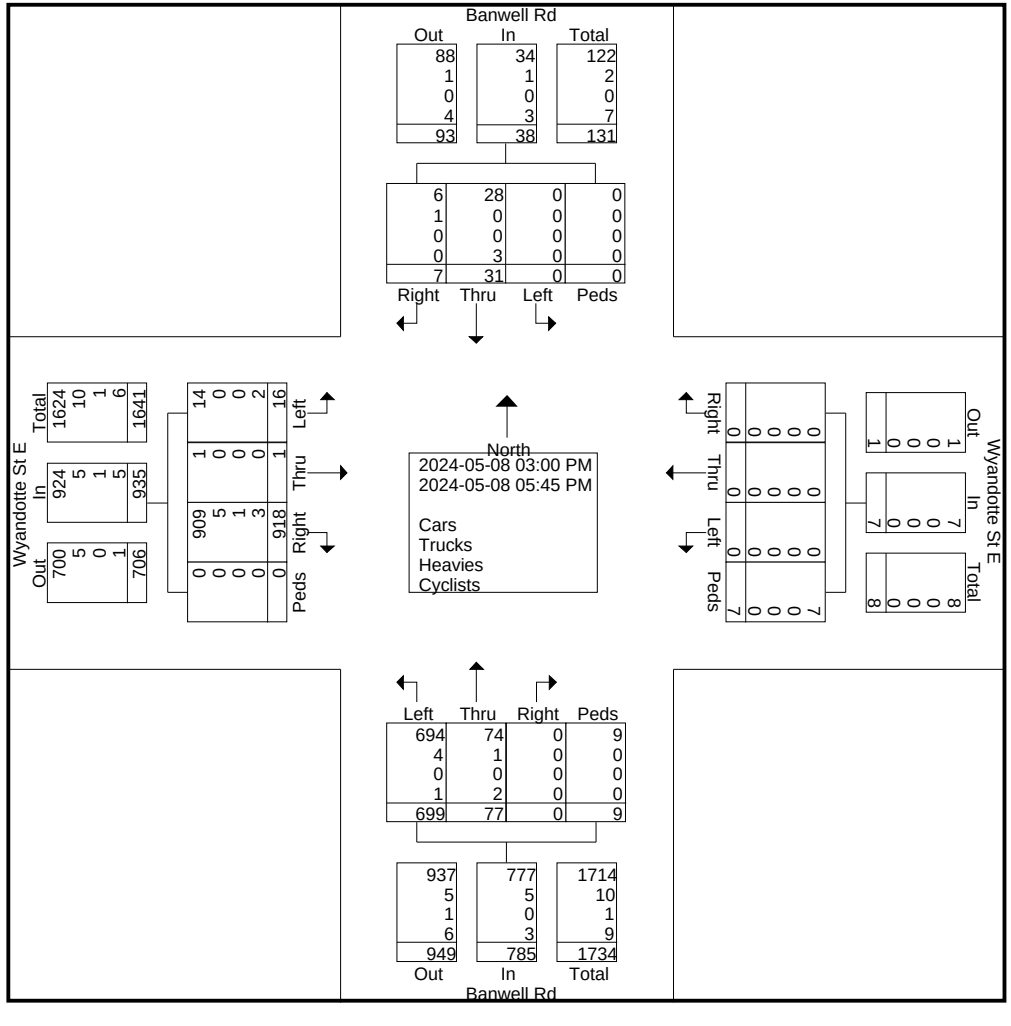

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Your Traffic Count Specialist

File Name : Wyandotte Street E at Banwell Road
Site Code : 00000000
Start Date : 2024-05-08
Page No : 3

	Banwell Rd From North					Wyandotte St E From East					Banwell Rd From South					Wyandotte St E From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**1**	2	0	0	3	0	0	0	0	0	0	**11**	57	0	68	89	0	**1**	0	90	161
04:30 PM	1	3	0	0	4	0	0	0	0	0	0	6	68	0	74	**90**	0	1	0	**91**	169
04:45 PM	1	**4**	0	0	**5**	0	0	0	1	1	0	5	45	0	50	75	0	0	0	75	131
05:00 PM	0	3	0	0	3	0	0	0	**3**	**3**	0	9	**73**	**2**	**84**	83	0	0	0	83	**173**
Total Volume	3	12	0	0	15	0	0	0	4	4	0	31	243	2	276	337	0	2	0	339	634
% App. Total	20	80	0	0		0	0	0	100		0	11.2	88	0.7		99.4	0	0.6	0		
PHF	.750	.750	.000	.000	.750	.000	.000	.000	.333	.333	.000	.705	.832	.250	.821	.936	.000	.500	.000	.931	.916
Cars	3	12	0	0	15	0	0	0	4	4	0	30	242	2	274	336	0	2	0	338	631
% Cars	100	100	0	0	100	0	0	0	100	100	0	96.8	99.6	100	99.3	99.7	0	100	0	99.7	99.5
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0.4	0.3	0	0	0	0.3	0.3
Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0.4	0	0	0	0	0	0.2

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Your Traffic Count Specialist

File Name : Wyandotte Street E at Banwell Road
Site Code : 00000000
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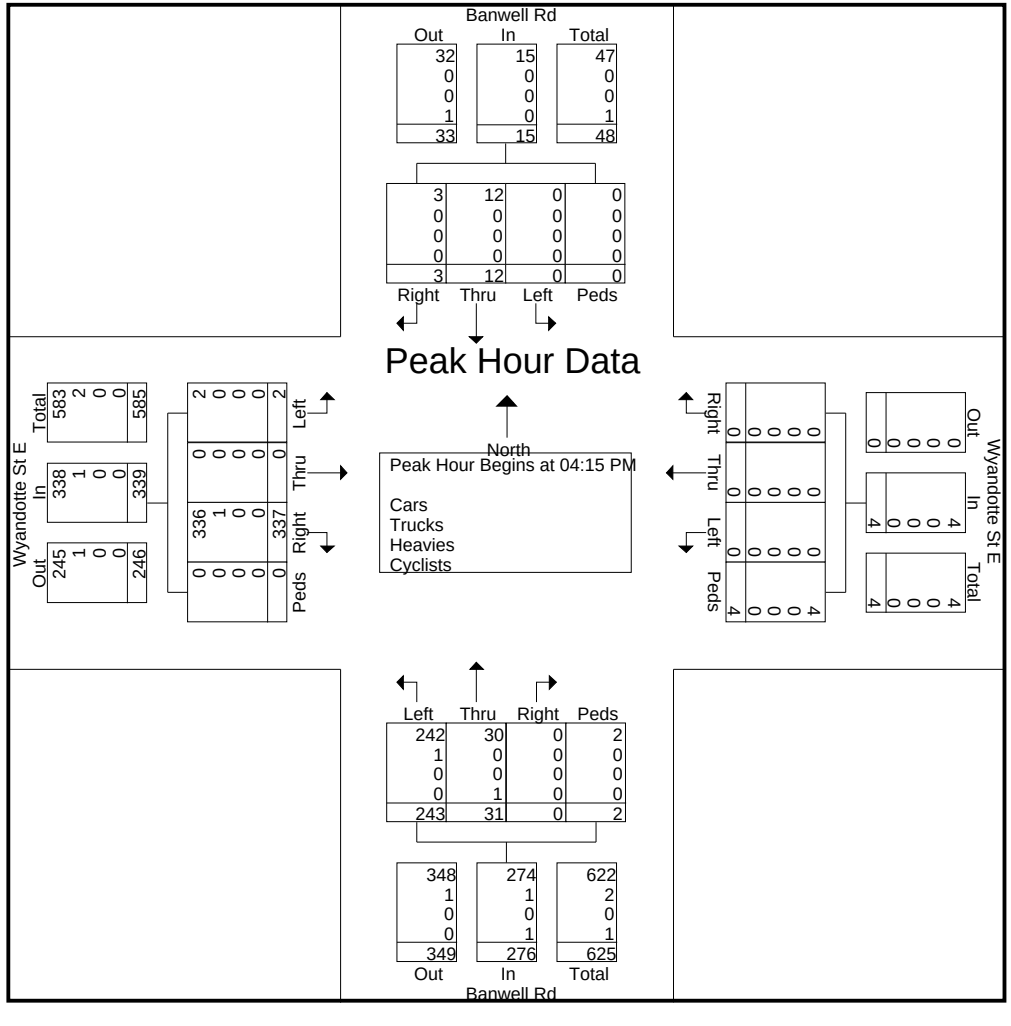

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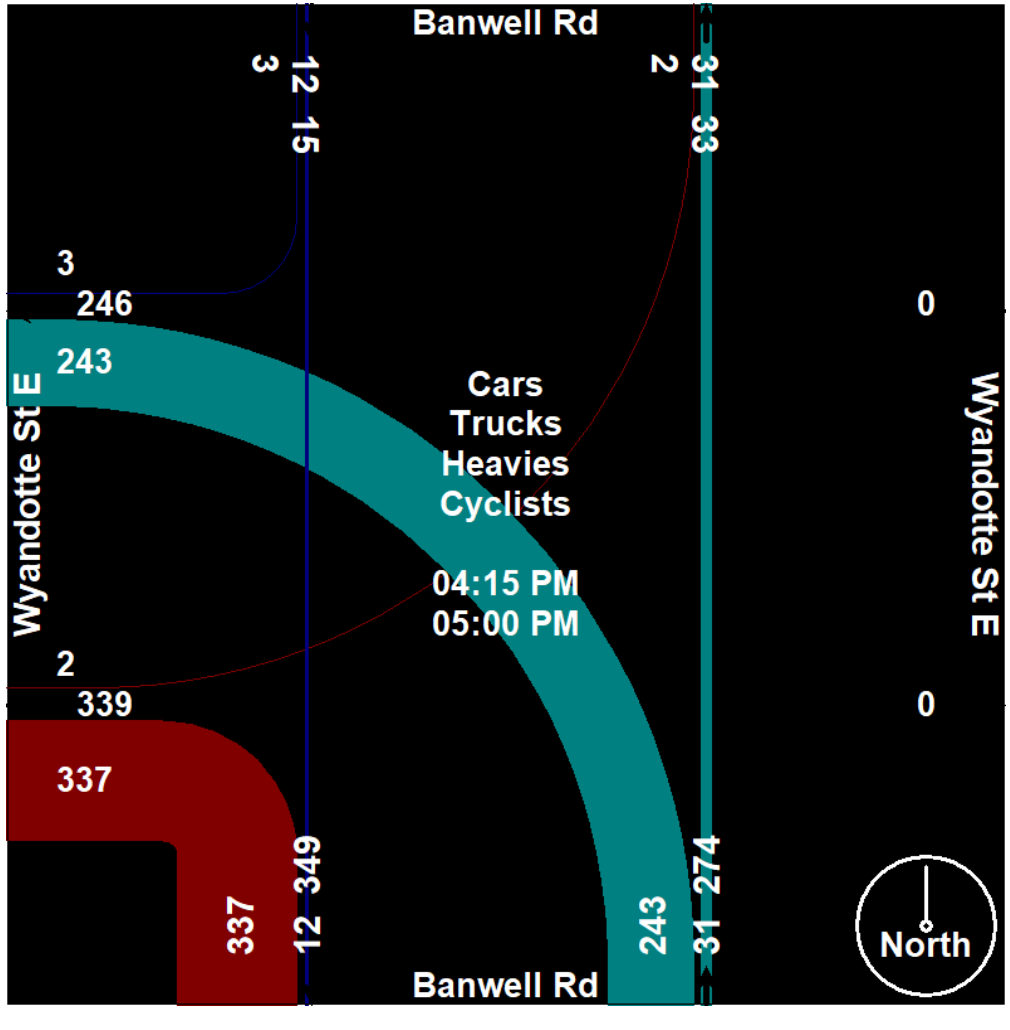
Your Traffic Count Specialist

File Name : Wyandotte Street E at Banwell Road
Site Code : 00000000
Start Date : 2024-05-08
Page No : 5



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Your Traffic Count Specialist

File Name : Little River Boulevard at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

	Clover Ave From North					Little River Blvd From East					Clover Ave From South					Little River Blvd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	2	3	3	0	8	8	25	25	4	62	38	12	11	2	63	7	18	1	3	29	162
03:15 PM	1	3	3	0	7	4	14	13	0	31	26	3	5	1	35	3	24	0	1	28	101
03:30 PM	0	3	3	6	12	3	15	9	3	30	29	4	8	7	48	2	13	2	1	18	108
03:45 PM	1	3	2	0	6	3	25	17	1	46	10	4	9	4	27	5	19	1	0	25	104
Total	4	12	11	6	33	18	79	64	8	169	103	23	33	14	173	17	74	4	5	100	475
04:00 PM	0	5	4	2	11	2	26	17	3	48	21	6	4	3	34	5	19	1	1	26	119
04:15 PM	0	5	4	0	9	7	18	17	2	44	16	2	5	4	27	1	24	0	0	25	105
04:30 PM	2	3	3	0	8	3	24	18	1	46	24	1	6	2	33	3	18	1	0	22	109
04:45 PM	0	2	2	0	4	4	26	9	0	39	20	7	4	5	36	4	20	1	0	25	104
Total	2	15	13	2	32	16	94	61	6	177	81	16	19	14	130	13	81	3	1	98	437
05:00 PM	0	2	2	2	6	7	26	10	0	43	23	9	4	4	40	4	26	2	0	32	121
05:15 PM	0	7	3	1	11	7	25	14	0	46	20	4	4	11	39	2	23	0	1	26	122
05:30 PM	0	4	2	1	7	4	33	11	0	48	24	5	4	15	48	4	22	0	0	26	129
05:45 PM	1	5	3	1	10	2	32	10	0	44	16	5	5	6	32	2	20	1	0	23	109
Total	1	18	10	5	34	20	116	45	0	181	83	23	17	36	159	12	91	3	1	107	481
Grand Total	7	45	34	13	99	54	289	170	14	527	267	62	69	64	462	42	246	10	7	305	1393
Apprch %	7.1	45.5	34.3	13.1		10.2	54.8	32.3	2.7		57.8	13.4	14.9	13.9		13.8	80.7	3.3	2.3		
Total %	0.5	3.2	2.4	0.9	7.1	3.9	20.7	12.2	1	37.8	19.2	4.5	5	4.6	33.2	3	17.7	0.7	0.5	21.9	
Cars	6	44	32	13	95	52	279	165	14	510	260	58	68	64	450	41	241	10	7	299	1354
% Cars	85.7	97.8	94.1	100	96	96.3	96.5	97.1	100	96.8	97.4	93.5	98.6	100	97.4	97.6	98	100	100	98	97.2
Trucks	0	1	0	0	1	0	3	0	0	3	0	2	1	0	3	0	3	0	0	3	10
% Trucks	0	2.2	0	0	1	0	1	0	0	0.6	0	3.2	1.4	0	0.6	0	1.2	0	0	1	0.7
Heavies	0	0	1	0	1	1	4	2	0	7	6	0	0	0	6	1	0	0	0	1	15
% Heavies	0	0	2.9	0	1	1.9	1.4	1.2	0	1.3	2.2	0	0	0	1.3	2.4	0	0	0	0.3	1.1
Cyclists	1	0	1	0	2	1	3	3	0	7	1	2	0	0	3	0	2	0	0	2	14
% Cyclists	14.3	0	2.9	0	2	1.9	1	1.8	0	1.3	0.4	3.2	0	0	0.6	0	0.8	0	0	0.7	1

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Your Traffic Count Specialist

File Name : Little River Boulevard at Clover Avenue
Site Code : 00000000
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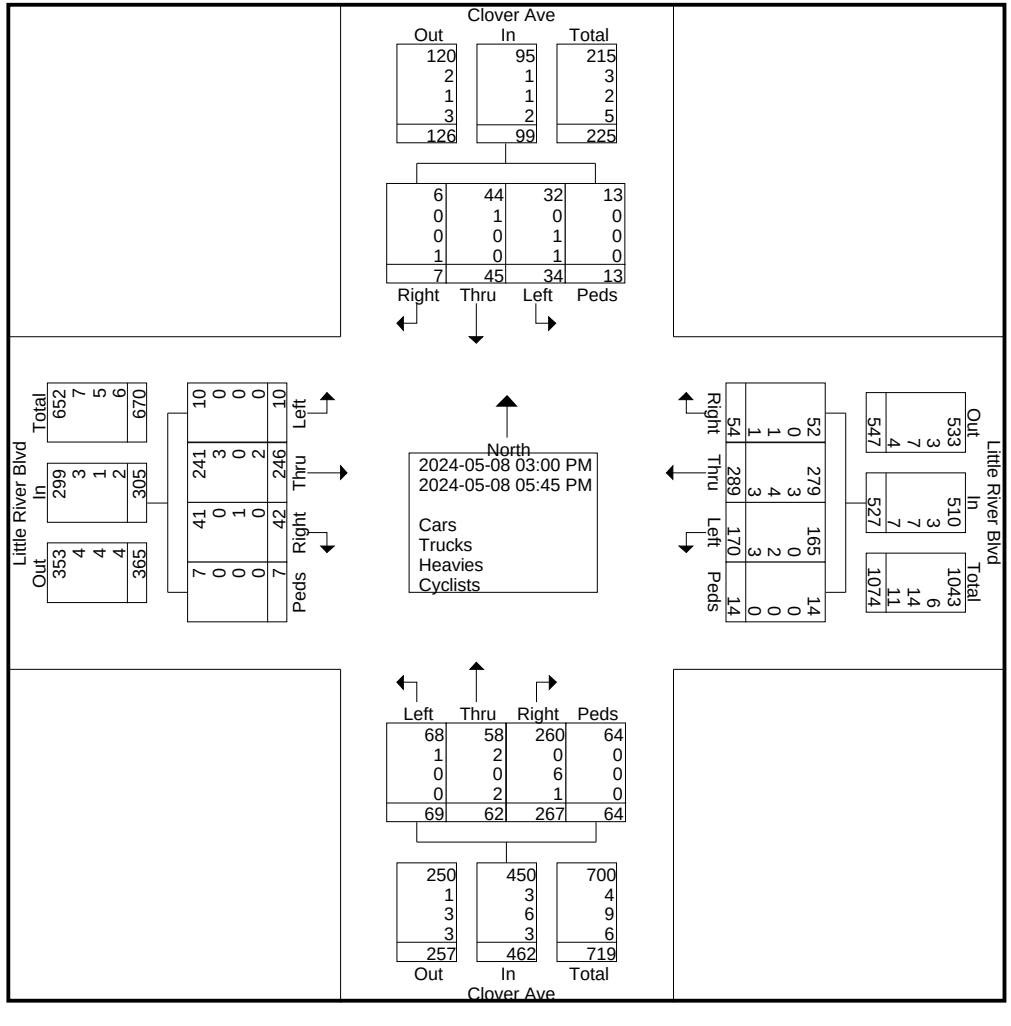

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Your Traffic Count Specialist

File Name : Little River Boulevard at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08

	Clover Ave From North					Little River Blvd From East					Clover Ave From South					Little River Blvd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	2	2	**2**	6	**7**	26	10	0	43	23	**9**	4	4	40	**4**	**26**	**2**	0	**32**	121
05:15 PM	0	**7**	**3**	1	**11**	7	25	**14**	0	46	20	4	4	11	39	2	23	0	**1**	26	122
05:30 PM	0	4	2	1	7	4	**33**	11	0	**48**	**24**	5	4	**15**	**48**	4	22	0	0	26	**129**
05:45 PM	**1**	5	3	1	10	2	32	10	0	44	16	5	**5**	6	32	2	20	1	0	23	109
Total Volume	1	18	10	5	34	20	116	45	0	181	83	23	17	36	159	12	91	3	1	107	481
% App. Total	2.9	52.9	29.4	14.7		11	64.1	24.9	0		52.2	14.5	10.7	22.6		11.2	85	2.8	0.9		
PHF	.250	.643	.833	.625	.773	.714	.879	.804	.000	.943	.865	.639	.850	.600	.828	.750	.875	.375	.250	.836	.932
Cars	0	18	10	5	33	19	112	43	0	174	81	22	17	36	156	12	89	3	1	105	468
% Cars	0	100	100	100	97.1	95.0	96.6	95.6	0	96.1	97.6	95.7	100	100	98.1	100	97.8	100	100	98.1	97.3
Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0	0.9	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0.2
Heavies	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2
% Heavies	0	0	0	0	0	0	0	0	0	0	2.4	0	0	0	1.3	0	0	0	0	0	0.4
Cyclists	1	0	0	0	1	1	3	2	0	6	0	1	0	0	1	0	2	0	0	2	10
% Cyclists	100	0	0	0	2.9	5.0	2.6	4.4	0	3.3	0	4.3	0	0	0.6	0	2.2	0	0	1.9	2.1

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Your Traffic Count Specialist

File Name : Little River Boulevard at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
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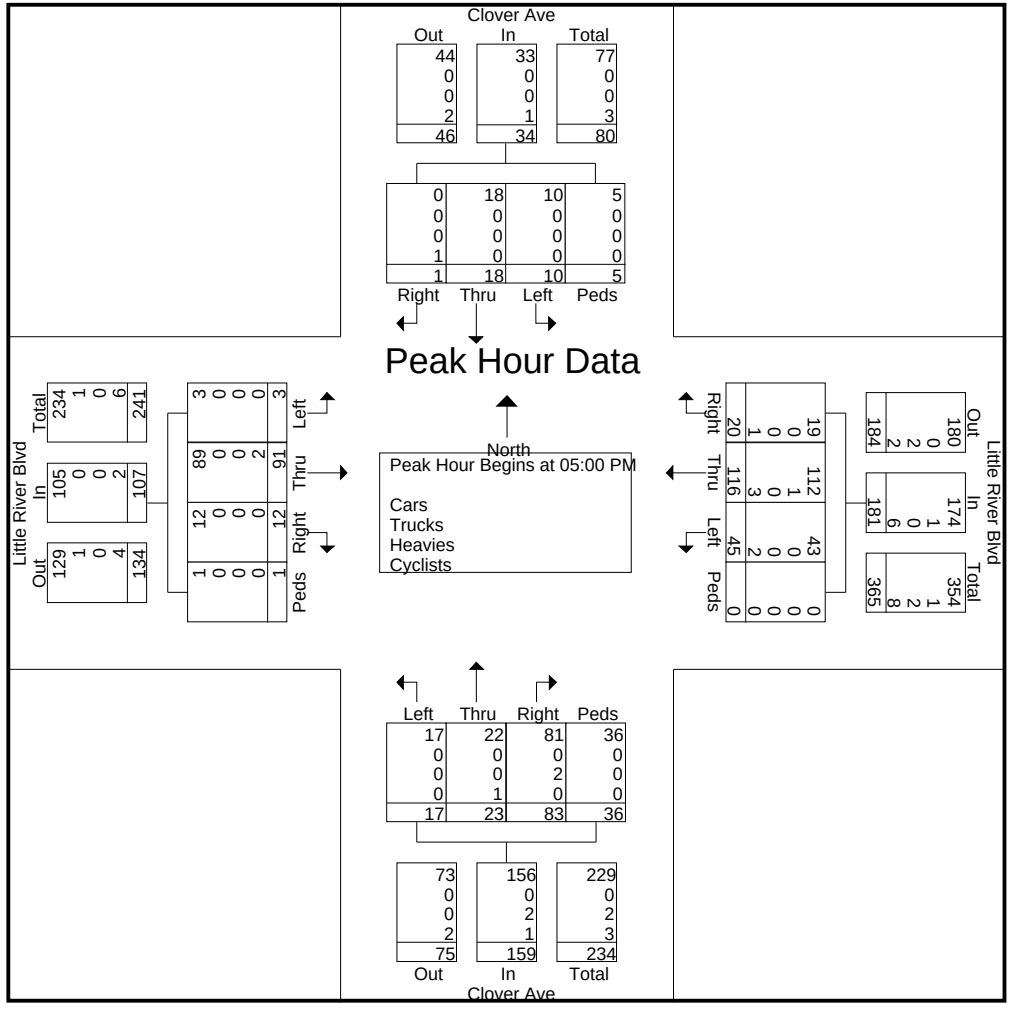

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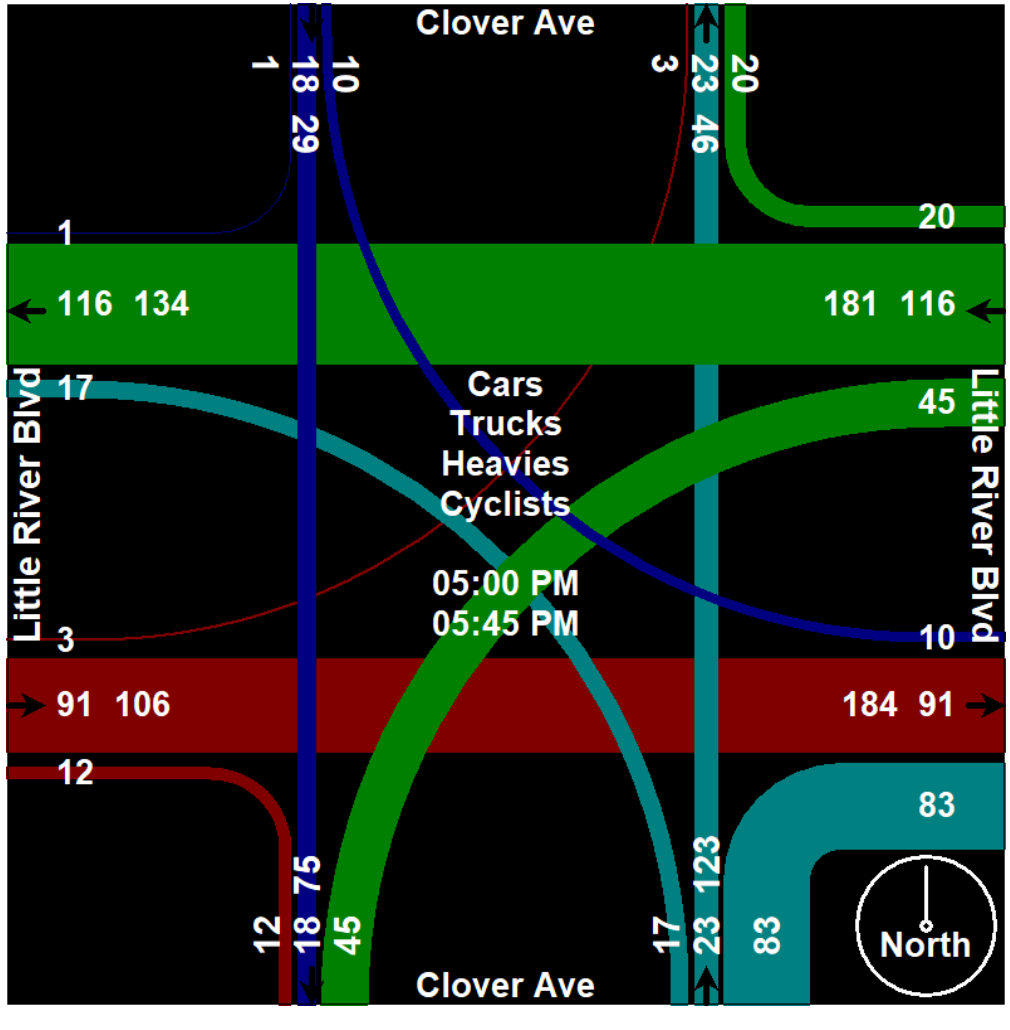
Your Traffic Count Specialist

File Name : Little River Boulevard at Clover Avenue
Site Code : 00000000
Start Date : 2024-05-08
Page No : 5



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Your Traffic Count Specialist

File Name : Little River Boulevard at Banwell Road
Site Code : 00000000
Start Date : 2024-05-08
Page No : 1

Groups Printed- Cars - Trucks - Heavies - Cyclists

	Banwell Rd From North					Little River Blvd From East					Banwell Rd From South					Little River Blvd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	2	58	22	1	83	17	20	21	0	58	43	48	18	3	112	16	22	5	0	43	296
03:15 PM	1	53	33	0	87	15	18	30	0	63	35	48	20	3	106	15	20	6	0	41	297
03:30 PM	1	50	18	0	69	15	9	26	1	51	43	46	23	3	115	12	25	2	1	40	275
03:45 PM	0	45	26	0	71	17	17	18	1	53	43	51	23	0	117	21	22	2	0	45	286
Total	4	206	99	1	310	64	64	95	2	225	164	193	84	9	450	64	89	15	1	169	1154
04:00 PM	2	49	29	0	80	19	22	22	0	63	29	44	25	0	98	12	25	3	0	40	281
04:15 PM	1	50	41	0	92	16	19	19	3	57	37	57	27	6	127	19	31	1	0	51	327
04:30 PM	1	58	37	0	96	21	29	24	0	74	40	60	16	1	117	15	23	4	0	42	329
04:45 PM	1	54	29	0	84	10	16	23	1	50	49	39	23	0	111	15	16	1	0	32	277
Total	5	211	136	0	352	66	86	88	4	244	155	200	91	7	453	61	95	9	0	165	1214
05:00 PM	0	54	37	0	91	15	23	25	0	63	39	62	32	3	136	15	24	3	1	43	333
05:15 PM	0	53	28	2	83	10	23	28	1	62	44	61	28	0	133	28	21	3	0	52	330
05:30 PM	2	44	28	1	75	13	25	18	1	57	54	66	19	3	142	21	35	4	2	62	336
05:45 PM	2	47	26	0	75	12	21	19	0	52	44	46	23	5	118	21	20	3	0	44	289
Total	4	198	119	3	324	50	92	90	2	234	181	235	102	11	529	85	100	13	3	201	1288
Grand Total	13	615	354	4	986	180	242	273	8	703	500	628	277	27	1432	210	284	37	4	535	3656
Apprch %	1.3	62.4	35.9	0.4		25.6	34.4	38.8	1.1		34.9	43.9	19.3	1.9		39.3	53.1	6.9	0.7		
Total %	0.4	16.8	9.7	0.1	27	4.9	6.6	7.5	0.2	19.2	13.7	17.2	7.6	0.7	39.2	5.7	7.8	1	0.1	14.6	
Cars	12	612	350	4	978	178	239	270	8	695	497	624	269	27	1417	209	272	36	4	521	3611
% Cars	92.3	99.5	98.9	100	99.2	98.9	98.8	98.9	100	98.9	99.4	99.4	97.1	100	99	99.5	95.8	97.3	100	97.4	98.8
Trucks	1	3	2	0	6	1	1	1	0	3	2	1	1	0	4	1	1	1	0	3	16
% Trucks	7.7	0.5	0.6	0	0.6	0.6	0.4	0.4	0	0.4	0.4	0.2	0.4	0	0.3	0.5	0.4	2.7	0	0.6	0.4
Heavies	0	0	2	0	2	1	0	1	0	2	1	1	6	0	8	0	5	0	0	5	17
% Heavies	0	0	0.6	0	0.2	0.6	0	0.4	0	0.3	0.2	0.2	2.2	0	0.6	0	1.8	0	0	0.9	0.5
Cyclists	0	0	0	0	0	0	2	1	0	3	0	2	1	0	3	0	6	0	0	6	12
% Cyclists	0	0	0	0	0	0	0.8	0.4	0	0.4	0	0.3	0.4	0	0.2	0	2.1	0	0	1.1	0.3

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Your Traffic Count Specialist

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Site Code : 00000000
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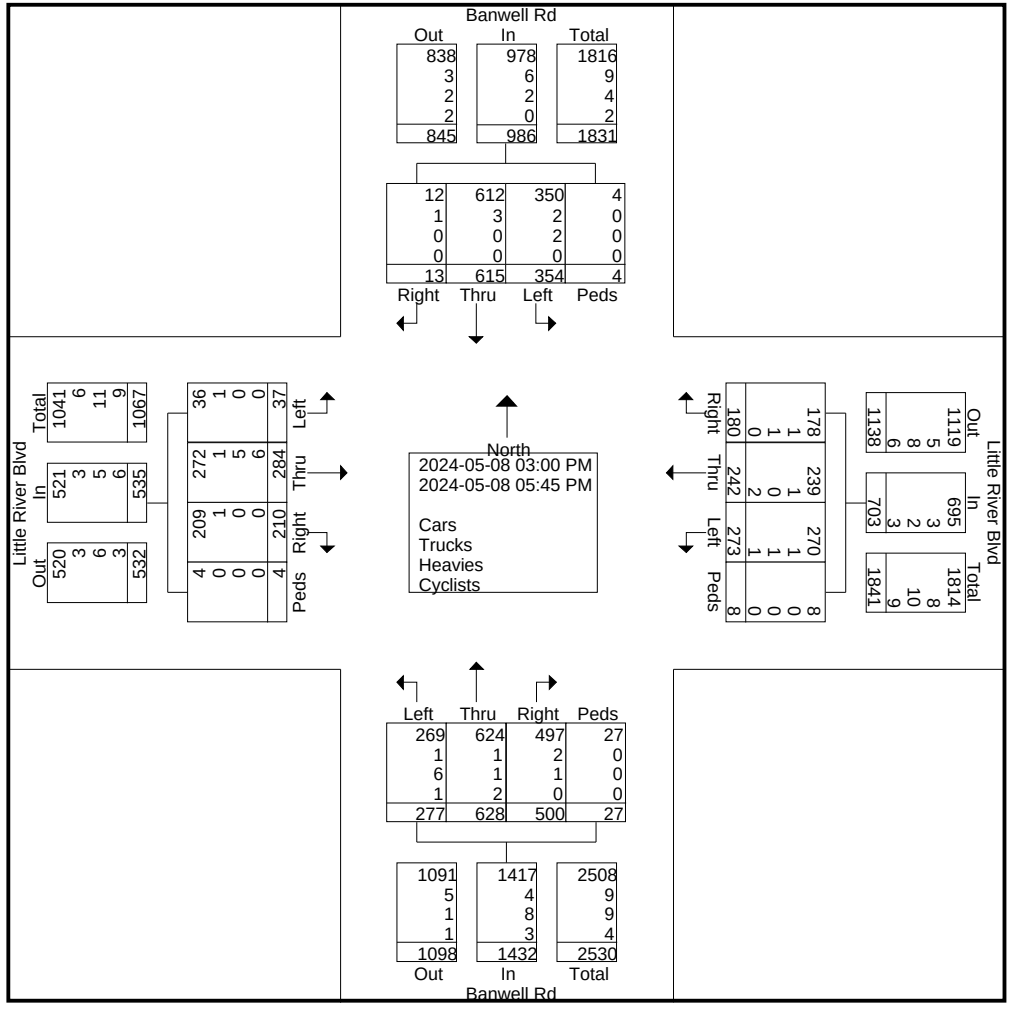

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Your Traffic Count Specialist

File Name : Little River Boulevard at Banwell Road
Site Code : 00000000
Start Date : 2024-05-08
Page No : 3

	Banwell Rd From North					Little River Blvd From East					Banwell Rd From South					Little River Blvd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	**54**	**37**	0	**91**	**15**	23	25	0	**63**	39	62	**32**	3	136	15	24	3	1	43	333
05:15 PM	0	53	28	**2**	83	10	23	**28**	**1**	62	44	61	28	0	133	**28**	21	3	0	52	330
05:30 PM	**2**	44	28	1	75	13	**25**	18	1	57	**54**	**66**	19	3	**142**	21	**35**	**4**	**2**	**62**	**336**
05:45 PM	2	47	26	0	75	12	21	19	0	52	44	46	23	**5**	118	21	20	3	0	44	289
Total Volume	4	198	119	3	324	50	92	90	2	234	181	235	102	11	529	85	100	13	3	201	1288
% App. Total	1.2	61.1	36.7	0.9		21.4	39.3	38.5	0.9		34.2	44.4	19.3	2.1		42.3	49.8	6.5	1.5		
PHF	.500	.917	.804	.375	.890	.833	.920	.804	.500	.929	.838	.890	.797	.550	.931	.759	.714	.813	.375	.810	.958
Cars	4	198	118	3	323	50	91	90	2	233	180	234	100	11	525	85	97	13	3	198	1279
% Cars	100	100	99.2	100	99.7	100	98.9	100	100	99.6	99.4	99.6	98.0	100	99.2	100	97.0	100	100	98.5	99.3
Trucks	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	3
% Trucks	0	0	0.8	0	0.3	0	0	0	0	0	0.6	0	1.0	0	0.4	0	0	0	0	0	0.2
Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% Heavies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.0	0	0	1.0	0.2
Cyclists	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	0	1	0	0	1	4
% Cyclists	0	0	0	0	0	0	1.1	0	0	0.4	0	0.4	1.0	0	0.4	0	1.0	0	0	0.5	0.3

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Your Traffic Count Specialist

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Site Code : 00000000
Start Date : 2024-05-08
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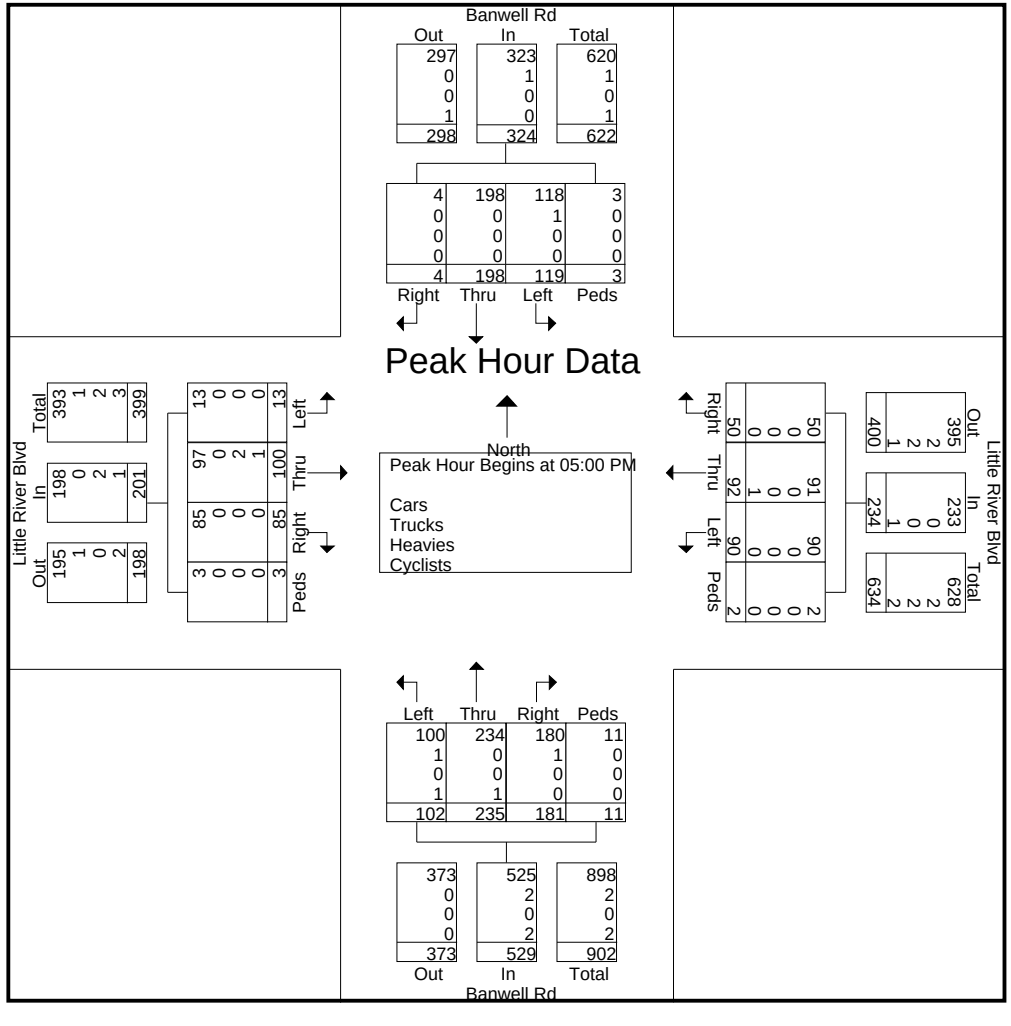

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Site Code : 00000000
Start Date : 2024-05-08
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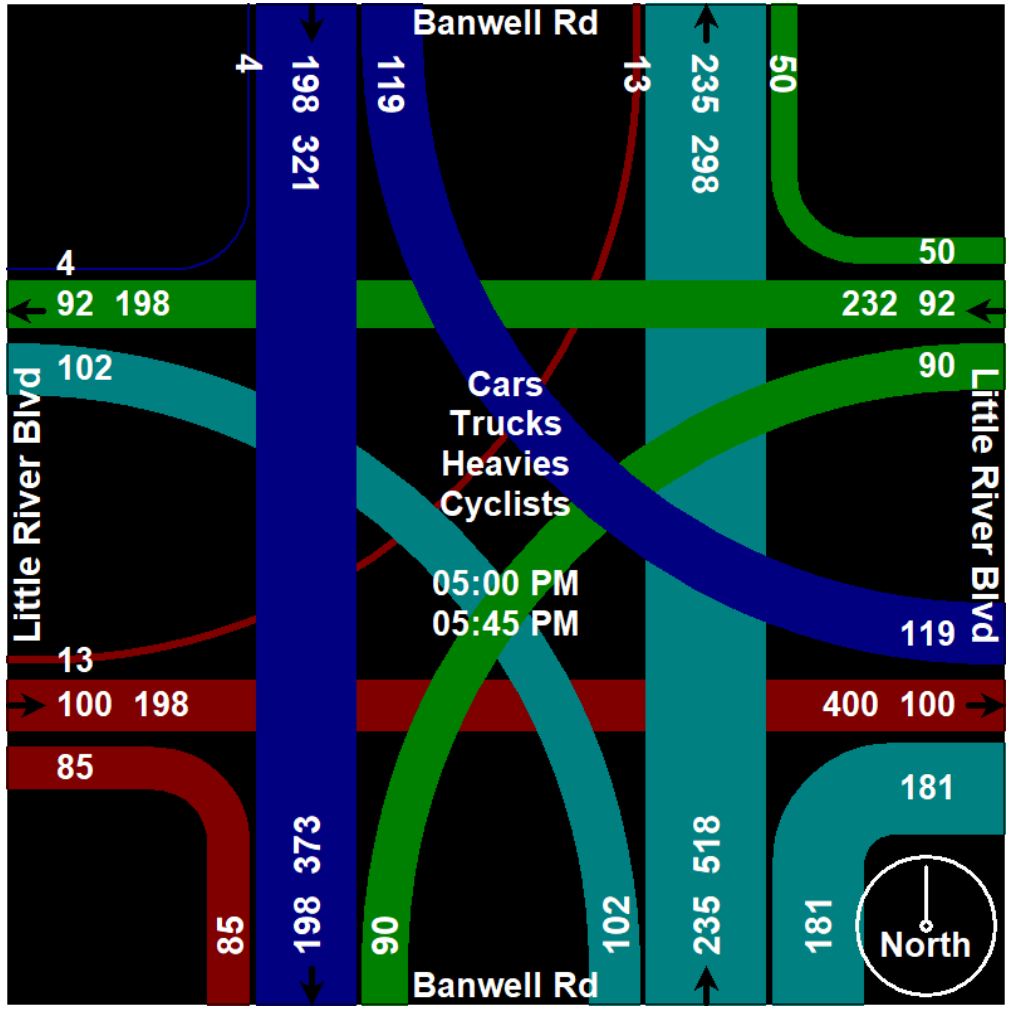


Appendix C

Level of Service (LOS) Definitions

Highway Capacity Manual 2010

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* (Transportation Research Board, 2010).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into three intersection types: all-way stop, two-way stop, and roundabout control. All-way stop and roundabout control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F[1]	>50

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

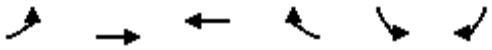
Appendix D

Synchro Analysis Worksheets

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	494	11	8	452	12	8
Future Volume (Veh/h)	494	11	8	452	12	8
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)	537	12	9	491	13	9
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			549		1052	543
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			549		1052	543
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	98
cM capacity (veh/h)			1021		249	540

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	549	500	22
Volume Left	0	9	13
Volume Right	12	0	9
cSH	1700	1021	319
Volume to Capacity	0.32	0.01	0.07
Queue Length 95th (m)	0.0	0.2	1.8
Control Delay (s)	0.0	0.3	17.1
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	17.1
Approach LOS			C

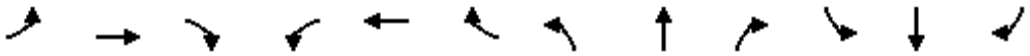
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	589	327	14	12	41
Future Volume (Veh/h)	45	589	327	14	12	41
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)	49	640	355	15	13	45
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	370				1100	362
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	370				1100	362
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				94	93
cM capacity (veh/h)	1189				225	682

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	49	640	370	58
Volume Left	49	0	0	13
Volume Right	0	0	15	45
cSH	1189	1700	1700	469
Volume to Capacity	0.04	0.38	0.22	0.12
Queue Length 95th (m)	1.0	0.0	0.0	3.4
Control Delay (s)	8.2	0.0	0.0	13.8
Lane LOS	A			B
Approach Delay (s)	0.6		0.0	13.8
Approach LOS				B

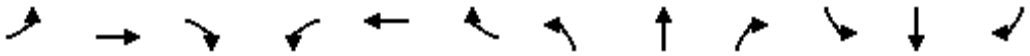
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	576	0	0	254	13	1	0	0	4	0	15
Future Volume (Veh/h)	19	576	0	0	254	13	1	0	0	4	0	15
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)	21	626	0	0	276	14	1	0	0	4	0	16
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	290			626			967	958	626	951	951	283
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	290			626			967	958	626	951	951	283
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 %	98			100			100	100	100	98	100	98
cM capacity (veh/h)	1272			956			226	253	484	237	255	756

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	647	290	1	20
Volume Left	21	0	1	4
Volume Right	0	14	0	16
cSH	1272	956	226	525
Volume to Capacity	0.02	0.00	0.00	0.04
Queue Length 95th (m)	0.4	0.0	0.1	0.9
Control Delay (s)	0.5	0.0	21.0	12.1
Lane LOS	A		C	B
Approach Delay (s)	0.5	0.0	21.0	12.1
Approach LOS			C	B

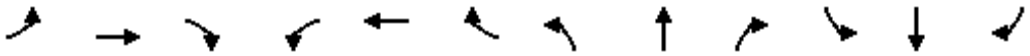
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	358	0	0	0	258	33	0	0	13	3
Future Volume (Veh/h)	2	0	358	0	0	0	258	33	0	0	13	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)	2	0	389	0	0	0	280	36	0	0	14	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	0			389			208	198	194	216	393	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			389			208	198	194	216	393	0
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			62	95	100	100	97	100
cM capacity (veh/h)	1623			1170			731	696	847	710	543	1085

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	391	0	316	17
Volume Left	2	0	280	0
Volume Right	389	0	0	3
cSH	1623	1700	727	595
Volume to Capacity	0.00	0.00	0.43	0.03
Queue Length 95th (m)	0.0	0.0	17.7	0.7
Control Delay (s)	0.0	0.0	13.7	11.2
Lane LOS	A		B	B
Approach Delay (s)	0.0	0.0	13.7	11.2
Approach LOS			B	B

Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	51.6%	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)	3	97	13	48	123	21	18	24	88	11	19	1
Future Volume (Veh/h)	3	97	13	48	123	21	18	24	88	11	19	1
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)	3	105	14	52	134	23	20	26	96	12	21	1
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	157			119			379	379	112	476	374	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	157			119			379	379	112	476	374	146
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			96			96	95	90	97	96	100
cM capacity (veh/h)	1423			1469			545	532	941	419	536	902

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	209	142	34
Volume Left	3	52	20	12
Volume Right	14	23	96	1
cSH	1423	1469	757	493
Volume to Capacity	0.00	0.04	0.19	0.07
Queue Length 95th (m)	0.1	0.9	5.5	1.8
Control Delay (s)	0.2	2.1	10.8	12.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	2.1	10.8	12.8
Approach LOS			B	B

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	32.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	25.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	106	90	96	98	53	108	249	192	126	210	4
Future Vol, veh/h	14	106	90	96	98	53	108	249	192	126	210	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	115	98	104	107	58	117	271	209	137	228	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

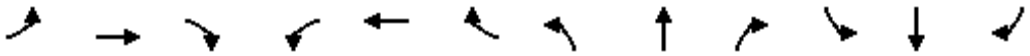
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	17.6	20.3	27.8	29.3
HCM LOS	C	C	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	0%	7%	39%	37%
Vol Thru, %	70%	0%	50%	40%	62%
Vol Right, %	0%	100%	43%	21%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	192	210	247	340
LT Vol	108	0	14	96	126
Through Vol	249	0	106	98	210
RT Vol	0	192	90	53	4
Lane Flow Rate	388	209	228	268	370
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.812	0.386	0.482	0.568	0.75
Departure Headway (Hd)	7.535	6.66	7.607	7.622	7.31
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	481	541	473	473	495
Service Time	5.287	4.412	5.667	5.678	5.365
HCM Lane V/C Ratio	0.807	0.386	0.482	0.567	0.747
HCM Control Delay	35.5	13.6	17.6	20.3	29.3
HCM Lane LOS	E	B	C	C	D
HCM 95th-tile Q	7.7	1.8	2.6	3.5	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	504	16	9	461	15	9
Future Volume (Veh/h)	504	16	9	461	15	9
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)	548	17	10	501	16	10
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			565		1078	556
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			565		1078	556
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	98
cM capacity (veh/h)			1007		240	530

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	565	511	26
Volume Left	0	10	16
Volume Right	17	0	10
cSH	1700	1007	304
Volume to Capacity	0.33	0.01	0.09
Queue Length 95th (m)	0.0	0.2	2.2
Control Delay (s)	0.0	0.3	18.0
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	18.0
Approach LOS			C

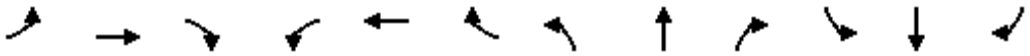
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	626	41	14	350	14	26	6	9	12	10	42
Future Volume (Veh/h)	46	626	41	14	350	14	26	6	9	12	10	42
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)	50	680	45	15	380	15	28	7	10	13	11	46
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	395			725			1264	1228	702	1211	1242	388
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	395			725			1264	1228	702	1211	1242	388
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 %	96			98			77	96	98	91	93	93
cM capacity (veh/h)	1164			878			123	168	438	144	164	661

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	50	725	15	395	45	70
Volume Left	50	0	15	0	28	13
Volume Right	0	45	0	15	10	46
cSH	1164	1700	878	1700	154	308
Volume to Capacity	0.04	0.43	0.02	0.23	0.29	0.23
Queue Length 95th (m)	1.1	0.0	0.4	0.0	9.1	6.9
Control Delay (s)	8.2	0.0	9.2	0.0	37.7	20.1
Lane LOS	A		A		E	C
Approach Delay (s)	0.5		0.3		37.7	20.1
Approach LOS					E	C

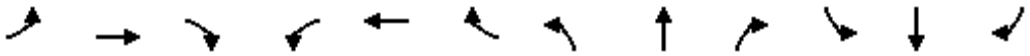
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	51.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	612	8	2	283	16	7	1	1	9	2	15
Future Volume (Veh/h)	19	612	8	2	283	16	7	1	1	9	2	15
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)	21	665	9	2	308	17	8	1	1	10	2	16
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	325			674			1040	1040	670	1029	1036	316
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	325			674			1040	1040	670	1029	1036	316
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 %	98			100			96	100	100	95	99	98
cM capacity (veh/h)	1235			917			199	226	457	208	227	724

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	21	674	2	325	10	28
Volume Left	21	0	2	0	8	10
Volume Right	0	9	0	17	1	16
cSH	1235	1700	917	1700	214	354
Volume to Capacity	0.02	0.40	0.00	0.19	0.05	0.08
Queue Length 95th (m)	0.4	0.0	0.1	0.0	1.2	2.0
Control Delay (s)	8.0	0.0	8.9	0.0	22.7	16.0
Lane LOS	A		A		C	C
Approach Delay (s)	0.2		0.1		22.7	16.0
Approach LOS					C	C

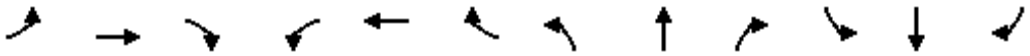
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	42.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	379	0	0	0	285	34	0	0	13	3
Future Volume (Veh/h)	2	0	379	0	0	0	285	34	0	0	13	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)	2	0	412	0	0	0	310	37	0	0	14	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	0			412			220	210	206	228	416	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			412			220	210	206	228	416	0
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			57	95	100	100	97	100
cM capacity (veh/h)	1623			1147			718	686	835	696	527	1085

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	414	0	347	17
Volume Left	2	0	310	0
Volume Right	412	0	0	3
cSH	1623	1700	715	579
Volume to Capacity	0.00	0.00	0.49	0.03
Queue Length 95th (m)	0.0	0.0	21.4	0.7
Control Delay (s)	0.0	0.0	14.7	11.4
Lane LOS	A		B	B
Approach Delay (s)	0.0	0.0	14.7	11.4
Approach LOS			B	B

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	54.5%	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)	3	101	14	52	136	23	18	55	90	13	26	1
Future Volume (Veh/h)	3	101	14	52	136	23	18	55	90	13	26	1
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)	3	110	15	57	148	25	20	60	98	14	28	1
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	173			125			413	410	118	526	406	160
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	173			125			413	410	118	526	406	160
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			96			96	88	90	96	95	100
cM capacity (veh/h)	1404			1462			510	509	934	365	513	885

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	128	230	178	43
Volume Left	3	57	20	14
Volume Right	15	25	98	1
cSH	1404	1462	680	457
Volume to Capacity	0.00	0.04	0.26	0.09
Queue Length 95th (m)	0.1	1.0	8.4	2.5
Control Delay (s)	0.2	2.1	12.2	13.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	2.1	12.2	13.7
Approach LOS			B	B

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	34.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	32.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	114	92	98	109	54	110	276	196	126	224	4
Future Vol, veh/h	14	114	92	98	109	54	110	276	196	126	224	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	124	100	107	118	59	120	300	213	137	243	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

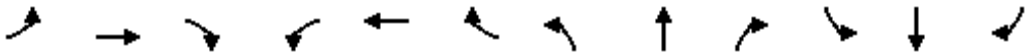
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	19.9	23.8	39.2	37.3
HCM LOS	C	C	E	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	0%	6%	38%	36%
Vol Thru, %	72%	0%	52%	42%	63%
Vol Right, %	0%	100%	42%	21%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	386	196	220	261	354
LT Vol	110	0	14	98	126
Through Vol	276	0	114	109	224
RT Vol	0	196	92	54	4
Lane Flow Rate	420	213	239	284	385
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.915	0.413	0.532	0.629	0.82
Departure Headway (Hd)	7.851	6.983	8.015	7.987	7.669
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	462	513	447	451	469
Service Time	5.626	4.757	6.101	6.068	5.744
HCM Lane V/C Ratio	0.909	0.415	0.535	0.63	0.821
HCM Control Delay	51.7	14.6	19.9	23.8	37.3
HCM Lane LOS	F	B	C	C	E
HCM 95th-tile Q	10.3	2	3.1	4.2	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	504	20	11	461	18	10
Future Volume (Veh/h)	504	20	11	461	18	10
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)	548	22	12	501	20	11
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			570		1084	559
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			570		1084	559
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	98
cM capacity (veh/h)			1002		237	529

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	570	513	31
Volume Left	0	12	20
Volume Right	22	0	11
cSH	1700	1002	295
Volume to Capacity	0.34	0.01	0.11
Queue Length 95th (m)	0.0	0.3	2.8
Control Delay (s)	0.0	0.3	18.6
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	18.6
Approach LOS			C

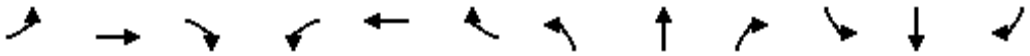
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	657	41	14	371	14	26	6	9	12	10	42
Future Volume (Veh/h)	46	657	41	14	371	14	26	6	9	12	10	42
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)	50	714	45	15	403	15	28	7	10	13	11	46
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	418			759			1321	1284	736	1268	1300	410
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	418			759			1321	1284	736	1268	1300	410
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 %	96			98			75	95	98	90	93	93
cM capacity (veh/h)	1141			852			112	155	419	131	152	641

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	50	759	15	418	45	70
Volume Left	50	0	15	0	28	13
Volume Right	0	45	0	15	10	46
cSH	1141	1700	852	1700	141	287
Volume to Capacity	0.04	0.45	0.02	0.25	0.32	0.24
Queue Length 95th (m)	1.1	0.0	0.4	0.0	10.2	7.5
Control Delay (s)	8.3	0.0	9.3	0.0	42.1	21.5
Lane LOS	A		A		E	C
Approach Delay (s)	0.5		0.3		42.1	21.5
Approach LOS					E	C

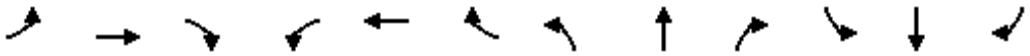
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	51.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	644	8	4	303	19	7	1	4	14	2	15
Future Volume (Veh/h)	19	644	8	4	303	19	7	1	4	14	2	15
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)	21	700	9	4	329	21	8	1	4	15	2	16
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	350			709			1100	1104	704	1094	1098	340
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	350			709			1100	1104	704	1094	1098	340
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 %	98			100			96	100	99	92	99	98
cM capacity (veh/h)	1209			890			181	206	437	186	208	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	21	709	4	350	13	33
Volume Left	21	0	4	0	8	15
Volume Right	0	9	0	21	4	16
cSH	1209	1700	890	1700	223	292
Volume to Capacity	0.02	0.42	0.00	0.21	0.06	0.11
Queue Length 95th (m)	0.4	0.0	0.1	0.0	1.5	3.0
Control Delay (s)	8.0	0.0	9.1	0.0	22.1	18.9
Lane LOS	A		A		C	C
Approach Delay (s)	0.2		0.1		22.1	18.9
Approach LOS					C	C

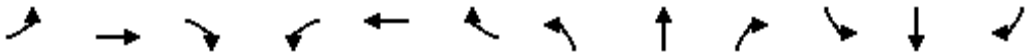
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	44.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	385	0	0	0	294	34	0	0	13	3
Future Volume (Veh/h)	2	0	385	0	0	0	294	34	0	0	13	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)	2	0	418	0	0	0	320	37	0	0	14	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	0			418			223	213	209	232	422	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			418			223	213	209	232	422	0
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			55	95	100	100	97	100
cM capacity (veh/h)	1623			1141			715	684	831	693	523	1085

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	420	0	357	17
Volume Left	2	0	320	0
Volume Right	418	0	0	3
cSH	1623	1700	712	575
Volume to Capacity	0.00	0.00	0.50	0.03
Queue Length 95th (m)	0.0	0.0	22.7	0.7
Control Delay (s)	0.0	0.0	15.0	11.5
Lane LOS	A		C	B
Approach Delay (s)	0.0	0.0	15.0	11.5
Approach LOS			C	B

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	55.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	101	14	52	136	26	18	55	90	15	26	1
Future Volume (Veh/h)	3	101	14	52	136	26	18	55	90	15	26	1
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)	3	110	15	57	148	28	20	60	98	16	28	1
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	176			125			414	414	118	528	407	162
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	176			125			414	414	118	528	407	162
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			96			96	88	90	96	95	100
cM capacity (veh/h)	1400			1462			508	507	934	364	512	883

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	128	233	178	45
Volume Left	3	57	20	16
Volume Right	15	28	98	1
cSH	1400	1462	678	451
Volume to Capacity	0.00	0.04	0.26	0.10
Queue Length 95th (m)	0.1	1.0	8.4	2.6
Control Delay (s)	0.2	2.1	12.2	13.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	2.1	12.2	13.9
Approach LOS			B	B

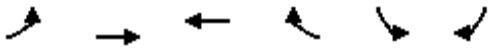
Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	34.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	36.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	114	94	98	109	54	113	285	196	126	230	4
Future Vol, veh/h	14	114	94	98	109	54	113	285	196	126	230	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	124	102	107	118	59	123	310	213	137	250	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	20.6	24.5	44.7	40.3
HCM LOS	C	C	E	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	0%	6%	38%	35%
Vol Thru, %	72%	0%	51%	42%	64%
Vol Right, %	0%	100%	42%	21%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	398	196	222	261	360
LT Vol	113	0	14	98	126
Through Vol	285	0	114	109	230
RT Vol	0	196	94	54	4
Lane Flow Rate	433	213	241	284	391
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.952	0.418	0.544	0.638	0.842
Departure Headway (Hd)	7.923	7.055	8.121	8.099	7.75
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	454	507	442	443	466
Service Time	5.704	4.836	6.215	6.187	5.834
HCM Lane V/C Ratio	0.954	0.42	0.545	0.641	0.839
HCM Control Delay	59.4	14.9	20.6	24.5	40.3
HCM Lane LOS	F	B	C	C	E
HCM 95th-tile Q	11.4	2	3.2	4.3	8.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	624	299	9	6	26
Future Volume (Veh/h)	40	624	299	9	6	26
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)	43	678	325	10	7	28
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	335				1094	330
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	335				1094	330
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				97	96
cM capacity (veh/h)	1224				228	712

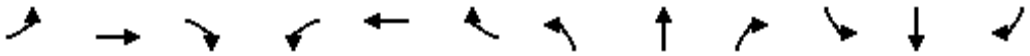
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	721	335	35
Volume Left	43	0	7
Volume Right	0	10	28
cSH	1224	1700	500
Volume to Capacity	0.04	0.20	0.07
Queue Length 95th (m)	0.9	0.0	1.8
Control Delay (s)	0.9	0.0	12.7
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	530	33	14	485	28	13
Future Volume (Veh/h)	530	33	14	485	28	13
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)	576	36	15	527	30	14
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			612		1151	594
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			612		1151	594
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		86	97
cM capacity (veh/h)			967		215	505

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	612	542	44
Volume Left	0	15	30
Volume Right	36	0	14
cSH	1700	967	264
Volume to Capacity	0.36	0.02	0.17
Queue Length 95th (m)	0.0	0.4	4.7
Control Delay (s)	0.0	0.4	21.4
Lane LOS		A	C
Approach Delay (s)	0.0	0.4	21.4
Approach LOS			C

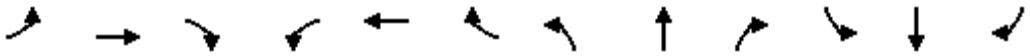
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	724	41	14	416	15	26	6	9	13	10	44
Future Volume (Veh/h)	48	724	41	14	416	15	26	6	9	13	10	44
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)	52	787	45	15	452	16	28	7	10	14	11	48
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	468			832			1449	1412	810	1394	1426	460
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	468			832			1449	1412	810	1394	1426	460
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 %	95			98			69	95	97	87	91	92
cM capacity (veh/h)	1094			801			89	129	380	105	126	601

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	52	832	15	468	45	73
Volume Left	52	0	15	0	28	14
Volume Right	0	45	0	16	10	48
cSH	1094	1700	801	1700	114	244
Volume to Capacity	0.05	0.49	0.02	0.28	0.40	0.30
Queue Length 95th (m)	1.2	0.0	0.5	0.0	13.2	9.7
Control Delay (s)	8.5	0.0	9.6	0.0	55.9	26.0
Lane LOS	A		A		F	D
Approach Delay (s)	0.5		0.3		55.9	26.0
Approach LOS					F	D

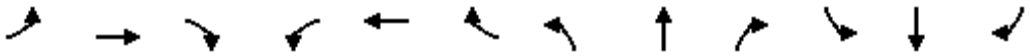
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	53.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	689	30	4	329	26	23	6	10	22	9	16
Future Volume (Veh/h)	20	689	30	4	329	26	23	6	10	22	9	16
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)	22	749	33	4	358	28	25	7	11	24	10	17
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	386			782			1198	1204	766	1188	1206	372
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	386			782			1198	1204	766	1188	1206	372
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 %	98			100			83	96	97	84	94	97
cM capacity (veh/h)	1172			836			149	180	403	153	179	674

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	22	782	4	386	43	51
Volume Left	22	0	4	0	25	24
Volume Right	0	33	0	28	11	17
cSH	1172	1700	836	1700	184	214
Volume to Capacity	0.02	0.46	0.00	0.23	0.23	0.24
Queue Length 95th (m)	0.5	0.0	0.1	0.0	7.0	7.2
Control Delay (s)	8.1	0.0	9.3	0.0	30.5	26.9
Lane LOS	A		A		D	D
Approach Delay (s)	0.2		0.1		30.5	26.9
Approach LOS					D	D

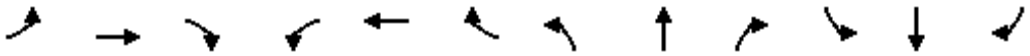
Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	48.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	409	0	0	0	313	35	0	0	14	3
Future Volume (Veh/h)	2	0	409	0	0	0	313	35	0	0	14	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)	2	0	445	0	0	0	340	38	0	0	15	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	0			445			237	226	222	246	449	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			445			237	226	222	246	449	0
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			51	94	100	100	97	100
cM capacity (veh/h)	1623			1115			699	672	817	677	505	1085

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	447	0	378	18
Volume Left	2	0	340	0
Volume Right	445	0	0	3
cSH	1623	1700	696	554
Volume to Capacity	0.00	0.00	0.54	0.03
Queue Length 95th (m)	0.0	0.0	26.4	0.8
Control Delay (s)	0.0	0.0	16.2	11.7
Lane LOS	A		C	B
Approach Delay (s)	0.0	0.0	16.2	11.7
Approach LOS			C	B

Intersection Summary				
Average Delay	7.5			
Intersection Capacity Utilization	57.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	106	15	70	164	26	19	127	94	14	39	1
Future Volume (Veh/h)	3	106	15	70	164	26	19	127	94	14	39	1
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)	3	115	16	76	178	28	21	138	102	15	42	1
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	206			131			495	487	123	644	481	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	206			131			495	487	123	644	481	192
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			95			95	70	89	94	91	100
cM capacity (veh/h)	1365			1454			432	455	928	252	458	850

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	134	282	261	58
Volume Left	3	76	21	15
Volume Right	16	28	102	1
cSH	1365	1454	565	381
Volume to Capacity	0.00	0.05	0.46	0.15
Queue Length 95th (m)	0.1	1.3	19.4	4.3
Control Delay (s)	0.2	2.4	16.7	16.1
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	2.4	16.7	16.1
Approach LOS			C	C

Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	53.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	129	96	103	128	57	116	303	206	135	250	4
Future Vol, veh/h	15	129	96	103	128	57	116	303	206	135	250	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	140	104	112	139	62	126	329	224	147	272	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

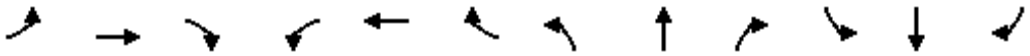
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	25.4	32.5	69.4	62
HCM LOS	D	D	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	0%	6%	36%	35%
Vol Thru, %	72%	0%	54%	44%	64%
Vol Right, %	0%	100%	40%	20%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	419	206	240	288	389
LT Vol	116	0	15	103	135
Through Vol	303	0	129	128	250
RT Vol	0	206	96	57	4
Lane Flow Rate	455	224	261	313	423
Geometry Grp	7	7	2	2	5
Degree of Util (X)	1.076	0.475	0.621	0.735	0.954
Departure Headway (Hd)	8.503	7.635	8.878	8.763	8.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	428	470	410	416	436
Service Time	6.272	5.403	6.878	6.763	6.407
HCM Lane V/C Ratio	1.063	0.477	0.637	0.752	0.97
HCM Control Delay	95	17.2	25.4	32.5	62
HCM Lane LOS	F	C	D	D	F
HCM 95th-tile Q	15.2	2.5	4.1	5.8	11.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	530	37	16	485	30	13
Future Volume (Veh/h)	530	37	16	485	30	13
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)	576	40	17	527	33	14
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			616		1157	596
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			616		1157	596
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	97
cM capacity (veh/h)			964		213	504

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	616	544	47
Volume Left	0	17	33
Volume Right	40	0	14
cSH	1700	964	257
Volume to Capacity	0.36	0.02	0.18
Queue Length 95th (m)	0.0	0.4	5.2
Control Delay (s)	0.0	0.5	22.1
Lane LOS		A	C
Approach Delay (s)	0.0	0.5	22.1
Approach LOS			C

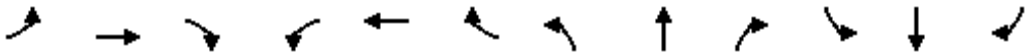
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	756	41	14	437	15	26	6	9	13	10	44
Future Volume (Veh/h)	48	756	41	14	437	15	26	6	9	13	10	44
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)	52	822	45	15	475	16	28	7	10	14	11	48
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	491			867			1507	1470	844	1452	1484	483
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	491			867			1507	1470	844	1452	1484	483
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 %	95			98			65	94	97	85	91	92
cM capacity (veh/h)	1072			777			80	119	363	96	116	584

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	52	867	15	491	45	73
Volume Left	52	0	15	0	28	14
Volume Right	0	45	0	16	10	48
cSH	1072	1700	777	1700	103	226
Volume to Capacity	0.05	0.51	0.02	0.29	0.44	0.32
Queue Length 95th (m)	1.2	0.0	0.5	0.0	14.8	10.7
Control Delay (s)	8.5	0.0	9.7	0.0	64.3	28.4
Lane LOS	A		A		F	D
Approach Delay (s)	0.5		0.3		64.3	28.4
Approach LOS					F	D

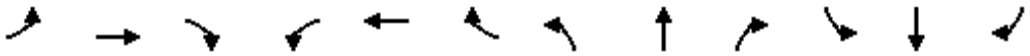
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	721	30	6	350	29	23	6	13	27	9	16
Future Volume (Veh/h)	20	721	30	6	350	29	23	6	13	27	9	16
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)	22	784	33	7	380	32	25	7	14	29	10	17
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	412			817			1260	1270	800	1256	1271	396
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			817			1260	1270	800	1256	1271	396
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 %	98			99			81	96	96	79	94	97
cM capacity (veh/h)	1147			811			134	163	385	135	163	653

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	22	817	7	412	46	56
Volume Left	22	0	7	0	25	29
Volume Right	0	33	0	32	14	17
cSH	1147	1700	811	1700	173	186
Volume to Capacity	0.02	0.48	0.01	0.24	0.27	0.30
Queue Length 95th (m)	0.5	0.0	0.2	0.0	8.2	9.6
Control Delay (s)	8.2	0.0	9.5	0.0	33.2	32.6
Lane LOS	A		A		D	D
Approach Delay (s)	0.2		0.2		33.2	32.6
Approach LOS					D	D

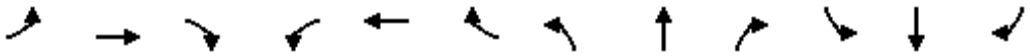
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	50.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	415	0	0	0	323	35	0	0	14	3
Future Volume (Veh/h)	2	0	415	0	0	0	323	35	0	0	14	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)	2	0	451	0	0	0	351	38	0	0	15	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	0			451			240	230	226	248	455	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			451			240	230	226	248	455	0
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			50	94	100	100	97	100
cM capacity (veh/h)	1623			1109			695	669	814	674	501	1085

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	453	0	389	18
Volume Left	2	0	351	0
Volume Right	451	0	0	3
cSH	1623	1700	693	550
Volume to Capacity	0.00	0.00	0.56	0.03
Queue Length 95th (m)	0.0	0.0	28.1	0.8
Control Delay (s)	0.0	0.0	16.6	11.8
Lane LOS	A		C	B
Approach Delay (s)	0.0	0.0	16.6	11.8
Approach LOS			C	B

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	106	15	70	164	29	19	127	94	16	39	1
Future Volume (Veh/h)	3	106	15	70	164	29	19	127	94	16	39	1
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)	3	115	16	76	178	32	21	138	102	17	42	1
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	210			131			497	491	123	646	483	194
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	210			131			497	491	123	646	483	194
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			95			95	69	89	93	91	100
cM capacity (veh/h)	1361			1454			431	452	928	251	457	847

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	134	286	261	60
Volume Left	3	76	21	17
Volume Right	16	32	102	1
cSH	1361	1454	563	373
Volume to Capacity	0.00	0.05	0.46	0.16
Queue Length 95th (m)	0.1	1.3	19.5	4.5
Control Delay (s)	0.2	2.4	16.8	16.5
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	2.4	16.8	16.5
Approach LOS			C	C

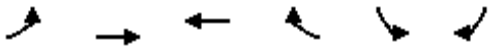
Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	59.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	129	98	103	128	57	119	313	206	135	256	4
Future Vol, veh/h	15	129	98	103	128	57	119	313	206	135	256	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	140	107	112	139	62	129	340	224	147	278	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	26.1	33.3	79.4	66.9
HCM LOS	D	D	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	0%	6%	36%	34%
Vol Thru, %	72%	0%	53%	44%	65%
Vol Right, %	0%	100%	40%	20%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	432	206	242	288	395
LT Vol	119	0	15	103	135
Through Vol	313	0	129	128	256
RT Vol	0	206	98	57	4
Lane Flow Rate	470	224	263	313	429
Geometry Grp	7	7	2	2	5
Degree of Util (X)	1.118	0.479	0.63	0.741	0.974
Departure Headway (Hd)	8.571	7.703	8.987	8.877	8.486
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	423	466	405	410	429
Service Time	6.338	5.469	6.987	6.877	6.486
HCM Lane V/C Ratio	1.111	0.481	0.649	0.763	1
HCM Control Delay	109	17.4	26.1	33.3	66.9
HCM Lane LOS	F	C	D	D	F
HCM 95th-tile Q	16.6	2.5	4.2	5.9	11.8



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	722	358	9	6	26
Future Volume (Veh/h)	40	722	358	9	6	26
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)	43	785	389	10	7	28
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	399				1265	394
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399				1265	394
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				96	96
cM capacity (veh/h)	1160				180	655

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	828	399	35
Volume Left	43	0	7
Volume Right	0	10	28
cSH	1160	1700	429
Volume to Capacity	0.04	0.23	0.08
Queue Length 95th (m)	0.9	0.0	2.1
Control Delay (s)	1.0	0.0	14.1
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	14.1
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		