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8365 Keystone Crossing, Suite 201
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TRAFFIC IMPACT STUDY

PROPOSED RESIDENTIAL DEVELOPMENT

AUBURN RIDGE WEST

BROWNSBURG, INDIANA

PREPARED FOR

M/I HOMES

December 2024

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CERTIFICATION

I certify that this **TRAFFIC IMPACT STUDY** has been prepared by me and under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering.

A&F ENGINEERING CO., LLC

December 20, 2024
Steven J. Fehribach, P.E.
Indiana Registration #60890237

Trevor Reich, E.I.
Senior Traffic Engineer

Sri Gayatri Kesara
Traffic Engineer Technician

INTRODUCTION

This **TRAFFIC IMPACT STUDY**, prepared on behalf of M/I Homes, is for a proposed residential development known as Auburn Ridge West that will be located in the northeast quadrant of the intersection of CR 450 N and CR 500 E in Brownsburg, Indiana.

PURPOSE

The purpose of this analysis is to determine what impact traffic generated by the proposed development will have on the existing adjacent roadway system. This analysis will identify any existing roadway deficiencies or ones that may occur in the future.

Conclusions will be reached that will determine if the roadway system can accommodate the anticipated traffic volumes or will determine the modifications that will be required to the system if there are identified deficiencies.

Recommendations will be made that will address the conclusions resulting from this analysis. These recommendations will address feasible roadway system improvements to provide safe ingress and egress, to and from the proposed development, with minimal interference to traffic on the public street system.

SCOPE OF WORK

The scope of work for this analysis is as follows:

First, conduct turning movement traffic volume counts between the hours of 6:00 AM to 9:00 AM and 2:00 PM to 7:00 PM during a typical school day in November 2024 at the following intersections:

- Green Street & CR 500 N
- CR 500 N & CR 600 E
- CR 500 N & CR 575 E
- CR 450 N & CR 575 E
- CR 450 N West Leg & CR 500 E
- CR 450 N East Leg & CR 500 E

Second, estimate the year 2029 background traffic volumes by applying a 3.0% per year growth rate to the existing traffic volumes.

Third, estimate the number of peak hour trips that will be generated by the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision.

Fourth, assign and distribute the generated traffic from the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision to the study intersections.

Fifth, prepare a capacity analysis, level of service analysis, and a turn-lane analysis at the study intersections for each of the following scenarios:

Scenario 1: Existing Traffic Volumes – Based on existing traffic volumes.

Scenario 2: Year 2029 Background Traffic Volumes – Based on the sum of applying a 3.0% per year growth rate to the existing traffic volumes.

Scenario 3: Year 2029 + Proposed Development Traffic Volumes – Based on the sum of year 2029 background traffic volumes and generated traffic volumes from the proposed Auburn Ridge development and the adjacent Auburn Ridge subdivision.

Sixth, prepare recommendations for the roadway geometrics that will be needed to accommodate the future traffic volumes.

Finally, prepare a **TRAFFIC IMPACT STUDY** report documenting all data, analyses, conclusions, and recommendations to provide for the safe and efficient movement of traffic through the study area.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The subject site is located in the northeast quadrant of the intersection of CR 450 N & CR 500 E in Brownsburg, Indiana. As proposed, the site will consist of 124 single family homes. The site will be served by one full access drive along CR 500 E and one full access drive along CR 450 N. Additionally, the site will have access to CR 575 E via an internal connection to the adjacent Auburn Ridge subdivision to the east. **Figure 1** is an area map showing the location and general layout of the proposed site.

DESCRIPTION OF NEAR-BY DEVELOPMENTS

It is anticipated that the adjacent Auburn Ridge subdivision will be fully constructed within the horizon year of this study. Auburn Ridge will be comprised of 170 single family homes and will be served by a full access drive that creates a T-intersection with CR 575 E & CR 500 N. Additionally, the Auburn Ridge subdivision will have an internal connection to the proposed Auburn Ridge West development. The location and general layout of Auburn Ridge are shown in **Figure 1.**

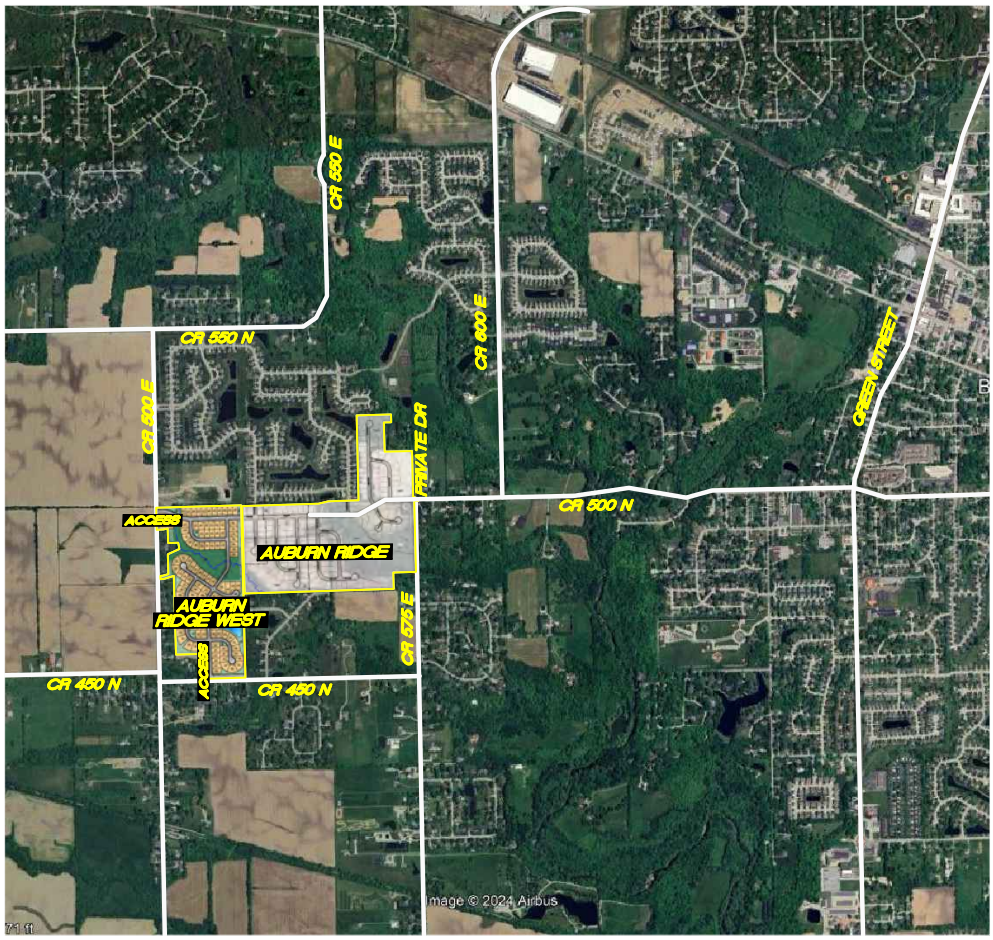

FIGURE 1

AREA MAP

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA

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STUDY AREA

The study area for this analysis has been defined to include the following intersections:

- Green Street & CR 500 N
- CR 500 N & CR 600 E
- CR 500 N & CR 575 E
- CR 450 N & CR 575 E
- CR 450 N & CR 500 E
- CR 500 E & Proposed Access Drive
- CR 450 N & Proposed Access Drive

Figures 2A & 2B show the existing intersection geometrics at the study intersections.

DESCRIPTION OF ABUTTING STREET SYSTEM

The proposed Auburn Ridge West development and the adjacent Auburn Ridge will be primarily served by the public roadway system that includes Green Street, CR 500 N, CR 600 E, CR 575 E, and CR 450 N.

TABLE 1 – DESCRIPTION OF THE ABUTTING STREET SYSTEM

STREET NAME	NUMBER OF LANES	SPEED LIMIT (MPH)	FUNCTIONAL CLASSIFICATION*
Green Street	2	30	Principal Arterial
CR 500 N	2	30/35	Minor Arterial
CR 600 E	2	40	Minor Arterial
CR 575 E	2	35	Major Collector/Local Road
CR 450 N	2	Not Posted	Major Collector/Local Road

* Roadway functional classification take from the INDOT Roadway Inventory & Functional Class Viewer

EXISTING TRAFFIC VOLUMES

Turning movement traffic volume counts were collected by A&F Engineering at the study intersections between the hours of 6:00 AM to 9:00 AM and 2:00 PM to 7:00 PM during a typical weekday in November 2024 under good weather conditions. However, during the time of the traffic volume counts, road closures in the study area impacted the traffic volumes and patterns. Therefore, year 2021 traffic volumes from a previously completed traffic impact study for the Auburn Ridge subdivision were grown to 2024 levels with an annual growth rate of 3.0%. It should be noted that the peak hours vary slightly at each intersection. The respective peak hours for each intersection were used in order to create a "worse case" traffic volume scenario. The intersection count output summary sheets are included in the **Appendix**, and the year 2024 AM and PM peak hour traffic volumes at the existing study intersections are shown in **Figure 3.**

YEAR 2029 BACKGROUND TRAFFIC VOLUMES

In order to account for the growth in traffic volumes that may occur due to development outside of the study area over the next five years, an annual growth rate was applied to the year 2024 traffic volumes. A 3.0% per year non-compounded growth rate was used in this study. Therefore, a growth rate factor of 1.15 was applied to the year 2024 traffic volumes. The total year 2029 background traffic volumes are shown on **Figure 4**.

GENERATED TRIPS FOR PROPOSED DEVELOPMENT

The estimate of newly generated traffic is a function of the development size and of the character of the land use. The ITE *Trip Generation Manual*[1] was used to calculate the number of trips that will be generated by the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision. This report is a compilation of trip data for various land uses as collected by transportation professionals throughout the United States to establish the average number of trips generated by those land uses. **Table 2** summarizes the total trips that will be generated by the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision.

TABLE 2 – TOTAL GENERATED TRIPS FOR PROPOSED DEVELOPMENT

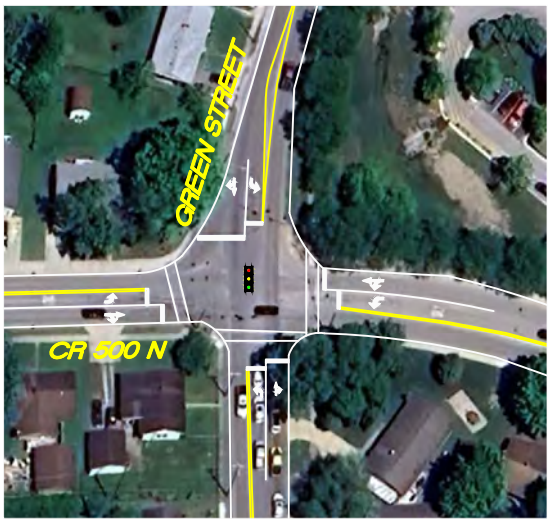
DEVELOPMENT INFORMATION			GENERATED TRIPS			
LAND USE	ITE CODE	SIZE	AM PEAK		PM PEAK	
			IN	OUT	IN	OUT
Single Family Homes	210	294 DU	50	149	173	101

PASS-BY & INTERNAL TRIPS

Pass-by trips are trips that are already in the existing traffic stream along the adjacent public roadway system that enter a site, utilize the site, and then return back to the existing traffic stream. Residential developments do not typically attract a significant number of pass-by trips. Therefore, pass-by trip reductions are not included in this study.

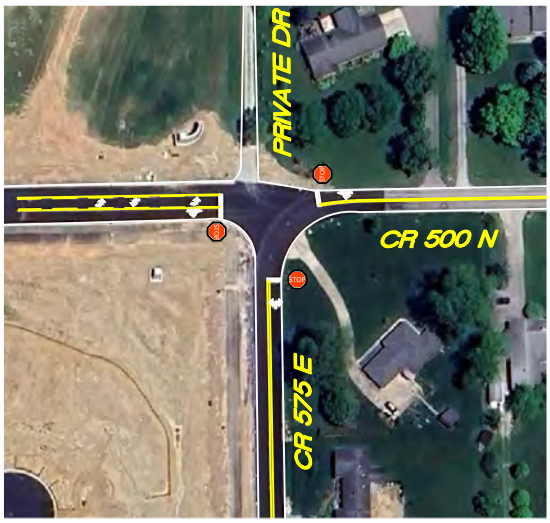
An internal trip results when a trip is made between two or more land uses without traversing the external public roadway system. The proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision are comprised of a single land use only. Hence, internal trip reductions are not considered in this study.

[1] *Trip Generation Manual*, Institute of Transportation Engineers, 11th Edition, 2021.



GREEN STREET & CR 500 N

CR 500 N & CR 600 E



CR 500 N & CR 575 E

CR 450 N & CR 575 E

FIGURE 2A

EXISTING INTERSECTION GEOMETRICS

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BROWNSBURG, INDIANA

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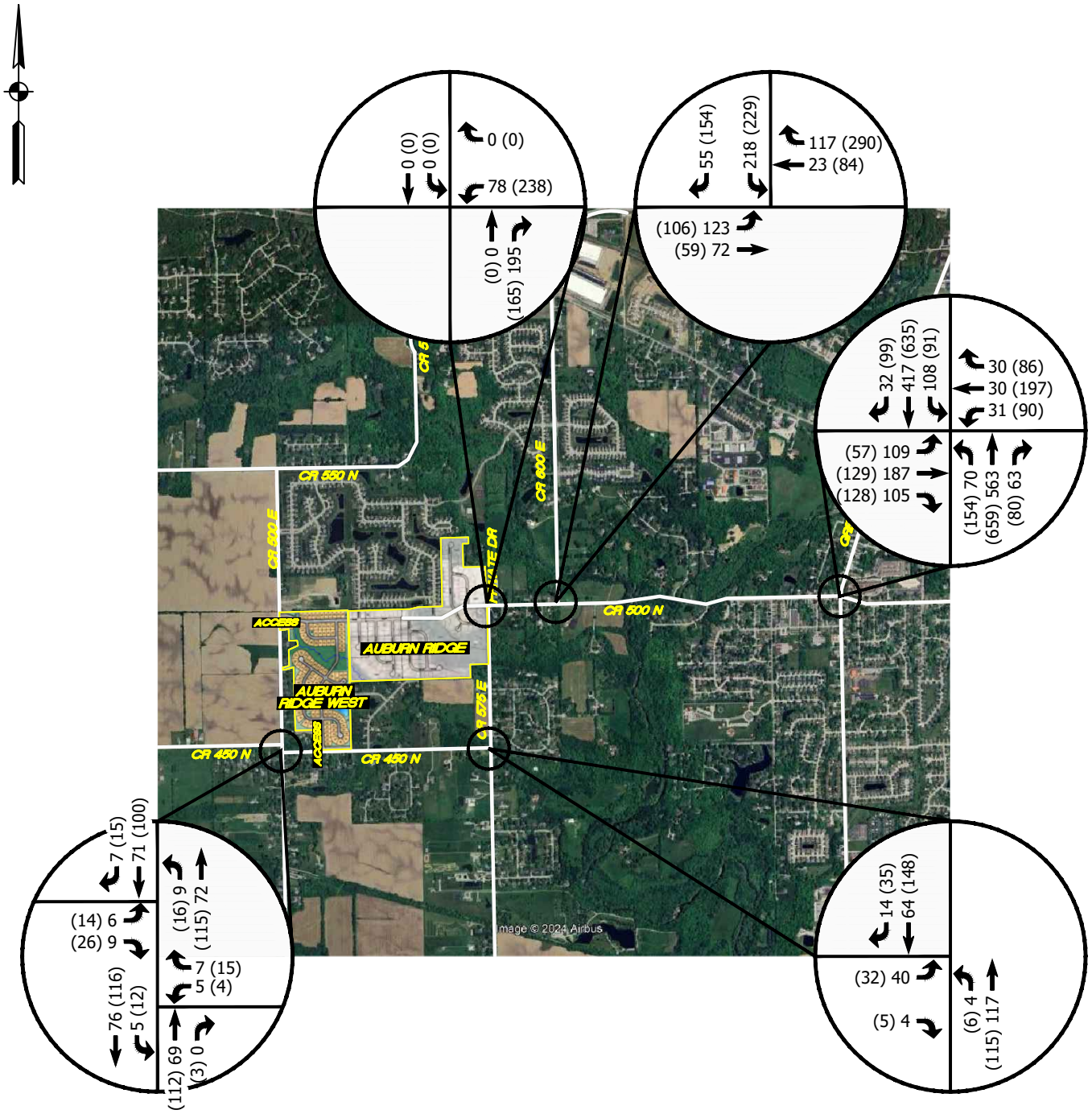
CR 450 N & CR 500 E

FIGURE 2B

EXISTING INTERSECTION GEOMETRICS

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA



LEGEND
XX = A.M. PEAK HOUR
(XX) = P.M. PEAK HOUR
* = NEGLIGIBLE

FIGURE 3

2024 TRAFFIC VOLUMES

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA

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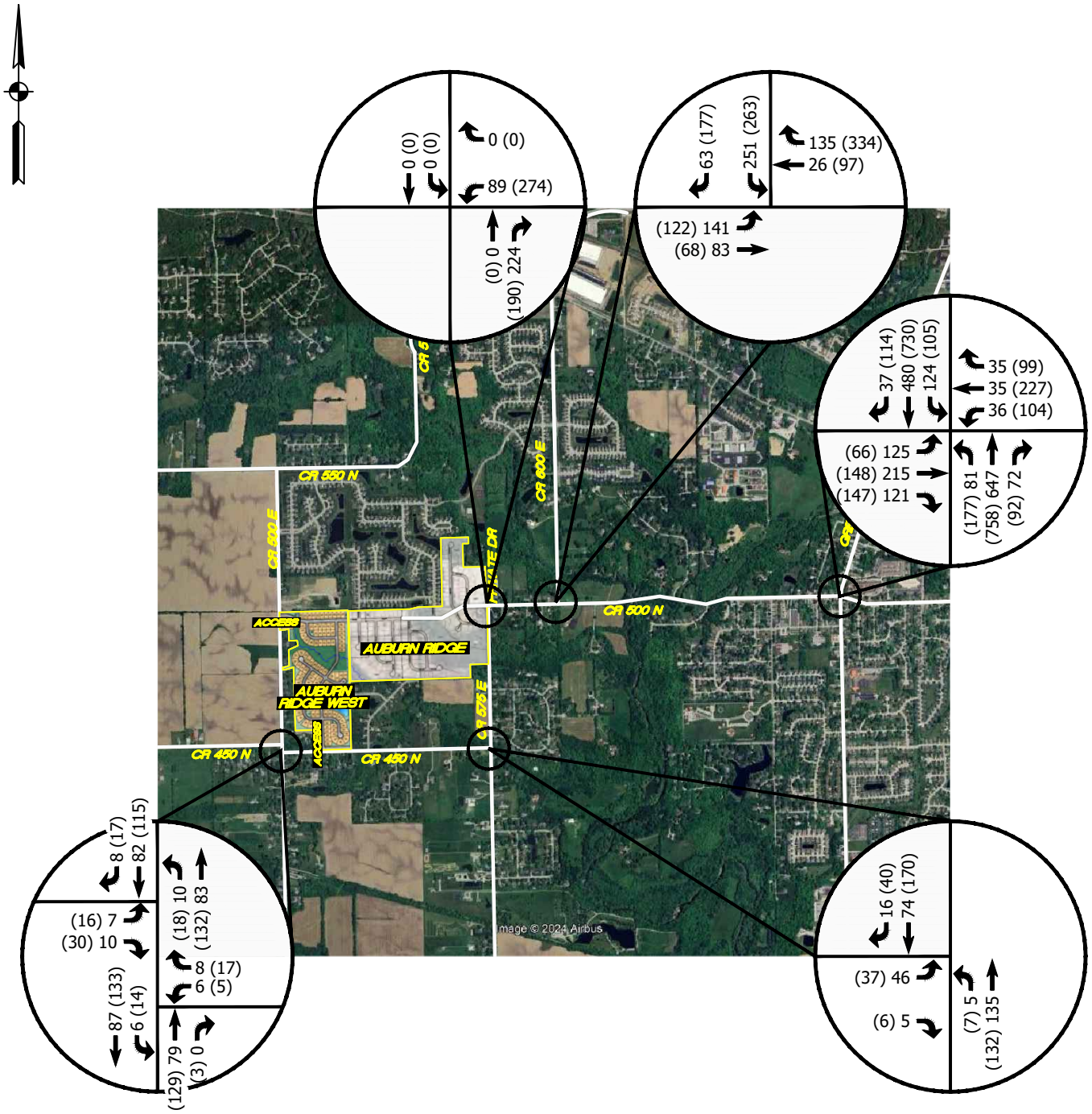

LEGEND
XX = A.M. PEAK HOUR
(XX) = P.M. PEAK HOUR
* = NEGLIGIBLE

FIGURE 4

YEAR 2029 BACKGROUND TRAFFIC VOLUMES

TRAFFIC IMPACT STUDY
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BROWNSBURG, INDIANA

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ASSIGNMENT AND DISTRIBUTION OF GENERATED TRIPS

The study methodology used to determine the traffic volumes from the site that will be added to the street system is defined as follows:

1. The volume of traffic that will enter and exit the proposed development must be assigned to the access points and to the public street system. Using the traffic volume data collected for this analysis, traffic to and from the site development has been assigned to the proposed driveways and to the public street system that will be serving the site.

2. To determine the volume of traffic that will be added to the public roadway system, the generated traffic must be distributed by direction to the public roadways at their intersection with the driveways. For the proposed development, the trip distribution was based on the location of the development, the existing traffic patterns, and the assignment of generated traffic.

Figure 5 illustrates the assignment and distribution of generated trips from the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision.

GENERATED TRIPS ADDED TO THE STREET SYSTEM

The total generated traffic volumes that can be expected from the proposed Auburn Ridge West development and the Auburn Ridge subdivision have been assigned to each of the study intersections. These volumes were determined based on the previously discussed trip generation data, assignment and distribution of generated traffic. The total peak hour generated traffic volumes from the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision are shown in **Figure 6**. Additionally, **Figure 7** illustrates the sum of the year 2029 background traffic volumes and generated traffic volumes from the proposed Auburn Ridge West development and the adjacent Auburn Ridge subdivision.

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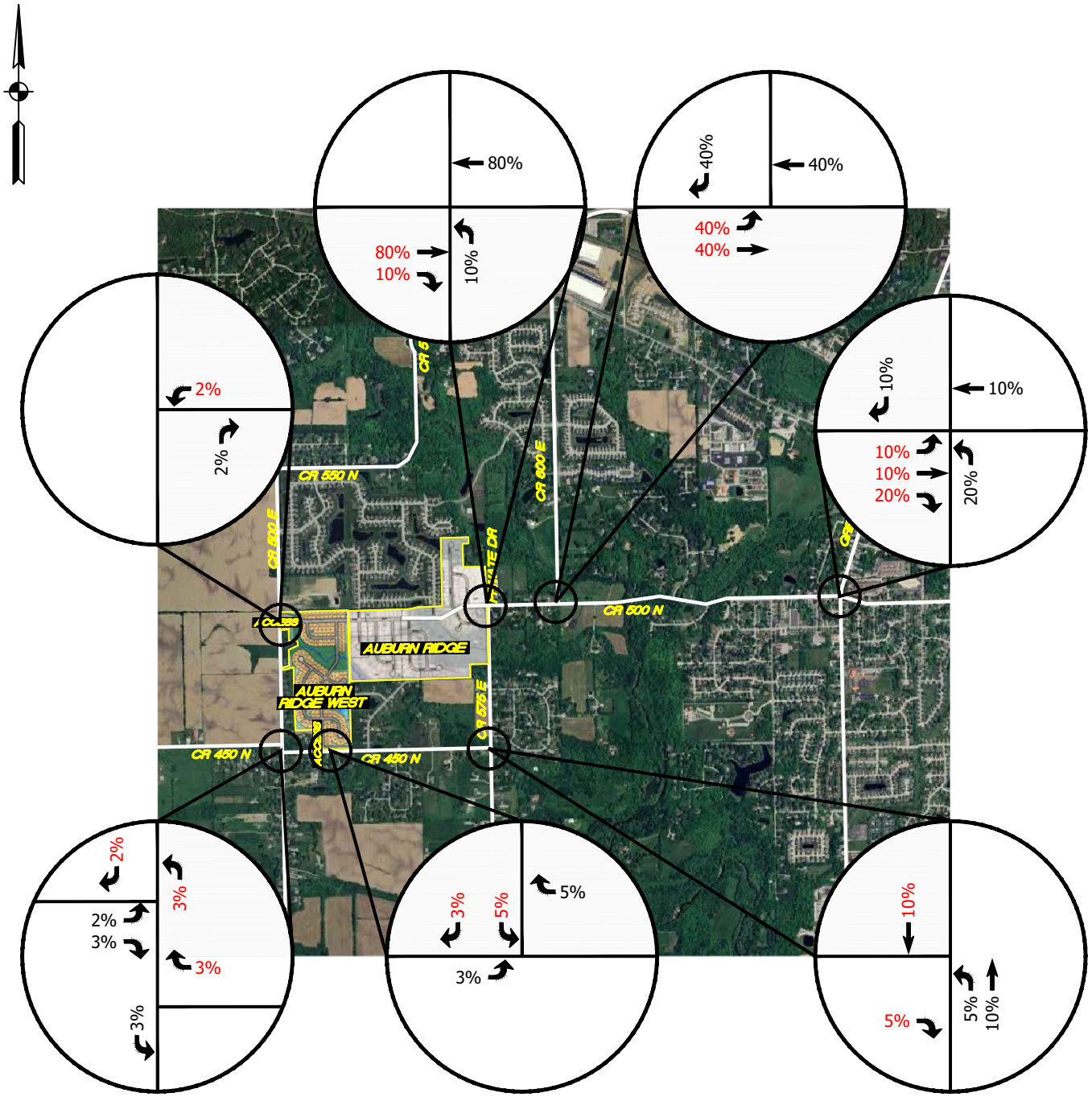

LEGEND
XX = INBOUND TRAFFIC
XX = OUTBOUND TRAFFIC
* = NEGLIGIBLE

FIGURE 5

ASSIGNMENT & DISTRIBUTION OF GENERATED TRAFFIC TRAFFIC VOLUMES FROM AUBURN RIDGE WEST & AUBURN RIDGE

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA

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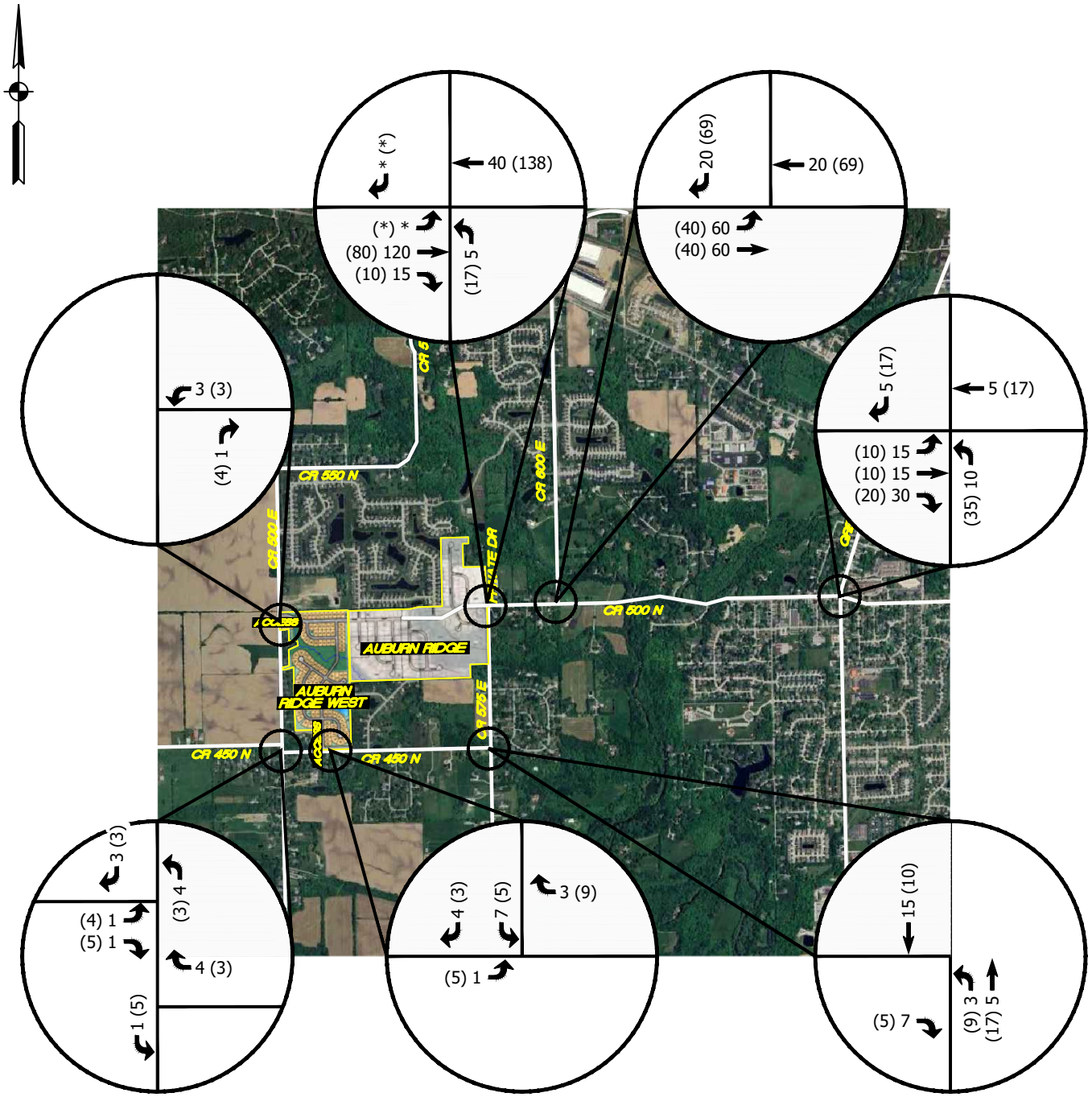

LEGEND
XX = A.M. PEAK HOUR
(XX) = P.M. PEAK HOUR
* = NEGLIGIBLE

FIGURE 6

GENERATED TRAFFIC VOLUMES FROM AUBURN RIDGE WEST AND AUBURN RIDGE

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA

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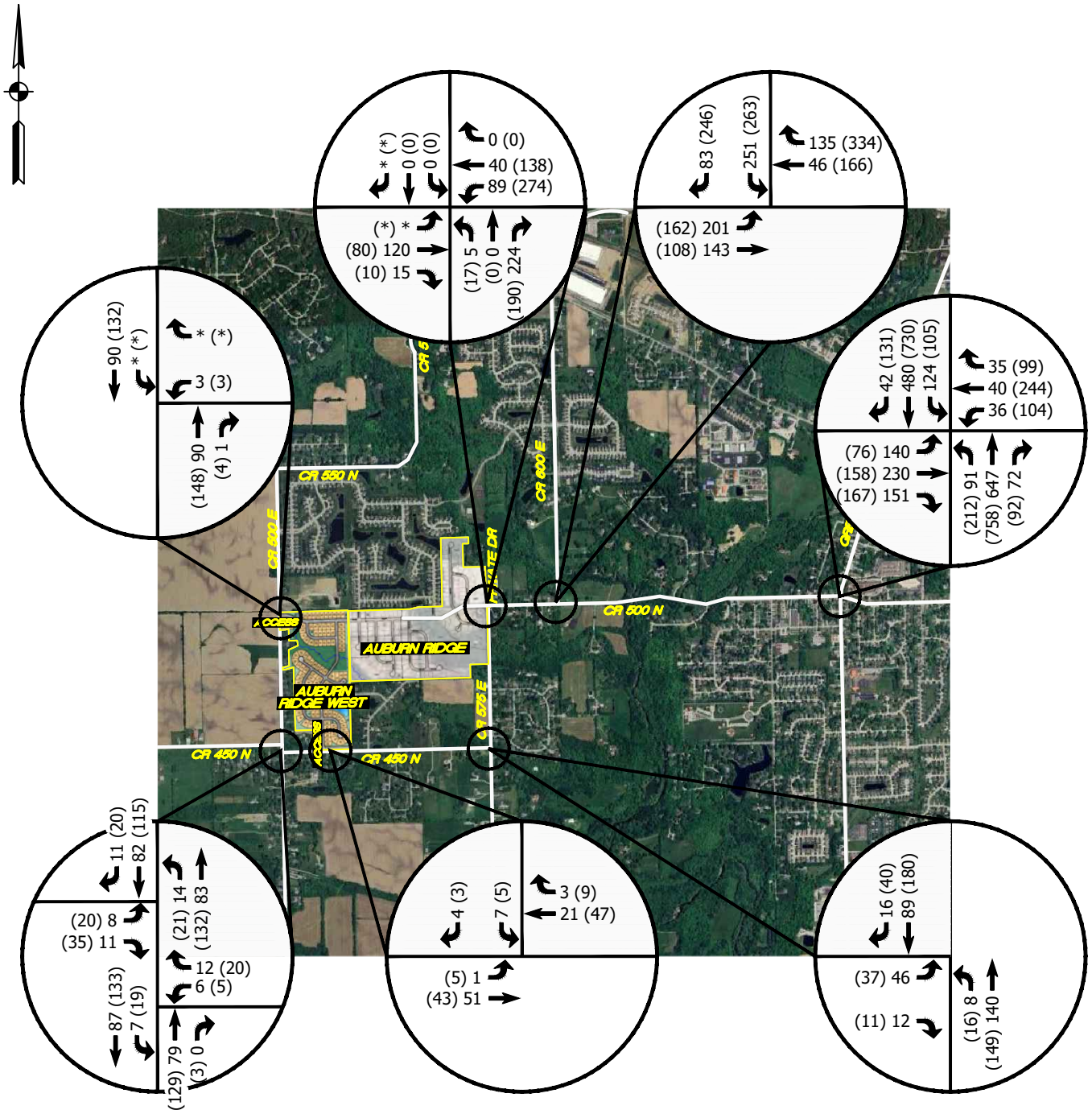

LEGEND
XX = A.M. PEAK HOUR
(XX) = P.M. PEAK HOUR
* = NEGLIGIBLE

FIGURE 7

SUM OF YEAR 2029 BACKGROUND TRAFFIC VOLUMES & TOTAL GENERATED TRAFFIC VOLUMES FROM AUBURN RIDGE WEST & AUBURN RIDGE

TRAFFIC IMPACT STUDY
MI HOMES
BROWNSBURG, INDIANA

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TURN LANE ANALYSIS

The year 2029 background traffic volumes were combined with the generated traffic volumes from the proposed development to determine if turn lanes would be required along CR 500 E and CR 450 N at the proposed access drive locations. This analysis was done in accordance with the INDOT *Driveway Permit Guide*[2]. The results are summarized in the following table.

TABLE 3 – TURN LANE WARRANT RESULTS

LOCATION	SCENARIO	RIGHT- TURN LANE	LEFT-TURN LANE
CR 500 E & Proposed Access Drive	Total Year 2029 Traffic Volumes + Generated Traffic Volumes	✗	✗
CR 450 N & Proposed Access Drive	Total Year 2029 Traffic Volumes + Generated Traffic Volumes	✗	✗

✔=Turn Lane warranted; ✗=Turn Lane not warranted

It should be noted that where turn lanes are not shown to be warranted, the Town of Brownsburg could require turn lane treatments based on local standards. The graphs that show the turn lane warrant criteria are shown in the **Appendix**.

CAPACITY ANALYSIS

The "efficiency" of an intersection is based on its ability to accommodate the traffic volumes that approach the intersection. It is defined by the Level-of-Service (LOS) of the intersection. The LOS is determined by a series of calculations commonly called a "capacity analysis". Input data into a capacity analysis includes traffic volumes, intersection geometry, and number and use of lanes. To determine the LOS at each of the study intersections, a capacity analysis has been made using the recognized computer program *Synchro/Sim Traffic*[3]. This program allows intersections to be analyzed and optimized using the capacity calculation methods outlined within the *Highway Capacity Manual (HCM 7th Edition)*[4]. The following list shows the delays related to the levels of service for unsignalized and signalized intersections:

[2] INDOT *Driveway Permit Guide, Version 1.4*, Indiana Department of Transportation, April 2024

[3] *Synchro/Sim Traffic 12*, Cubic Transportation Systems, 2023.

[4] *Highway Capacity Manual (HCM), 7th Edition* Transportation Research Board, The National Academics of Sciences, Washington, DC, 2022.

Level of Service	Control Delay (seconds/vehicle)	
	UNSIGNALIZED	SIGNALIZED
A	Less than or equal to 10	Less than or equal to 10
B	Between 10.1 and 15	Between 10.1 and 20
C	Between 15.1 and 25	Between 20.1 and 35
D	Between 25.1 and 35	Between 35.1 and 55
E	Between 35.1 and 50	Between 55.1 and 80
F	greater than 50	greater than 80

CAPACITY ANALYSIS SCENARIOS

To evaluate the proposed development's effect on the public street system, a series of traffic volume scenarios were analyzed to determine the adequacy of the existing roadway network. From this analysis, necessary recommendations can be made to improve the public street system so it will accommodate future traffic volumes. An analysis has been made for the peak hours at each of the study intersections for the following traffic volume scenarios:

Scenario 1: Existing Traffic Volumes – Based on existing traffic volumes. **Figure 3** is a summary of these traffic volumes.

Scenario 2: Year 2029 Background Traffic Volumes – Based on the sum of applying a 3.0% per year growth rate to the existing traffic volumes and adding volumes from the future near-by development. **Figure 4** is a summary of these traffic volumes.

Scenario 3: Year 2029 + Proposed Development Traffic Volumes – Based on the sum of year 2029 background traffic volumes and generated traffic volumes from the proposed development. **Figure 7** is a summary of these traffic volumes.

The following tables summarize the peak hour level of service results at each of the study intersections. The *Synchro* (*HCM 7th Edition*) intersection reports illustrating the capacity analysis results are included in the **Appendix**.

TABLE 4 – LEVEL OF SERVICE SUMMARY: GREEN STREET & CR 500 N

APPROACH	AM PEAK			PM PEAK		
	Scenarios			Scenarios		
	1	2	3	1	2	3
Northbound Approach	B	C	C	B	C	C
Southbound Approach	B	B	B	C	C	C
Eastbound Approach	C	D	D	C	D	D
Westbound Approach	C	C	C	C	D	D
Intersection	**B**	**C**	**C**	**C**	**C**	**C**

TABLE 5 – LEVEL OF SERVICE SUMMARY: CR 500 N & CR 600 E

APPROACH	AM PEAK			PM PEAK		
	Scenarios			Scenarios		
	1	2	3	1	2	3
Southbound Approach	B	B	C	B	C	E
Eastbound Approach	B	B	C	B	B	C
Westbound Approach	A	A	B	B	C	D
Intersection	**B**	**B**	**C**	**B**	**C**	**D**

TABLE 6 – LEVEL OF SERVICE SUMMARY: CR 500 N & CR 575 E

APPROACH	AM PEAK			PM PEAK		
	Scenarios			Scenarios		
	1	2	3	1	2	3
Northbound Approach	A	A	A	A	A	A
Southbound Approach	A	A	A	A	A	A
Eastbound Approach	A	A	A	A	A	A
Westbound Approach	A	A	A	A	B	B
Intersection	**A**	**A**	**A**	**A**	**A**	**B**

TABLE 7 – LEVEL OF SERVICE SUMMARY: CR 450 N EAST LEG & CR 575 E

APPROACH	AM PEAK			PM PEAK		
	Scenarios			Scenarios		
	1	2	3	1	2	3
Westbound Approach	A	A	A	A	A	A
Southbound Left-Turn	A	A	A	A	A	A

TABLE 8 – LEVEL OF SERVICE SUMMARY: CR 450 N WEST LEG & CR 500 E

APPROACH	AM PEAK			PM PEAK		
	Scenarios			Scenarios		
	1	2	3	1	2	3
Eastbound Approach	A	A	A	A	A	A
Northbound Left-Turn	A	A	A	A	A	A

TABLE 10 – LEVEL OF SERVICE SUMMARY: CR 500 E & PROPOSED ACCESS DRIVE

APPROACH	AM PEAK	PM PEAK
	Scenario 3	Scenario 3
Westbound Approach	A	B
Southbound Left-Turn	A	A

Analysis considers construction of the westbound full access drive with one inbound and one outbound lane that will stop for CR 500 E.

TABLE 11 – LEVEL OF SERVICE SUMMARY: CR 450 N & PROPOSED ACCESS DRIVE

APPROACH	AM PEAK	PM PEAK
	Scenario 3	Scenario 3
Southbound Approach	A	A
Eastbound Left-Turn	A	A

Analysis considers construction of the southbound full access drive with one inbound and one outbound lane that will stop for CR 450 N.

CONCLUSIONS & RECOMMENDATIONS

The conclusions that follow are based on existing traffic volume data, trip generation, assignment and distribution of generated traffic, capacity analyses/level of service and a field review conducted at the site. Based on the analyses and the resulting conclusions of this study, recommendations are formulated.

GREEN STREET & CR 500 N

Capacity analyses for all traffic volume scenarios have shown that the intersection currently operates and will continue to operate at acceptable levels of service during the AM and PM peak hours with existing intersection conditions. Therefore, no intersection improvements are recommended at this location.

CR 500 N & CR 600 E

Capacity analyses for all traffic volume scenarios have shown that the intersection currently operates and will continue to operate at acceptable levels of service during the AM and PM peak hours with existing intersection conditions. Therefore, no intersection improvements are recommended at this location.

CR 500 N & CR 575 E

Capacity analyses for all traffic volume scenarios have shown that the intersection currently operates and will continue to operate at acceptable levels of service during the AM and PM peak hours with existing intersection conditions. Therefore, no intersection improvements are recommended at this location.

CR 500 N & CR 550 E

Capacity analyses for all traffic volume scenarios have shown that all approaches to this intersection currently operate and will continue to operate at acceptable levels of service during the AM and PM peak hours. Therefore, no intersection improvements are recommended at this location.

CR 450 N & CR 575 E

Capacity analyses for all traffic volume scenarios have shown that all approaches to this intersection currently operate and will continue to operate at acceptable levels of service during the AM and PM peak hours. Therefore, no intersection improvements are recommended at this location.

CR 450 N & CR 500 E

Capacity analyses for all traffic volume scenarios have shown that all approaches to this intersection currently operate and will continue to operate at acceptable levels of service during the AM and PM peak hours. Therefore, no intersection improvements are recommended at this location.

CR 500 E & PROPOSED ACCESS DRIVE

Capacity analyses have shown that all approaches to this intersection will operate at acceptable levels of service during the AM and PM peak hours with the following recommended intersection conditions:

- Construction of the westbound full access drive with at least one inbound and one outbound lane.
- The intersection should be stop-controlled with the access drive stopping for CR 500 E.

CR 450 N & PROPOSED ACCESS DRIVE

Capacity analyses have shown that all approaches to this intersection will operate at acceptable levels of service during the AM and PM peak hours with the following recommended intersection conditions:

- Construction of the southbound full-access drive with at least one inbound and one outbound lane.
- The intersection should be stop-controlled with the access drive stopping for CR 450 N.

TRAFFIC IMPACT STUDY

APPENDIX

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ADDITIONAL FIGURES

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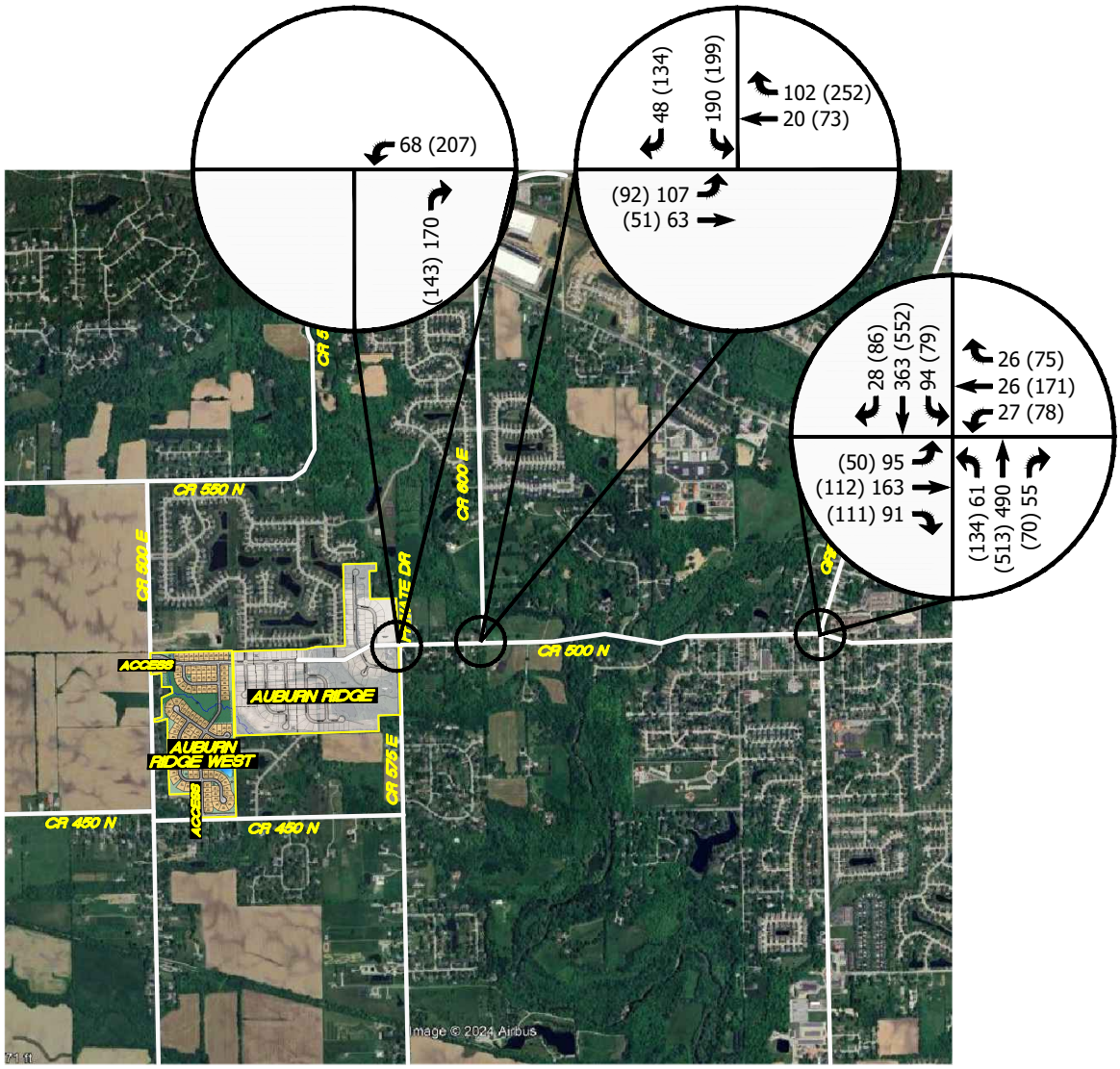

LEGEND
XX = A.M. PEAK HOUR
(XX) = P.M. PEAK HOUR
* = NEGLIGIBLE

FIGURE A

2021 EXISTING TRAFFIC VOLUMES

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MI HOMES
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GREEN STREET & CR 500 N

TRAFFIC VOLUME COUNTS
CAPACITY ANALYSIS

GREEN ST & TILDEN DR (CR 500 N) - TMC

Tue Oct 29, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241825, Location: 39.836066, -86.401301

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

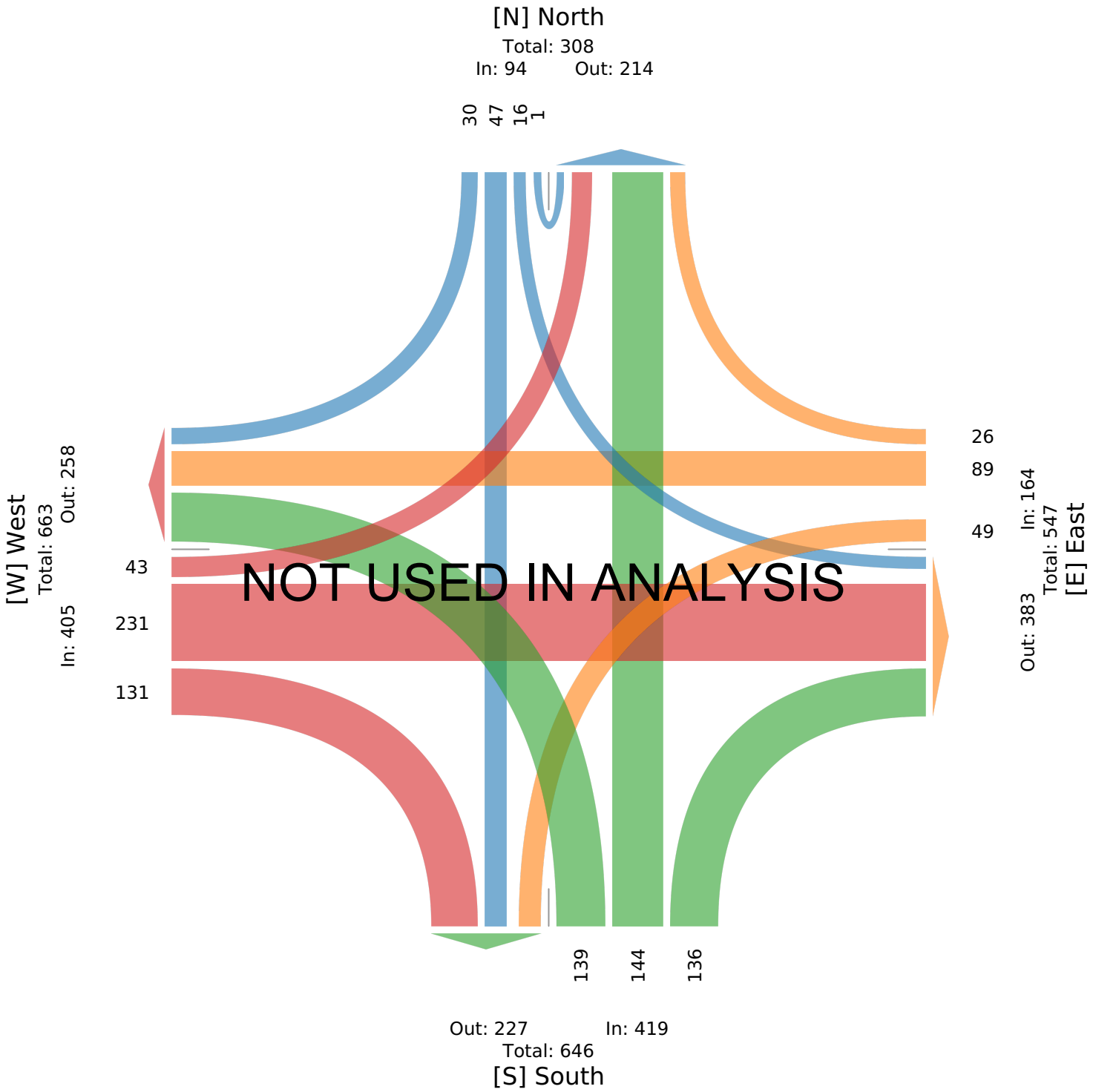
Leg	South					North					West					East					
Direction	Northbound					Southbound					Eastbound					Westbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2024-10-29 7:00AM	28	29	33	0	**90**	4	9	6	1	**20**	10	53	31	0	**94**	5	19	5	0	**29**	**233**
7:15AM	34	39	45	0	**118**	4	15	9	0	**28**	8	88	23	0	**119**	10	17	7	0	**34**	**299**
7:30AM	35	38	34	0	**107**	3	9	9	0	**21**	12	63	38	0	**113**	15	20	7	0	**42**	**283**
7:45AM	42	38	24	0	**104**	5	14	6	0	**25**	13	27	39	0	**79**	19	33	7	0	**59**	**267**
Total	139	144	136	0	**419**	16	47	30	1	**94**	43	231	131	0	**405**	49	89	26	0	**164**	**1082**
% Approach	33.2%	34.4%	32.5%	0%	**-**	17.0%	50.0%	31.9%	1.1%	**-**	10.6%	57.0%	32.3%	0%	**-**	29.9%	54.3%	15.9%	0%	**-**	-
% Total	12.8%	13.3%	12.6%	0%	**38.7%**	1.5%	4.3%	2.8%	0.1%	**8.7%**	4.0%	21.3%	12.1%	0%	**37.4%**	4.5%	8.2%	2.4%	0%	**15.2%**	-
PHF	0.827	0.923	0.756	-	**0.888**	0.800	0.783	0.833	0.250	**0.839**	0.827	0.656	0.840	-	**0.851**	0.645	0.674	0.929	-	**0.695**	0.905
Lights and Motorcycles	126	137	135	0	**398**	16	45	28	1	**90**	43	226	131	0	**400**	47	88	25	0	**160**	1048
% Lights and Motorcycles	90.6%	95.1%	99.3%	0%	**95.0%**	100%	95.7%	93.3%	100%	**95.7%**	100%	97.8%	100%	0%	**98.8%**	95.9%	98.9%	96.2%	0%	**97.6%**	96.9%
Heavy	13	7	1	0	**21**	0	2	2	0	**4**	0	5	0	0	**5**	2	1	1	0	**4**	34
% Heavy	9.4%	4.9%	0.7%	0%	**5.0%**	0%	4.3%	6.7%	0%	**4.3%**	0%	2.2%	0%	0%	**1.2%**	4.1%	1.1%	3.8%	0%	**2.4%**	3.1%

*L: Left, R: Right, T: Thru, U: U-Turn

NOT USED IN ANALYSIS

GREEN ST & TILDEN DR (CR 500 N) - TMC
Tue Oct 29, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241825, Location: 39.836066, -86.401301

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US



GREEN ST & TILDEN DR (CR 500 N) - TMC

Tue Oct 29, 2024
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241825, Location: 39.836066, -86.401301

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

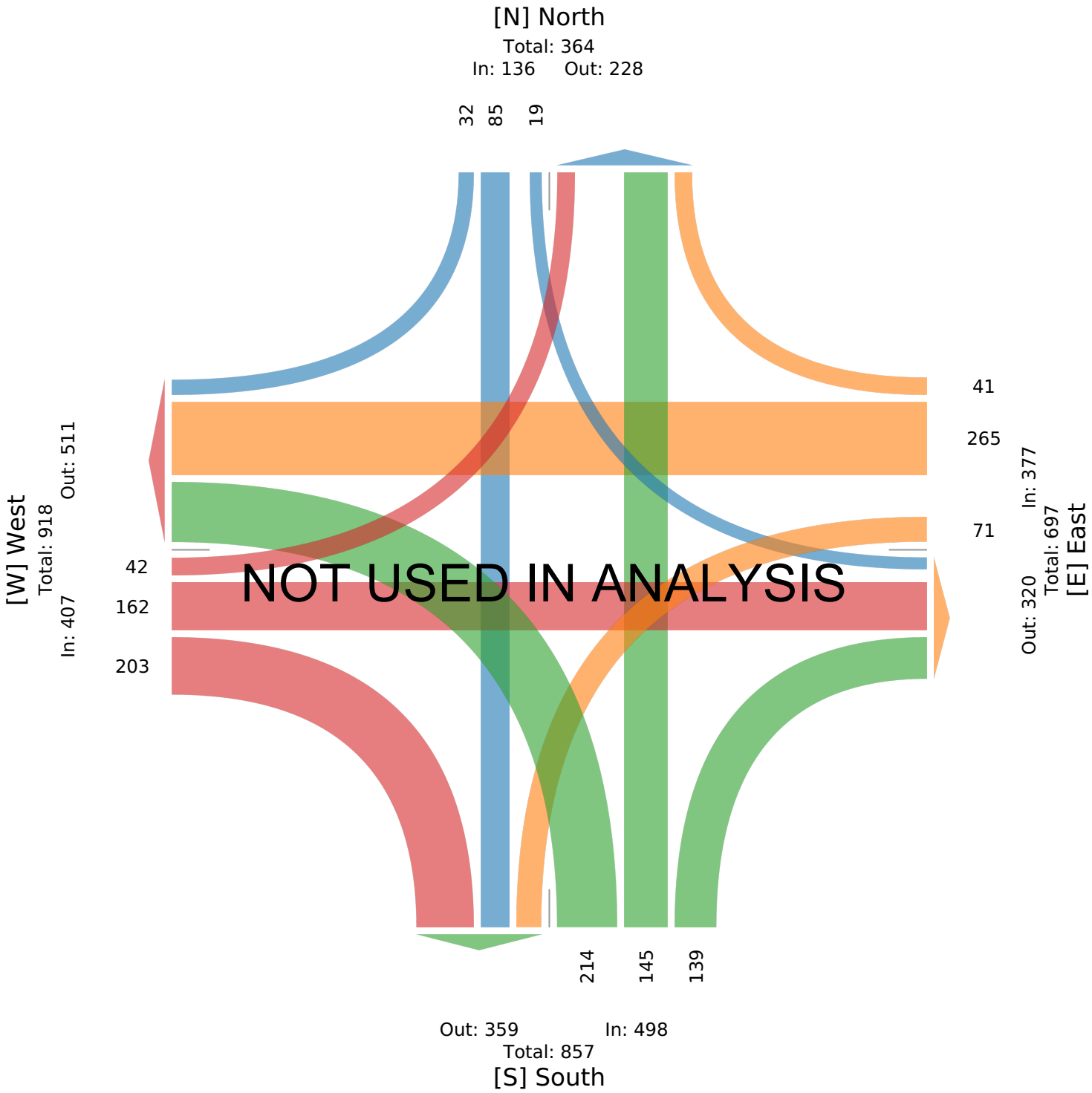
Leg	South					North					West					East					
Direction	Northbound					Southbound					Eastbound					Westbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2024-10-29 4:45PM	44	38	46	0	**128**	4	19	12	0	**35**	8	46	51	0	**105**	18	67	4	0	**89**	**357**
5:00PM	57	34	32	0	**123**	5	19	6	0	**30**	15	33	58	0	**106**	15	72	9	0	**96**	**355**
5:15PM	55	33	29	0	**117**	6	22	6	0	**34**	10	44	47	0	**101**	18	58	18	0	**94**	**346**
5:30PM	58	40	32	0	**130**	4	25	8	0	**37**	9	39	47	0	**95**	20	68	10	0	**98**	**360**
Total	214	145	139	0	**498**	19	85	32	0	**136**	42	162	203	0	**407**	71	265	41	0	**377**	**1418**
% Approach	43.0%	29.1%	27.9%	0%	**-**	14.0%	62.5%	23.5%	0%	**-**	10.3%	39.8%	49.9%	0%	**-**	18.8%	70.3%	10.9%	0%	**-**	-
% Total	15.1%	10.2%	9.8%	0%	**35.1%**	1.3%	6.0%	2.3%	0%	**9.6%**	3.0%	11.4%	14.3%	0%	**28.7%**	5.0%	18.7%	2.9%	0%	**26.6%**	-
PHF	0.922	0.906	0.755	-	**0.958**	0.792	0.850	0.667	-	**0.919**	0.700	0.880	0.875	-	**0.960**	0.888	0.920	0.569	-	**0.962**	0.985
Lights and Motorcycles	211	145	139	0	**495**	19	84	32	0	**135**	42	161	200	0	**403**	71	265	41	0	**377**	1410
% Lights and Motorcycles	98.6%	100%	100%	0%	**99.4%**	100%	98.8%	100%	0%	**99.3%**	100%	99.4%	98.5%	0%	**99.0%**	100%	100%	100%	0%	**100%**	99.4%
Heavy	3	0	0	0	**3**	0	1	0	0	**1**	0	1	3	0	**4**	0	0	0	0	**0**	8
% Heavy	1.4%	0%	0%	0%	**0.6%**	0%	1.2%	0%	0%	**0.7%**	0%	0.6%	1.5%	0%	**1.0%**	0%	0%	0%	0%	**0%**	0.6%

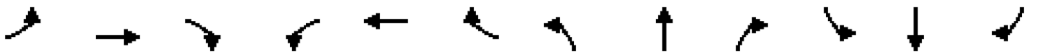
*L: Left, R: Right, T: Thru, U: U-Turn

NOT USED IN ANALYSIS

GREEN ST & TILDEN DR (CR 500 N) - TMC
Tue Oct 29, 2024
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241825, Location: 39.836066, -86.401301

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

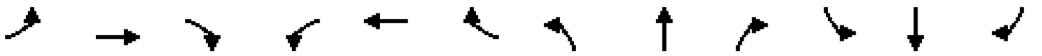




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	187	105	31	30	30	70	563	63	108	417	32
Future Volume (veh/h)	109	187	105	31	30	30	70	563	63	108	417	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1885	1841	1767	1826	1885	1900	1841	1796
Adj Flow Rate, veh/h	120	205	115	34	33	33	77	619	69	119	458	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	0	4	1	4	9	5	1	0	4	7
Cap, veh/h	387	265	149	177	204	204	471	730	81	363	787	60
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.08	0.45	0.45	0.09	0.47	0.47
Sat Flow, veh/h	1357	1125	631	1043	865	865	1682	1614	180	1810	1688	129
Grp Volume(v), veh/h	120	0	320	34	0	66	77	0	688	119	0	493
Grp Sat Flow(s),veh/h/ln	1357	0	1757	1043	0	1730	1682	0	1794	1810	0	1817
Q Serve(g_s), s	5.1	0.0	11.3	2.1	0.0	2.0	1.5	0.0	22.7	2.1	0.0	13.2
Cycle Q Clear(g_c), s	7.1	0.0	11.3	13.4	0.0	2.0	1.5	0.0	22.7	2.1	0.0	13.2
Prop In Lane	1.00		0.36	1.00		0.50	1.00		0.10	1.00		0.07
Lane Grp Cap(c), veh/h	387	0	414	177	0	408	471	0	811	363	0	847
V/C Ratio(X)	0.31	0.00	0.77	0.19	0.00	0.16	0.16	0.00	0.85	0.33	0.00	0.58
Avail Cap(c_a), veh/h	598	0	687	339	0	676	521	0	1403	398	0	1427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	23.7	30.0	0.0	20.2	8.9	0.0	16.2	11.9	0.0	13.0
Incr Delay (d2), s/veh	0.5	0.0	3.1	0.5	0.0	0.2	0.2	0.0	2.6	0.5	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.7	0.5	0.0	0.8	0.5	0.0	8.7	0.7	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.5	0.0	26.8	30.5	0.0	20.4	9.0	0.0	18.7	12.4	0.0	13.6
LnGrp LOS	C		C	C		C	A		B	B		B
Approach Vol, veh/h		440			100			765			612	
Approach Delay, s/veh		25.9			23.8			17.8			13.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	35.1		20.7	9.8	36.0		20.7				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	52.0		26.0	7.3	52.2		26.0				
Max Q Clear Time (g_c+I1), s	4.1	24.7		13.3	3.5	15.2		15.4				
Green Ext Time (p_c), s	0.1	5.4		1.9	0.0	3.6		0.3				

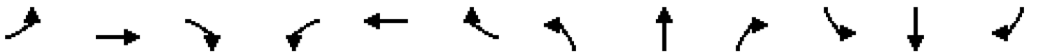
Intersection Summary												
HCM 7th Control Delay, s/veh			18.6									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	129	128	90	197	86	154	659	80	91	635	99
Future Volume (veh/h)	57	129	128	90	197	86	154	659	80	91	635	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1885	1900	1900	1900	1885	1900
Adj Flow Rate, veh/h	58	130	129	91	199	87	156	666	81	92	641	100
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	1	2	0	0	0	1	0	0	0	1	0
Cap, veh/h	218	219	217	232	316	138	334	793	96	331	744	116
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.09	0.48	0.48	0.08	0.47	0.47
Sat Flow, veh/h	1110	868	862	1138	1253	548	1795	1662	202	1810	1592	248
Grp Volume(v), veh/h	58	0	259	91	0	286	156	0	747	92	0	741
Grp Sat Flow(s),veh/h/ln	1110	0	1730	1138	0	1801	1795	0	1864	1810	0	1840
Q Serve(g_s), s	3.7	0.0	10.0	5.8	0.0	10.7	3.2	0.0	26.5	1.8	0.0	27.2
Cycle Q Clear(g_c), s	14.4	0.0	10.0	15.8	0.0	10.7	3.2	0.0	26.5	1.8	0.0	27.2
Prop In Lane	1.00		0.50	1.00		0.30	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	218	0	436	232	0	454	334	0	890	331	0	860
V/C Ratio(X)	0.27	0.00	0.59	0.39	0.00	0.63	0.47	0.00	0.84	0.28	0.00	0.86
Avail Cap(c_a), veh/h	320	0	594	336	0	619	399	0	1532	362	0	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	24.9	31.8	0.0	25.2	14.4	0.0	17.2	13.2	0.0	18.0
Incr Delay (d2), s/veh	0.6	0.0	1.3	1.1	0.0	1.4	1.0	0.0	2.2	0.5	0.0	2.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.1	1.6	0.0	4.6	1.2	0.0	10.7	0.7	0.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.2	0.0	26.2	32.9	0.0	26.6	15.4	0.0	19.5	13.6	0.0	20.8
LnGrp LOS	C		C	C		C	B		B	B		C
Approach Vol, veh/h		317			377			903			833	
Approach Delay, s/veh		27.3			28.1			18.8			20.0	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	41.1		24.1	11.2	40.4		24.1				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.3	62.2		26.0	9.5	60.0		26.0				
Max Q Clear Time (g_c+I1), s	3.8	28.5		16.4	5.2	29.2		17.8				
Green Ext Time (p_c), s	0.1	6.4		1.2	0.1	6.2		1.3				

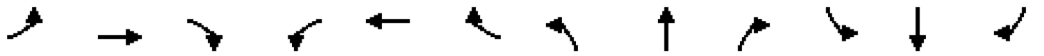
Intersection Summary												
HCM 7th Control Delay, s/veh			21.8									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	217	121	36	35	35	81	647	72	124	480	37
Future Volume (veh/h)	125	217	121	36	35	35	81	647	72	124	480	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1885	1841	1767	1826	1885	1900	1841	1796
Adj Flow Rate, veh/h	137	238	133	40	38	38	89	711	79	136	527	41
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	0	4	1	4	9	5	1	0	4	7
Cap, veh/h	390	294	165	147	226	226	419	792	88	289	838	65
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.07	0.49	0.49	0.08	0.50	0.50
Sat Flow, veh/h	1344	1127	630	995	865	865	1682	1614	179	1810	1686	131
Grp Volume(v), veh/h	137	0	371	40	0	76	89	0	790	136	0	568
Grp Sat Flow(s),veh/h/ln	1344	0	1757	995	0	1730	1682	0	1794	1810	0	1817
Q Serve(g_s), s	7.5	0.0	16.9	3.4	0.0	2.9	2.1	0.0	34.3	3.0	0.0	19.5
Cycle Q Clear(g_c), s	10.4	0.0	16.9	20.2	0.0	2.9	2.1	0.0	34.3	3.0	0.0	19.5
Prop In Lane	1.00		0.36	1.00		0.50	1.00		0.10	1.00		0.07
Lane Grp Cap(c), veh/h	390	0	459	147	0	452	419	0	880	289	0	903
V/C Ratio(X)	0.35	0.00	0.81	0.27	0.00	0.17	0.21	0.00	0.90	0.47	0.00	0.63
Avail Cap(c_a), veh/h	416	0	493	167	0	486	442	0	1129	310	0	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	29.6	39.0	0.0	24.4	11.0	0.0	19.8	17.1	0.0	15.7
Incr Delay (d2), s/veh	0.5	0.0	9.1	1.0	0.0	0.2	0.2	0.0	8.1	1.2	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	8.1	0.8	0.0	1.2	0.7	0.0	15.0	1.2	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	0.0	38.7	40.0	0.0	24.6	11.3	0.0	27.9	18.3	0.0	16.4
LnGrp LOS	C		D	D		C	B		C	B		B
Approach Vol, veh/h		508			116			879			704	
Approach Delay, s/veh		36.1			29.9			26.3			16.8	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	46.9		27.3	10.7	47.5		27.3				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.7	53.8		24.0	7.3	54.2		24.0				
Max Q Clear Time (g_c+I1), s	5.0	36.3		18.9	4.1	21.5		22.2				
Green Ext Time (p_c), s	0.1	5.6		1.3	0.0	4.3		0.1				

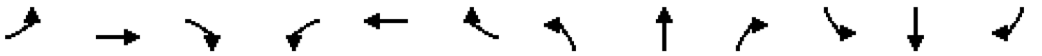
Intersection Summary	
HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	148	147	104	227	99	177	758	92	105	730	114
Future Volume (veh/h)	66	148	147	104	227	99	177	758	92	105	730	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1885	1900	1900	1900	1885	1900
Adj Flow Rate, veh/h	67	149	148	105	229	100	179	766	93	106	737	115
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	1	2	0	0	0	1	0	0	0	1	0
Cap, veh/h	187	232	231	203	336	147	260	850	103	261	808	126
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.07	0.51	0.51	0.07	0.51	0.51
Sat Flow, veh/h	1068	868	862	1099	1254	548	1795	1662	202	1810	1592	248
Grp Volume(v), veh/h	67	0	297	105	0	329	179	0	859	106	0	852
Grp Sat Flow(s),veh/h/ln	1068	0	1730	1099	0	1801	1795	0	1864	1810	0	1840
Q Serve(g_s), s	5.7	0.0	14.5	8.9	0.0	15.6	4.4	0.0	39.9	2.5	0.0	40.5
Cycle Q Clear(g_c), s	21.3	0.0	14.5	23.4	0.0	15.6	4.4	0.0	39.9	2.5	0.0	40.5
Prop In Lane	1.00		0.50	1.00		0.30	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	187	0	463	203	0	482	260	0	953	261	0	934
V/C Ratio(X)	0.36	0.00	0.64	0.52	0.00	0.68	0.69	0.00	0.90	0.41	0.00	0.91
Avail Cap(c_a), veh/h	192	0	471	208	0	491	340	0	1215	275	0	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	30.9	41.2	0.0	31.3	20.4	0.0	21.1	18.9	0.0	21.5
Incr Delay (d2), s/veh	1.2	0.0	2.9	2.1	0.0	3.8	3.8	0.0	7.9	1.0	0.0	9.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	6.3	2.5	0.0	7.1	2.2	0.0	18.2	1.1	0.0	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.0	0.0	33.7	43.3	0.0	35.1	24.2	0.0	29.1	19.9	0.0	31.5
LnGrp LOS	D		C	D		D	C		C	B		C
Approach Vol, veh/h		364			434			1038			958	
Approach Delay, s/veh		35.3			37.1			28.2			30.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	53.8		30.6	11.4	53.4		30.6				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.3	62.2		26.0	11.2	58.3		26.0				
Max Q Clear Time (g_c+I1), s	4.5	41.9		23.3	6.4	42.5		25.4				
Green Ext Time (p_c), s	0.1	6.8		0.5	0.2	5.9		0.2				

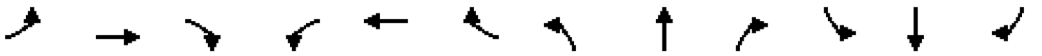
Intersection Summary												
HCM 7th Control Delay, s/veh			31.2									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	230	151	36	40	35	91	647	72	124	480	42
Future Volume (veh/h)	140	230	151	36	40	35	91	647	72	124	480	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1885	1841	1767	1826	1885	1900	1841	1796
Adj Flow Rate, veh/h	154	253	166	40	44	38	100	711	79	136	527	46
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	0	4	1	4	9	5	1	0	4	7
Cap, veh/h	412	300	197	135	266	230	395	778	86	265	811	71
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.07	0.48	0.48	0.07	0.49	0.49
Sat Flow, veh/h	1337	1054	692	952	934	806	1682	1614	179	1810	1669	146
Grp Volume(v), veh/h	154	0	419	40	0	82	100	0	790	136	0	573
Grp Sat Flow(s),veh/h/ln	1337	0	1746	952	0	1740	1682	0	1794	1810	0	1814
Q Serve(g_s), s	8.9	0.0	20.6	3.8	0.0	3.2	2.6	0.0	37.2	3.3	0.0	21.7
Cycle Q Clear(g_c), s	12.1	0.0	20.6	24.4	0.0	3.2	2.6	0.0	37.2	3.3	0.0	21.7
Prop In Lane	1.00		0.40	1.00		0.46	1.00		0.10	1.00		0.08
Lane Grp Cap(c), veh/h	412	0	497	135	0	496	395	0	865	265	0	881
V/C Ratio(X)	0.37	0.00	0.84	0.30	0.00	0.17	0.25	0.00	0.91	0.51	0.00	0.65
Avail Cap(c_a), veh/h	412	0	497	135	0	496	410	0	1026	275	0	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	30.7	42.2	0.0	24.5	12.6	0.0	21.9	19.0	0.0	17.6
Incr Delay (d2), s/veh	0.6	0.0	12.4	1.2	0.0	0.2	0.3	0.0	11.0	1.5	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	10.1	0.9	0.0	1.3	0.9	0.0	17.1	1.4	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	43.2	43.4	0.0	24.7	12.9	0.0	32.9	20.6	0.0	18.8
LnGrp LOS	C		D	D		C	B		C	C		B
Approach Vol, veh/h		573			122			890			709	
Approach Delay, s/veh		39.5			30.8			30.6			19.1	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	49.0		31.0	10.9	49.4		31.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.3	52.2		26.0	7.3	52.2		26.0				
Max Q Clear Time (g_c+I1), s	5.3	39.2		22.6	4.6	23.7		26.4				
Green Ext Time (p_c), s	0.1	4.8		1.1	0.1	4.2		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			29.3									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	158	167	104	244	99	212	758	92	105	730	131
Future Volume (veh/h)	76	158	167	104	244	99	212	758	92	105	730	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1885	1900	1900	1900	1885	1900
Adj Flow Rate, veh/h	77	160	169	105	246	100	214	766	93	106	737	132
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	1	2	0	0	0	1	0	0	0	1	0
Cap, veh/h	166	221	233	168	338	137	260	870	106	270	798	143
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.08	0.52	0.52	0.07	0.51	0.51
Sat Flow, veh/h	1051	839	886	1068	1284	522	1795	1662	202	1810	1556	279
Grp Volume(v), veh/h	77	0	329	105	0	346	214	0	859	106	0	869
Grp Sat Flow(s),veh/h/ln	1051	0	1726	1068	0	1806	1795	0	1864	1810	0	1835
Q Serve(g_s), s	7.1	0.0	17.2	8.8	0.0	17.3	5.5	0.0	40.3	2.6	0.0	43.3
Cycle Q Clear(g_c), s	24.4	0.0	17.2	26.0	0.0	17.3	5.5	0.0	40.3	2.6	0.0	43.3
Prop In Lane	1.00		0.51	1.00		0.29	1.00		0.11	1.00		0.15
Lane Grp Cap(c), veh/h	166	0	454	168	0	475	260	0	976	270	0	941
V/C Ratio(X)	0.46	0.00	0.73	0.62	0.00	0.73	0.82	0.00	0.88	0.39	0.00	0.92
Avail Cap(c_a), veh/h	166	0	454	168	0	475	331	0	1172	282	0	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	0.0	33.2	45.4	0.0	33.2	21.6	0.0	20.8	18.6	0.0	22.3
Incr Delay (d2), s/veh	2.0	0.0	5.7	7.0	0.0	5.6	12.4	0.0	7.0	0.9	0.0	12.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	7.8	2.9	0.0	8.2	3.3	0.0	18.2	1.1	0.0	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.4	0.0	38.9	52.4	0.0	38.8	34.0	0.0	27.8	19.5	0.0	34.3
LnGrp LOS	D		D	D		D	C		C	B		C
Approach Vol, veh/h		406			451			1073			975	
Approach Delay, s/veh		40.3			42.0			29.1			32.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	56.8		31.0	12.2	55.7		31.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	7.3	62.2		26.0	11.6	57.9		26.0				
Max Q Clear Time (g_c+I1), s	4.6	42.3		26.4	7.5	45.3		28.0				
Green Ext Time (p_c), s	0.1	6.7		0.0	0.2	5.3		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			33.9									
HCM 7th LOS			C									

CR 500 N & CR 600 E

TRAFFIC VOLUME COUNTS
CAPACITY ANALYSIS

CR 500 N & CR 600 E - TMC

Tue Oct 29, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241829, Location: 39.835672, -86.420382

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

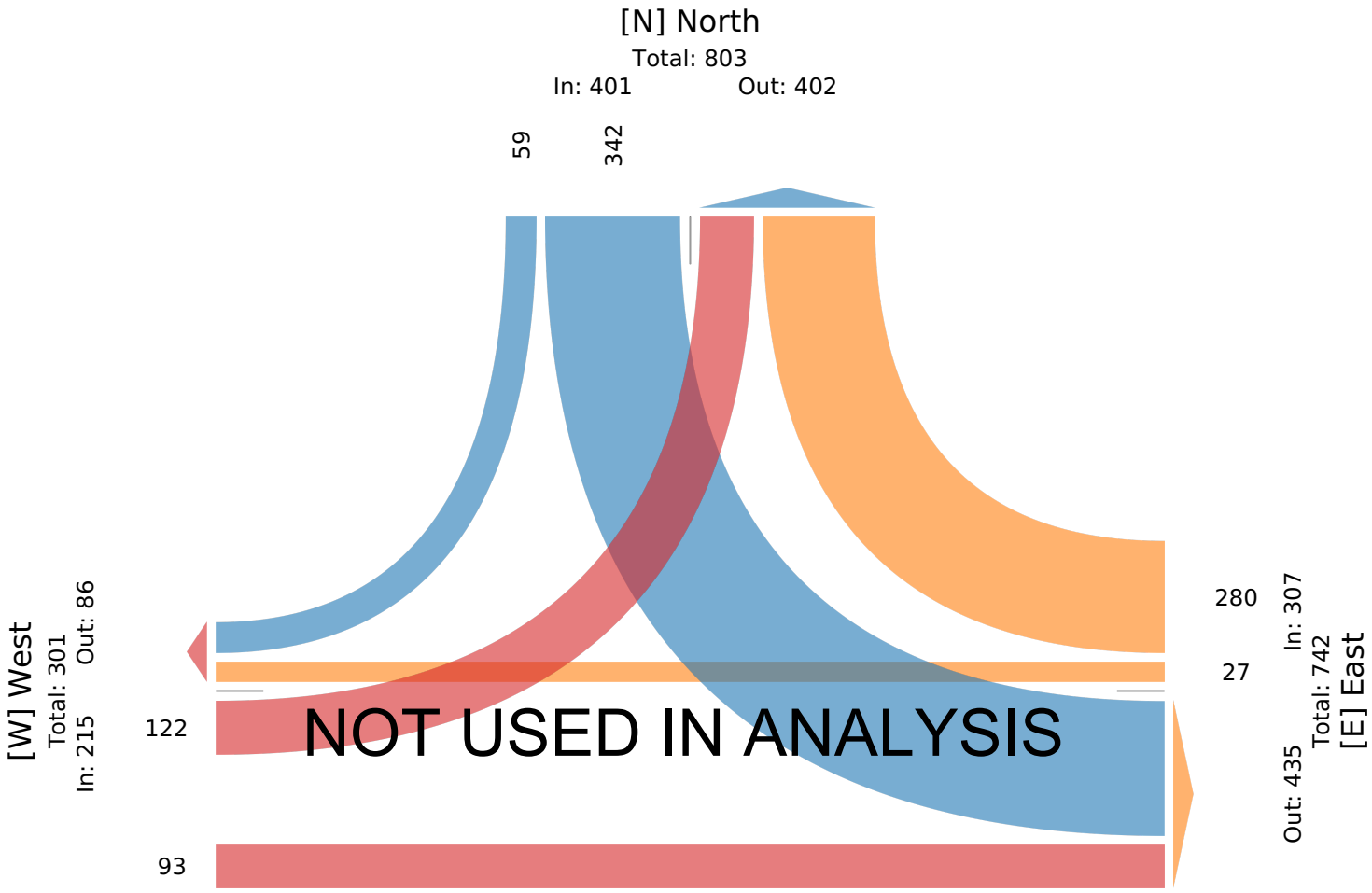
Leg	North				West				East				
Direction	Southbound				Eastbound				Westbound				
Time	L	R	U	**App**	L	T	U	**App**	T	R	U	**App**	**Int**
2024-10-29 7:00AM	91	18	0	**109**	25	32	0	**57**	5	61	0	**66**	**232**
7:15AM	115	11	0	**126**	39	27	0	**66**	4	69	0	**73**	**265**
7:30AM	75	15	0	**90**	31	21	0	**52**	10	74	0	**84**	**226**
7:45AM	61	15	0	**76**	27	13	0	**40**	8	76	0	**84**	**200**
Total	342	59	0	**401**	122	93	0	**215**	27	280	0	**307**	**923**
% Approach	85.3%	14.7%	0%	**-**	56.7%	43.3%	0%	**-**	8.8%	91.2%	0%	**-**	-
% Total	37.1%	6.4%	0%	**43.4%**	13.2%	10.1%	0%	**23.3%**	2.9%	30.3%	0%	**33.3%**	-
PHF	0.743	0.819	-	**0.796**	0.782	0.727	-	**0.814**	0.675	0.921	-	**0.914**	0.871
Lights and Motorcycles	335	57	0	**392**	119	90	0	**209**	24	267	0	**291**	892
% Lights and Motorcycles	98.0%	96.6%	0%	**97.8%**	97.5%	96.8%	0%	**97.2%**	88.9%	95.4%	0%	**94.8%**	96.6%
Heavy	7	2	0	**9**	3	3	0	**6**	3	13	0	**16**	31
% Heavy	2.0%	3.4%	0%	**2.2%**	2.5%	3.2%	0%	**2.8%**	11.1%	4.6%	0%	**5.2%**	3.4%

*L: Left, R: Right, T: Thru, U: U-Turn

NOT USED IN ANALYSIS

CR 500 N & CR 600 E - TMC
Tue Oct 29, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241829, Location: 39.835672, -86.420382

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US



CR 500 N & CR 600 E - TMC

Tue Oct 29, 2024
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241829, Location: 39.835672, -86.420382

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

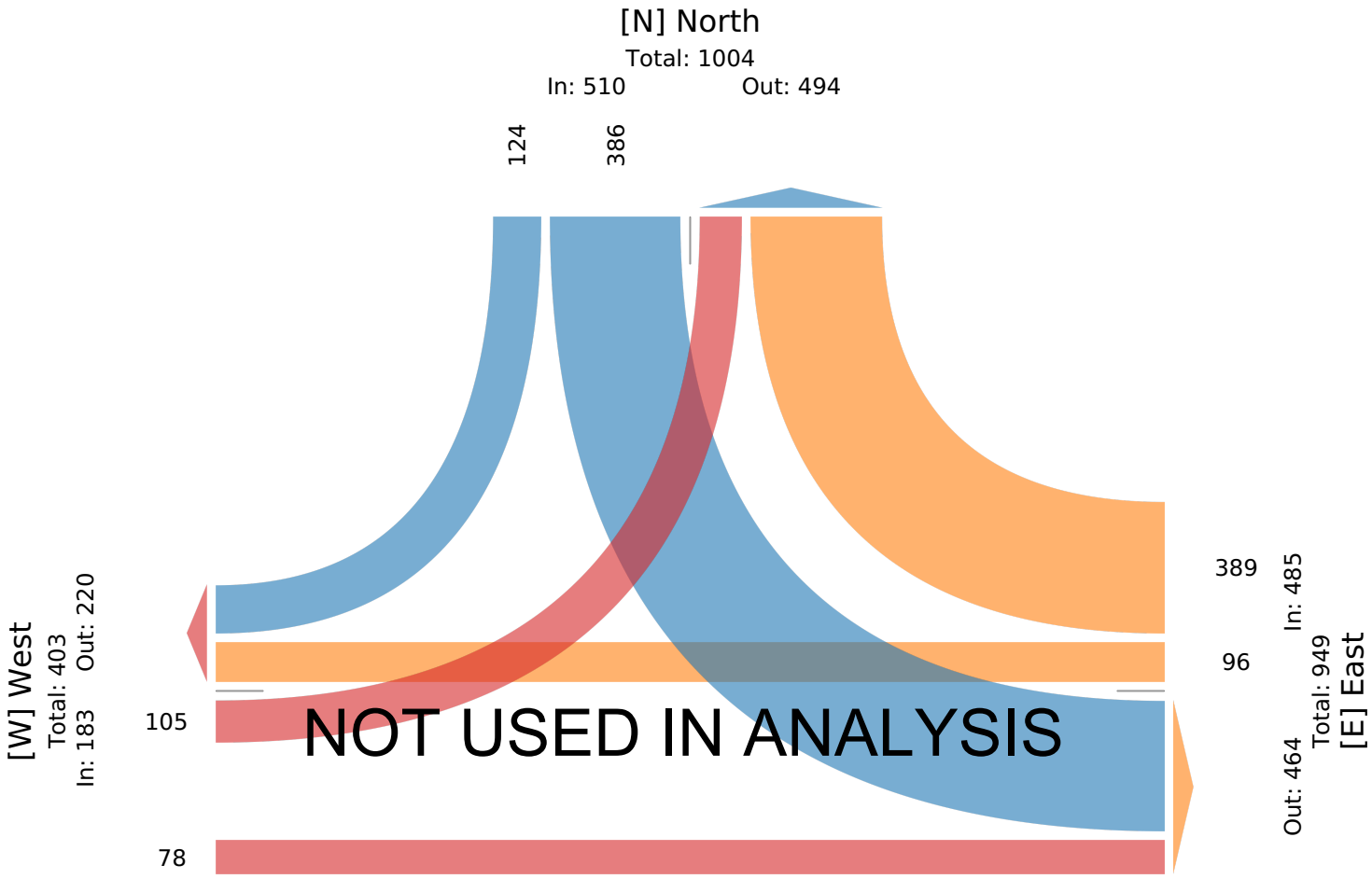
Leg	North				West				East				
Direction	Southbound				Eastbound				Westbound				
Time	L	R	U	**App**	L	T	U	**App**	T	R	U	**App**	**Int**
2024-10-29 4:45PM	102	29	0	**131**	24	24	0	**48**	32	90	0	**122**	**301**
5:00PM	108	31	0	**139**	17	17	0	**34**	22	101	0	**123**	**296**
5:15PM	98	33	0	**131**	31	18	0	**49**	26	97	0	**123**	**303**
5:30PM	78	31	0	**109**	33	19	0	**52**	16	101	0	**117**	**278**
Total	386	124	0	**510**	105	78	0	**183**	96	389	0	**485**	**1178**
% Approach	75.7%	24.3%	0%	**-**	57.4%	42.6%	0%	**-**	19.8%	80.2%	0%	**-**	-
% Total	32.8%	10.5%	0%	**43.3%**	8.9%	6.6%	0%	**15.5%**	8.1%	33.0%	0%	**41.2%**	-
PHF	0.894	0.939	-	**0.917**	0.795	0.813	-	**0.880**	0.750	0.963	-	**0.986**	0.972
Lights and Motorcycles	382	124	0	**506**	103	77	0	**180**	95	387	0	**482**	1168
% Lights and Motorcycles	99.0%	100%	0%	**99.2%**	98.1%	98.7%	0%	**98.4%**	99.0%	99.5%	0%	**99.4%**	99.2%
Heavy	4	0	0	**4**	2	1	0	**3**	1	2	0	**3**	10
% Heavy	1.0%	0%	0%	**0.8%**	1.9%	1.3%	0%	**1.6%**	1.0%	0.5%	0%	**0.6%**	0.8%

*L: Left, R: Right, T: Thru, U: U-Turn

NOT USED IN ANALYSIS

CR 500 N & CR 600 E - TMC
Tue Oct 29, 2024
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241829, Location: 39.835672, -86.420382

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US



Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	123	72	23	117	218	55
Future Vol, veh/h	123	72	23	117	218	55
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	3	2	11	5	2	3
Mvmt Flow	141	83	26	134	251	63
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	10.5	9	11.6
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	63%	0%	80%
Vol Thru, %	37%	16%	0%
Vol Right, %	0%	84%	20%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	195	140	273
LT Vol	123	0	218
Through Vol	72	23	0
RT Vol	0	117	55
Lane Flow Rate	224	161	314
Geometry Grp	1	1	1
Degree of Util (X)	0.316	0.209	0.426
Departure Headway (Hd)	5.068	4.675	4.891
Convergence, Y/N	Yes	Yes	Yes
Cap	706	761	731
Service Time	3.131	2.743	2.954
HCM Lane V/C Ratio	0.317	0.212	0.43
HCM Control Delay, s/veh	10.5	9	11.6
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.4	0.8	2.1

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	106	59	84	290	229	154
Future Vol, veh/h	106	59	84	290	229	154
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	1	1	1	1	0
Mvmt Flow	109	61	87	299	236	159
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	10.9	12.9	15
HCM LOS	B	B	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	64%	0%	60%
Vol Thru, %	36%	22%	0%
Vol Right, %	0%	78%	40%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	165	374	383
LT Vol	106	0	229
Through Vol	59	84	0
RT Vol	0	290	154
Lane Flow Rate	170	386	395
Geometry Grp	1	1	1
Degree of Util (X)	0.27	0.517	0.571
Departure Headway (Hd)	5.707	4.828	5.205
Convergence, Y/N	Yes	Yes	Yes
Cap	629	748	695
Service Time	3.748	2.862	3.236
HCM Lane V/C Ratio	0.27	0.516	0.568
HCM Control Delay, s/veh	10.9	12.9	15
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.1	3	3.6

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	141	83	26	135	251	63
Future Vol, veh/h	141	83	26	135	251	63
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	3	2	11	5	2	3
Mvmt Flow	162	95	30	155	289	72
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	11.5	9.6	13.3
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	63%	0%	80%
Vol Thru, %	37%	16%	0%
Vol Right, %	0%	84%	20%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	224	161	314
LT Vol	141	0	251
Through Vol	83	26	0
RT Vol	0	135	63
Lane Flow Rate	257	185	361
Geometry Grp	1	1	1
Degree of Util (X)	0.375	0.25	0.506
Departure Headway (Hd)	5.248	4.873	5.045
Convergence, Y/N	Yes	Yes	Yes
Cap	677	727	707
Service Time	3.339	2.971	3.131
HCM Lane V/C Ratio	0.38	0.254	0.511
HCM Control Delay, s/veh	11.5	9.6	13.3
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.7	1	2.9

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	68	97	333	263	177
Future Vol, veh/h	122	68	97	333	263	177
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	1	1	1	1	0
Mvmt Flow	126	70	100	343	271	182
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	12.1	16.6	19.9
HCM LOS	B	C	C

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	64%	0%	60%
Vol Thru, %	36%	23%	0%
Vol Right, %	0%	77%	40%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	190	430	440
LT Vol	122	0	263
Through Vol	68	97	0
RT Vol	0	333	177
Lane Flow Rate	196	443	454
Geometry Grp	1	1	1
Degree of Util (X)	0.33	0.631	0.69
Departure Headway (Hd)	6.068	5.121	5.477
Convergence, Y/N	Yes	Yes	Yes
Cap	590	700	658
Service Time	4.138	3.177	3.528
HCM Lane V/C Ratio	0.332	0.633	0.69
HCM Control Delay, s/veh	12.1	16.6	19.9
HCM Lane LOS	B	C	C
HCM 95th-tile Q	1.4	4.5	5.5

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	201	143	46	135	251	83
Future Vol, veh/h	201	143	46	135	251	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	3	2	11	5	2	3
Mvmt Flow	231	164	53	155	289	95
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	16.8	10.9	16.4
HCM LOS	C	B	C

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	0%	75%
Vol Thru, %	42%	25%	0%
Vol Right, %	0%	75%	25%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	344	181	334
LT Vol	201	0	251
Through Vol	143	46	0
RT Vol	0	135	83
Lane Flow Rate	395	208	384
Geometry Grp	1	1	1
Degree of Util (X)	0.608	0.313	0.593
Departure Headway (Hd)	5.537	5.414	5.561
Convergence, Y/N	Yes	Yes	Yes
Cap	652	662	649
Service Time	3.58	3.464	3.604
HCM Lane V/C Ratio	0.606	0.314	0.592
HCM Control Delay, s/veh	16.8	10.9	16.4
HCM Lane LOS	C	B	C
HCM 95th-tile Q	4.1	1.3	3.9

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	162	108	166	334	263	246
Future Vol, veh/h	162	108	166	334	263	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	1	1	1	1	0
Mvmt Flow	167	111	171	344	271	254
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	17	31.5	38.1
HCM LOS	C	D	E

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	60%	0%	52%
Vol Thru, %	40%	33%	0%
Vol Right, %	0%	67%	48%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	270	500	509
LT Vol	162	0	263
Through Vol	108	166	0
RT Vol	0	334	246
Lane Flow Rate	278	515	525
Geometry Grp	1	1	1
Degree of Util (X)	0.522	0.834	0.88
Departure Headway (Hd)	6.747	5.827	6.037
Convergence, Y/N	Yes	Yes	Yes
Cap	534	619	598
Service Time	4.802	3.873	4.078
HCM Lane V/C Ratio	0.521	0.832	0.878
HCM Control Delay, s/veh	17	31.5	38.1
HCM Lane LOS	C	D	E
HCM 95th-tile Q	3	8.9	10.2

CR 500 N & CR 575 E

TRAFFIC VOLUME COUNTS
CAPACITY ANALYSIS

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	78	0	0	0	0	195	0	0	0
Future Vol, veh/h	0	0	0	78	0	0	0	0	195	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	2	0	6	2	0	0	0	2	0	0	0
Mvmt Flow	0	0	0	87	0	0	0	0	217	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	0	8.3	7.4	0
HCM LOS	-	A	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	0	0	78	0
LT Vol	0	0	0	78	0
Through Vol	0	0	0	0	0
RT Vol	195	0	0	0	0
Lane Flow Rate	217	0	0	87	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.208	0	0	0.113	0
Departure Headway (Hd)	3.451	4.935	4.969	4.683	4.219
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	1025	0	0	765	0
Service Time	1.521	2.69	2.725	2.712	2.306
HCM Lane V/C Ratio	0.212	0	0	0.114	0
HCM Control Delay, s/veh	7.4	7.7	7.7	8.3	7.3
HCM Lane LOS	A	N	N	A	N
HCM 95th-tile Q	0.8	0	0	0.4	0

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	238	0	0	0	0	165	0	0	0
Future Vol, veh/h	0	0	0	238	0	0	0	0	165	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	0	6	0	1	3	0	0	0	2	0	0	0
Mvmt Flow	0	0	0	243	0	0	0	0	168	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	0	9.6	7.8	0
HCM LOS	-	A	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	0	0	238	0
LT Vol	0	0	0	238	0
Through Vol	0	0	0	0	0
RT Vol	165	0	0	0	0
Lane Flow Rate	168	0	0	243	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.182	0	0	0.304	0
Departure Headway (Hd)	3.894	5.047	5.15	4.513	4.667
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	928	0	0	789	0
Service Time	1.894	2.765	2.868	2.576	2.675
HCM Lane V/C Ratio	0.181	0	0	0.308	0
HCM Control Delay, s/veh	7.8	7.8	7.9	9.6	7.7
HCM Lane LOS	A	N	N	A	N
HCM 95th-tile Q	0.7	0	0	1.3	0

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	89	0	0	0	0	224	0	0	0
Future Vol, veh/h	0	0	0	89	0	0	0	0	224	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	2	0	6	2	0	0	0	2	0	0	0
Mvmt Flow	0	0	0	99	0	0	0	0	249	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	0	8.5	7.7	0
HCM LOS	-	A	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	224	0	0	89	0
LT Vol	0	0	0	89	0
Through Vol	0	0	0	0	0
RT Vol	224	0	0	0	0
Lane Flow Rate	249	0	0	99	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.24	0	0	0.13	0
Departure Headway (Hd)	3.472	5	5.034	4.738	4.369
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	1015	0	0	756	0
Service Time	1.554	2.769	2.803	2.775	2.369
HCM Lane V/C Ratio	0.245	0	0	0.131	0
HCM Control Delay, s/veh	7.7	7.8	7.8	8.5	7.4
HCM Lane LOS	A	N	N	A	N
HCM 95th-tile Q	0.9	0	0	0.4	0

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	274	0	0	0	0	190	0	0	0
Future Vol, veh/h	0	0	0	274	0	0	0	0	190	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	0	6	0	1	3	0	0	0	2	0	0	0
Mvmt Flow	0	0	0	280	0	0	0	0	194	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	0	10.2	8.1	0
HCM LOS	-	B	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	0	0	274	0
LT Vol	0	0	0	274	0
Through Vol	0	0	0	0	0
RT Vol	190	0	0	0	0
Lane Flow Rate	194	0	0	280	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.215	0	0	0.354	0
Departure Headway (Hd)	3.992	5.148	5.25	4.556	4.799
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	905	0	0	780	0
Service Time	1.992	2.872	2.975	2.641	2.81
HCM Lane V/C Ratio	0.214	0	0	0.359	0
HCM Control Delay, s/veh	8.1	7.9	8	10.2	7.8
HCM Lane LOS	A	N	N	B	N
HCM 95th-tile Q	0.8	0	0	1.6	0

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	120	15	89	40	0	5	0	224	0	0	0
Future Vol, veh/h	0	120	15	89	40	0	5	0	224	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	2	0	6	2	0	0	0	2	0	0	0
Mvmt Flow	0	133	17	99	44	0	6	0	249	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	9.3	9.2	8.7	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	2%	0%	0%	69%	0%
Vol Thru, %	0%	100%	89%	31%	100%
Vol Right, %	98%	0%	11%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	229	0	135	129	0
LT Vol	5	0	0	89	0
Through Vol	0	0	120	40	0
RT Vol	224	0	15	0	0
Lane Flow Rate	254	0	150	143	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.288	0	0.214	0.198	0
Departure Headway (Hd)	4.068	5.174	5.13	4.97	4.938
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	885	0	698	720	0
Service Time	2.089	2.919	2.875	3.015	2.982
HCM Lane V/C Ratio	0.287	0	0.215	0.199	0
HCM Control Delay, s/veh	8.7	7.9	9.3	9.2	8
HCM Lane LOS	A	N	A	A	N
HCM 95th-tile Q	1.2	0	0.8	0.7	0

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	80	10	274	138	0	17	0	190	0	0	0
Future Vol, veh/h	0	80	10	274	138	0	17	0	190	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	0	6	0	1	3	0	0	0	2	0	0	0
Mvmt Flow	0	82	10	280	141	0	17	0	194	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay, s/veh	9	13.7	9.4	0
HCM LOS	A	B	A	-

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	8%	0%	0%	67%	0%
Vol Thru, %	0%	100%	89%	33%	100%
Vol Right, %	92%	0%	11%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	0	90	412	0
LT Vol	17	0	0	274	0
Through Vol	0	0	80	138	0
RT Vol	190	0	10	0	0
Lane Flow Rate	211	0	92	420	0
Geometry Grp	2	5	5	4a	2
Degree of Util (X)	0.271	0	0.138	0.556	0
Departure Headway (Hd)	4.617	5.378	5.402	4.764	5.456
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	775	0	659	753	0
Service Time	2.663	3.146	3.171	2.817	3.535
HCM Lane V/C Ratio	0.272	0	0.14	0.558	0
HCM Control Delay, s/veh	9.4	8.1	9	13.7	8.5
HCM Lane LOS	A	N	A	B	N
HCM 95th-tile Q	1.1	0	0.5	3.5	0

CR 450 N & CR 575 E

TRAFFIC VOLUME COUNTS
CAPACITY ANALYSIS

CR 575 E & CR 450 N - TMC

Tue Oct 29, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241831, Location: 39.82823, -86.424879

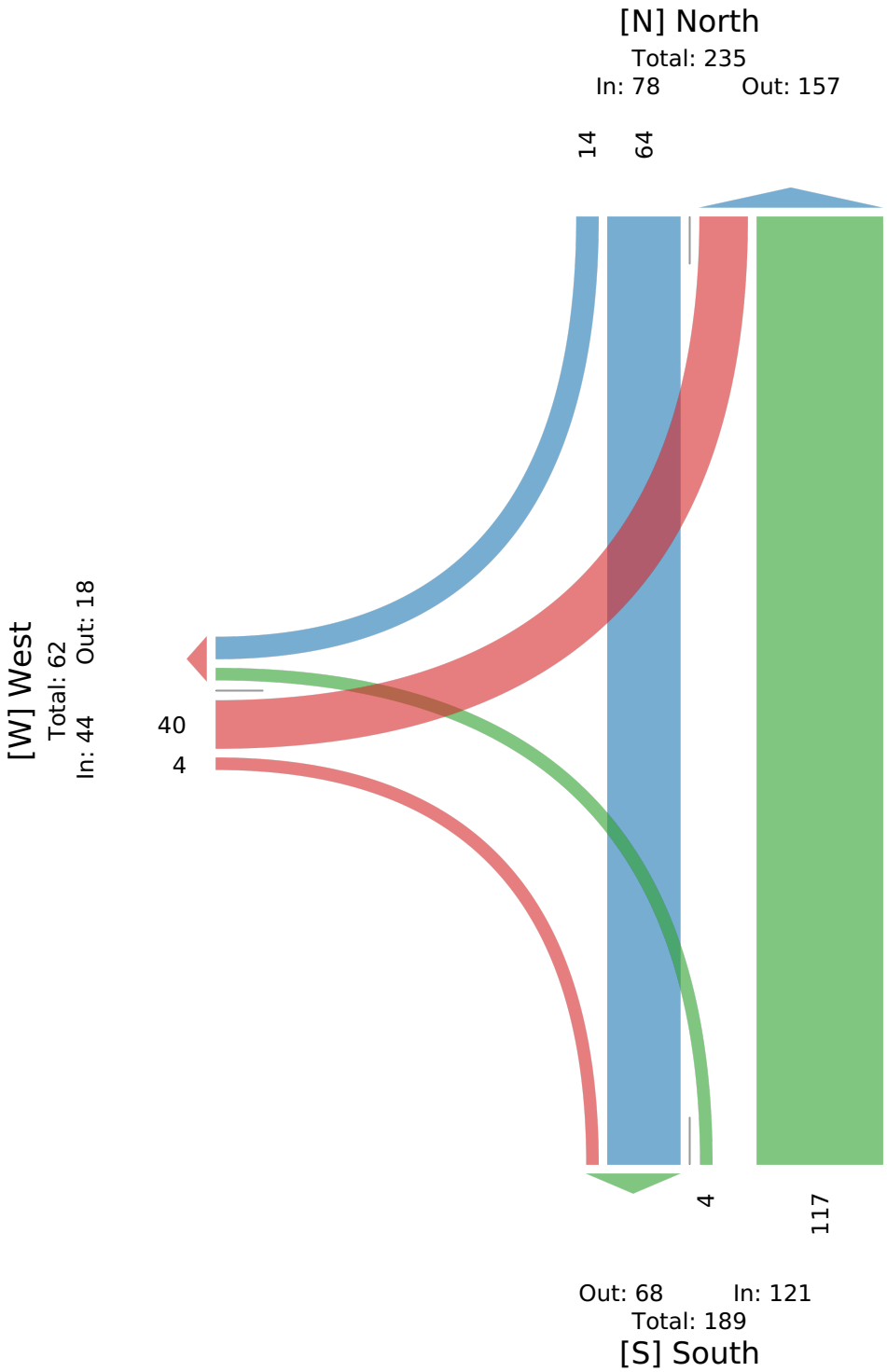
Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

Leg	South				North				West				
Direction	Northbound				Southbound				Eastbound				
Time	L	T	U	**App**	T	R	U	**App**	L	R	U	**App**	**Int**
2024-10-29 7:15AM	3	37	0	**40**	14	3	0	**17**	14	0	0	**14**	**71**
7:30AM	1	25	0	**26**	19	5	0	**24**	12	2	0	**14**	**64**
7:45AM	0	27	0	**27**	18	3	0	**21**	6	2	0	**8**	**56**
8:00AM	0	28	0	**28**	13	3	0	**16**	8	0	0	**8**	**52**
Total	4	117	0	**121**	64	14	0	**78**	40	4	0	**44**	**243**
% Approach	3.3%	96.7%	0%	**-**	82.1%	17.9%	0%	**-**	90.9%	9.1%	0%	**-**	-
% Total	1.6%	48.1%	0%	**49.8%**	26.3%	5.8%	0%	**32.1%**	16.5%	1.6%	0%	**18.1%**	-
PHF	0.333	0.791	-	**0.756**	0.842	0.700	-	**0.813**	0.714	0.500	-	**0.786**	0.856
Lights and Motorcycles	4	113	0	**117**	63	13	0	**76**	40	4	0	**44**	237
% Lights and Motorcycles	100%	96.6%	0%	**96.7%**	98.4%	92.9%	0%	**97.4%**	100%	100%	0%	**100%**	97.5%
Heavy	0	4	0	**4**	1	1	0	**2**	0	0	0	**0**	6
% Heavy	0%	3.4%	0%	**3.3%**	1.6%	7.1%	0%	**2.6%**	0%	0%	0%	**0%**	2.5%

*L: Left, R: Right, T: Thru, U: U-Turn

CR 575 E & CR 450 N - TMC
Tue Oct 29, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241831, Location: 39.82823, -86.424879

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US



CR 575 E & CR 450 N - TMC

Tue Oct 29, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241831, Location: 39.82823, -86.424879

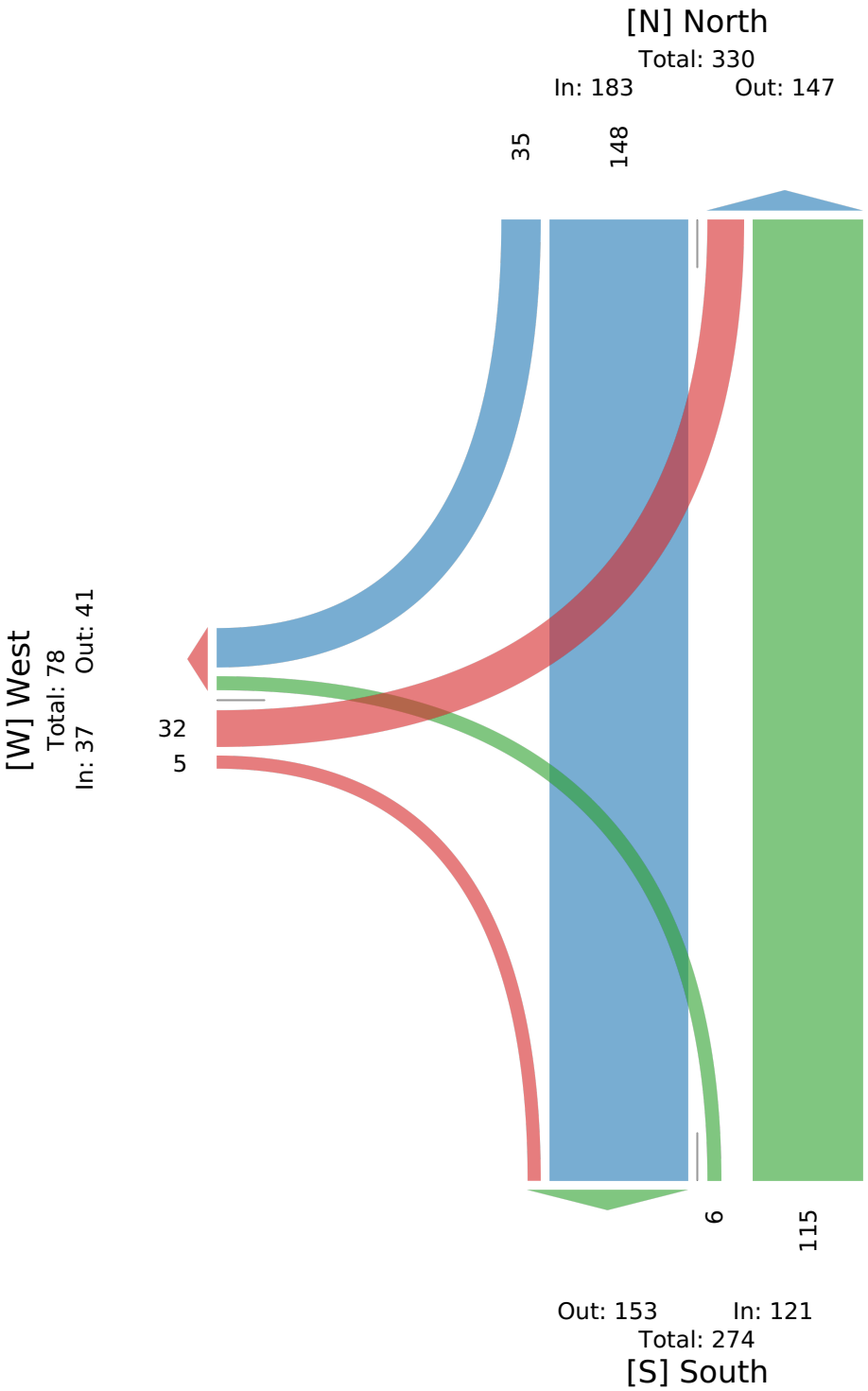
Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US

Leg Direction	South Northbound				North Southbound				West Eastbound				
Time	L	T	U	**App**	T	R	U	**App**	L	R	U	**App**	**Int**
2024-10-29 4:30PM	1	29	0	**30**	35	6	0	**41**	8	3	0	**11**	**82**
4:45PM	3	30	0	**33**	31	12	0	**43**	8	0	0	**8**	**84**
5:00PM	2	26	0	**28**	44	8	0	**52**	7	0	0	**7**	**87**
5:15PM	0	30	0	**30**	38	9	0	**47**	9	2	0	**11**	**88**
Total	6	115	0	**121**	148	35	0	**183**	32	5	0	**37**	**341**
% Approach	5.0%	95.0%	0%	**-**	80.9%	19.1%	0%	**-**	86.5%	13.5%	0%	**-**	-
% Total	1.8%	33.7%	0%	**35.5%**	43.4%	10.3%	0%	**53.7%**	9.4%	1.5%	0%	**10.9%**	-
PHF	0.500	0.958	-	**0.917**	0.841	0.729	-	**0.880**	0.889	0.417	-	**0.841**	0.969
Lights and Motorcycles	6	112	0	**118**	148	34	0	**182**	32	5	0	**37**	337
% Lights and Motorcycles	100%	97.4%	0%	**97.5%**	100%	97.1%	0%	**99.5%**	100%	100%	0%	**100%**	98.8%
Heavy	0	3	0	**3**	0	1	0	**1**	0	0	0	**0**	4
% Heavy	0%	2.6%	0%	**2.5%**	0%	2.9%	0%	**0.5%**	0%	0%	0%	**0%**	1.2%

*L: Left, R: Right, T: Thru, U: U-Turn

CR 575 E & CR 450 N - TMC
Tue Oct 29, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy)
All Movements
ID: 1241831, Location: 39.82823, -86.424879

Provided by: A&F Engineering
8365 Keystone Crossing, Suite 201, Indianapolis, IN, 46240, US



Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	4	4	117	64	14
Future Vol, veh/h	40	4	4	117	64	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	2	7
Mvmt Flow	47	5	5	136	74	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	228	83	91	0	-	0
Stage 1	83	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	765	983	1517	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	762	983	1517	-	-	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.95	0.24	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	60	-	778	-	-
HCM Lane V/C Ratio	0.003	-	0.066	-	-
HCM Control Delay (s/veh)	7.4	0	10	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	5	6	115	148	35
Future Vol, veh/h	32	5	6	115	148	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	3	0	3
Mvmt Flow	33	5	6	119	153	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	302	171	189	0	-	0
Stage 1	171	-	-	-	-	-
Stage 2	131	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	694	878	1398	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	691	878	1398	-	-	-
Mov Cap-2 Maneuver	691	-	-	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	900	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.35	0.38	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	89	-	711	-	-
HCM Lane V/C Ratio	0.004	-	0.054	-	-
HCM Control Delay (s/veh)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	5	5	135	74	16
Future Vol, veh/h	46	5	5	135	74	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	2	7
Mvmt Flow	53	6	6	157	86	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	264	95	105	0	-	0
Stage 1	95	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	729	967	1499	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	866	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	967	1499	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	866	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.25	0.26	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	64	-	744	-	-
HCM Lane V/C Ratio	0.004	-	0.08	-	-
HCM Control Delay (s/veh)	7.4	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	6	7	132	170	40
Future Vol, veh/h	37	6	7	132	170	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	3	0	3
Mvmt Flow	38	6	7	136	175	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	346	196	216	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	654	851	1365	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	651	851	1365	-	-	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	882	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.73	0.39	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	91	-	673	-	-
HCM Lane V/C Ratio	0.005	-	0.066	-	-
HCM Control Delay (s/veh)	7.7	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	12	8	140	89	16
Future Vol, veh/h	46	12	8	140	89	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	2	7
Mvmt Flow	53	14	9	163	103	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	294	113	122	0	-	0
Stage 1	113	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	701	946	1478	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	696	946	1478	-	-	-
Mov Cap-2 Maneuver	696	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.38	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	97	-	736	-	-
HCM Lane V/C Ratio	0.006	-	0.092	-	-
HCM Control Delay (s/veh)	7.5	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	11	16	149	180	40
Future Vol, veh/h	37	11	16	149	180	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	3	0	3
Mvmt Flow	38	11	16	154	186	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	393	206	227	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	616	839	1353	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	607	839	1353	-	-	-
Mov Cap-2 Maneuver	607	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.01	0.75	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	175	-	648	-	-
HCM Lane V/C Ratio	0.012	-	0.076	-	-
HCM Control Delay (s/veh)	7.7	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

CR 450 N & CR 500 E

TRAFFIC VOLUME COUNTS
CAPACITY ANALYSIS

	NB			SB			EB			WB		
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
7:00-7:15	2	17	0	1	16	0	4	2	0	2	0	2
7:15-7:30	0	20	0	0	20	1	1	1	3	0	1	1
7:30-7:45	2	17	0	0	22	4	1	1	1	2	2	0
7:45-8:00	1	15	0	0	13	2	0	0	1	1	1	0
AM PEAK Total	5	69	0	1	71	7	6	4	5	5	4	3
	L	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
4:45-5:00	0	19	0	0	21	1	5	5	1	1	3	1
5:00-5:15	0	23	1	1	38	6	2	2	1	1	3	0
5:15-5:30	2	36	2	1	22	3	3	1	11	1	2	1
5:30-5:45	2	34	0	0	19	5	4	2	3	1	4	1
PM PEAK Total	4	112	3	2	100	15	14	10	16	4	12	3

46		
48		
52		
34		
180	PHF =	0.87

57		
78		
85		
75		
295	PHF =	0.87

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	7	69	0	5	76
Future Vol, veh/h	5	7	69	0	5	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	8	79	0	6	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	178	79	0	0	79	0
Stage 1	79	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	811	981	-	-	1519	-
Stage 1	944	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	808	981	-	-	1519	-
Mov Cap-2 Maneuver	808	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.06	0	0.46
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	901	111	-
HCM Lane V/C Ratio	-	-	0.015	0.004	-
HCM Control Delay (s/veh)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	9	9	72	71	7
Future Vol, veh/h	6	9	9	72	71	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	10	83	82	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	189	86	90	0	-	0
Stage 1	86	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	800	973	1506	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	794	973	1506	-	-	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	931	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.11	0.82	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	200	-	893	-	-
HCM Lane V/C Ratio	0.007	-	0.019	-	-
HCM Control Delay (s/veh)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	15	112	3	12	116
Future Vol, veh/h	4	15	112	3	12	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	17	129	3	14	133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	291	130	0	0	132	0
Stage 1	130	-	-	-	-	-
Stage 2	161	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	699	919	-	-	1453	-
Stage 1	896	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	692	919	-	-	1453	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	859	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.3	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	860	169	-
HCM Lane V/C Ratio	-	-	0.025	0.009	-
HCM Control Delay (s/veh)	-	-	9.3	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	26	16	115	100	15
Future Vol, veh/h	14	26	16	115	100	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	30	18	132	115	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	293	124	132	0	-	0
Stage 1	124	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	698	927	1453	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	689	927	1453	-	-	-
Mov Cap-2 Maneuver	689	-	-	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	861	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.61	0.92	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	220	-	827	-	-
HCM Lane V/C Ratio	0.013	-	0.056	-	-
HCM Control Delay (s/veh)	7.5	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	8	79	0	6	87
Future Vol, veh/h	6	8	79	0	6	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	9	91	0	7	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	205	91	0	0	91	0
Stage 1	91	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	784	967	-	-	1504	-
Stage 1	933	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	780	967	-	-	1504	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.18	0	0.48
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	877	116	-
HCM Lane V/C Ratio	-	-	0.018	0.005	-
HCM Control Delay (s/veh)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	10	10	83	82	8
Future Vol, veh/h	7	10	10	83	82	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	11	11	95	94	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	217	99	103	0	-	0
Stage 1	99	-	-	-	-	-
Stage 2	118	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	771	957	1488	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	765	957	1488	-	-	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.25	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	194	-	867	-	-
HCM Lane V/C Ratio	0.008	-	0.023	-	-
HCM Control Delay (s/veh)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	17	129	3	14	133
Future Vol, veh/h	5	17	129	3	14	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	20	148	3	16	153

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	335	150	0	0	152	0
Stage 1	150	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	660	896	-	-	1429	-
Stage 1	878	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	652	896	-	-	1429	-
Mov Cap-2 Maneuver	652	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.5	0	0.72
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	826	171	-
HCM Lane V/C Ratio	-	-	0.031	0.011	-
HCM Control Delay (s/veh)	-	-	9.5	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	30	18	132	115	17
Future Vol, veh/h	16	30	18	132	115	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	34	21	152	132	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	335	142	152	0	-	0
Stage 1	142	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	660	906	1429	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	650	906	1429	-	-	-
Mov Cap-2 Maneuver	650	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.84	0.91	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	216	-	797	-	-
HCM Lane V/C Ratio	0.014	-	0.066	-	-
HCM Control Delay (s/veh)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	12	79	0	7	87
Future Vol, veh/h	6	12	79	0	7	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	14	91	0	8	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	207	91	0	0	91	0
Stage 1	91	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	782	967	-	-	1504	-
Stage 1	933	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	777	967	-	-	1504	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.12	0	0.55
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	134	-
HCM Lane V/C Ratio	-	-	0.023	0.005	-
HCM Control Delay (s/veh)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	11	14	83	82	11
Future Vol, veh/h	8	11	14	83	82	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	13	16	95	94	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	228	101	107	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	760	955	1484	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	751	955	1484	-	-	-
Mov Cap-2 Maneuver	751	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.31	1.08	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	260	-	857	-	-
HCM Lane V/C Ratio	0.011	-	0.025	-	-
HCM Control Delay (s/veh)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	20	19	133	129	3
Future Vol, veh/h	5	20	19	133	129	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	23	22	153	148	3

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	398	98	0	0	175	0
Stage 1	98	-	-	-	-	-
Stage 2	300	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	607	958	-	-	1402	-
Stage 1	926	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	543	958	-	-	1402	-
Mov Cap-2 Maneuver	543	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.49	0	7.69
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	831	1399	-
HCM Lane V/C Ratio	-	-	0.035	0.106	-
HCM Control Delay (s/veh)	-	-	9.5	7.9	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.4	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	35	21	132	115	20
Future Vol, veh/h	20	35	21	132	115	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	40	24	152	132	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	344	144	155	0	-	0
Stage 1	144	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	653	904	1425	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	641	904	1425	-	-	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	834	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.98	1.04	0
HCM LOS	A		

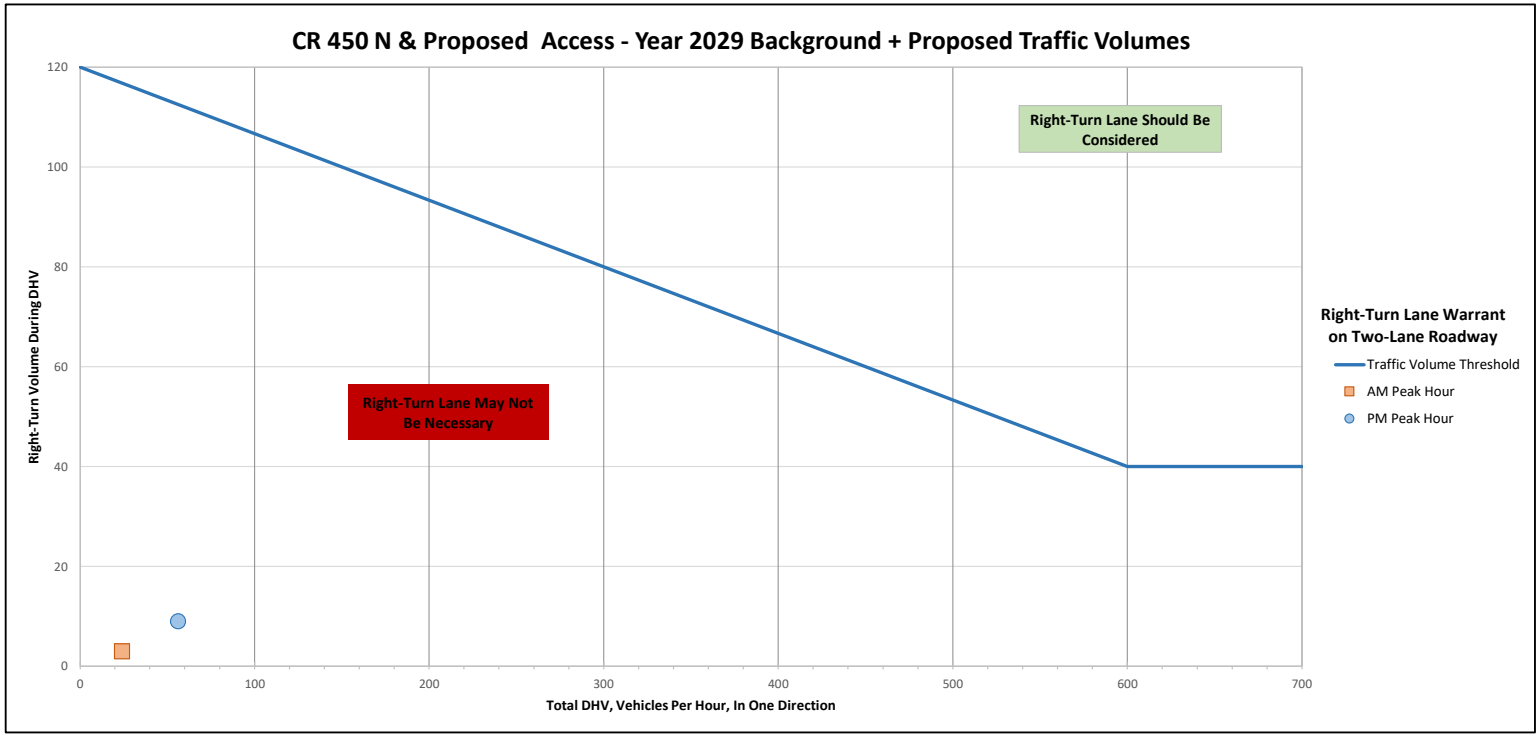
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	247	-	786	-	-
HCM Lane V/C Ratio	0.017	-	0.08	-	-
HCM Control Delay (s/veh)	7.6	0	10	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

CR 500 E & PROPOSED ACCESS DRIVE

TURN LANE WARRANTS
CAPACITY ANALYSIS

Total Approach Volume	Right-Turn Volume
0	120
600	40
700	40

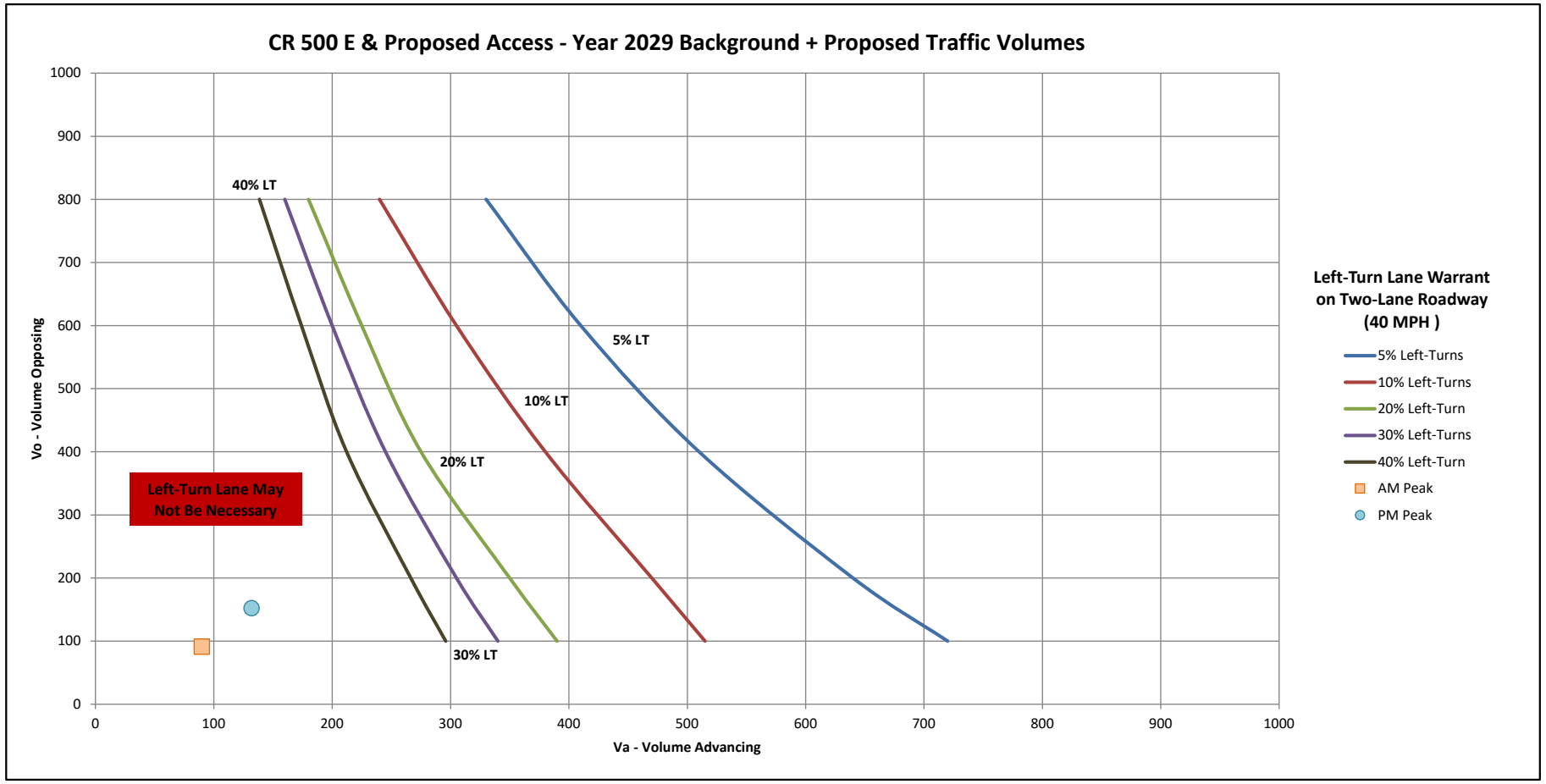
AM Peak Hour Traffic Volume Input		PM Peak Hour Traffic Volume Input	
Total Approach Volume	24	Total Approach Volume	56
Right-Turn Volume	3	Right-Turn Volume	9
WARRANTED?	NO	WARRANTED?	NO



NOTE : For highways with a design speed below 80 km/h (50 mph) with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20

Operating Speed (mph)	Opposing Volume (veh/h)	Advancing Volume (veh/h)							
		5% Left Turns	10% Left Turns	15% Left Turns	20% Left Turns	25% Left Turns	30% Left Turns	35% Left Turns	40% Left Turns
40	800	330	240	207	180	168	160	146	139
	600	410	305	260	225	211	200	184	174
	400	510	380	320	275	258	245	224	212
	200	640	470	401	350	324	305	282	266
	100	720	515	446	390	360	340	313	296

AM Peak Hour Traffic Volume Input		PM Peak Hour Traffic Volume Input	
Advancing Volume (Va)	90	Advancing Volume (Va)	132
Opposing Volume (Vo)	91	Opposing Volume (Vo)	152
Left-Turn Volume	0	Left-Turn Volume	0
% Left-Turn	0%	% Left-Turn	0%
WARRANTED?	NO	WARRANTED?	NO



Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	90	1	0	90
Future Vol, veh/h	3	0	90	1	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	98	1	0	98

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	196	98	0	0	99	0
Stage 1	98	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	793	958	-	-	1494	-
Stage 1	926	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	793	958	-	-	1494	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.56	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	793	1494	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s/veh)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	148	4	0	132
Future Vol, veh/h	3	0	148	4	0	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	161	4	0	143

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	307	163	0	0	165	0
Stage 1	163	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	686	882	-	-	1413	-
Stage 1	866	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	686	882	-	-	1413	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.28	0	0
HCM LOS	B		

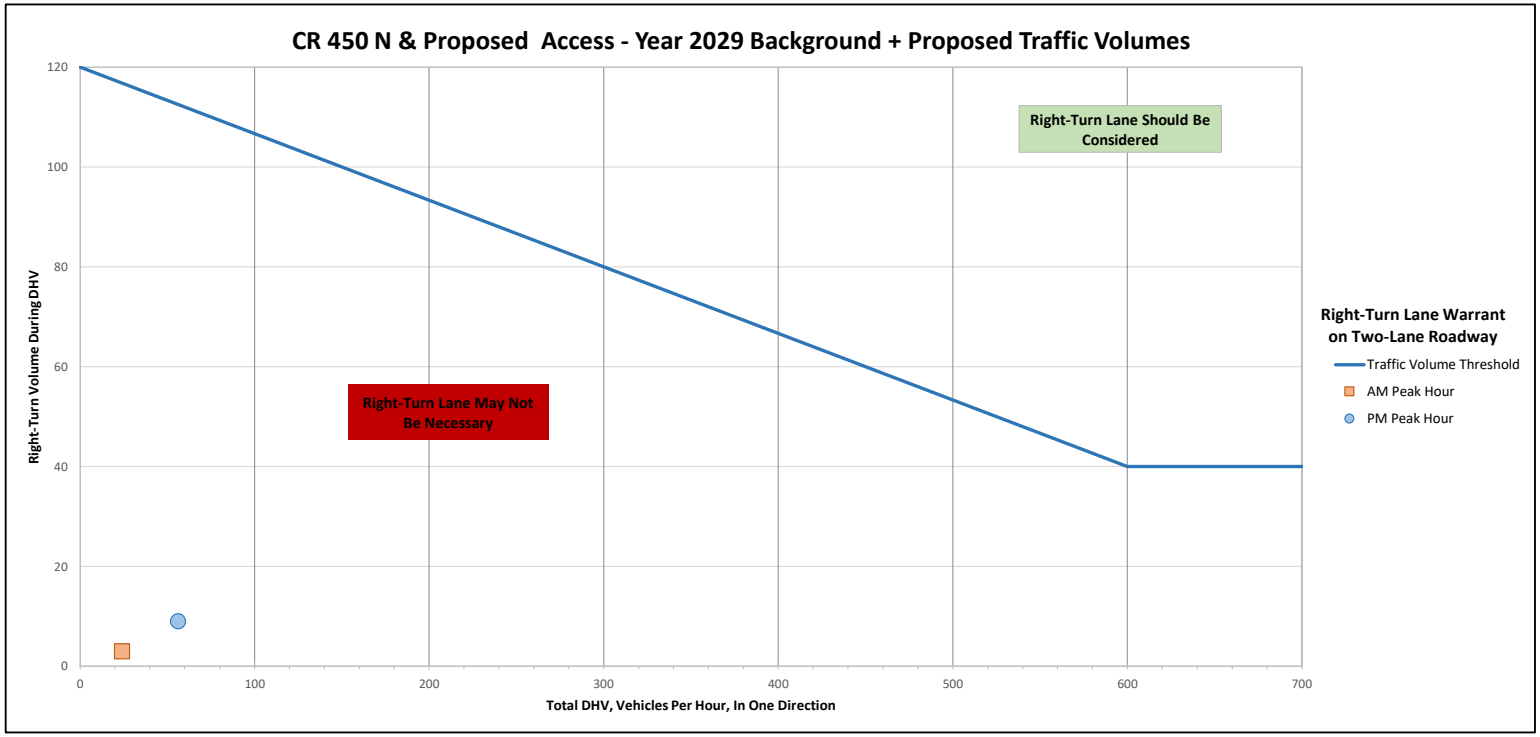
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	686	1413	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s/veh)	-	-	10.3	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

CR 450 N & PROPOSED ACCESS DRIVE

TURN LANE WARRANTS
CAPACITY ANALYSIS

Total Approach Volume	Right-Turn Volume
0	120
600	40
700	40

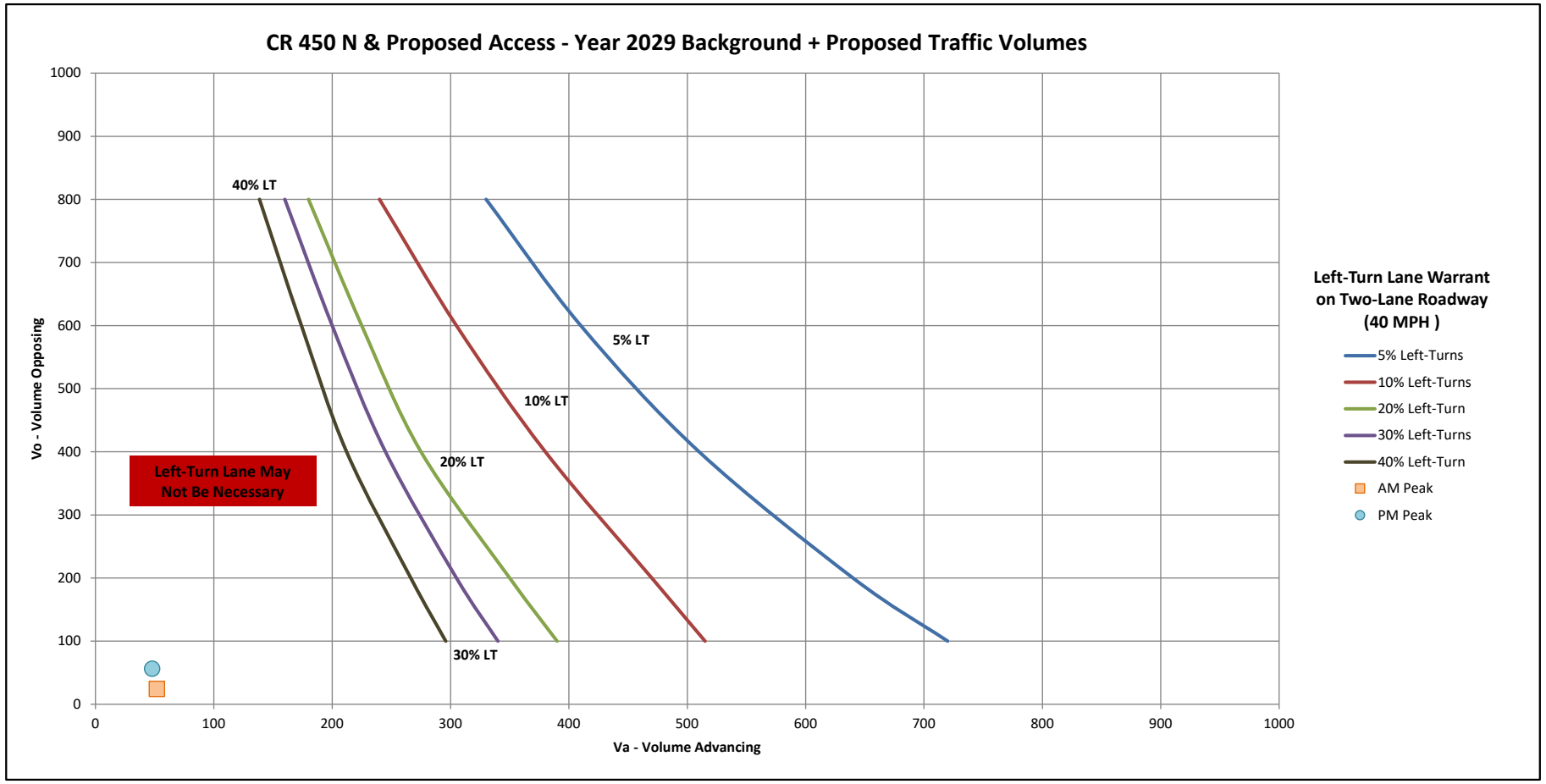
AM Peak Hour Traffic Volume Input		PM Peak Hour Traffic Volume Input	
Total Approach Volume	24	Total Approach Volume	56
Right-Turn Volume	3	Right-Turn Volume	9
WARRANTED?	NO	WARRANTED?	NO



NOTE : For highways with a design speed below 80 km/h (50 mph) with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20

Operating Speed (mph)	Opposing Volume (veh/h)	Advancing Volume (veh/h)							
		5% Left Turns	10% Left Turns	15% Left Turns	20% Left Turns	25% Left Turns	30% Left Turns	35% Left Turns	40% Left Turns
40	800	330	240	207	180	168	160	146	139
	600	410	305	260	225	211	200	184	174
	400	510	380	320	275	258	245	224	212
	200	640	470	401	350	324	305	282	266
	100	720	515	446	390	360	340	313	296

AM Peak Hour Traffic Volume Input		PM Peak Hour Traffic Volume Input	
Advancing Volume (Va)	52	Advancing Volume (Va)	48
Opposing Volume (Vo)	24	Opposing Volume (Vo)	56
Left-Turn Volume	1	Left-Turn Volume	5
% Left-Turn	2%	% Left-Turn	10%
WARRANTED?	NO	WARRANTED?	NO



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	51	21	3	7	4
Future Vol, veh/h	1	51	21	3	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	55	23	3	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	26	0	-	0	82	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	58	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1588	-	-	-	920	1052
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	919	1052
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.14	0	8.78
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	35	-	-	-	963
HCM Lane V/C Ratio	0.001	-	-	-	0.012
HCM Control Delay (s/veh)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	43	47	9	5	3
Future Vol, veh/h	5	43	47	9	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	47	51	10	5	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	61	0	-	0	114	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	58	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1542	-	-	-	883	1011
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1542	-	-	-	880	1011
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.76	0	8.93
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	188	-	-	-	925
HCM Lane V/C Ratio	0.004	-	-	-	0.009
HCM Control Delay (s/veh)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0