Traffic Impact Study

DEVELOPMENT

PIQUA, OHIO

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Executive Summary

The purpose of this study is to provide an assessment of the potential traffic impacts of the proposed development. The proposed development is a data center located in Piqua, Ohio that will be served by two accesses on Washington Road. The proposed development is located west of North County Road 25A (CR-25A), north of Farrington Road (CR-31) and east of Washington Road (CR 35). The proposed development is expected to be constructed in two phases complete by 2031.

This study analyzes the existing, no build, and build traffic operations at the opening of each phase. Two existing intersections and two proposed accesses on Washington Road were analyzed. Based on the new traffic volumes and analysis results, improvements to the network were analyzed to provide adequate traffic operations through the study area after the development is operational.

Background Growth
Based on the historical growth in the area and proposed developments, a 1.5% annual background growth rate was applied to the existing traffic volumes.

Trip Generation
The trip generation for the proposed project was provided by the developer. This data was compared with the *ITE Trip Generation Manual*, *11th edition* and it was determined the higher peak hour and daily trip generation anticipated by the developer will be used for the study. The trip generation used anticipates 260 AM peak hour trips, 330 PM peak hour trips, and 1,900 Daily Trips at the completion of Phase 2 in 2031.

Traffic Analysis
Traffic operations in the study area were analyzed using the *Highway Capacity Manual, 7th edition* methodology. The analysis was conducted on the Existing, No Build (Phase 1 and Phase 2), and Build (Phase 1 and Phase 2). Based on the results, improvements to the network were analyzed.

Recommendations

Phase 1 (2028)

Washington Road (CR-35) at Farrington Road (CR-31)

- Construct a southbound left turn lane with 275 feet of storage and taper length designed per ODOT Figure 401-7.
- Construct westbound right turn lane with 150 feet of storage and taper length designed per ODOT Figure 401-7.

Washington Road (CR-35) at Site Access 1

- Construct one 12 foot wide entering lane and one 12 foot wide exiting lane.
- Install one westbound stop sign with a stop line pavement marking placed per ODOT standards.

Phase 2 (2031)

Washington Road (CR-35) at Site Access 2

- Construct one 12 foot wide entering lane and one 12 foot wide exiting lane.
- Install one westbound stop sign with a stop line pavement marking placed per ODOT standards.

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1. INTRODUCTION

1.1. Objective

The purpose of this study is to analyze the traffic impacts of the proposed Data Center in Piqua, Ohio. The proposed development is located north of Farrington Road (CR-31), east of Washington Road (CR-35), and west of County Road 25A. The development will be served by two accesses located on Washington Road. The full build out is expected to be in six years, 2031.

Existing conditions were gathered and analyzed as base conditions. The No Build conditions for Phase 1 and Phase 2 were analyzed with the background growth included. The trips anticipated to be generated by the development were added to the traffic network to create the Build Phase 1 and Phase 2 networks. The results of the Build analyses were used to determine improvements. Based on the results, recommendations for adequate traffic operations for Build Phase 1 (2028) and Build Phase 2 (2031) are provided.

1.2. References

- Manual on Uniform Traffic Control Devices (MUTCD); *US Department of Transportation Federal Highway Administration (FHWA); 11th Edition*
- A Policy on Geometric Design of Highways and Streets (Green Book); *American Association of State Highway and Transportation Officials (AASHTO), 2018*
- Synchro 12; *CUBIC/Trafficware*
- Trip Generation Manual 11th Edition; *Institute of Transportation Engineers (ITE); 2021*
- Trip Generation Handbook 3rd Edition; *Institute of Transportation Engineers (ITE); 2017*
- Study Area Peak Hour Traffic Counts; *Marr Traffic, January, 2025*
- The Highway Capacity Manual; *Transportation Research Board; 7th Edition*
- Location & Design Manual, Volume 1 – Roadway Design; *Ohio Department of Transportation, January 17, 2025*

2.1. Proposed Development and Study Area

The proposed data center development is located in the City of Piqua, Ohio. As shown in Figure 2.1, the development is located west of North County Road 25A (CR-25A), north of Farrington Road (CR-31) and east of Washington Road (CR-35). The proposed project will be developed in two three-year phases, Phase 1 (2028) and Phase 2 (2031). The development will be accessed at 2 locations described below:

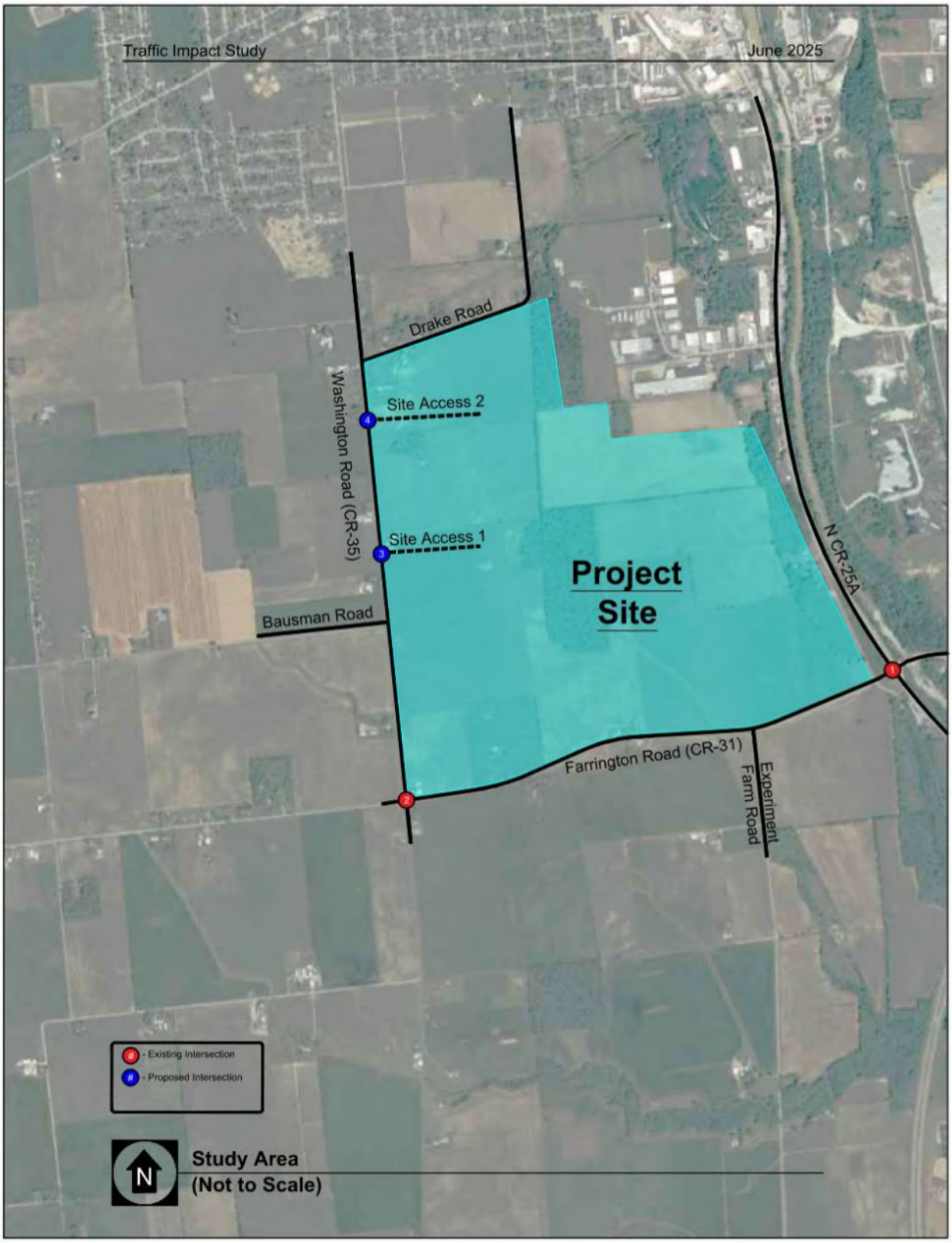
1. Washington Road / ***Site Access 1 –*** (North of Bausman Road)
2. Washington Road / ***Site Access 2*** – (South of Drake Road)

Study Area

The proposed study area includes a total of four intersections including the new intersections created by the proposed accesses. The existing intersections include one signalized and one two-way stop-controlled intersection. Based on the existing land use, travel patterns, and the type of proposed development, the study network includes intersections along Farrington Road (CR-31) and Washington Road (CR-35). Below is the list of intersections to be studied:

1. CR-25A at Farrington Road (CR-31) / W Peterson Road (CR-31)
2. Farrington Road (CR-31) at Washington Road (CR-35)
3. Washington Road (CR-35) at ***Site Access 1***
4. Washington Road (CR-35) at ***Site Access 2***

Figure 2.1 – Study Area



2.2. Existing Roadway Network

Street Inventory

N County Road 25A is classified as a Minor Arterial Road by the Ohio Department of Transportation (ODOT Functional Classification Review Map (FCR Map)). It operates as a north-south corridor connecting Piqua and Troy. It is an undivided four-lane roadway with two travel lanes in each direction and a posted speed limit of 45 mph in the study area. Sidewalks are not present but the shoulders are striped as a bicycle facility to the north of Farrington Road.

Farrington Road (CR-31) is classified as a Minor Collector Road by the ODOT FCR Map. It includes one travel lane in the eastbound direction and one travel lane in the westbound direction between Washington Road (CR-35) and Experiment Farm Road where it widens to two eastbound travel lanes. The speed limit is not posted in the study area. Sidewalks and bicycle facilities are not provided within the study area.

Washington Road (CR-35) is classified as a Major Collector Road by the ODOT FCR Map. It includes one travel lane in each direction. It runs north-south and connects west of Troy to west of Piqua. The speed limit is not posted. Sidewalks and bicycle facilities are not provided within the study area.

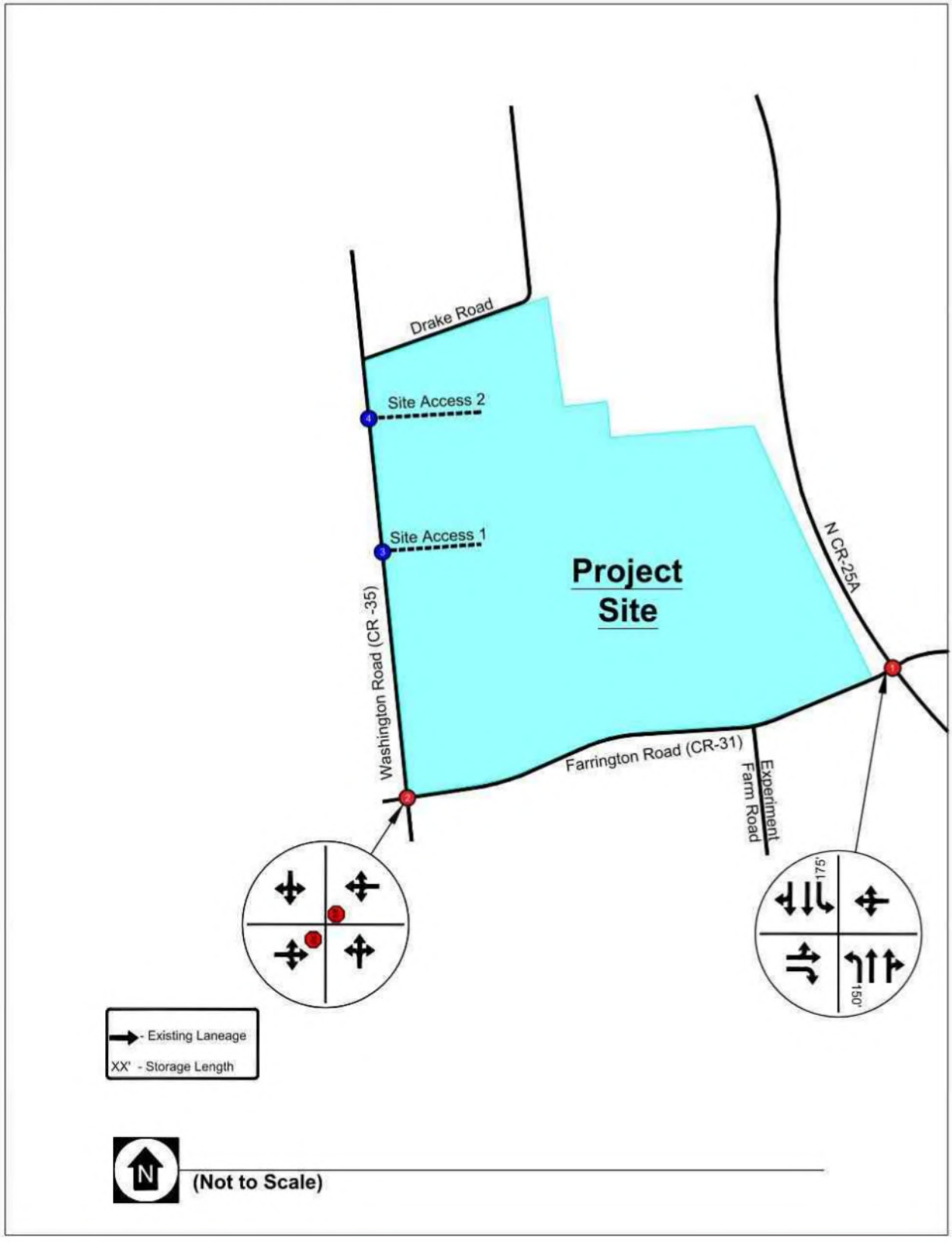
Intersection Inventory

Below is a description of the existing intersection geometry and traffic control shown in Figure 2.2.

N County Road 25A at Farrington Road (CR-31)/West Peterson Road (CR-31) is a four-leg signalized intersection. The northbound and southbound approaches include a left turn lane (150 feet of storage northbound and 175 feet of storage southbound), a through lane, and shared /through right lane. The northbound and southbound left turn movement operates under protected-permissive phasing. The eastbound approach has a shared left/through lane and a right turn lane which operates under permissive phasing. The westbound approach includes a single shared left/through/right which operates under permissive phasing. No pedestrian facilities are provided at this intersection. The shoulders of the southbound approach are striped as a bicycle facility.

Farrington Road (CR-31) at Washington Road (CR-35) is a four-leg two-way stop-controlled intersection. The northbound and southbound approaches on Washington Road operate uncontrolled and include a single shared left/through/right lane. The eastbound and westbound approaches on Farrington Road are stop-controlled and include a shared left/through/right lane. No pedestrian or bicycle facilities are provided at this intersection.

Figure 2.2 – Existing Intersection Geometry



3. EXISTING & BACKGROUND TRAFFIC VOLUMES

3.1. Traffic Data

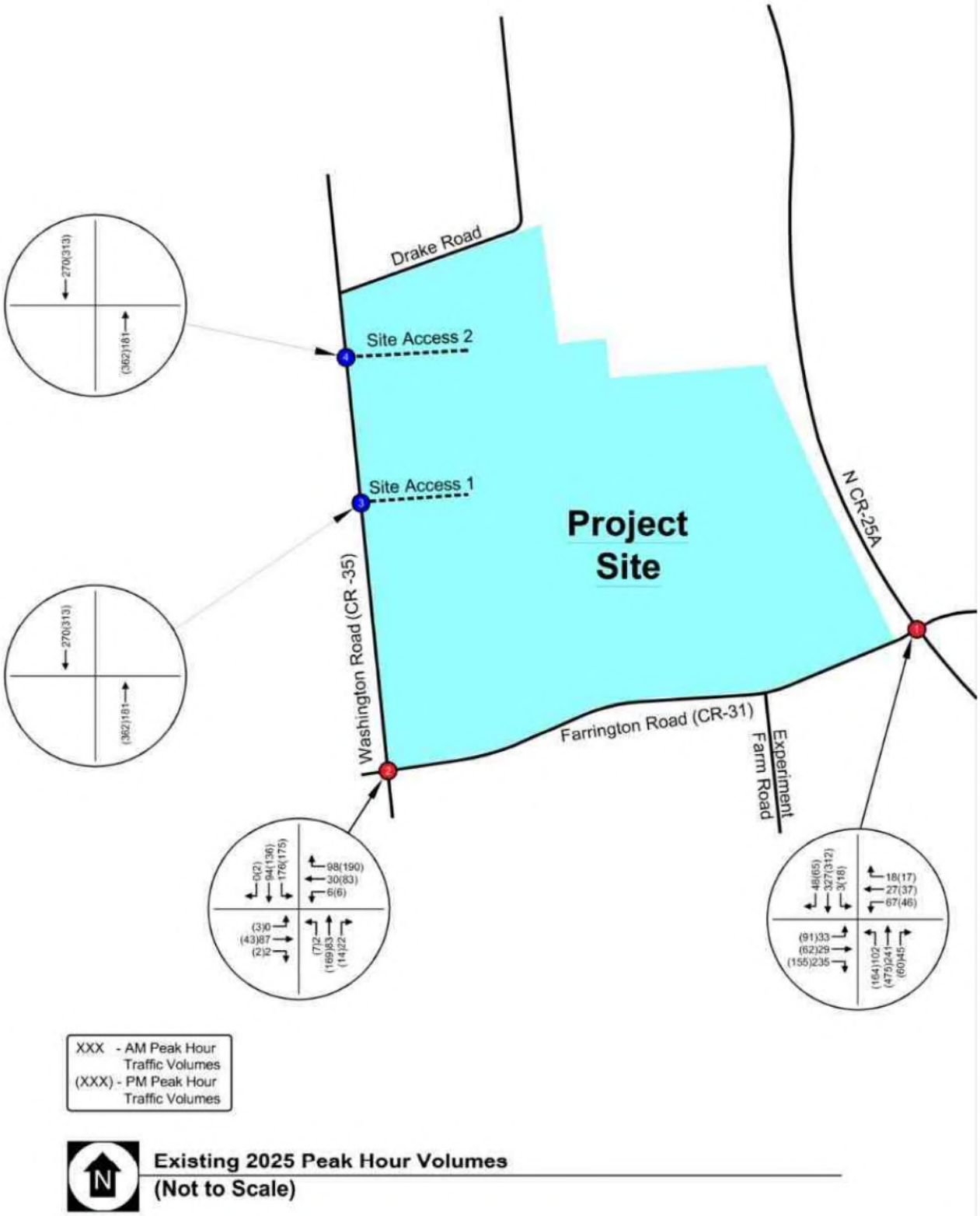
Existing Traffic Volumes

Turning movement traffic counts were collected the two existing study intersections on a typical weekday when school was in session in January 2025. Vehicle turning movement and classification counts were collected from 6:00 AM to 6:00 PM at the study intersections. The study area AM and PM peak hours are shown in Table 3.1. The peak hour turning movement volumes are shown in Figure 3.1, and the raw turning movement counts are included in Appendix A.

Table 3.1 – Turning Movement Collection Summary

Peak	Count Collection Period	Peak Hour
AM	6:00 AM – Noon	**7:15 – 8:15 AM**
PM	Noon – 6:00 PM	**3:45 – 4:45 PM**

Figure 3.1 – Existing AM & PM Peak Hour Traffic Volumes



Background Growth

Background growth is the increase in traffic passing through the study area due to development and general population growth. It is calculated based on historical growth rates at ODOT traffic count stations near the study area. Five ODOT count stations are located within proximity to the study area. Count stations 735191 and 735991 are located on N County Road 25A north of the I-75 Interchange and carried an average of 9,679 and 9,676 vehicles per day in 2024, respectively. Count stations 735891, 734991 and 10455 are located on Washington Road and carried an average of 5,871 and 5,919 and 5,686 vehicles per day in 2024, respectively. Combined these count stations show a historic growth rate of -0.85% annually since 2015. Based on scoping with the City of Piqua, a proposed background growth factor of +1.5% per year was applied to the traffic volumes for each phase of development. The ODOT historic count data is included in Appendix A.

Phase 1 No Build Traffic Volumes

Background growth was applied to the Existing traffic volumes to determine the No Build traffic volumes. These are the volumes expected to be on the roadway during the 2028 horizon year before Phase 1 of the development opens. Phase 1 No Build peak hour traffic volumes are shown in Figure 3.2.

Phase 2 No Build Traffic Volumes

Background growth was applied to the Phase 1 Build traffic volumes to determine the No Build volumes for Phase 2. These are the volumes expected to be on the roadway during the 2031 horizon year before Phase 2 of the development opens. Phase 2 No Build peak hour traffic volumes are shown in Figure 3.3

Figure 3.2 – Phase 1 No Build AM & PM Peak Hour Traffic Volumes

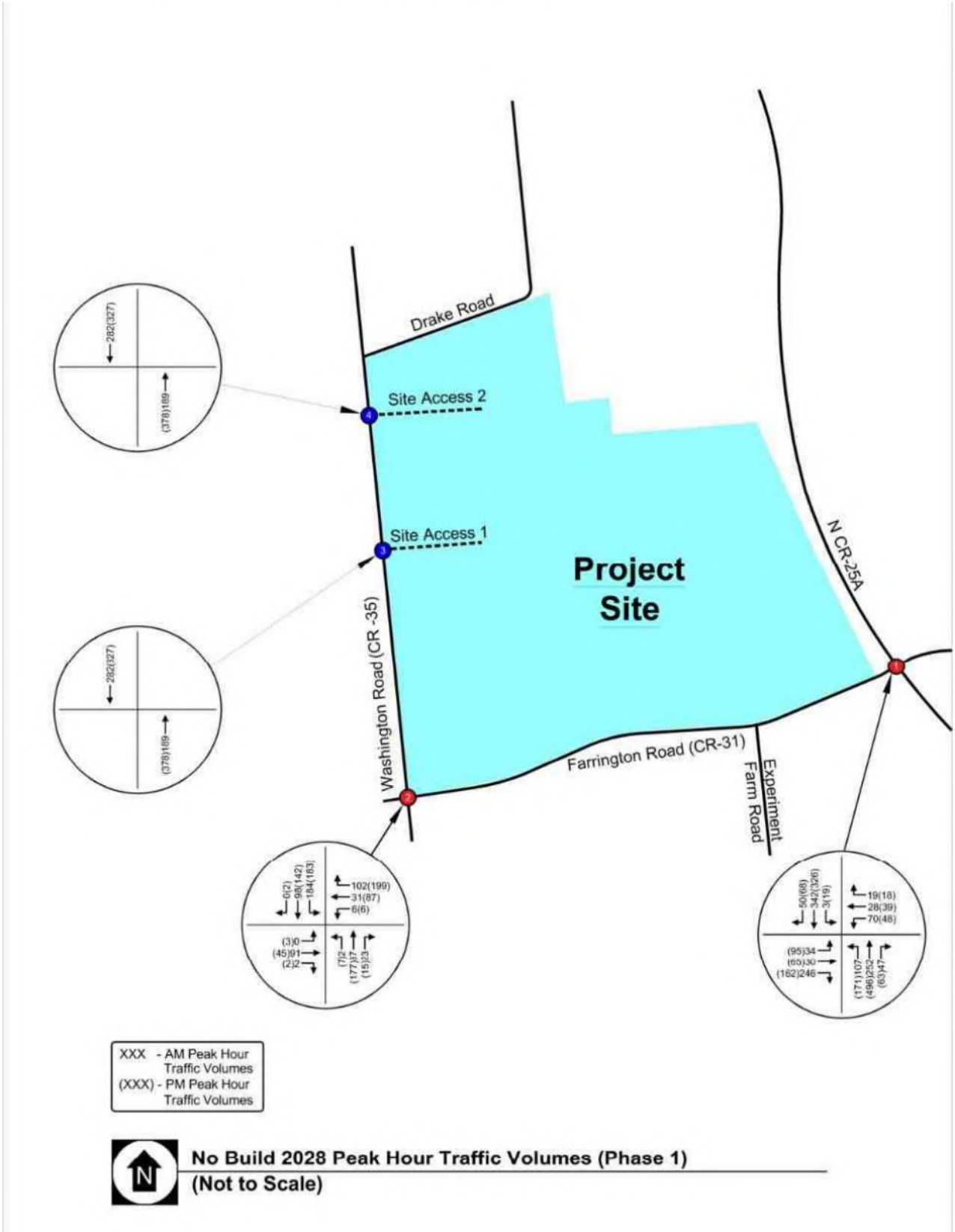
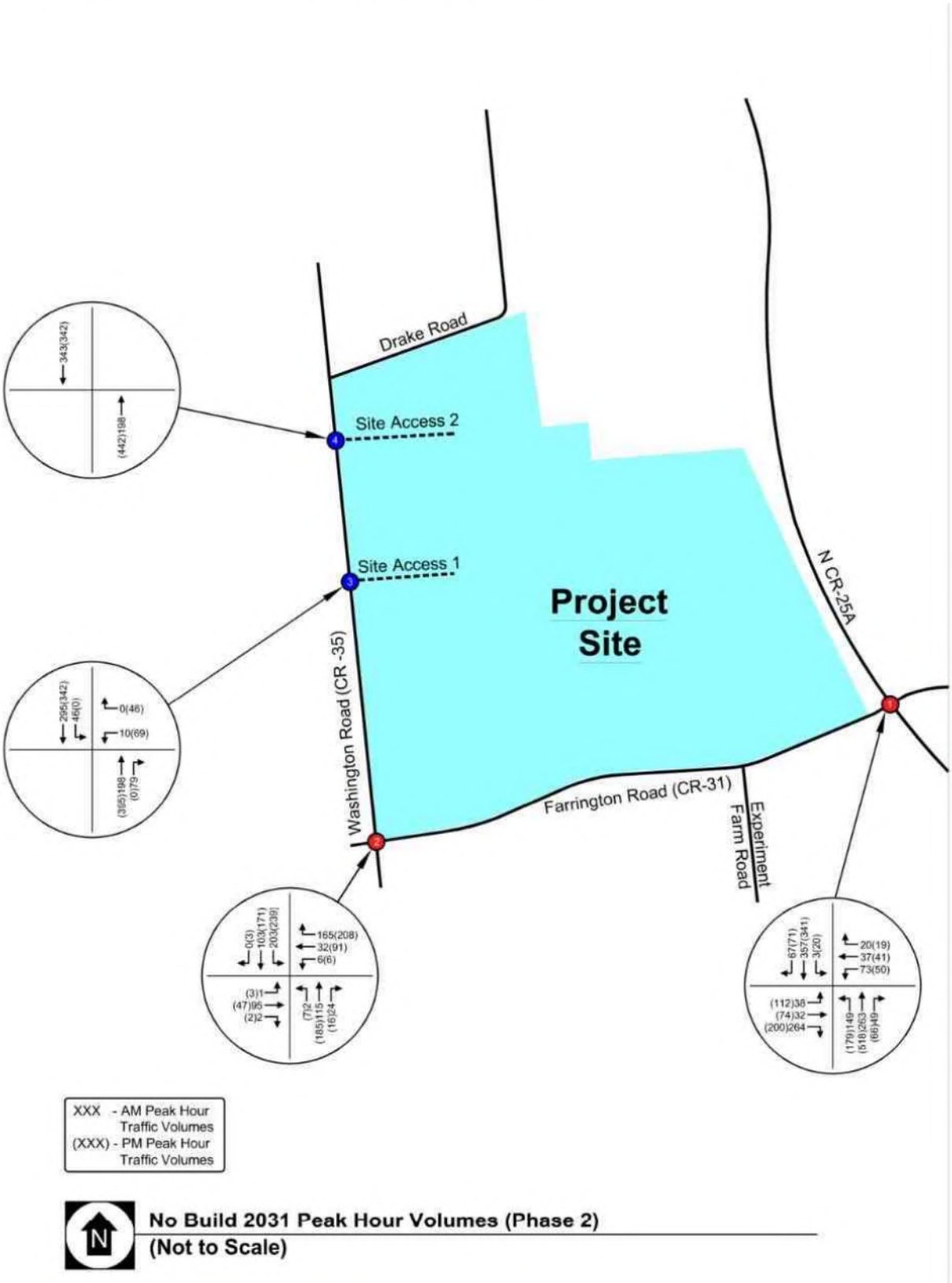


Figure 3.3 – Phase 2 No Build AM & PM Peak Hour Traffic Volumes



4.1. Proposed Development

In order to determine the traffic expected to be generated by the proposed development, the land uses must be evaluated, and trips generated, distributed, and assigned to the study area network. The proposed development is expected to be constructed in two three-year phases over a total of six years. Each phase is expected to include the following land uses:

Phase 1 *(2028)*

- Data Center building 1 – 295,000 sf
- Data Center building 2 - 355,000 sf

Phase 2 *(2031)*

- Data Center building 1 – 295,000 sf
- Data Center building 2 - 355,000 sf

A general site plan is shown in Figure 4.1.

Site Access Review

The proposed development includes two accesses. This will provide multiple connections to the existing transportation network and help to disperse traffic generated by the development. Site Access 1 and Site Access 2 will be built prior to construction of Phase 1 and Phase 2 beginning, respectively.

Site Access 1 is proposed as a new westbound approach on Washington Road (CR-35), serving as the primary access point for Phase 1 of the development, which is scheduled to commence operations in 2028. This access road will facilitate ingress and egress for the data center buildings designated for Phase 1. Site Access 2 is proposed as an additional westbound approach along Washington Road, located north of Site Access 1 and is anticipated to be operational in 2031. Until Phase 2 is operational, Site Access 1 will function as the primary access route for the development.

Figure 4.1 – General Site Plan

4.2. Trip Generation

The *ITE Trip Generation Manual* provides formulas for calculating the expected number of trips generated by a Data Center. The developer has determined trip generations on an hourly basis for a data center this size. A comparison of the ITE trip generation for a data center with the client provided trip generation was performed and submitted for approval as part of the study scope. Appendix B provides the submitted scope that includes the trip generation comparison. It was agreed that for this study the more conservative trip generation volumes provided by the client should be used.

The information provided by the client is described as "conservative assumptions and generations" based on their current understanding of the trip generation expected for this type of development. Additionally, the guidelines suggest the use of "these assumptions as the best information[…]available right now with the acknowledgement that traffic assessments may need to be revised in the future." The proposed trips to be used for the traffic study based on these guidelines are presented in Table 4.1. These are the expected trips during the AM and PM peak hour when the data center is operational.

Table 4.1 – **Proposed Trip Generation – Traffic Study Guidelines (from Developer)**

				AM			PM			
Vehicle Type	Land Use	Quantity	Units	Enter	Exit	Total	Enter	Exit	Total	Weekday
	Phase 1 Build (2028)									
Auto	Data Center, Campus F	650	k.s.f.	115	0	115	0	115	115	600
Heavy				5	5	10	0	0	0	100
	Phase 1 New Trips			**120**	**5**	**125**	**0**	**115**	**115**	**700**
	Phase 2 Build (2031)									
Auto	Data Center, Campus F	650	k.s.f	115	0	115	0	215	215	1,000
Heavy				10	10	20	0	0	0	200
	Phase 2 New Trips			**125**	**10**	**135**	**0**	**215**	**215**	**1,200**
	Total Phase 1 & 2 Trips			**245**	**15**	**260**	**0**	**330**	**330**	**1,900**

Trip Distribution

An external distribution of the trips was forecasted using existing traffic patterns, historical traffic data, and existing land use locations. The general external distribution for the area is summarized in Table 4.2.

Table 4.2 – Trip Distribution Summary

Direction of Approach	Assumed Distribution
New Trips	
to/from **North** via **Washington Road**	**40%**
to/from **South** via **Washington Road**	**19%**
to/from **West** via **Farrington Road**	**1%**
to/from **East** via **West Peterson Road**	**5%**
to/from **North** via **N CR-25A**	**10%**
to/from **South** via **N CR-25A**	**25%**

While the external distribution is anticipated to remain the same during both phases, the distribution of traffic to and from the site will change as accesses open. Therefore, distributions were created for each phase and land use group based on the general distribution and the accesses that will be open.

The anticipated distribution of site-generated trips for passenger cars and heavy vehicles in Phase 1 are shown in Figure 4.2 and Figure 4.3 and Phase 2 distributions are shown in Figure 4.5 and Figure 4.6.

Traffic Assignment

The trips expected to be generated by the development were assigned to the roadway network using the distributions. The expected assignment of total site-generated trips for Phase 1 and Phase 2 are shown in Figure 4.4 and Figure 4.7, respectively.

Figure 4.2 –Trip Distribution Phase 1 (2028) – Passenger Cars

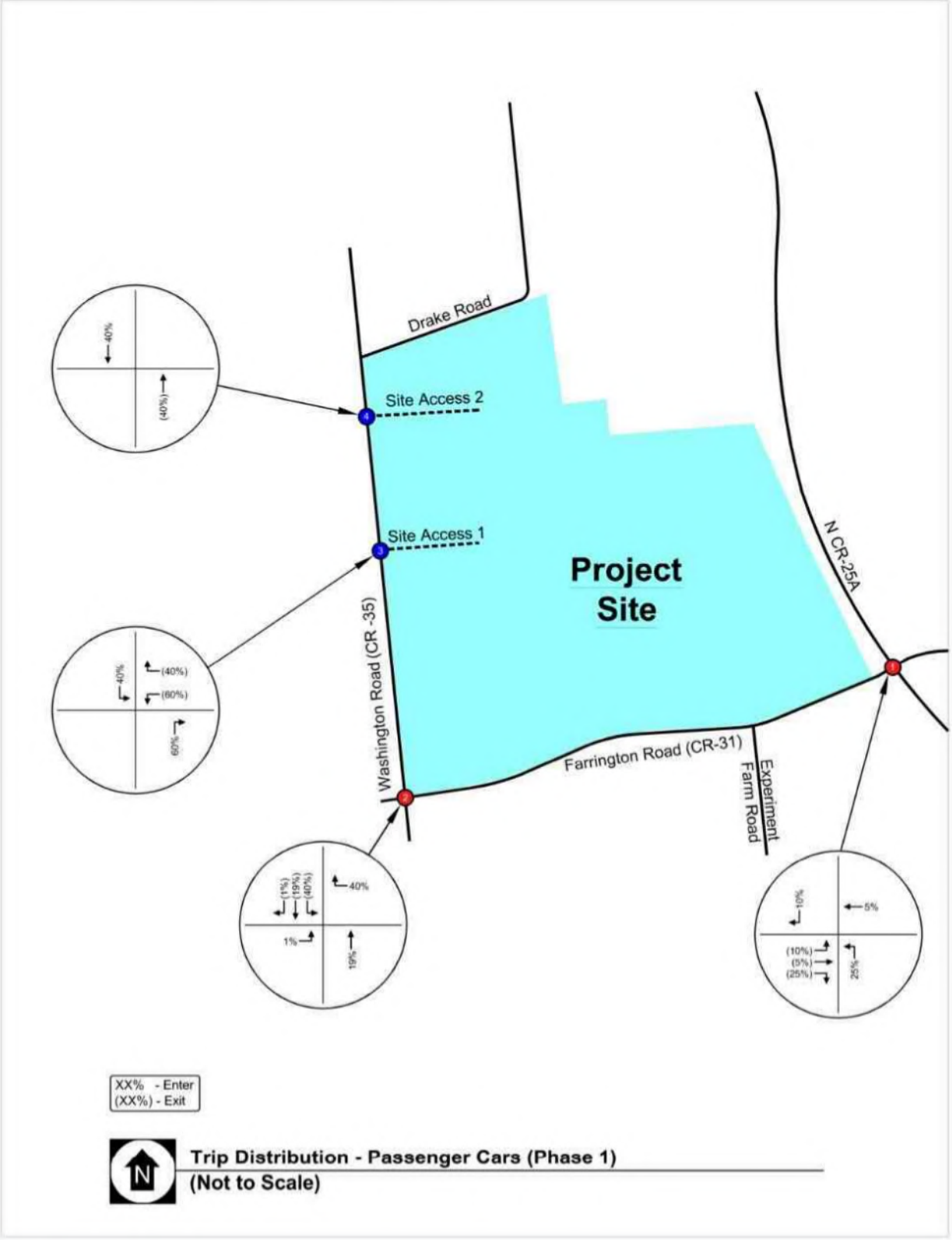


Figure 4.3 –Trip Distribution Phase 1 (2028) – Heavy Vehicles

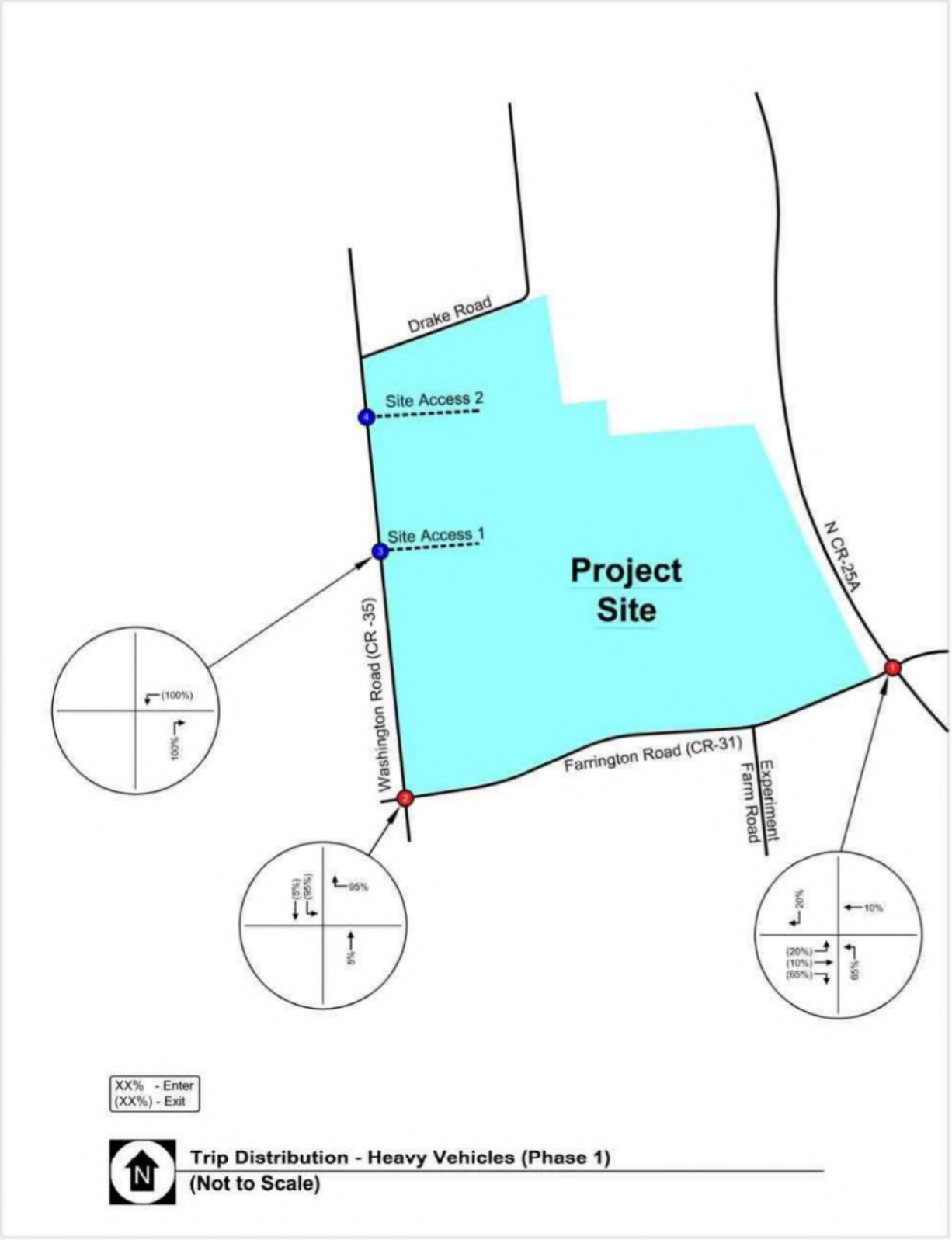


Figure 4.4 – Total Trip Assignment Phase 1 (2028)

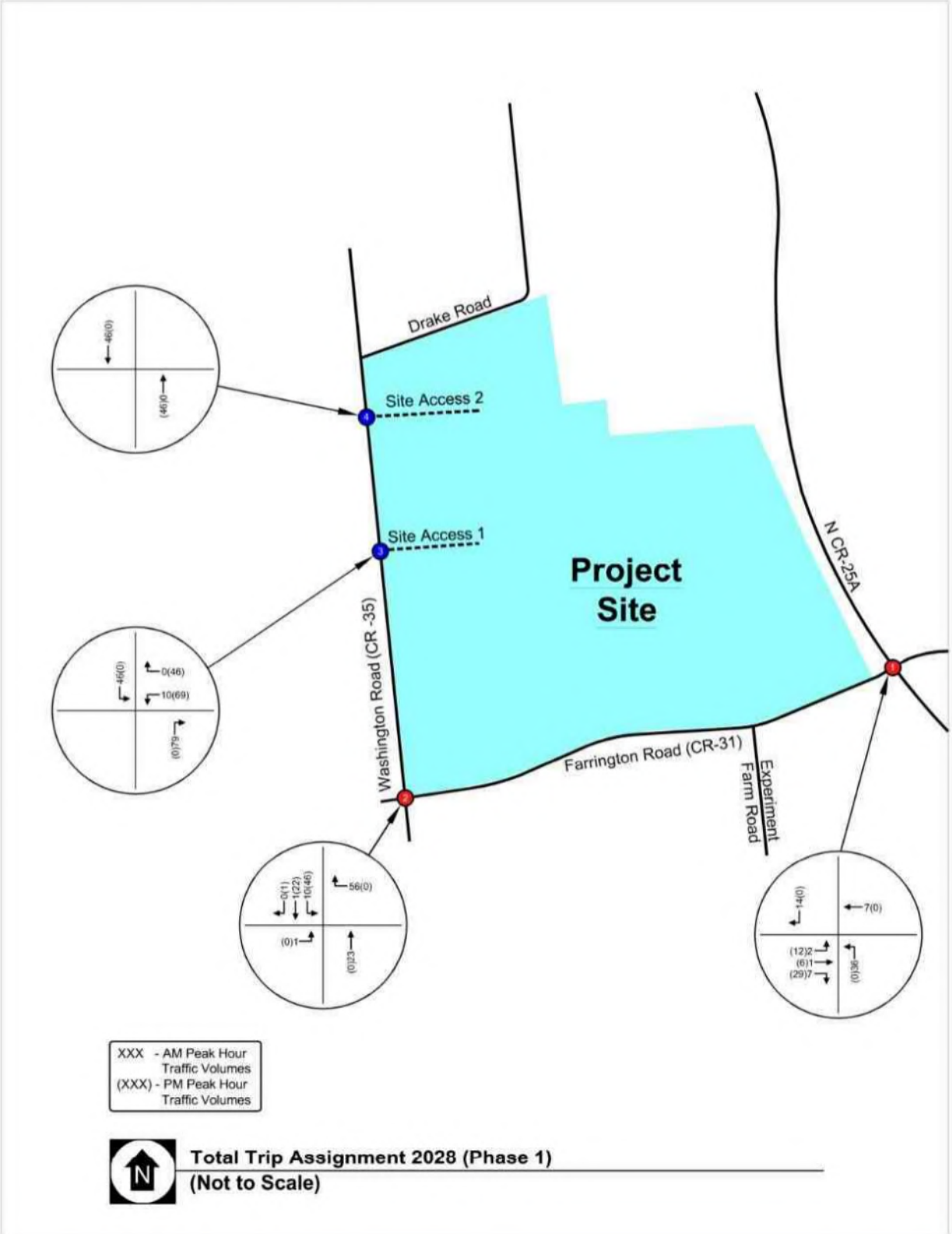


Figure 4.5 – Trip Distribution Phase 2 (2031) – Passenger Cars

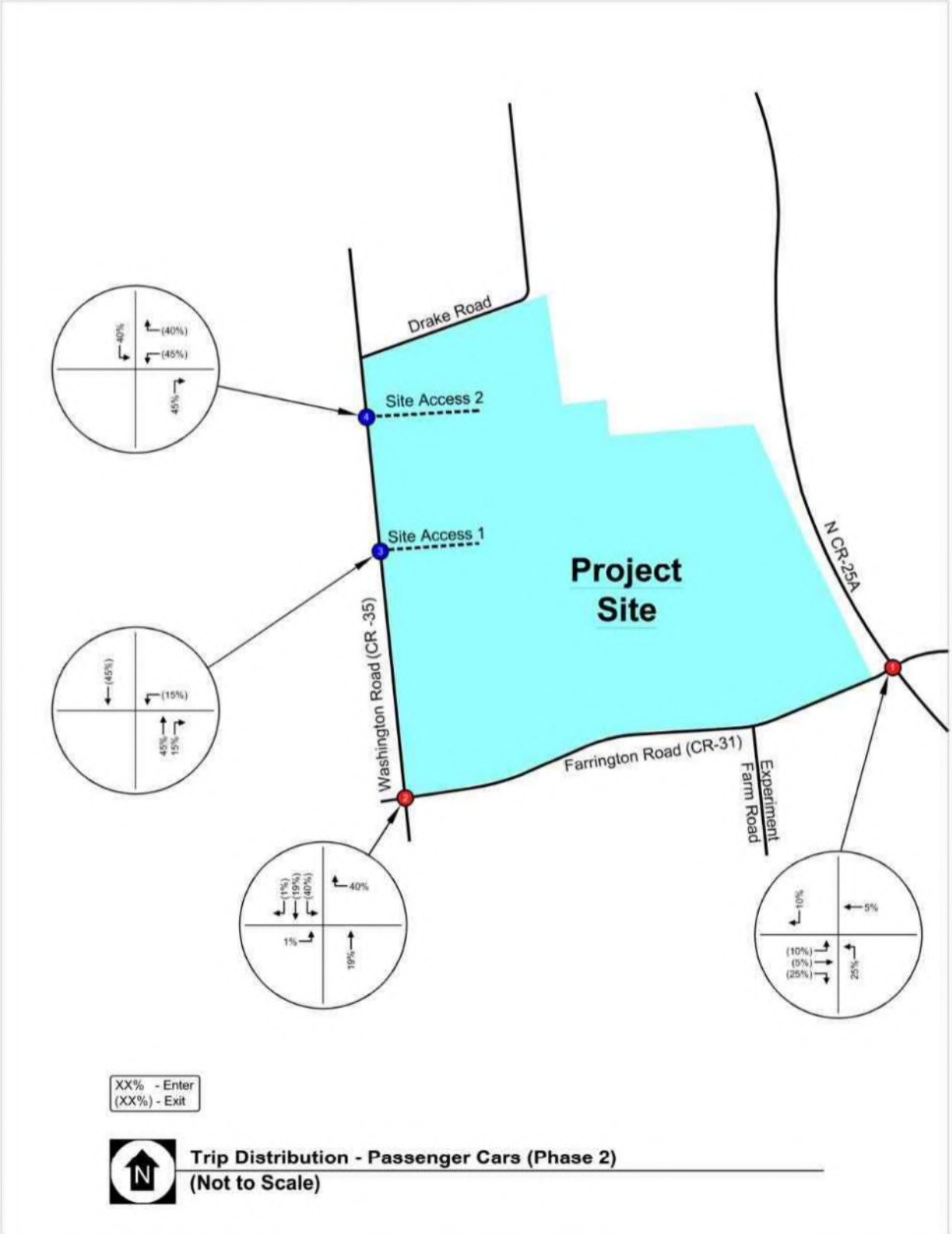


Figure 4.6 – Trip Distribution Phase 2 (2031) – Heavy Vehicles

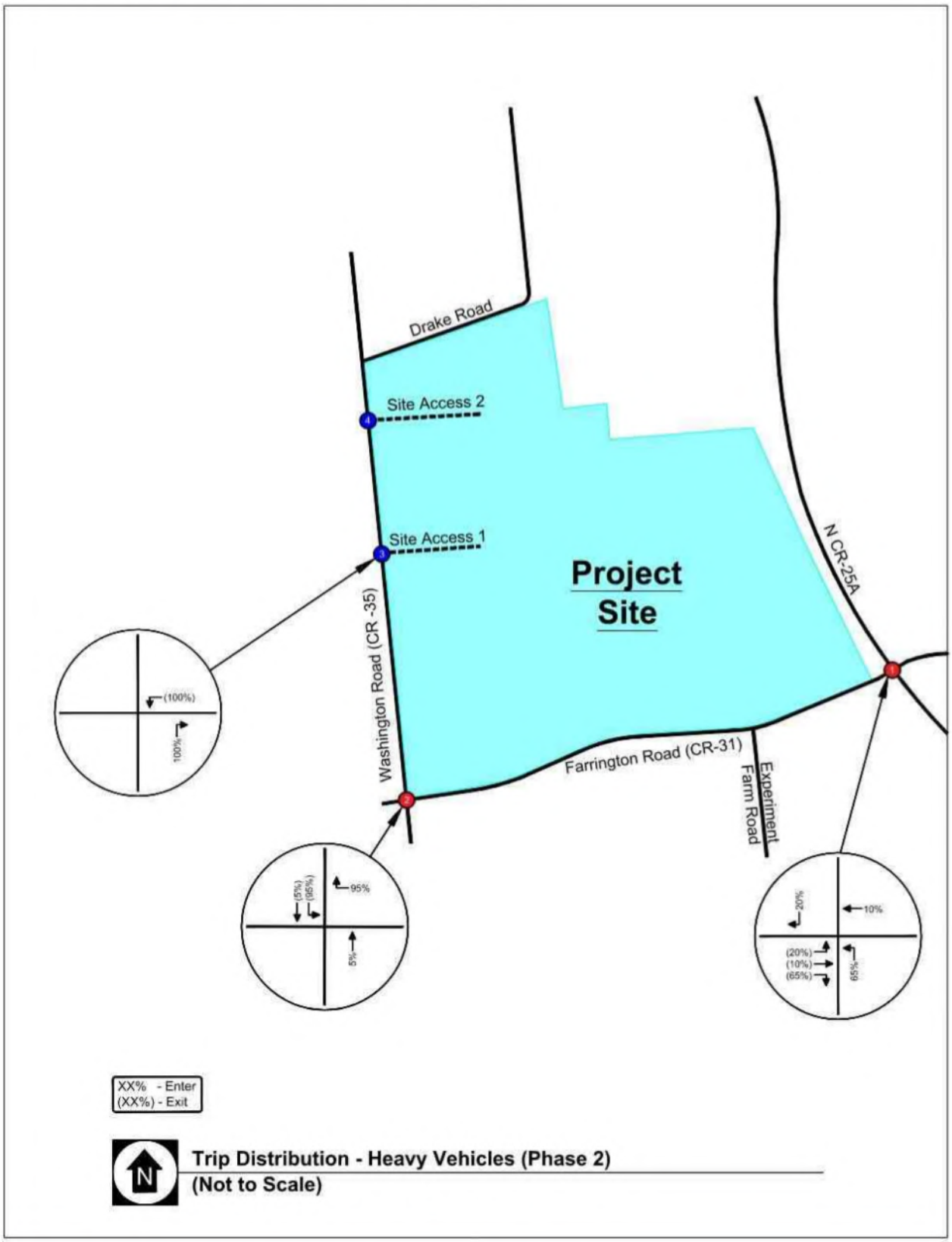
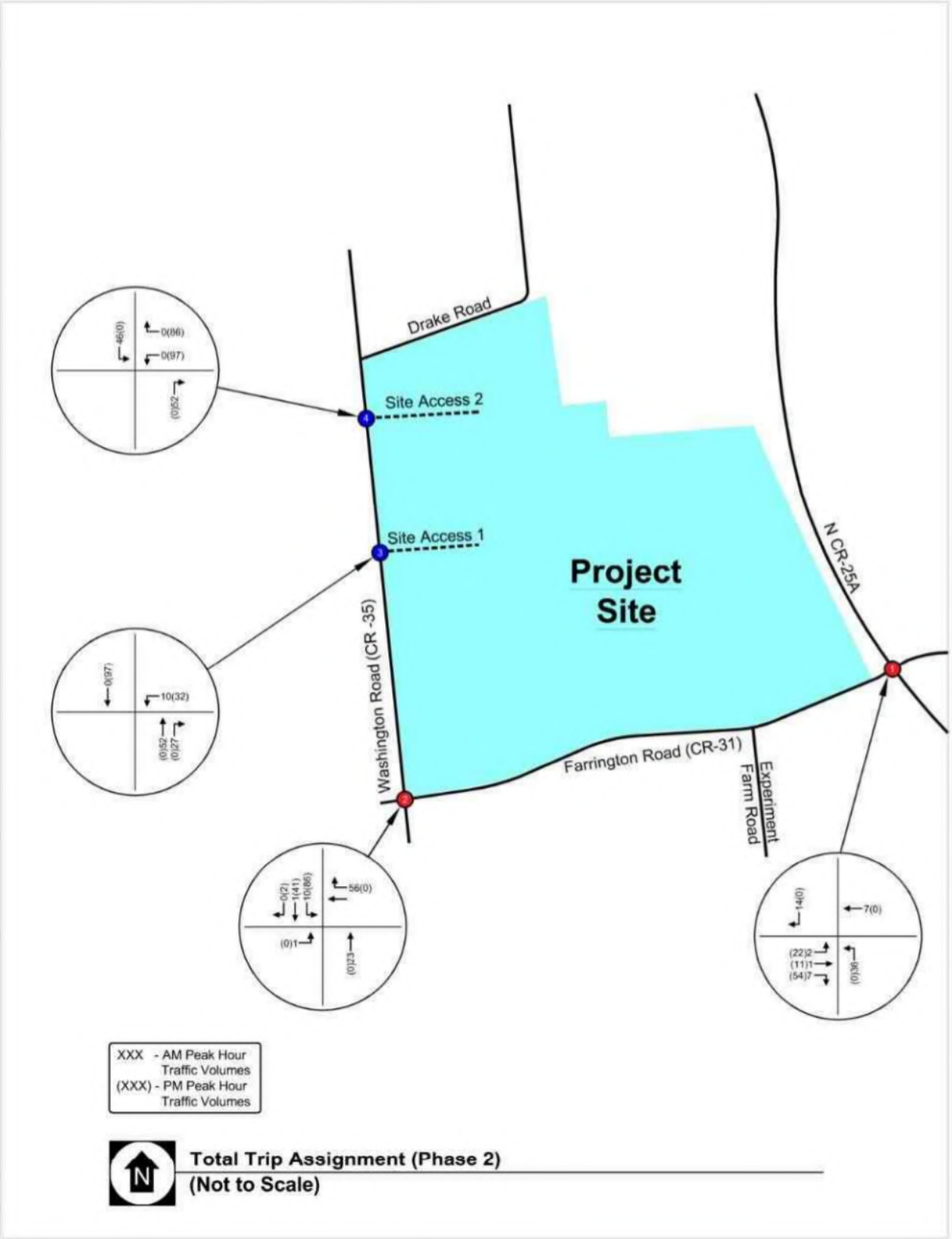


Figure 4.7 – Total Trip Assignment Phase 2 (2031)



Build Traffic Volumes

The Build volumes for Phase 1 and Phase 2 were calculated by adding the No Build volumes to the net trip assignment for each respective phase. The resulting traffic volumes for the AM and PM peak hours are shown in Figure 4.8 for Phase 1 and Figure 4.9 for Phase 2.

Figure 4.8 –Build Volumes Phase 1 (2028)

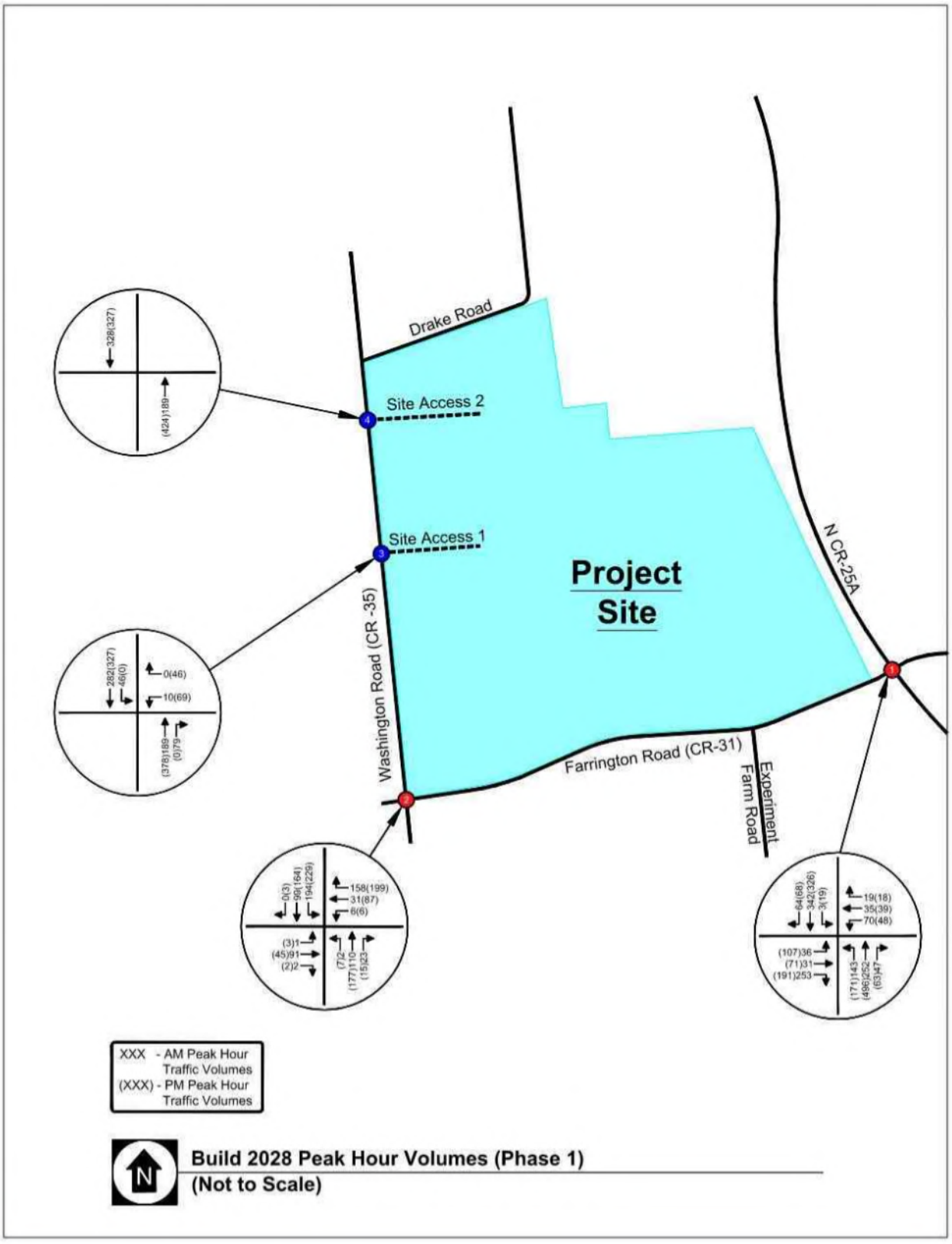
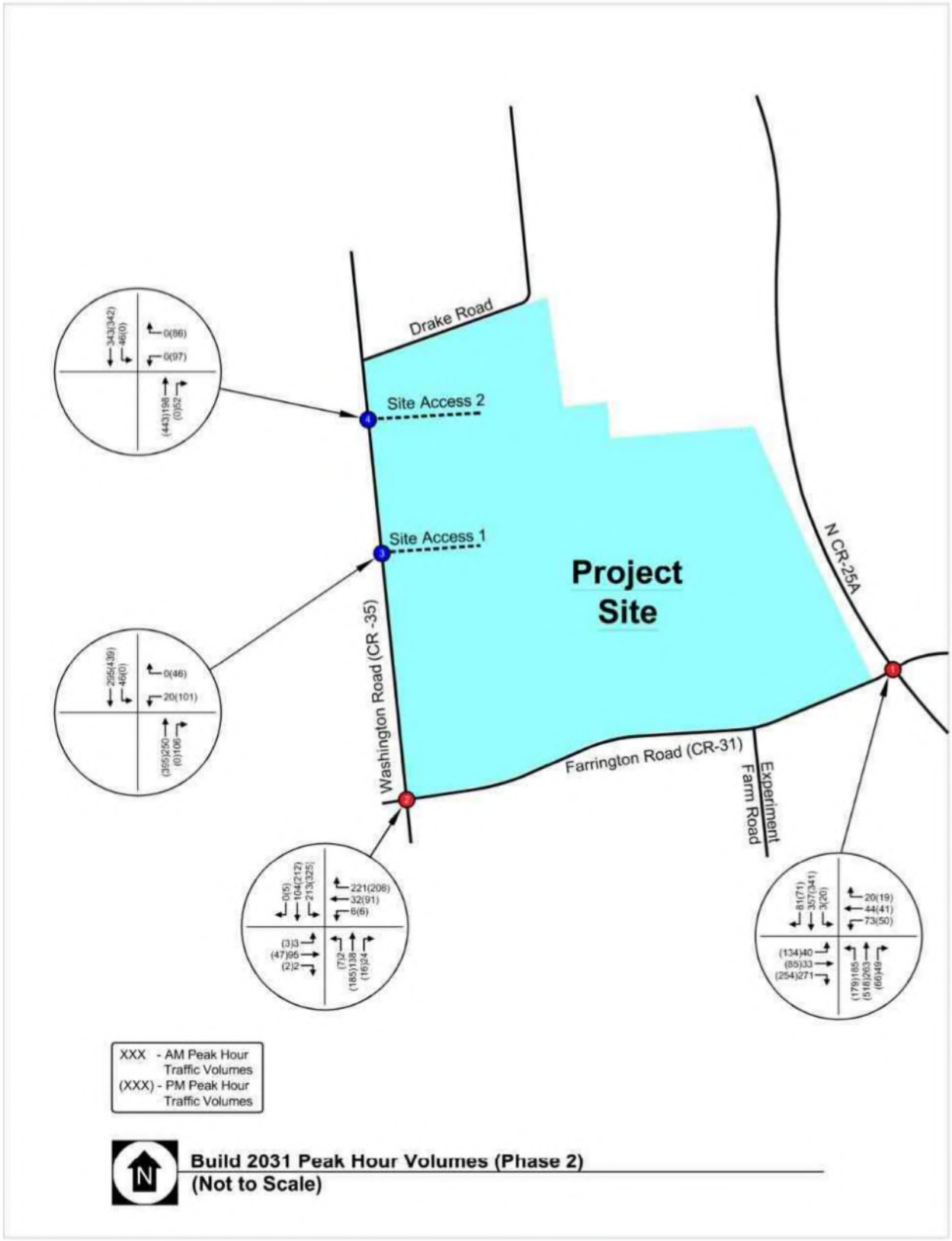


Figure 4.9 –Build Volumes Phase 2 (2031)



Operational analysis of the Existing, No Build (Background) and Build scenarios for both phases of the development were conducted using industry standards. The analysis is conducted to show the effect of traffic generated by the proposed development on the transportation network for each phase.

The operational analysis results in a Level of Service (LOS) for each intersection during the AM and PM peak hours. The LOS is based on the methodology outlined in the *Highway Capacity Manual,7th edition (HCM)*. The LOS results range from an A to a F, with A being the best and F the worst. Intersection LOS is based on the volume-to-capacity ratio and amount of delay experienced by each movement. For unsignalized intersections, the LOS is reported for critical turning movements based on the values shown in Table 5.1. For signalized intersections the LOS is reported for each approach and for the overall intersection, based on the values shown in Table 5.1.

Table 5.1 – Level of Service Criteria

Level of Service	Description	Average Control Delay (seconds per vehicle)	
		Signalized	Unsignalized
A	*Free flow*	≤ 10	≤ 10
B	*Stable flow, slight delay*	> 10 - 20	> 10 - 15
C	*Stable flow, acceptable delay*	> 20 - 35	> 15 - 25
D	*Near-unstable flow, tolerable delay*	> 35 - 55	> 25 - 35
E	*Unstable flow, intolerable delay*	> 55 - 80	> 35 - 50
F	*Forced flow, failure*	> 80	> 50

Source: Highway Capacity Manual (HCM 7th Edition)

Analysis Conditions

The results for the Existing 2025, No Build Phase 1 (2028), No Build Phase 2 (2031), Build Phase 1 (2028), and Build Phase 2 (2031) scenarios at the study intersections are summarized in Table 5.2 and Table 5.3 for the AM and PM peak hours, respectively. Full capacity analysis results are included in Appendix D.

Existing Conditions

The analysis for the Existing Conditions was conducted at the study intersections using the existing geometry and traffic control as described in the Existing Conditions section of the report. As shown, the overall signalized intersections and the critical movements at the unsignalized intersections operate at LOS D or better during the AM and PM peak hours.

No Build Conditions – Phase 1 (2028)

Phase 1 (2028) No Build analysis was conducted using the same geometry and traffic control that was used in the existing condition analysis and the traffic volumes presented for Phase 1 (2028) No Build. The analysis results show the overall signalized intersections and the critical movements at the unsignalized intersections are expected to operate at an LOS D or better during both peak hours.

Build – Phase 1 (2028)

The Phase 1 (2028) Build analysis was conducted using the geometry and traffic control used in the No Build analysis and the traffic volumes presented for Phase 1 (2028) Build. This phase is also expected to have Site Access 1 open and providing one entering and one exiting lane. The analysis results show the signalized intersection and the critical movements at the unsignalized intersections are expected to operate at LOS D or better during both peak hours.

Build with Improvements – Phase (2028)

Although the Phase 1 (2028) Build analysis shows adequate operations are expected. At the intersection of Farrington Road (CR-31) at Washington Road (CR-35), a southbound left turn lane is warranted based on the ODOT Left Turn Warrants using Figure 401-5b. Also, a westbound right turn lane is warranted based on ODOT Right Turn Lane Warrant, Figure 401-6b. The results with the additional turn lanes at this intersection are shown in Table 5.2 and Table 5.3.

No Build – Phase 2 (2031)

Phase 2 (2031) No Build analysis was performed with the same geometry and traffic control as Phase 1 (2028) Build w/ Improvements scenario and the traffic volumes presented for Phase 2 (2031) No Build. The analysis results show the signalized intersection and the critical movements at the unsignalized intersections are expected to operate at LOS D or better during both peak hours.

Build – Phase 2 (2031)

The Phase 2 (2031) Build analysis used the traffic volumes shown for Phase 2 (2031) Build and the same geometry and traffic control as Phase 2 (2031) No Build. This phase is also expected to have Site Access 2 open and providing one entering and one exiting lane. As shown in Table 5.3, the eastbound approach and westbound shared left/thru movement on Farrington Road at Washington Road are expected to operate at LOS E and F during the PM peak hour, respectively. This type of LOS is often experienced by a stop-controlled approach when both the delay and queue lengths are expected to be at an acceptable level. Also, the higher volume westbound right turning movement is expected to operate at LOS B.

Table 5.2 – Capacity Analysis Results – AM Peak Hour

Intersection	Approach	2025 Existing			Phase 1 (2028) No Build			Phase 1 (2028) Build			Phase 1 (2028) Build w/ Improvements			Phase 2 (2031) No Build			Phase 2 (2031) Build		
		Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue
AM Peak Hour																			
1. **N CR-25A at Farrington Road (CR-31)/ W Peterson Road (CR-31)** (*Signalized*)	**Overall**	**13.6**	**B**		**13.8**	**B**		**14.0**	**B**		**14.0**	**B**		**14.2**	**B**		**14.4**	**B**	
	Eastbound	17.5	B	49’	17.5	B	50’	17.4	B	52’	17.4	B	52’	17.4	B	54’	17.3	B	55’
	Westbound	20.1	C	77’	20.2	C	80’	20.4	C	84’	20.4	C	84’	20.4	C	88’	20.5	C	92’
	Northbound	9.1	A	66’	9.3	A	70’	9.4	A	71’	9.4	A	22’	9.7	A	74’	10.0	A	75’
	Southbound	13.3	B	92’	13.7	B	97’	14.3	B	101’	14.3	B	57’	14.7	B	106’	15.1	B	110’
2. **Farrington Road (CR -31) at Washington Road (CR-35)** (*TWSC*)	Eastbound	20.2	C	30’	21.6	C	35’	23.6	C	40’	23.6	C	40’	25.7	D	45’	29.1	D	53’
	Westbound	12.8	B	25’	13.2	B	28’	13.8	B	40’	-	-	-	-	-	-	-	-	-
	WB Left/Thru	-	-	-	-	-	-	-	-	-	20.4	C	25’	21.7	C	25’	23.7	C	25’
	WB Right	-	-	-	-	-	-	-	-	-	10.0	B	25’	10.1	B	25’	10.9	B	30’
	Northbound Left	7.4	A	0’	7.4	A	0’	7.5	A	0’	7.5	A	0’	7.5	A	0’	7.5	A	0’
	Southbound Left	7.8	A	25’	7.9	A	25’	8.0	A	25’	5.3	A	25’	8.0	A	25’	8.1	A	25’
3. **Washington Road (CR-35) at Site Access 1** (*TWSC*)	Westbound	-	-	-	-	-	-	14.0	B	25’	14.0	B	25’	14.3	B	25’	15.7	C	25’
	Southbound Left	-	-	-	-	-	-	7.9	A	25’	7.9	A	25’	8.0	A	25’	8.2	A	25’
4. **Washington Road (CR-35) at Site Access 2** (*TWSC*)	Westbound	-	-	-	-	-	-	-	-	-	-	-	-	0.0	A	0’	0.0	A	0’
	Southbound Left	-	-	-	-	-	-	-	-	-	-	-	-	0.0	A	0’	7.9	A	0’

Table 5.3 – Capacity Analysis Results – PM Peak Hour

Intersection	Approach	2025 Existing			Phase 1 (2028) No Build			Phase 1 (2028) Build			Phase 1 (2028) Build w/ Improvements			Phase 2 (2031) No Build			Phase 2 (2031) Build		
		Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue
PM Peak Hour																			
1. N CR-25A at Farrington Road (CR-31)/ W Peterson Road (CR-31) (*Signalized*)	**Overall**	**13.1**	**B**		**13.2**	**B**		**13.7**	**B**		**13.7**	**B**		**14.1**	**B**		**15.5**	**B**	
	Eastbound	18.5	B	102'	18.7	B	106'	19.0	B	117'	19.0	B	117'	18.9	B	123'	18.8	B	148'
	Westbound	21.0	C	65'	21.5	C	68'	21.8	C	67'	21.8	C	67'	22.0	C	72'	21.7	C	73'
	Northbound	9.8	A	134'	9.9	A	144'	10.3	B	147'	10.3	B	147'	10.8	B	158'	12.5	B	168'
	Southbound	12.7	B	94'	12.8	B	100'	13.2	B	103'	13.2	B	103'	13.7	B	110'	15.4	B	115'
2. Farrington Road (CR -31) at Washington Road (CR-35) (*TWSC*)	Eastbound	19.6	C	25'	20.8	C	25'	25.7	D	25'	25.1	D	25'	27.3	D	25'	46.3	E	40'
	Westbound	18.8	B	78'	20.6	C	90'	26.2	D	115'	-	-	-	-	-	-	-	-	-
	WB Left/Thru	-	-	-	-	-	-	-	-	-	24.9	C	63''	33.2	D	53'	66.0	F	93'
	WB Right	-	-	-	-	-	-	-	-	-	10.1	B	25'	10.8	B	25'	10.8	B	25'
	Northbound Left	7.5	A	0'	7.5	A	0'	7.6	A	0'	7.5	A	0'	7.6	A	0'	7.7	A	0'
	Southbound Left	8.0	A	25'	8.1	A	25'	8.2	A	25'	8.0	A	25'	8.2	A	25'	8.5	A	25'
3. Washington Road (CR-35) at Site Access 1 (*TWSC*)	Westbound	-	-	-	-	-	-	16.2	C	28'	16.2	C	28'	16.8	C	30'	22.4	C	55'
	Southbound Left	-	-	-	-	-	-	0.0	A	0'	0.0	A	0'	0.0	A	0'	0.0	A	0'
4. Washington Road (CR-35) at Site Access 2 (*TWSC*)	Westbound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.4	C	63'
	Southbound Left	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	A	0'

5.1. Warrants – Turn Lanes

Unsignalized intersections have warrants to determine if left and right turn lanes should be installed to improve operations. Left turn warrants for the unsignalized intersection of Washington Road (CR-35) and Farrington Road (CR-31) were performed according to methods outlined by the ODOT *Location and Design Manual, Volume 1 – Roadway Design* Figure 401-5b. These warrants are based on the speed of the roadway, number of turning vehicles and total traffic travelling through the study intersection.

The left turn analyzed is for the southbound approach on Washington Road (CR-35) at Farrington Road (CR-31) based on the Phase 1 (2028) Build traffic volumes. As shown in Table 5.4, the southbound left turn lane on Washington Road (CR-35) at Farrington Road (CR-31) is warranted during both peak hours. The analysis results are included in Appendix D.

Table 5.4 – Left Turn Warrant Analysis – Phase 1 (2028) Build volumes

Location	Major Road Speed	Peak Hour	Advancing Volume	Opposing Volume	Left Turn Volume		Warrant Met?
Unsignalized Locations *(ODOT Figure 401b)*							
Washington Road (CR-35)	55 mph	AM	293	135	194	(66%)	**YES**
at Farrington Road (CR-31)		PM	396	199	229	(58%)	**YES**

The right turn lane being analyzed is for the westbound approach on Farrington Road (CR-31) at Washington Road (CR-35) based on Phase 1 (2028) Build traffic volumes. As shown in Table 5.5, the westbound right turn lane on Farrington Road (CR-31) at Washington Road (CR-35) is warranted during the PM peak hour. The analysis results are included in Appendix D.

Table 5.5 – Right Turn Warrant Analysis – Phase 1 (2028) Build volumes

Location	Major Road Speed	Peak Hour	Advancing Volume	Right Turn Volume	Warrant Met?
Unsignalized Locations *(ODOT Figure 401b)*					
Washington Road (CR-35)	55 mph	AM	193	156	**NO**
at Farrington Road (CR-31)		PM	292	199	**YES**

Turn Lane Lengths

The turn lane lengths were determined using the ODOT *Location and Design Manual, Volume 1 – Roadway Design,* 400 - Intersection Design. Based on a 2-lane 55 mph road, using Figure 401-9 for a high demand turn lane at an unsignalized stopped crossroad, the westbound right turn lane will require 150 feet of storage with additional taper length as determined from ODOT Figure 401-7. Using the same figure for a high demand unsignalized through road, the southbound right turn lane will require 275 feet of storage with additional taper length as determined from ODOT Figure 401-7.

6. RECOMMENDATIONS

Based on the existing conditions of the transportation network and the trips expected to be generated by the proposed development, the following recommendations are expected to provide safe and efficient traffic operations within the study area. The recommendations are for the opening of Phase 1 (2028) and Phase 2 (2031) based on the trip generation and operational analysis presented.

Phase 1 (2028)

Washington Road (CR-35) at Farrington Road (CR-31)

- Construct a southbound left turn lane with 275 feet of storage and taper length designed per ODOT standards.
- Construct westbound right turn lane with 150 feet of storage and taper length designed per ODOT standards.

Washington Road (CR-35) at Site Access 1

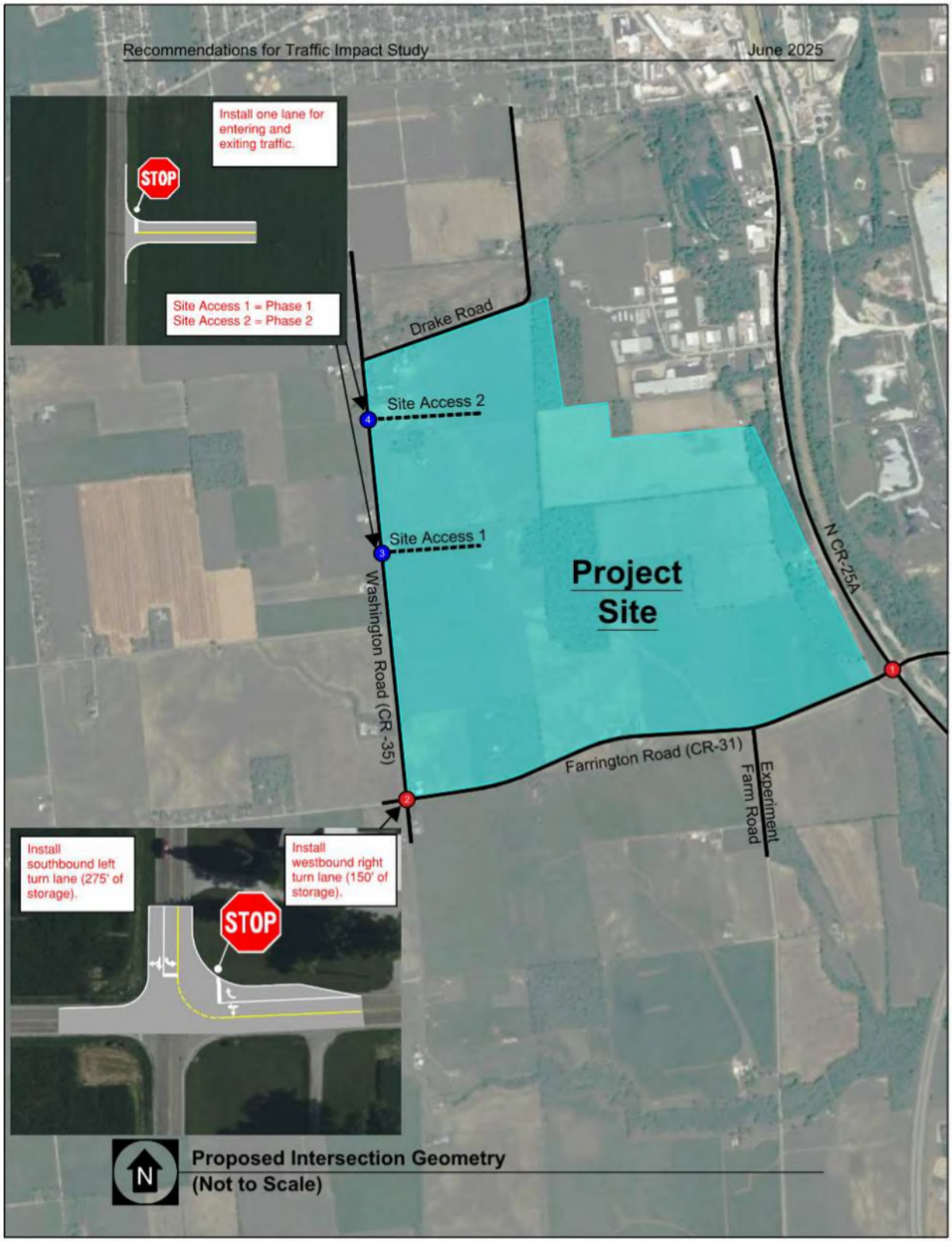
- Construct one 12-foot wide entering lane and one 12 foot wide exiting lane.
- Install one westbound stop sign with a stop line pavement marking placed per MUTCD standards.

Phase 2 (2031)

Washington Road (CR-35) at Site Access 2

- Construct one 12-foot wide entering lane and one 12 foot wide exiting lane.
- Install one westbound stop sign with a stop line pavement marking placed per MUTCD standards.

Figure 6.1 – Recommendations Figure



APPENDIX A – DATA COLLECTION

Existing Data Counts

Historic Traffic Data

TRAFFIC COUNT RECORD

BARGE DESIGN SOLUTIONS

Marr Traffic
Subconsultant

Site 1 of 4
US-75 N County Rd 25A (South)
US-75 N County Rd 25A (North)
SR-31 Farrington Rd
SR-31 W Peterson Rd

Date	Lat/Long	Project
Thursday, January 30, 2025	40.107677°, -84.232164°	

15-Minute Traffic Data

	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←				
	US-75 N County Rd 25A (South)					US-75 N County Rd 25A (North)					SR-31 Farrington Rd					SR-31 W Peterson Rd				
TIME	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped
6:00 – 6:15	2	24	1	0	0	2	42	16	0	0	7	3	35	0	0	6	7	0	0	0
6:15 – 6:30	11	36	12	0	0	0	68	11	0	0	4	3	36	0	0	9	4	1	0	0
6:30 – 6:45	22	47	12	0	0	2	89	20	0	0	14	6	54	0	0	12	8	2	0	0
6:45 – 7:00	33	47	12	0	0	1	81	19	0	0	11	8	48	0	0	16	10	3	0	0
7:00 – 7:15	23	36	6	0	0	4	71	7	0	0	7	11	49	0	0	10	8	3	0	0
7:15 – 7:30	22	50	10	0	0	2	79	13	0	0	5	5	69	0	0	22	9	7	0	0
7:30 – 7:45	25	55	8	0	0	1	79	9	0	0	8	11	66	0	0	17	4	3	0	0
7:45 – 8:00	27	80	13	0	0	0	91	13	0	0	11	6	53	0	0	14	8	5	0	0
8:00 – 8:15	28	56	14	0	0	0	78	13	0	0	9	7	47	0	0	14	6	3	0	0
8:15 – 8:30	20	48	8	0	0	1	57	11	0	0	9	6	42	0	0	8	5	1	0	0
8:30 – 8:45	23	52	6	0	0	0	65	9	0	0	5	3	36	0	0	9	5	2	0	0
8:45 – 9:00	10	43	6	0	0	1	55	10	0	0	5	6	33	0	0	10	6	1	0	0
9:00 – 9:15	16	37	1	0	0	1	79	13	0	0	7	7	23	0	0	6	1	1	0	0
9:15 – 9:30	23	46	6	0	0	2	50	10	0	0	9	3	29	0	0	6	3	2	0	0
9:30 – 9:45	15	37	7	0	0	3	60	7	0	0	4	9	21	0	0	11	8	1	0	0
9:45 – 10:00	15	59	8	0	0	2	49	8	0	0	5	5	34	0	0	4	7	1	0	0
10:00 – 10:15	18	43	6	0	0	1	55	9	0	0	5	5	24	0	0	2	7	0	0	0
10:15 – 10:30	16	56	7	0	0	1	49	10	0	0	9	5	19	0	0	2	1	2	0	0
10:30 – 10:45	22	52	6	0	0	1	46	10	0	0	6	8	30	0	0	10	6	0	0	0
10:45 – 11:00	23	61	5	0	0	1	55	12	0	0	12	5	21	0	0	6	1	0	0	0
11:00 – 11:15	14	49	6	0	0	0	59	6	0	0	12	5	41	0	0	9	9	1	0	0
11:15 – 11:30	11	51	11	0	0	2	49	8	0	0	5	8	24	0	0	6	6	0	0	0
11:30 – 11:45	17	60	11	0	0	5	58	11	0	0	5	5	24	0	0	7	3	0	0	0
11:45 – 12:00	17	54	8	0	0	1	65	6	0	0	17	3	24	0	0	8	4	0	0	0
12:00 – 12:15	21	53	5	0	0	4	67	15	0	0	14	6	19	0	0	9	3	7	0	0
12:15 – 12:30	25	57	10	0	0	5	52	12	0	0	16	3	23	0	0	5	5	1	0	0
12:30 – 12:45	16	50	8	0	0	2	57	15	0	0	13	4	25	0	0	6	10	2	0	0
12:45 – 13:00	21	56	3	0	0	0	47	11	0	0	15	8	24	0	0	8	4	0	0	0
13:00 – 13:15	17	56	10	0	0	3	63	8	0	0	16	7	30	0	0	6	1	1	0	0
13:15 – 13:30	19	57	5	0	0	1	67	9	0	0	12	11	26	0	0	8	9	2	0	0
13:30 – 13:45	23	72	5	0	0	1	63	11	0	0	17	10	27	0	0	6	5	2	0	0
13:45 – 14:00	28	76	13	0	0	1	59	14	0	0	13	9	18	0	0	5	10	2	0	0
14:00 – 14:15	19	69	14	0	0	4	69	12	0	0	13	10	33	0	0	13	10	0	0	0
14:15 – 14:30	27	62	13	0	0	0	72	17	0	0	17	4	31	0	0	10	6	1	0	0
14:30 – 14:45	36	74	7	0	0	3	110	16	0	0	14	5	39	0	0	13	12	0	0	0
14:45 – 15:00	32	80	16	0	0	0	69	13	0	0	25	16	27	0	0	8	8	1	0	0
15:00 – 15:15	29	89	11	0	0	6	76	10	0	0	30	13	28	0	0	11	7	3	0	0
15:15 – 15:30	47	112	16	0	0	3	70	15	0	0	30	8	22	0	0	5	10	1	0	0
15:30 – 15:45	40	103	11	0	0	2	78	12	0	0	27	10	34	0	0	24	11	0	0	0
15:45 – 16:00	45	140	15	0	0	3	65	18	0	0	22	15	36	0	0	11	13	5	0	0
16:00 – 16:15	32	109	14	0	0	7	94	13	0	0	26	21	40	0	0	15	9	2	0	0
16:15 – 16:30	45	117	19	0	0	3	71	13	0	0	29	18	47	0	0	10	12	7	0	0
16:30 – 16:45	42	109	12	0	0	5	82	21	0	0	14	8	32	0	0	10	3	3	0	0
16:45 – 17:00	42	93	17	0	0	5	67	14	0	0	21	7	35	0	0	15	21	2	0	0
17:00 – 17:15	42	83	12	0	0	3	89	30	0	0	18	23	31	0	0	17	16	0	0	0
17:15 – 17:30	57	100	12	0	0	7	79	23	0	0	18	15	35	0	0	6	12	2	0	0
17:30 – 17:45	29	70	9	0	0	5	60	17	0	0	27	14	36	0	0	21	7	3	0	0
17:45 – 18:00	29	99	12	0	0	1	59	12	0	0	25	6	26	0	0	4	6	2	0	0

Summary

	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←				
PEAK HOUR	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped
07:15 – 08:15	102	241	45	0	0	3	327	48	0	0	33	29	235	0	0	67	27	18	0	0
PHF	0.92																			
Heavy Veh	10%					6%					5%					7%				
14:45 – 15:45	148	384	54	0	0	11	293	50	0	0	112	47	111	0	0	48	36	5	0	0
PHF	0.92																			
Heavy Veh	8%					8%					3%					8%				
15:45 – 16:45	164	475	60	0	0	18	312	65	0	0	91	62	155	0	0	46	37	17	0	0
PHF	0.96																			
Heavy Veh	4%					5%					4%					3%				

TRAFFIC COUNT RECORD

BARGE DESIGN SOLUTIONS

Marr Traffic
Subconsultant

Site 2 of 4
SR-35 Washington Rd (South)
SR-35 Washington Rd (North)
SR-31 Farrington Rd (West)
SR-31 Farrington Rd (East)

Date	Lat/Long	Project
Thursday, January 30, 2025	40.104010°, -84.259065°	

15-Minute Traffic Data

	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←				
	SR-35 Washington Rd (South)					SR-35 Washington Rd (North)					SR-31 Farrington Rd (West)					SR-31 Farrington Rd (East)				
TIME	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped
6:00 – 6:15	0	6	2	0	0	16	18	0	0	0	0	7	0	0	0	1	1	8	0	0
6:15 – 6:30	0	11	2	0	0	32	23	0	0	0	0	9	1	0	0	0	1	7	0	0
6:30 – 6:45	1	18	4	0	0	52	30	0	0	0	0	22	2	0	0	1	5	24	0	0
6:45 – 7:00	0	24	3	0	0	46	32	2	0	0	0	22	0	0	0	1	10	33	0	0
7:00 – 7:15	1	13	3	0	0	37	16	0	0	0	0	22	1	0	0	1	10	18	0	0
7:15 – 7:30	0	14	3	0	0	49	13	0	0	0	0	23	0	0	0	0	9	27	0	0
7:30 – 7:45	0	25	8	0	0	49	34	0	0	0	0	22	2	0	0	2	6	22	0	0
7:45 – 8:00	0	27	7	0	0	44	25	0	0	0	0	20	0	0	0	3	9	23	0	0
8:00 – 8:15	2	17	4	0	0	34	22	0	0	0	0	22	0	0	0	1	6	26	0	0
8:15 – 8:30	1	14	5	0	0	25	16	0	0	0	0	17	0	0	0	1	3	21	0	0
8:30 – 8:45	0	17	2	0	0	30	24	1	0	0	1	18	0	0	0	0	8	24	0	0
8:45 – 9:00	0	8	2	0	0	30	20	0	0	0	0	5	1	0	0	1	6	16	0	0
9:00 – 9:15	1	12	4	0	0	25	11	0	0	0	1	10	2	0	0	0	7	17	0	0
9:15 – 9:30	0	12	1	0	0	32	17	0	0	0	1	9	1	0	0	3	8	14	0	0
9:30 – 9:45	1	14	1	0	0	17	12	0	0	0	0	10	1	0	0	2	6	23	0	0
9:45 – 10:00	0	10	1	0	0	30	18	0	0	0	0	10	2	0	0	0	11	13	0	0
10:00 – 10:15	0	14	2	0	0	20	11	0	0	0	1	13	1	0	0	5	12	15	0	0
10:15 – 10:30	1	14	2	0	0	14	11	0	0	0	0	8	2	0	0	1	3	15	0	0
10:30 – 10:45	0	17	1	0	0	21	18	0	0	0	0	13	1	0	0	1	9	20	0	0
10:45 – 11:00	0	12	1	0	0	19	15	1	0	0	0	6	0	0	0	0	9	25	0	0
11:00 – 11:15	2	20	2	0	0	28	9	0	0	0	1	13	0	0	0	1	5	20	0	0
11:15 – 11:30	0	25	3	0	0	17	21	0	0	0	0	10	1	0	0	1	9	10	0	0
11:30 – 11:45	0	14	1	0	0	22	25	0	0	0	0	9	1	0	0	1	12	11	0	0
11:45 – 12:00	0	20	2	0	0	25	21	0	0	0	0	9	1	0	0	0	9	15	0	0
12:00 – 12:15	1	34	3	0	0	22	23	0	0	0	0	6	2	0	0	1	4	21	0	0
12:15 – 12:30	0	24	3	0	0	20	21	1	0	0	0	14	0	0	0	2	7	27	0	0
12:30 – 12:45	0	23	1	0	0	27	17	1	0	0	0	9	0	0	0	2	8	16	0	0
12:45 – 13:00	1	29	4	0	0	24	25	0	0	0	0	9	0	0	0	0	11	22	0	0
13:00 – 13:15	2	19	3	0	0	21	23	1	0	0	0	8	0	0	0	0	5	17	0	0
13:15 – 13:30	1	24	1	0	0	30	28	0	0	0	0	8	1	0	0	1	7	25	0	0
13:30 – 13:45	2	16	1	0	0	26	34	0	0	0	0	6	0	0	0	0	11	19	0	0
13:45 – 14:00	3	20	2	0	0	17	16	0	0	0	0	9	1	0	0	1	5	29	0	0
14:00 – 14:15	2	33	5	0	0	29	24	0	0	0	0	17	0	0	0	1	13	24	0	0
14:15 – 14:30	0	29	3	0	0	27	30	0	0	0	0	11	1	0	0	3	14	24	0	0
14:30 – 14:45	1	27	0	0	0	32	29	0	0	0	0	12	2	0	0	2	14	38	0	0
14:45 – 15:00	2	37	4	0	0	29	25	0	0	0	0	10	0	0	0	2	19	28	0	0
15:00 – 15:15	2	45	3	0	0	26	29	0	0	0	1	10	1	0	0	1	15	23	0	0
15:15 – 15:30	2	43	3	0	0	28	21	0	0	0	1	7	1	0	0	1	24	45	0	0
15:30 – 15:45	1	37	1	0	0	34	30	1	0	0	1	14	1	0	0	6	16	39	0	0
15:45 – 16:00	3	46	2	0	0	42	27	0	0	0	1	10	1	0	2	2	21	48	0	0
16:00 – 16:15	1	44	6	0	0	40	39	1	0	0	0	17	0	0	0	1	20	40	0	0
16:15 – 16:30	2	45	4	0	0	45	31	0	0	0	0	12	0	0	0	1	18	57	0	0
16:30 – 16:45	1	34	2	0	0	48	39	1	0	0	2	4	1	0	0	2	24	45	0	0
16:45 – 17:00	1	33	2	0	0	30	30	0	0	0	0	5	1	0	0	3	16	47	0	0
17:00 – 17:15	2	52	4	0	0	39	28	0	0	0	1	6	2	0	0	1	21	40	0	0
17:15 – 17:30	3	24	4	0	0	36	32	0	0	0	0	11	0	0	0	5	20	60	0	0
17:30 – 17:45	3	38	6	0	0	30	28	0	0	0	0	8	3	0	0	1	14	41	0	0
17:45 – 18:00	1	32	2	0	0	28	17	0	0	0	0	8	0	0	0	0	10	45	0	0

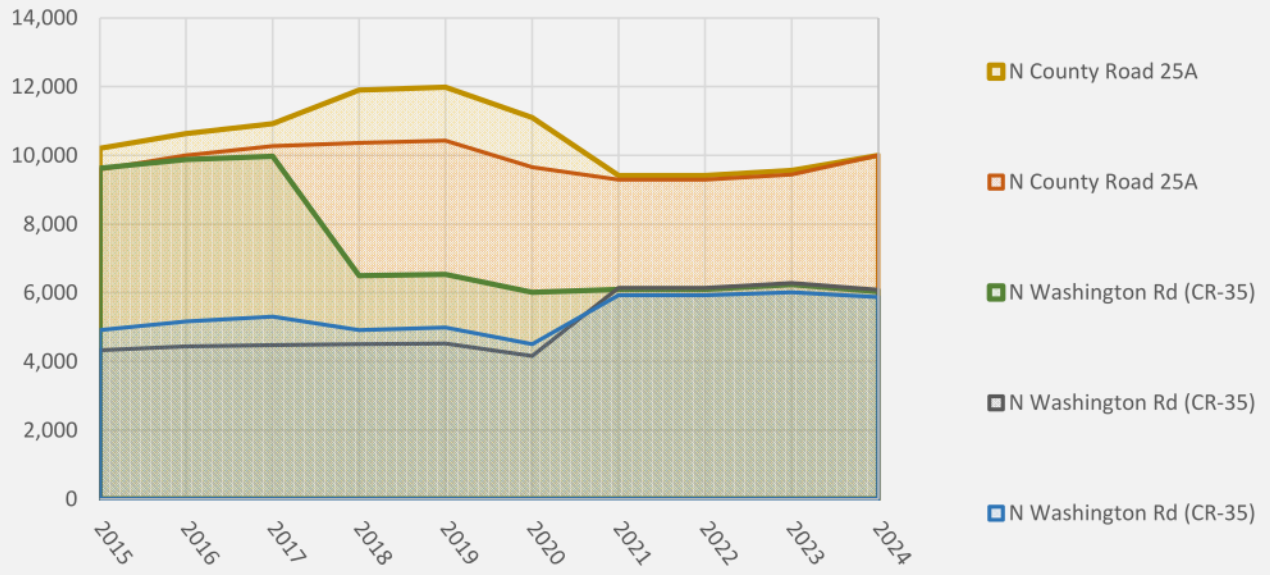
Summary

	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←				
PEAK HOUR	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped
07:15 – 08:15	2	83	22	0	0	176	94	0	0	0	0	87	2	0	0	6	30	98	0	0
PHF	0.88																			
Heavy Veh	3%					1%					9%					7%				
14:45 – 15:45	7	162	11	0	0	117	105	1	0	0	3	41	3	0	0	10	74	135	0	0
PHF	0.92																			
Heavy Veh	2%					2%					2%					4%				
15:45 – 16:45	7	169	14	0	0	175	136	2	0	0	3	43	2	0	2	6	83	190	0	0
PHF	0.97																			
Heavy Veh	1%					3%					6%					3%				

Historic Traffic Data

Year	735191 N County Road 25A	735991 N County Road 25A	735891 N Washington Rd (CR-35)	734991 N Washington Rd (CR-35)	10455 N Washington Rd (CR-35)	Total
2024	10,000	9,999	6,035	6,085	5,875	37,994
2023	9,442	9,558	6,238	6,285	6,013	37,536
2022	9,293	9,407	6,098	6,144	5,924	36,866
2021	9,293	9,407	6,098	6,144	5,924	36,866
2020	9,655	11,096	6,010	4,162	4,503	35,426
2019	10,427	11,983	6,533	4,524	4,992	38,459
2018	10,365	11,900	6,500	4,501	4,918	38,184
2017	10,263	10,915	9,972	4,479	5,309	40,938
2016	9,993	10,628	9,873	4,435	5,164	40,093
2015	9,590	10,200	9,623	4,323	4,918	38,654

Current Year	2024
Horizon Year	2029
Linear Growth Per Year	-0.85%
Since	2015



APPENDIX B – PROPOSED DEVELOPMENT DATA

Trip Generation Figures

Traffic Study Guidelines

Updated April 2023

This document provides guidelines for assumptions to inform traffic studies at new sites. There are conservative assumptions and generalizations included in what is provided below, if your site has particularly complex requirements or circumstances, these may need to be refined.

This is an update of the previous Traffic Study Guidelines and modified based on our current understanding of a Type F campus. For sites that could support more than 1 region, there is more uncertainty around what would be required for the 2nd region. Suggestion is to use these assumptions as the best information we have available right now with the acknowledgment that traffic assessments may need to be revised in the future. It is also suggested that project teams have consultants perform the study with all potential future regions that may fit on the site so we understand the full extent of what might be required, even though a study scoped for only the 1st region may be what is submitted to the AHJ.

Types of Trips

Construction Trips Construction trips are assumed to be consistent among each region and are developed on a per region basis. Current estimates of construction labor is that it would peak at 1,200-1,500 workers per day. In addition, there would be approximately 150 daily truck deliveries. Deliveries and visitors typically arrive from 5:00am through 6:00pm, with trips for staff and craft concentrated around 5:00-7:00am and 3:00-6:00pm. It is assumed that construction of the entire region would take approximately 36 months, with the peak in construction labor would only be approximately 6 months.

Operations Trips Operations trips start to occur after the completion of the first DHs (Approximately 24 months after BG). These trips include staff, deliveries, visitors, and subcontractors. It is expected that for a full region, there would be approximately 300 trips per day and an additional 50 daily truck deliveries. For a two region campus, we should assume that the operations trips are doubled.

Retrofit Trips Retrofit trips, are assumed to be consistent through the life starting approximately 3 years after the Region is handed over and operating. It is assumed that for a campus there would be approximately 200 trips per day and an additional 50 daily truck deliveries dedicated to retrofit projects. These trips generally enter from 5:00-6:00am and exit from 3:00-5:00pm. This is per campus (does not double for a 2 region campus).

Expected Phasing

Single Region Type F Campus

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Construction							
Operations			50%				
Retrofit							

Double Region Type F Campus

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Construction (Region 1)							
Operations (Region 1)			50%				
Construction (Region 2)							
Operations (Region 2)						50%	
Retrofit (both regions)							

Construction staff would "roll through" from Region 1 to Region 2.
Operations staffing would be duplicated for Region 1 and Region 2 (e.g., 600 total trips/day for operations staff at full buildout of two regions).
Retrofit staff would serve both regions so the assumptions are the same regardless of the number of regions (e.g., 200 staff)

Trip Details

Trips per Region

Trip Type	Enter/Exit	Daily Trips
Construction (Personnel)	Enter	1100
	Exit	1100
Construction (Truck	Enter	150

Deliveries)		
	Exit	150
Operations (Personnel)	Enter	300
	Exit	300
Operations (Truck Deliveries)	Enter	50
	Exit	50
Retrofit (Personnel)**	Enter	200
	Exit	200
Retrofit (Truck Deliveries)**	Enter	50
	Exit	50

** Retrofit traffic is not doubled for two region campuses.

Phase 1 Operational Trips
Phase 2 Retrofit Trips

For one region

Type of Trip	Enter or Exit	Total Daily	5-6a	6-7a	7-8a	8-9a	9-10a	10-11a	11-12p	12-1p	1-2p	2-3p	3-4p	4-5p	5-6p
Construction (Personnel)	Enter	1100	425	425	150			10	80	10					
	Exit	1100							10	80	10	190	270	270	270
Construction (Truck Deliveries)	Enter	150		15	15	15	15	15	15	15	15	15	15		
	Exit	150		15	15	15	15	15	15	15	15	15	15		
Operations (Personnel)	Enter	300	35	115	115	35									
	Exit	300											70	115	115
Operations (Truck Deliveries)	Enter	50		5	5	5	5	5	5	5	5	5	5		
	Exit	50		5	5	5	5	5	5	5	5	5	5		
Retrofit (Personnel)	Enter	200	200												
	Exit	200											100	100	
Retrofit (Truck Deliveries)	Enter	50		5	5	5	5	5	5	5	5	5	5		
	Exit	50		5	5	5	5	5	5	5	5	5	5		
Total Entering		**1850**	**660**	**565**	**290**	**60**	**25**	**35**	**105**	**35**	**25**	**25**	**25**	**0**	**0**

Total Exiting	1850	0	25	25	25	25	25	35	105	35	215	465	485	385
Total Trips	3700	660	590	315	85	50	60	140	140	60	240	490	485	385

APPENDIX C – LOS ANALYSIS

Existing

No Build and Build - Phase 1

No Build and Build - Phase 2

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	255	122	111	311	3	407
v/c Ratio	0.22	0.33	0.41	0.19	0.15	0.01	0.32
Control Delay (s/veh)	21.6	2.8	23.8	6.9	7.8	6.3	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	2.8	23.8	6.9	7.8	6.3	14.6
Queue Length 50th (ft)	20	0	35	15	20	0	52
Queue Length 95th (ft)	49	31	77	38	66	4	92
Internal Link Dist (ft)	2220		1715		1435		3278
Turn Bay Length (ft)				150		175	
Base Capacity (vph)	923	787	843	594	2069	647	2134
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.32	0.14	0.19	0.15	0.00	0.19

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	29	235	67	27	18	102	241	45	3	327	48
Future Volume (veh/h)	33	29	235	67	27	18	102	241	45	3	327	48
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	36	32	255	73	29	20	111	262	49	3	355	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	247	189	479	233	86	42	549	1277	235	509	1079	157
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.46	0.46	0.01	0.36	0.36
Sat Flow, veh/h	717	915	1547	629	419	205	1668	2806	517	1725	3015	438
Grp Volume(v), veh/h	68	0	255	122	0	0	111	154	157	3	201	206
Grp Sat Flow(s),veh/h/ln	1632	0	1547	1252	0	0	1668	1664	1659	1725	1721	1732
Q Serve(g_s), s	0.0	0.0	7.6	3.0	0.0	0.0	2.1	3.1	3.2	0.1	4.8	4.8
Cycle Q Clear(g_c), s	1.7	0.0	7.6	4.7	0.0	0.0	2.1	3.1	3.2	0.1	4.8	4.8
Prop In Lane	0.53		1.00	0.60		0.16	1.00		0.31	1.00		0.25
Lane Grp Cap(c), veh/h	436	0	479	362	0	0	549	757	755	509	616	620
V/C Ratio(X)	0.16	0.00	0.53	0.34	0.00	0.00	0.20	0.20	0.21	0.01	0.33	0.33
Avail Cap(c_a), veh/h	1030	0	1084	844	0	0	640	1018	1015	771	1053	1060
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	16.0	19.3	0.0	0.0	8.4	9.1	9.2	11.3	13.0	13.1
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.8	0.0	0.0	0.3	0.1	0.1	0.0	0.2	0.2
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	0.7	0.0	2.6	1.3	0.0	0.0	0.6	0.9	0.9	0.0	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.5	0.0	17.3	20.1	0.0	0.0	8.6	9.2	9.3	11.3	13.3	13.3
LnGrp LOS	B		B	C			A	A	A	B	B	B
Approach Vol, veh/h		323			122			422			410	
Approach Delay, s/veh		17.5			20.1			9.1			13.3	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	31.2		18.1	12.0	25.8		18.1				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.2		9.6	4.1	6.8		6.7				
Green Ext Time (p_c), s	0.0	1.3		1.9	0.1	1.7		1.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.6									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	87	2	6	30	98	2	83	22	176	94	0
Future Vol, veh/h	0	87	2	6	30	98	2	83	22	176	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	0	99	2	7	34	111	2	94	25	200	107	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	623	631	107	668	618	107	107	0	0	119	0	0
Stage 1	507	507	-	111	111	-	-	-	-	-	-	-
Stage 2	116	124	-	556	507	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	389	389	929	365	398	934	1478	-	-	1469	-	-
Stage 1	535	528	-	882	794	-	-	-	-	-	-	-
Stage 2	872	780	-	506	531	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	267	332	929	228	340	934	1478	-	-	1469	-	-
Mov Cap-2 Maneuver	267	332	-	228	340	-	-	-	-	-	-	-
Stage 1	458	451	-	880	792	-	-	-	-	-	-	-
Stage 2	734	779	-	337	454	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.19	12.84	0.14	5.11
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	32	-	-	337	611	1173	-	-
HCM Lane V/C Ratio	0.002	-	-	0.3	0.249	0.136	-	-
HCM Ctrl Dly (s/v)	7.4	0	-	20.2	12.8	7.8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.2	1	0.5	-	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	161	105	171	558	19	393
v/c Ratio	0.53	0.20	0.33	0.31	0.31	0.04	0.35
Control Delay (s/veh)	27.5	2.4	20.8	8.6	10.1	7.5	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.5	2.4	20.8	8.6	10.1	7.5	15.9
Queue Length 50th (ft)	52	0	29	26	45	3	51
Queue Length 95th (ft)	102	24	65	63	134	12	94
Internal Link Dist (ft)	2242		1715		1435		3278
Turn Bay Length (ft)				150		175	
Base Capacity (vph)	764	821	777	563	1961	509	1904
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.14	0.30	0.28	0.04	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	62	155	46	37	17	164	475	60	18	312	65
Future Volume (veh/h)	91	62	155	46	37	17	164	475	60	18	312	65
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	95	65	161	48	39	18	171	495	62	19	325	68
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	256	143	467	159	113	37	611	1405	175	473	1040	215
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.12	0.45	0.45	0.03	0.36	0.36
Sat Flow, veh/h	840	787	1560	351	623	202	1753	3129	390	1739	2863	591
Grp Volume(v), veh/h	160	0	161	105	0	0	171	276	281	19	195	198
Grp Sat Flow(s),veh/h/ln	1627	0	1560	1176	0	0	1753	1749	1770	1739	1735	1719
Q Serve(g_s), s	0.0	0.0	4.4	0.9	0.0	0.0	3.0	5.7	5.7	0.4	4.5	4.6
Cycle Q Clear(g_c), s	4.6	0.0	4.4	5.4	0.0	0.0	3.0	5.7	5.7	0.4	4.5	4.6
Prop In Lane	0.59		1.00	0.46		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	399	0	467	308	0	0	611	785	795	473	630	624
V/C Ratio(X)	0.40	0.00	0.35	0.34	0.00	0.00	0.28	0.35	0.35	0.04	0.31	0.32
Avail Cap(c_a), veh/h	1035	0	1130	909	0	0	684	1086	1099	695	1077	1068
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	15.1	20.0	0.0	0.0	8.2	9.9	9.9	10.2	12.6	12.6
Incr Delay (d2), s/veh	0.9	0.0	0.6	0.9	0.0	0.0	0.4	0.2	0.2	0.0	0.2	0.2
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	1.8	0.0	1.5	1.2	0.0	0.0	0.9	1.6	1.7	0.1	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.2	0.0	15.7	21.0	0.0	0.0	8.6	10.1	10.1	10.2	12.8	12.8
LnGrp LOS	C		B	C			A	B	B	B	B	B
Approach Vol, veh/h		321			105			728			412	
Approach Delay, s/veh		18.5			21.0			9.8			12.7	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	30.5		16.6	12.7	25.8		16.6				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.4	7.7		6.6	5.0	6.6		7.4				
Green Ext Time (p_c), s	0.0	2.5		2.2	0.2	1.7		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.1									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	43	2	6	83	190	7	169	14	175	136	2
Future Vol, veh/h	3	43	2	6	83	190	7	169	14	175	136	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	44	2	6	86	196	7	174	14	180	140	2

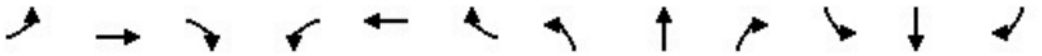
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	734	705	141	719	699	181	142	0	0	189	0	0
Stage 1	502	502	-	196	196	-	-	-	-	-	-	-
Stage 2	231	203	-	523	503	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	331	356	896	342	363	859	1441	-	-	1379	-	-
Stage 1	544	535	-	804	737	-	-	-	-	-	-	-
Stage 2	763	726	-	535	540	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	304	896	254	309	859	1441	-	-	1379	-	-
Mov Cap-2 Maneuver	164	304	-	254	309	-	-	-	-	-	-	-
Stage 1	467	459	-	799	733	-	-	-	-	-	-	-
Stage 2	517	722	-	414	463	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.58	18.82	0.28	4.47
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	65	-	-	296	544	1003	-	-
HCM Lane V/C Ratio	0.005	-	-	0.167	0.529	0.131	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	19.6	18.8	8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	3.1	0.5	-	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	267	127	116	325	3	426
v/c Ratio	0.22	0.34	0.42	0.20	0.16	0.01	0.34
Control Delay (s/veh)	21.6	2.8	23.9	7.0	7.9	6.3	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	2.8	23.9	7.0	7.9	6.3	14.9
Queue Length 50th (ft)	21	0	36	16	21	0	55
Queue Length 95th (ft)	50	32	80	40	70	4	97
Internal Link Dist (ft)	2242		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	921	795	840	587	2065	640	2129
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.34	0.15	0.20	0.16	0.00	0.20

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	30	246	70	28	19	107	252	47	3	342	50
Future Volume (veh/h)	34	30	246	70	28	19	107	252	47	3	342	50
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	37	33	267	76	30	21	116	274	51	3	372	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	251	194	490	235	87	44	537	1269	233	499	1068	154
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.45	0.45	0.01	0.35	0.35
Sat Flow, veh/h	722	912	1547	624	408	205	1668	2808	515	1725	3019	435
Grp Volume(v), veh/h	70	0	267	127	0	0	116	161	164	3	211	215
Grp Sat Flow(s),veh/h/ln	1634	0	1547	1237	0	0	1668	1664	1659	1725	1721	1733
Q Serve(g_s), s	0.0	0.0	8.0	3.2	0.0	0.0	2.2	3.3	3.4	0.1	5.1	5.2
Cycle Q Clear(g_c), s	1.8	0.0	8.0	5.0	0.0	0.0	2.2	3.3	3.4	0.1	5.1	5.2
Prop In Lane	0.53		1.00	0.60		0.17	1.00		0.31	1.00		0.25
Lane Grp Cap(c), veh/h	446	0	490	365	0	0	537	752	750	499	609	613
V/C Ratio(X)	0.16	0.00	0.54	0.35	0.00	0.00	0.22	0.21	0.22	0.01	0.35	0.35
Avail Cap(c_a), veh/h	1020	0	1075	828	0	0	623	1007	1004	757	1041	1049
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	15.9	19.4	0.0	0.0	8.6	9.4	9.4	11.6	13.4	13.5
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.8	0.0	0.0	0.3	0.1	0.1	0.0	0.3	0.3
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	0.7	0.0	2.7	1.4	0.0	0.0	0.6	0.9	0.9	0.0	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.4	0.0	17.3	20.2	0.0	0.0	8.9	9.5	9.5	11.6	13.7	13.7
LnGrp LOS	B		B	C			A	A	A	B	B	B
Approach Vol, veh/h		337			127			441			429	
Approach Delay, s/veh		17.5			20.2			9.3			13.7	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	31.3		18.6	12.1	25.8		18.6				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.4		10.0	4.2	7.2		7.0				
Green Ext Time (p_c), s	0.0	1.4		2.0	0.2	1.8		0.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.8									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	91	2	6	31	102	2	87	23	184	98	0
Future Vol, veh/h	0	91	2	6	31	102	2	87	23	184	98	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	0	103	2	7	35	116	2	99	26	209	111	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	651	659	111	698	646	112	111	0	0	125	0	0
Stage 1	530	530	-	116	116	-	-	-	-	-	-	-
Stage 2	121	130	-	581	530	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	372	375	923	349	384	928	1472	-	-	1462	-	-
Stage 1	520	516	-	876	790	-	-	-	-	-	-	-
Stage 2	867	776	-	491	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	250	317	923	209	325	928	1472	-	-	1462	-	-
Mov Cap-2 Maneuver	250	317	-	209	325	-	-	-	-	-	-	-
Stage 1	441	437	-	875	788	-	-	-	-	-	-	-
Stage 2	723	774	-	317	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.58	13.25	0.13	5.14
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	31	-	-	322	594	1174	-	-
HCM Lane V/C Ratio	0.002	-	-	0.329	0.266	0.143	-	-
HCM Ctrl Dly (s/v)	7.4	0	-	21.6	13.2	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.4	1.1	0.5	-	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	169	110	178	583	20	411
v/c Ratio	0.54	0.20	0.34	0.32	0.32	0.04	0.37
Control Delay (s/veh)	27.8	2.3	20.8	9.0	10.5	7.7	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.8	2.3	20.8	9.0	10.5	7.7	16.3
Queue Length 50th (ft)	55	0	30	28	48	3	54
Queue Length 95th (ft)	106	24	68	67	144	13	100
Internal Link Dist (ft)	2220		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	757	829	770	555	1951	500	1893
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.20	0.14	0.32	0.30	0.04	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	65	162	48	39	18	171	496	63	19	326	68
Future Volume (veh/h)	95	65	162	48	39	18	171	496	63	19	326	68
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	99	68	169	50	41	19	178	517	66	20	340	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	252	137	468	151	108	34	603	1398	178	463	1039	214
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.12	0.45	0.45	0.03	0.36	0.36
Sat Flow, veh/h	818	754	1560	309	594	189	1753	3121	397	1739	2863	591
Grp Volume(v), veh/h	167	0	169	110	0	0	178	289	294	20	204	207
Grp Sat Flow(s),veh/h/ln	1572	0	1560	1091	0	0	1753	1749	1769	1739	1735	1720
Q Serve(g_s), s	0.0	0.0	4.7	1.1	0.0	0.0	3.2	6.0	6.1	0.4	4.7	4.8
Cycle Q Clear(g_c), s	5.2	0.0	4.7	6.3	0.0	0.0	3.2	6.0	6.1	0.4	4.7	4.8
Prop In Lane	0.59		1.00	0.45		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	389	0	468	293	0	0	603	783	793	463	629	624
V/C Ratio(X)	0.43	0.00	0.36	0.38	0.00	0.00	0.30	0.37	0.37	0.04	0.32	0.33
Avail Cap(c_a), veh/h	1023	0	1130	890	0	0	675	1085	1098	683	1076	1067
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	15.2	20.4	0.0	0.0	8.3	10.1	10.1	10.2	12.7	12.7
Incr Delay (d2), s/veh	1.1	0.0	0.7	1.1	0.0	0.0	0.4	0.2	0.2	0.1	0.2	0.2
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	1.6	1.2	0.0	0.0	0.9	1.7	1.8	0.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.6	0.0	15.8	21.5	0.0	0.0	8.7	10.3	10.3	10.2	12.9	13.0
LnGrp LOS	C		B	C			A	B	B	B	B	B
Approach Vol, veh/h		336			110			761			431	
Approach Delay, s/veh		18.7			21.5			9.9			12.8	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	30.5		16.6	12.7	25.8		16.6				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.4	8.1		7.2	5.2	6.8		8.3				
Green Ext Time (p_c), s	0.0	2.6		2.0	0.2	1.8		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.2									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	45	2	6	87	199	7	177	15	183	142	2
Future Vol, veh/h	3	45	2	6	87	199	7	177	15	183	142	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	46	2	6	90	205	7	182	15	189	146	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	766	737	147	752	730	190	148	0	0	198	0	0
Stage 1	525	525	-	205	205	-	-	-	-	-	-	-
Stage 2	242	212	-	547	526	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	314	341	889	326	348	849	1433	-	-	1369	-	-
Stage 1	529	523	-	795	730	-	-	-	-	-	-	-
Stage 2	753	719	-	520	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	147	288	889	236	294	849	1433	-	-	1369	-	-
Mov Cap-2 Maneuver	147	288	-	236	294	-	-	-	-	-	-	-
Stage 1	449	444	-	791	726	-	-	-	-	-	-	-
Stage 2	498	715	-	394	448	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.76	20.65	0.26	4.51
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	62	-	-	280	525	1005	-	-
HCM Lane V/C Ratio	0.005	-	-	0.184	0.573	0.138	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	20.8	20.6	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	3.6	0.5	-	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	275	135	155	325	3	442
v/c Ratio	0.23	0.35	0.44	0.27	0.16	0.01	0.36
Control Delay (s/veh)	21.6	2.8	24.5	7.7	8.1	6.7	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	2.8	24.5	7.7	8.1	6.7	15.0
Queue Length 50th (ft)	22	0	39	22	21	0	57
Queue Length 95th (ft)	52	32	84	53	71	4	101
Internal Link Dist (ft)	2222		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	907	801	842	580	2049	634	2099
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.34	0.16	0.27	0.16	0.00	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	31	253	70	35	19	143	252	47	3	342	64
Future Volume (veh/h)	36	31	253	70	35	19	143	252	47	3	342	64
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	39	34	275	76	38	21	155	274	51	3	372	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	255	193	507	226	104	43	534	1275	234	491	1008	188
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.11	0.45	0.45	0.01	0.35	0.35
Sat Flow, veh/h	734	894	1547	592	480	197	1668	2808	515	1725	2895	540
Grp Volume(v), veh/h	73	0	275	135	0	0	155	161	164	3	220	222
Grp Sat Flow(s),veh/h/ln	1628	0	1547	1270	0	0	1668	1664	1659	1725	1721	1714
Q Serve(g_s), s	0.0	0.0	8.3	3.3	0.0	0.0	3.0	3.4	3.4	0.1	5.5	5.6
Cycle Q Clear(g_c), s	1.9	0.0	8.3	5.2	0.0	0.0	3.0	3.4	3.4	0.1	5.5	5.6
Prop In Lane	0.53		1.00	0.56		0.16	1.00		0.31	1.00		0.31
Lane Grp Cap(c), veh/h	448	0	507	372	0	0	534	756	754	491	599	597
V/C Ratio(X)	0.16	0.00	0.54	0.36	0.00	0.00	0.29	0.21	0.22	0.01	0.37	0.37
Avail Cap(c_a), veh/h	1000	0	1073	826	0	0	604	991	988	746	1025	1021
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	15.8	19.5	0.0	0.0	8.7	9.5	9.5	12.0	14.0	14.0
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.8	0.0	0.0	0.4	0.1	0.1	0.0	0.3	0.3
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	0.8	0.0	2.8	1.5	0.0	0.0	0.8	0.9	1.0	0.0	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	0.0	17.1	20.4	0.0	0.0	9.2	9.6	9.6	12.0	14.3	14.3
LnGrp LOS	B		B	C			A	A	A	B	B	B
Approach Vol, veh/h		348			135			480			445	
Approach Delay, s/veh		17.4			20.4			9.4			14.3	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	31.9		19.0	12.6	25.8		19.0				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.4		10.3	5.0	7.6		7.2				
Green Ext Time (p_c), s	0.0	1.4		2.1	0.2	1.9		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.0									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	91	2	6	31	158	2	110	23	194	99	0
Future Vol, veh/h	1	91	2	6	31	158	2	110	23	194	99	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	1	103	2	7	35	180	2	125	26	220	113	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	701	709	113	748	696	138	113	0	0	151	0	0
Stage 1	553	553	-	143	143	-	-	-	-	-	-	-
Stage 2	147	156	-	605	553	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	345	351	922	323	359	897	1471	-	-	1430	-	-
Stage 1	505	503	-	848	769	-	-	-	-	-	-	-
Stage 2	839	756	-	476	506	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	296	922	187	303	897	1471	-	-	1430	-	-
Mov Cap-2 Maneuver	209	296	-	187	303	-	-	-	-	-	-	-
Stage 1	427	425	-	847	768	-	-	-	-	-	-	-
Stage 2	639	754	-	304	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.59	13.82	0.11	5.28
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	26	-	-	299	628	1430	-	-
HCM Lane V/C Ratio	0.002	-	-	0.357	0.353	0.154	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	23.6	13.8	8	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.6	1.6	0.5	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	189	79	46	282
Future Vol, veh/h	10	0	189	79	46	282
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	11	0	205	86	50	307

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	655	248	0	0	291	0
Stage 1	248	-	-	-	-	-
Stage 2	407	-	-	-	-	-
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	431	790	-	-	1270	-
Stage 1	793	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	410	790	-	-	1270	-
Mov Cap-2 Maneuver	410	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.01	0	1.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	410	252	-
HCM Lane V/C Ratio	-	-	0.026	0.039	-
HCM Ctrl Dly (s/v)	-	-	14	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	185	199	110	178	583	20	411
v/c Ratio	0.58	0.23	0.33	0.33	0.32	0.04	0.37
Control Delay (s/veh)	28.6	2.2	20.4	9.4	10.9	8.1	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.6	2.2	20.4	9.4	10.9	8.1	16.8
Queue Length 50th (ft)	62	0	30	29	51	3	55
Queue Length 95th (ft)	117	26	67	70	147	13	103
Internal Link Dist (ft)	2239		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	746	852	754	549	1929	494	1872
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.23	0.15	0.32	0.30	0.04	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	71	191	48	39	18	171	496	63	19	326	68
Future Volume (veh/h)	107	71	191	48	39	18	171	496	63	19	326	68
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	111	74	199	50	41	19	178	517	66	20	340	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	255	131	482	141	101	31	594	1379	175	456	1025	212
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.12	0.44	0.44	0.03	0.36	0.36
Sat Flow, veh/h	792	684	1560	249	525	162	1753	3121	397	1739	2863	591
Grp Volume(v), veh/h	185	0	199	110	0	0	178	289	294	20	204	207
Grp Sat Flow(s),veh/h/ln	1476	0	1560	936	0	0	1753	1749	1769	1739	1735	1720
Q Serve(g_s), s	0.0	0.0	5.6	1.2	0.0	0.0	3.3	6.2	6.2	0.4	4.8	4.9
Cycle Q Clear(g_c), s	6.5	0.0	5.6	7.7	0.0	0.0	3.3	6.2	6.2	0.4	4.8	4.9
Prop In Lane	0.60		1.00	0.45		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	386	0	482	273	0	0	594	773	782	456	621	616
V/C Ratio(X)	0.48	0.00	0.41	0.40	0.00	0.00	0.30	0.37	0.38	0.04	0.33	0.34
Avail Cap(c_a), veh/h	991	0	1116	833	0	0	664	1071	1083	671	1062	1053
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	15.3	20.4	0.0	0.0	8.6	10.4	10.4	10.5	13.0	13.1
Incr Delay (d2), s/veh	1.3	0.0	0.8	1.4	0.0	0.0	0.4	0.2	0.2	0.1	0.2	0.2
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	2.2	0.0	1.9	1.2	0.0	0.0	0.9	1.8	1.8	0.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.1	0.0	16.1	21.8	0.0	0.0	9.0	10.6	10.7	10.5	13.3	13.3
LnGrp LOS	C		B	C			A	B	B	B	B	B
Approach Vol, veh/h		384			110			761			431	
Approach Delay, s/veh		19.0			21.8			10.3			13.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	30.5		17.3	12.8	25.8		17.3				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.4	8.2		8.5	5.3	6.9		9.7				
Green Ext Time (p_c), s	0.0	2.6		2.3	0.2	1.8		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.7									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	11.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	45	2	6	87	199	7	177	15	229	164	3
Future Vol, veh/h	3	45	2	6	87	199	7	177	15	229	164	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	46	2	6	90	205	7	182	15	236	169	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	885	855	171	869	849	190	172	0	0	198	0	0
Stage 1	643	643	-	205	205	-	-	-	-	-	-	-
Stage 2	242	212	-	664	644	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	261	291	863	271	297	849	1405	-	-	1369	-	-
Stage 1	455	462	-	795	730	-	-	-	-	-	-	-
Stage 2	753	719	-	448	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	108	234	863	182	239	849	1405	-	-	1369	-	-
Mov Cap-2 Maneuver	108	234	-	182	239	-	-	-	-	-	-	-
Stage 1	369	374	-	790	726	-	-	-	-	-	-	-
Stage 2	498	715	-	317	377	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	25.7	26.19	0.27	4.73
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	62	-	-	225	462	1037	-	-
HCM Lane V/C Ratio	0.005	-	-	0.229	0.651	0.172	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	25.7	26.2	8.2	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	4.6	0.6	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	69	46	378	0	0	327
Future Vol, veh/h	69	46	378	0	0	327
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	75	50	411	0	0	355

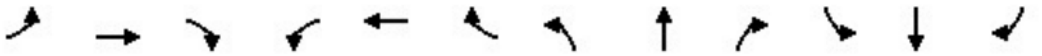
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	766	411	0	0	411	0
Stage 1	411	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	371	641	-	-	1148	-
Stage 1	669	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	371	641	-	-	1148	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.19	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	446	1148	-
HCM Lane V/C Ratio	-	-	0.28	-	-
HCM Ctrl Dly (s/v)	-	-	16.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	275	135	155	325	3	442
v/c Ratio	0.23	0.35	0.44	0.27	0.16	0.01	0.36
Control Delay (s/veh)	21.6	2.8	24.5	7.7	8.1	6.7	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	2.8	24.5	7.7	8.1	6.7	15.0
Queue Length 50th (ft)	22	0	39	22	21	0	57
Queue Length 95th (ft)	52	32	84	53	71	4	101
Internal Link Dist (ft)	2257		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	907	801	842	580	2049	634	2099
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.34	0.16	0.27	0.16	0.00	0.21

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	31	253	70	35	19	143	252	47	3	342	64
Future Volume (veh/h)	36	31	253	70	35	19	143	252	47	3	342	64
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	39	34	275	76	38	21	155	274	51	3	372	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	255	193	507	226	104	43	534	1275	234	491	1008	188
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.11	0.45	0.45	0.01	0.35	0.35
Sat Flow, veh/h	734	894	1547	592	480	197	1668	2808	515	1725	2895	540
Grp Volume(v), veh/h	73	0	275	135	0	0	155	161	164	3	220	222
Grp Sat Flow(s),veh/h/ln	1628	0	1547	1270	0	0	1668	1664	1659	1725	1721	1714
Q Serve(g_s), s	0.0	0.0	8.3	3.3	0.0	0.0	3.0	3.4	3.4	0.1	5.5	5.6
Cycle Q Clear(g_c), s	1.9	0.0	8.3	5.2	0.0	0.0	3.0	3.4	3.4	0.1	5.5	5.6
Prop In Lane	0.53		1.00	0.56		0.16	1.00		0.31	1.00		0.31
Lane Grp Cap(c), veh/h	448	0	507	372	0	0	534	756	754	491	599	597
V/C Ratio(X)	0.16	0.00	0.54	0.36	0.00	0.00	0.29	0.21	0.22	0.01	0.37	0.37
Avail Cap(c_a), veh/h	1000	0	1073	826	0	0	604	991	988	746	1025	1021
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	15.8	19.5	0.0	0.0	8.7	9.5	9.5	12.0	14.0	14.0
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.8	0.0	0.0	0.4	0.1	0.1	0.0	0.3	0.3
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	0.8	0.0	2.8	1.5	0.0	0.0	0.8	0.9	1.0	0.0	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	0.0	17.1	20.4	0.0	0.0	9.2	9.6	9.6	12.0	14.3	14.3
LnGrp LOS	B		B	C			A	A	A	B	B	B
Approach Vol, veh/h		348			135			480			445	
Approach Delay, s/veh		17.4			20.4			9.4			14.3	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	31.9		19.0	12.6	25.8		19.0				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.4		10.3	5.0	7.6		7.2				
Green Ext Time (p_c), s	0.0	1.4		2.1	0.2	1.9		0.8				

Intersection Summary		
HCM 7th Control Delay, s/veh		14.0
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	91	2	6	31	158	2	110	23	194	99	0
Future Vol, veh/h	1	91	2	6	31	158	2	110	23	194	99	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	1	103	2	7	35	180	2	125	26	220	113	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	701	709	113	748	696	138	113	0	0	151	0	0
Stage 1	553	553	-	143	143	-	-	-	-	-	-	-
Stage 2	147	156	-	605	553	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	345	351	922	323	359	897	1471	-	-	1430	-	-
Stage 1	505	503	-	848	769	-	-	-	-	-	-	-
Stage 2	839	756	-	476	506	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	296	922	187	303	897	1471	-	-	1430	-	-
Mov Cap-2 Maneuver	209	296	-	187	303	-	-	-	-	-	-	-
Stage 1	427	425	-	847	768	-	-	-	-	-	-	-
Stage 2	639	754	-	304	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.59	11.99	0.11	5.28
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	26	-	-	299	275	897	1430	-	-
HCM Lane V/C Ratio	0.002	-	-	0.357	0.153	0.2	0.154	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	23.6	20.4	10	8	-	-
HCM Lane LOS	A	A	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.6	0.5	0.7	0.5	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	189	79	46	282
Future Vol, veh/h	10	0	189	79	46	282
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	11	0	205	86	50	307

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	655	248	0	0	291	0
Stage 1	248	-	-	-	-	-
Stage 2	407	-	-	-	-	-
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	431	790	-	-	1270	-
Stage 1	793	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	410	790	-	-	1270	-
Mov Cap-2 Maneuver	410	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.01	0	1.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	410	252	-
HCM Lane V/C Ratio	-	-	0.026	0.039	-
HCM Ctrl Dly (s/v)	-	-	14	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	185	199	110	178	583	20	411
v/c Ratio	0.58	0.23	0.33	0.33	0.32	0.04	0.37
Control Delay (s/veh)	28.6	2.2	20.4	9.4	10.9	8.1	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.6	2.2	20.4	9.4	10.9	8.1	16.8
Queue Length 50th (ft)	62	0	30	29	51	3	55
Queue Length 95th (ft)	117	26	67	70	147	13	103
Internal Link Dist (ft)	2239		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	746	852	754	549	1929	494	1872
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.23	0.15	0.32	0.30	0.04	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	71	191	48	39	18	171	496	63	19	326	68
Future Volume (veh/h)	107	71	191	48	39	18	171	496	63	19	326	68
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	111	74	199	50	41	19	178	517	66	20	340	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	255	131	482	141	101	31	594	1379	175	456	1025	212
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.12	0.44	0.44	0.03	0.36	0.36
Sat Flow, veh/h	792	684	1560	249	525	162	1753	3121	397	1739	2863	591
Grp Volume(v), veh/h	185	0	199	110	0	0	178	289	294	20	204	207
Grp Sat Flow(s),veh/h/ln	1476	0	1560	936	0	0	1753	1749	1769	1739	1735	1720
Q Serve(g_s), s	0.0	0.0	5.6	1.2	0.0	0.0	3.3	6.2	6.2	0.4	4.8	4.9
Cycle Q Clear(g_c), s	6.5	0.0	5.6	7.7	0.0	0.0	3.3	6.2	6.2	0.4	4.8	4.9
Prop In Lane	0.60		1.00	0.45		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	386	0	482	273	0	0	594	773	782	456	621	616
V/C Ratio(X)	0.48	0.00	0.41	0.40	0.00	0.00	0.30	0.37	0.38	0.04	0.33	0.34
Avail Cap(c_a), veh/h	991	0	1116	833	0	0	664	1071	1083	671	1062	1053
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	15.3	20.4	0.0	0.0	8.6	10.4	10.4	10.5	13.0	13.1
Incr Delay (d2), s/veh	1.3	0.0	0.8	1.4	0.0	0.0	0.4	0.2	0.2	0.1	0.2	0.2
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	2.2	0.0	1.9	1.2	0.0	0.0	0.9	1.8	1.8	0.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.1	0.0	16.1	21.8	0.0	0.0	9.0	10.6	10.7	10.5	13.3	13.3
LnGrp LOS	C		B	C			A	B	B	B	B	B
Approach Vol, veh/h		384			110			761			431	
Approach Delay, s/veh		19.0			21.8			10.3			13.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	30.5		17.3	12.8	25.8		17.3				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.4	8.2		8.5	5.3	6.9		9.7				
Green Ext Time (p_c), s	0.0	2.6		2.3	0.2	1.8		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.7	
HCM 7th LOS		B	

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	45	2	6	87	199	7	177	15	229	164	3
Future Vol, veh/h	3	45	2	6	87	199	7	177	15	229	164	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	46	2	6	90	205	7	182	15	236	169	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	885	855	171	869	849	190	172	0	0	198	0	0
Stage 1	643	643	-	205	205	-	-	-	-	-	-	-
Stage 2	242	212	-	664	644	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	261	291	863	271	297	849	1405	-	-	1369	-	-
Stage 1	455	462	-	795	730	-	-	-	-	-	-	-
Stage 2	753	719	-	448	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	110	240	863	186	244	849	1405	-	-	1369	-	-
Mov Cap-2 Maneuver	110	240	-	186	244	-	-	-	-	-	-	-
Stage 1	377	383	-	790	726	-	-	-	-	-	-	-
Stage 2	498	715	-	325	386	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	25.11	18.18	0.27	4.73
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	62	-	-	230	341	849	1369	-	-
HCM Lane V/C Ratio	0.005	-	-	0.224	0.481	0.161	0.172	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	25.1	24.9	10.1	8.2	-	-
HCM Lane LOS	A	A	-	D	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	2.5	0.6	0.6	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	69	46	378	0	0	327
Future Vol, veh/h	69	46	378	0	0	327
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	75	50	411	0	0	355

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	766	411	0	0	411	0
Stage 1	411	-	-	-	-	-
Stage 2	355	-	-	-	-	-
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	371	641	-	-	1148	-
Stage 1	669	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	371	641	-	-	1148	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.19	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	446	1148	-
HCM Lane V/C Ratio	-	-	0.28	-	-
HCM Ctrl Dly (s/v)	-	-	16.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	76	287	141	162	339	3	461
v/c Ratio	0.24	0.36	0.46	0.29	0.17	0.01	0.37
Control Delay (s/veh)	21.6	3.2	24.7	7.9	8.2	6.7	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	3.2	24.7	7.9	8.2	6.7	15.3
Queue Length 50th (ft)	23	3	41	23	23	1	61
Queue Length 95th (ft)	54	37	88	56	74	4	106
Internal Link Dist (ft)	2239		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	897	799	838	571	2043	627	2091
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.36	0.17	0.28	0.17	0.00	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	32	264	73	37	20	149	263	49	3	357	67
Future Volume (veh/h)	38	32	264	73	37	20	149	263	49	3	357	67
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	41	35	287	79	40	22	162	286	53	3	388	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	263	196	518	227	106	44	522	1266	232	481	997	186
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.11	0.45	0.45	0.01	0.34	0.34
Sat Flow, veh/h	749	879	1547	585	474	196	1668	2810	514	1725	2895	540
Grp Volume(v), veh/h	76	0	287	141	0	0	162	168	171	3	229	232
Grp Sat Flow(s),veh/h/ln	1628	0	1547	1255	0	0	1668	1664	1659	1725	1721	1714
Q Serve(g_s), s	0.0	0.0	8.8	3.6	0.0	0.0	3.2	3.6	3.7	0.1	5.8	5.9
Cycle Q Clear(g_c), s	2.0	0.0	8.8	5.5	0.0	0.0	3.2	3.6	3.7	0.1	5.8	5.9
Prop In Lane	0.54		1.00	0.56		0.16	1.00		0.31	1.00		0.31
Lane Grp Cap(c), veh/h	459	0	518	377	0	0	522	750	748	481	593	591
V/C Ratio(X)	0.17	0.00	0.55	0.37	0.00	0.00	0.31	0.22	0.23	0.01	0.39	0.39
Avail Cap(c_a), veh/h	989	0	1063	811	0	0	588	981	978	733	1014	1010
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	15.8	19.5	0.0	0.0	9.0	9.7	9.8	12.3	14.4	14.4
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.9	0.0	0.0	0.5	0.1	0.1	0.0	0.3	0.3
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	0.8	0.0	2.9	1.6	0.0	0.0	0.9	1.0	1.0	0.0	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.5	0.0	17.1	20.4	0.0	0.0	9.5	9.9	9.9	12.3	14.7	14.7
LnGrp LOS	B		B	C			A	A	A	B	B	B
Approach Vol, veh/h		363			141			501			464	
Approach Delay, s/veh		17.4			20.4			9.7			14.7	
Approach LOS		B			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	32.0		19.6	12.7	25.8		19.6				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.7		10.8	5.2	7.9		7.5				
Green Ext Time (p_c), s	0.0	1.4		2.2	0.2	2.0		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.2									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	95	2	6	32	165	2	115	24	203	103	0
Future Vol, veh/h	1	95	2	6	32	165	2	115	24	203	103	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	1	108	2	7	36	188	2	131	27	231	117	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	732	741	117	781	727	144	117	0	0	158	0	0
Stage 1	578	578	-	149	149	-	-	-	-	-	-	-
Stage 2	153	163	-	632	578	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	328	336	916	306	344	890	1465	-	-	1422	-	-
Stage 1	489	490	-	842	765	-	-	-	-	-	-	-
Stage 2	833	750	-	460	493	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	281	916	168	288	890	1465	-	-	1422	-	-
Mov Cap-2 Maneuver	193	281	-	168	288	-	-	-	-	-	-	-
Stage 1	410	410	-	841	763	-	-	-	-	-	-	-
Stage 2	625	749	-	283	413	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	25.67	12.28	0.11	5.32
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	25	-	-	284	259	890	1422	-	-
HCM Lane V/C Ratio	0.002	-	-	0.393	0.167	0.211	0.162	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	25.7	21.7	10.1	8	-	-
HCM Lane LOS	A	A	-	D	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.8	0.6	0.8	0.6	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	198	79	46	295
Future Vol, veh/h	10	0	198	79	46	295
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	11	0	215	86	50	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	679	258	0	0	301	0
Stage 1	258	-	-	-	-	-
Stage 2	421	-	-	-	-	-
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	417	780	-	-	1260	-
Stage 1	785	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	397	780	-	-	1260	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	785	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.32	0	1.08
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	397	243	-
HCM Lane V/C Ratio	-	-	0.027	0.04	-
HCM Ctrl Dly (s/v)	-	-	14.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	198	0	0	343
Future Vol, veh/h	0	0	198	0	0	343
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	0	0	215	0	0	373

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	588	215	0	0	215	0
Stage 1	215	-	-	-	-	-
Stage 2	373	-	-	-	-	-
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	471	825	-	-	1355	-
Stage 1	821	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	471	825	-	-	1355	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1355	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	194	208	115	186	609	21	429
v/c Ratio	0.58	0.24	0.34	0.35	0.34	0.05	0.39
Control Delay (s/veh)	28.5	2.3	20.5	9.9	11.2	8.4	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.5	2.3	20.5	9.9	11.2	8.4	17.2
Queue Length 50th (ft)	65	0	32	31	54	3	59
Queue Length 95th (ft)	123	27	72	75	158	14	110
Internal Link Dist (ft)	2244		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	755	860	743	538	1911	485	1854
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.24	0.15	0.35	0.32	0.04	0.23

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	74	200	50	41	19	179	518	66	20	341	71
Future Volume (veh/h)	112	74	200	50	41	19	179	518	66	20	341	71
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	117	77	208	52	43	20	186	540	69	21	355	74
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	258	133	499	140	101	31	576	1355	173	437	1009	208
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.12	0.43	0.43	0.03	0.35	0.35
Sat Flow, veh/h	770	656	1560	234	496	154	1753	3120	397	1739	2864	590
Grp Volume(v), veh/h	194	0	208	115	0	0	186	302	307	21	213	216
Grp Sat Flow(s),veh/h/ln	1426	0	1560	885	0	0	1753	1749	1769	1739	1735	1720
Q Serve(g_s), s	0.0	0.0	5.9	1.4	0.0	0.0	3.5	6.7	6.7	0.4	5.2	5.3
Cycle Q Clear(g_c), s	7.2	0.0	5.9	8.6	0.0	0.0	3.5	6.7	6.7	0.4	5.2	5.3
Prop In Lane	0.60		1.00	0.45		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	391	0	499	272	0	0	576	759	768	437	611	606
V/C Ratio(X)	0.50	0.00	0.42	0.42	0.00	0.00	0.32	0.40	0.40	0.05	0.35	0.36
Avail Cap(c_a), veh/h	964	0	1100	800	0	0	643	1054	1066	646	1045	1036
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	15.1	20.5	0.0	0.0	9.0	11.0	11.0	10.8	13.6	13.6
Incr Delay (d2), s/veh	1.4	0.0	0.8	1.5	0.0	0.0	0.5	0.3	0.2	0.1	0.3	0.3
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	2.3	0.0	2.0	1.5	0.0	0.0	1.0	2.0	2.0	0.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.1	0.0	15.9	22.0	0.0	0.0	9.5	11.2	11.2	10.9	13.8	13.9
LnGrp LOS	C		B	C			A	B	B	B	B	B
Approach Vol, veh/h		402			115			795			450	
Approach Delay, s/veh		18.9			22.0			10.8			13.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	30.5		18.1	12.8	25.8		18.1				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.4	8.7		9.2	5.5	7.3		10.6				
Green Ext Time (p_c), s	0.0	2.7		2.4	0.2	1.8		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.1									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	47	2	6	91	208	7	185	16	239	171	3
Future Vol, veh/h	3	47	2	6	91	208	7	185	16	239	171	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	48	2	6	94	214	7	191	16	246	176	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	923	892	178	907	886	199	179	0	0	207	0	0
Stage 1	671	671	-	213	213	-	-	-	-	-	-	-
Stage 2	252	222	-	693	672	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	246	277	855	256	283	840	1396	-	-	1358	-	-
Stage 1	440	449	-	786	724	-	-	-	-	-	-	-
Stage 2	743	713	-	432	453	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	96	225	855	170	230	840	1396	-	-	1358	-	-
Mov Cap-2 Maneuver	96	225	-	170	230	-	-	-	-	-	-	-
Stage 1	360	368	-	782	720	-	-	-	-	-	-	-
Stage 2	479	708	-	306	371	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	27.27	17.89	0.26	4.77
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	60	-	-	215	225	840	1358	-	-
HCM Lane V/C Ratio	0.005	-	-	0.25	0.444	0.255	0.181	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	27.3	33.2	10.8	8.2	-	-
HCM Lane LOS	A	A	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1	2.1	1	0.7	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	69	46	395	0	0	342
Future Vol, veh/h	69	46	395	0	0	342
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	75	50	429	0	0	372

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	801	429	0	0	429	0
Stage 1	429	-	-	-	-	-
Stage 2	372	-	-	-	-	-
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	354	626	-	-	1130	-
Stage 1	656	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	354	626	-	-	1130	-
Mov Cap-2 Maneuver	354	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.84	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	428	1130	-
HCM Lane V/C Ratio	-	-	0.292	-	-
HCM Ctrl Dly (s/v)	-	-	16.8	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	443	0	0	342
Future Vol, veh/h	0	0	443	0	0	342
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	0	0	482	0	0	372

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	853	482	0	0	482	0
Stage 1	482	-	-	-	-	-
Stage 2	372	-	-	-	-	-
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	329	585	-	-	1081	-
Stage 1	621	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	329	585	-	-	1081	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1081	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	79	295	149	201	339	3	476
v/c Ratio	0.27	0.34	0.51	0.39	0.19	0.01	0.42
Control Delay (s/veh)	22.1	3.1	25.9	9.2	8.6	7.0	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.1	3.1	25.9	9.2	8.6	7.0	16.2
Queue Length 50th (ft)	24	5	44	30	23	1	62
Queue Length 95th (ft)	55	39	92	70	75	4	110
Internal Link Dist (ft)	2235		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	800	859	773	511	1876	572	1905
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.34	0.19	0.39	0.18	0.01	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	33	271	73	44	20	185	263	49	3	357	81
Future Volume (veh/h)	40	33	271	73	44	20	185	263	49	3	357	81
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	1826	1826	1826	1796	1796	1796	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	43	36	295	79	48	22	201	286	53	3	388	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	7	7	7	10	10	10	6	6	6
Cap, veh/h	266	195	529	221	122	43	515	1265	231	476	952	214
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.11	0.45	0.45	0.01	0.34	0.34
Sat Flow, veh/h	755	860	1547	558	536	190	1668	2810	514	1725	2792	627
Grp Volume(v), veh/h	79	0	295	149	0	0	201	168	171	3	238	238
Grp Sat Flow(s),veh/h/ln	1615	0	1547	1284	0	0	1668	1664	1659	1725	1721	1698
Q Serve(g_s), s	0.0	0.0	9.1	3.6	0.0	0.0	4.1	3.6	3.7	0.1	6.2	6.3
Cycle Q Clear(g_c), s	2.1	0.0	9.1	5.7	0.0	0.0	4.1	3.6	3.7	0.1	6.2	6.3
Prop In Lane	0.54		1.00	0.53		0.15	1.00		0.31	1.00		0.37
Lane Grp Cap(c), veh/h	462	0	529	386	0	0	515	749	747	476	587	579
V/C Ratio(X)	0.17	0.00	0.56	0.39	0.00	0.00	0.39	0.22	0.23	0.01	0.41	0.41
Avail Cap(c_a), veh/h	973	0	1059	812	0	0	574	970	967	725	1003	990
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	15.7	19.6	0.0	0.0	9.4	9.9	9.9	12.5	14.8	14.8
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.9	0.0	0.0	0.7	0.1	0.1	0.0	0.3	0.3
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	0.8	0.0	3.0	1.7	0.0	0.0	1.2	1.0	1.1	0.0	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	0.0	17.0	20.5	0.0	0.0	10.1	10.0	10.0	12.6	15.1	15.2
LnGrp LOS	B		B	C			B	A	B	B	B	B
Approach Vol, veh/h		374			149			540			479	
Approach Delay, s/veh		17.3			20.5			10.0			15.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	32.2		19.9	12.9	25.8		19.9				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.1	5.7		11.1	6.1	8.3		7.7				
Green Ext Time (p_c), s	0.0	1.4		2.2	0.2	2.1		0.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	14.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	95	2	6	32	221	2	138	24	213	104	0
Future Vol, veh/h	2	95	2	6	32	221	2	138	24	213	104	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	7	7	7	3	3	3	2	2	2
Mvmt Flow	2	108	2	7	36	251	2	157	27	242	118	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	782	791	118	831	777	170	118	0	0	184	0	0
Stage 1	602	602	-	175	175	-	-	-	-	-	-	-
Stage 2	180	189	-	656	602	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.17	6.57	6.27	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.563	4.063	3.363	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	303	314	915	283	322	861	1464	-	-	1391	-	-
Stage 1	474	478	-	815	745	-	-	-	-	-	-	-
Stage 2	806	731	-	446	481	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	259	915	146	266	861	1464	-	-	1391	-	-
Mov Cap-2 Maneuver	157	259	-	146	266	-	-	-	-	-	-	-
Stage 1	392	395	-	814	744	-	-	-	-	-	-	-
Stage 2	542	730	-	267	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	29.12	12.78	0.09	5.46
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	21	-	-	259	235	861	1391	-	-
HCM Lane V/C Ratio	0.002	-	-	0.434	0.183	0.292	0.174	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	29.1	23.7	10.9	8.1	-	-
HCM Lane LOS	A	A	-	D	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0.7	1.2	0.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	250	106	46	295
Future Vol, veh/h	20	0	250	106	46	295
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	22	0	272	115	50	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	750	329	0	0	387	0
Stage 1	329	-	-	-	-	-
Stage 2	421	-	-	-	-	-
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	379	712	-	-	1172	-
Stage 1	729	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	359	712	-	-	1172	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	628	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.66	0	1.11
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	359	243	-
HCM Lane V/C Ratio	-	-	0.061	0.043	-
HCM Ctrl Dly (s/v)	-	-	15.7	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	198	52	46	343
Future Vol, veh/h	0	0	198	52	46	343
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	0	0	215	57	50	373

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	716	243	0	0	272	0
Stage 1	243	-	-	-	-	-
Stage 2	473	-	-	-	-	-
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	397	795	-	-	1292	-
Stage 1	797	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	377	795	-	-	1292	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.93
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	213	-
HCM Lane V/C Ratio	-	-	-	0.039	-
HCM Ctrl Dly (s/v)	-	-	0	7.9	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	229	265	115	186	609	21	429
v/c Ratio	0.64	0.29	0.34	0.36	0.35	0.05	0.40
Control Delay (s/veh)	30.0	2.2	20.2	10.8	12.1	9.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	2.2	20.2	10.8	12.1	9.2	18.1
Queue Length 50th (ft)	79	0	32	33	59	3	62
Queue Length 95th (ft)	148	31	73	81	168	15	115
Internal Link Dist (ft)	2261		1715		1435		3278
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	728	904	679	523	1857	473	1801
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.17	0.36	0.33	0.04	0.24

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	85	254	50	41	19	179	518	66	20	341	71
Future Volume (veh/h)	134	85	254	50	41	19	179	518	66	20	341	71
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	140	89	265	52	43	20	186	540	69	21	355	74
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	277	143	558	136	100	31	538	1278	163	406	953	196
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.11	0.41	0.41	0.03	0.33	0.33
Sat Flow, veh/h	732	581	1560	198	404	127	1753	3120	397	1739	2864	590
Grp Volume(v), veh/h	229	0	265	115	0	0	186	302	307	21	213	216
Grp Sat Flow(s),veh/h/ln	1313	0	1560	729	0	0	1753	1749	1769	1739	1735	1720
Q Serve(g_s), s	0.0	0.0	7.9	1.7	0.0	0.0	3.9	7.4	7.5	0.5	5.6	5.7
Cycle Q Clear(g_c), s	9.9	0.0	7.9	11.6	0.0	0.0	3.9	7.4	7.5	0.5	5.6	5.7
Prop In Lane	0.61		1.00	0.45		0.17	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	420	0	558	267	0	0	538	716	724	406	577	572
V/C Ratio(X)	0.54	0.00	0.47	0.43	0.00	0.00	0.35	0.42	0.42	0.05	0.37	0.38
Avail Cap(c_a), veh/h	878	0	1040	675	0	0	600	995	1007	601	987	978
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	14.9	20.2	0.0	0.0	10.5	12.7	12.7	12.3	15.3	15.3
Incr Delay (d2), s/veh	1.6	0.0	0.9	1.6	0.0	0.0	0.5	0.3	0.3	0.1	0.3	0.3
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	2.6	1.3	0.0	0.0	1.2	2.3	2.4	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.2	0.0	15.8	21.7	0.0	0.0	11.1	13.0	13.0	12.3	15.6	15.6
LnGrp LOS	C		B	C			B	B	B	B	B	B
Approach Vol, veh/h		494			115			795			450	
Approach Delay, s/veh		18.8			21.7			12.5			15.4	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	30.4		21.4	12.9	25.8		21.4				
Change Period (Y+Rc), s	6.2	5.8		6.6	6.2	5.8		6.6				
Max Green Setting (Gmax), s	8.8	34.2		33.4	8.8	34.2		33.4				
Max Q Clear Time (g_c+I1), s	2.5	9.5		11.9	5.9	7.7		13.6				
Green Ext Time (p_c), s	0.0	2.7		2.9	0.2	1.8		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			15.5									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	12.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	47	2	6	91	208	7	185	16	325	212	5
Future Vol, veh/h	3	47	2	6	91	208	7	185	16	325	212	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	6	6	6	3	3	3	2	2	2	3	3	3
Mvmt Flow	3	48	2	6	94	214	7	191	16	335	219	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1143	1113	221	1126	1107	199	224	0	0	207	0	0
Stage 1	891	891	-	213	213	-	-	-	-	-	-	-
Stage 2	252	222	-	913	894	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.13	6.53	6.23	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.527	4.027	3.327	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	174	205	809	181	209	840	1345	-	-	1358	-	-
Stage 1	331	355	-	786	724	-	-	-	-	-	-	-
Stage 2	743	713	-	326	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	46	153	809	101	157	840	1345	-	-	1358	-	-
Mov Cap-2 Maneuver	46	153	-	101	157	-	-	-	-	-	-	-
Stage 1	250	268	-	782	720	-	-	-	-	-	-	-
Stage 2	478	708	-	201	270	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	46.32	28.31	0.26	5.11
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	60	-	-	139	151	840	1358	-	-
HCM Lane V/C Ratio	0.005	-	-	0.386	0.66	0.255	0.247	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	46.3	66	10.8	8.5	-	-
HCM Lane LOS	A	A	-	E	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.6	3.7	1	1	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	101	46	395	0	0	439
Future Vol, veh/h	101	46	395	0	0	439
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	110	50	429	0	0	477

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	907	429	0	0	429	0
Stage 1	429	-	-	-	-	-
Stage 2	477	-	-	-	-	-
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	306	626	-	-	1130	-
Stage 1	656	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	306	626	-	-	1130	-
Mov Cap-2 Maneuver	306	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	22.36	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	365	1130	-
HCM Lane V/C Ratio	-	-	0.438	-	-
HCM Ctrl Dly (s/v)	-	-	22.4	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.2	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	86	443	0	0	342
Future Vol, veh/h	97	86	443	0	0	342
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	105	93	482	0	0	372

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	853	482	0	0	482	0
Stage 1	482	-	-	-	-	-
Stage 2	372	-	-	-	-	-
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	329	585	-	-	1081	-
Stage 1	621	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	329	585	-	-	1081	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	21.45	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	414	1081	-
HCM Lane V/C Ratio	-	-	0.48	-	-
HCM Ctrl Dly (s/v)	-	-	21.4	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.5	0	-

APPENDIX D – WARRANT ANALYSIS RESULTS

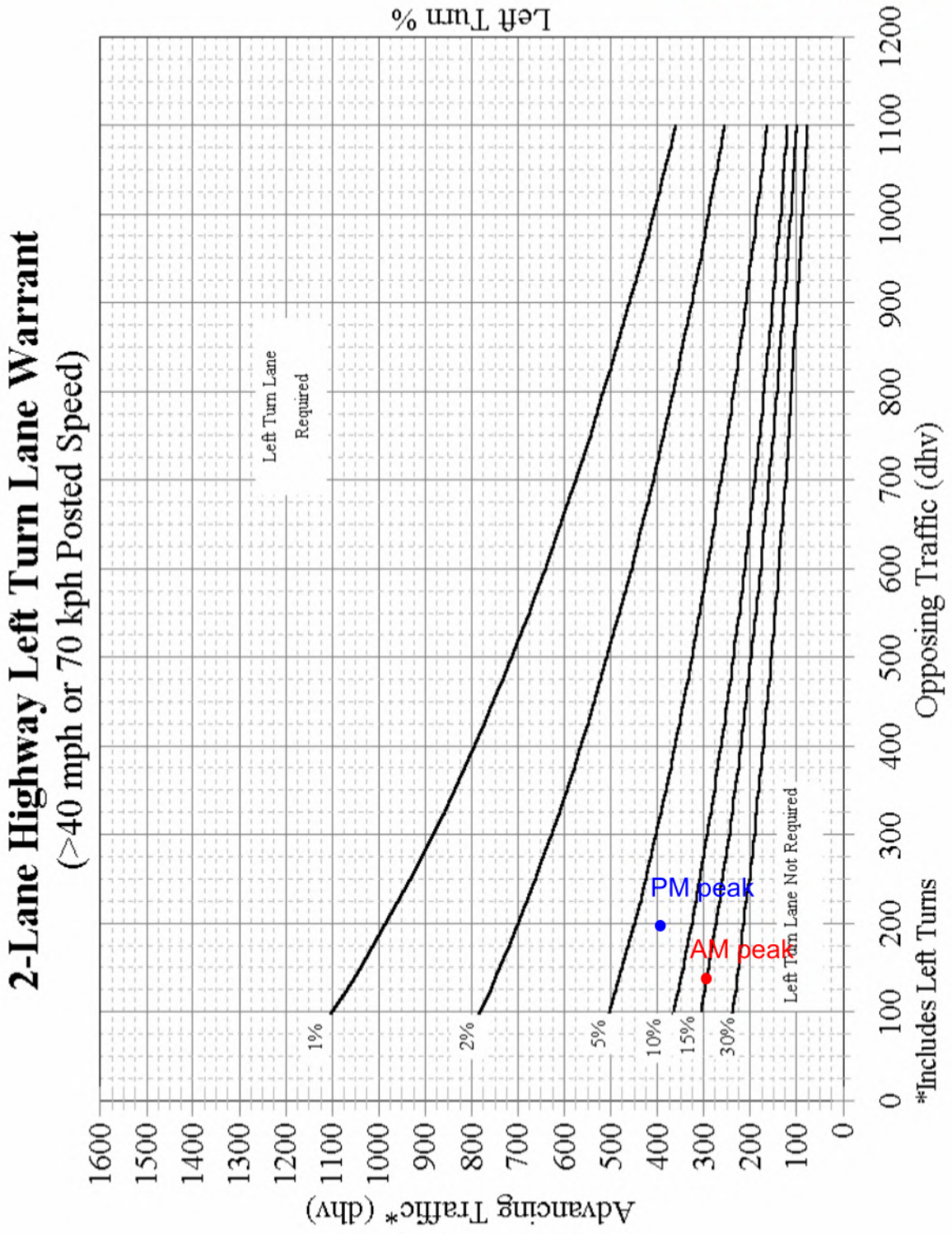
Turn Lane Warrant Results

2-LANE LEFT TURN LANE WARRANT (HIGH SPEED)

401-5b

REFERENCE SECTION
401.6.1

V (Adv) = 293 (396)
V (Opp) = 135 (199)
Left (%) = 66% (58%)



2-LANE RIGHT TURN LANE WARRANT (HIGH SPEED)	401-6b
	REFERENCE SECTION 401.6.3

V (adv) = 193 (292)
V (Right turns) = 156 (199)