Traffic Impact Study
Orion STEM School
Warrenville, Illinois

Prepared For:

W Estate, LLC

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

February 17, 2025

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed Orion STEM School to be located in Warrenville, Illinois. The proposed school is to occupy an approximately 75,000 square-foot vacant office building located on the west side of the eastern section of Weaver Parkway just north of Diehl Road. As proposed, the office building will be repurposed and expanded by approximately 13,800 square feet to provide an Orion STEM private school with the expansion housing a theater and gymnasium. The school parking lot will serve staff/faculty, students, and visitors and provide a total of 180 perpendicular parking spaces. Access to the school will be provided via the two existing access drives located on the west side of Weaver Parkway serving the office building.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday afternoon, and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning, afternoon, and evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the full buildout of the proposed development.

Site Location **Figure 1**

Aerial View of Site **Figure 2**

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2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site is occupied by a former approximately 75,000 square-foot office building and is located on the west side of the eastern section of Weaver Parkway just north of Diehl Road within the Cantera development. Land-uses in the surrounding area are primarily commercial and institutional. A retention pond borders the site to the west. The existing surface parking lot serving the site is currently used as overflow parking for the adjacent Northwestern medical office buildings.

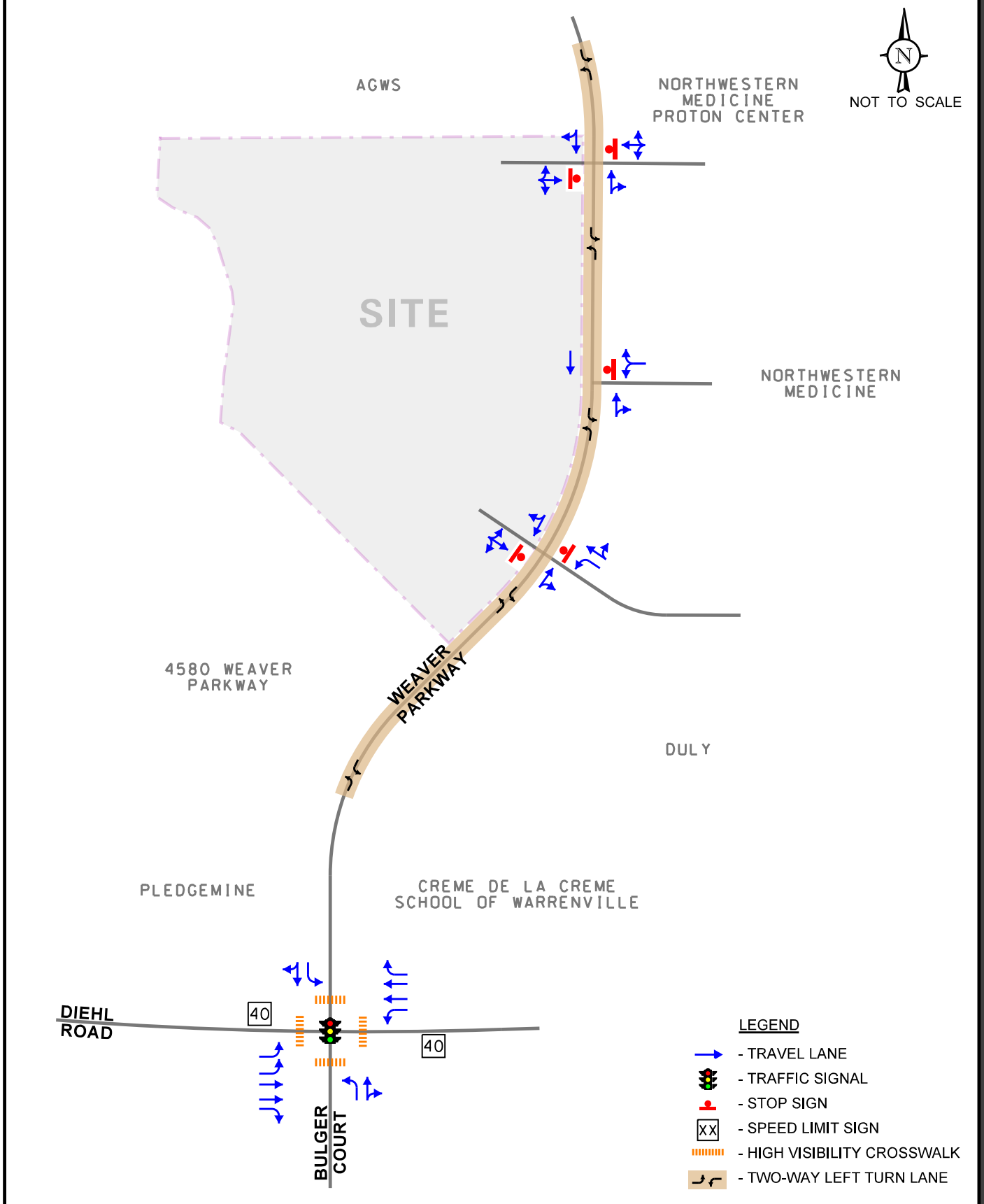
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Diehl Road is an east-west, minor arterial roadway that provides two through lanes in each direction in the vicinity of the site. At its signalized intersection with the eastern section of Weaver Parkway/Bulger Court, Diehl Road provides dual left-turn lanes, two through lanes, and a right-turn lane on the eastbound approach and a separate left-turn lane, two through lanes, and a separate right-turn lane on the westbound approach. High-visibility crosswalks are provided on the east and west legs of the intersection. Diehl Road carries an annual average daily traffic (AADT) volume of 8,100 vehicles (IDOT 2020), is under the jurisdiction of the DuPage County Division of Transportation (DuDOT), and has a posted speed limit of 40 miles per hour.

Weaver Parkway is a local roadway that loops around the office buildings located on the north side of Diehl Road and intersects Diehl Road at two locations. The road provides one lane in each direction divided by a two-way, left-turn lane with the eastern section of Weaver Parkway intersecting Diehl Road opposite Bulger Court. At its signalized intersection with Diehl Road, the eastern section of Weaver Parkway and the Bulger Court approaches provides a separate left-turn lane and a combined through/right-turn lane. High-visibility crosswalks are provided on the north and south legs of the intersection. Weaver Parkway/Bulger Road is under the jurisdiction of the City of Warrenville.

South Site Access Drive/Duly Access Drive are east-west private access drives that are aligned opposite one another. The south site access drive provides one inbound lane and one outbound lane. The Duly access drive provides one inbound lane and two outbound lanes, striped to provide a left-turn lane and a combined through/right-turn lane. Outbound movements from both access drives are under stop sign control. A paved crosswalk is provided at the south site access drive.



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Existing Roadway Characteristics

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Job No: 24-302 Figure: 3

Northwestern Access Drive is an east-west private access drive that provides one inbound lane and one outbound lane. Outbound movements are under stop sign control.

North Site Access Drive/Northwestern Proton Center Access Drive are east-west private access drives aligned opposite one another. Both access drives provide one inbound lane and one outbound lane. Outbound movements from both access drives are under stop sign control. A paved crosswalk is provided at the north site access drive.

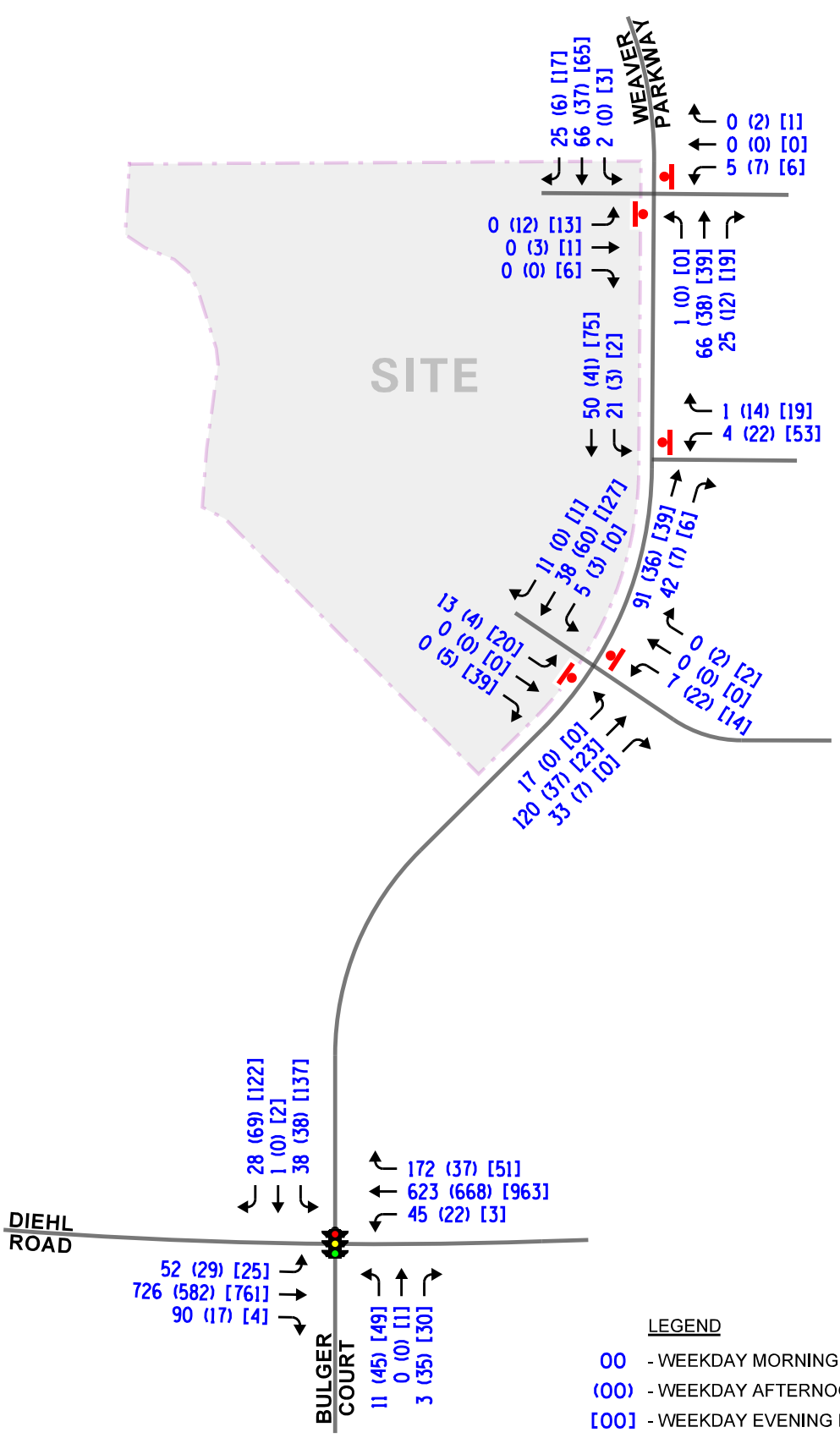
Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units on Tuesday, December 3, 2024, during the weekday morning (7:00 A.M. to 9:00 A.M.) peak period, during the weekday afternoon (2:00 P.M. to 4:00 P.M.) peak period, and during the weekday evening (4:00 P.M. to 6:00 P.M.) peak period at the following intersections:

- Diehl Road with the eastern section of Weaver Parkway/Bulger Court
- Weaver Parkway with the South Site Access/Duly Access Drive
- Weaver Parkway with Northwestern Facility Access Drive
- Weaver Parkway with North Site Access/Northwestern Proton Center Access Drive

The results of the traffic counts show that the weekday morning peak hour of traffic generally occurs from 7:45 A.M. to 8:45 A.M., the weekday afternoon peak hour of traffic generally occurs from 2:30 P.M. to 3:30 P.M., and the weekday evening peak hour of traffic generally occurs from 4:15 P.M. to 5:15 P.M.

Copies of the traffic count summary sheets are included in the Appendix. The existing traffic volumes are illustrated in **Figure 4**.



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Existing Traffic Volumes

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Crash Data Summary

KLOA, Inc. obtained crash data[1] for the most recent available past five years (2019 to 2023) for the intersection of Diehl Road with Weaver Parkway. The crash data for the intersection is summarized in **Table 1**. A review of the crash data indicated that no fatalities were reported at the intersections during the review period.

Table 1
DIEHL ROAD WITH WEAVER PARKWAY – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	1	0	1
2020	0	0	0	0	0	1	0	1
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	1	0	1
2023	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**
Average	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**<1.0**	**0.0**	**<1.0**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

The proposed school is to occupy an approximately 75,000 square-foot vacant office building located on the west side of the eastern section of Weaver Parkway just north of Diehl Road. As proposed, the office building will be repurposed and expanded by approximately 13,800 square feet to provide an Orion STEM private school with the expansion housing a theater and gymnasium. The school parking lot will serve staff/faculty, students, and visitors and provide a total of 180 perpendicular parking spaces. Access to the school will be provided via the two existing access drives located on the west side of Weaver Parkway serving the office building:

- The northern access drive is a full access drive that is located at the northern end of the site aligned opposite the southern access drive to the Northwestern Proton Center. This access drive provides one inbound lane and one outbound lane with the outbound lane that is under stop sign control.

- The southern access drive is a full access drive that is located at the southern end of the site aligned opposite the southern access drive to the Duly office building. This access drive provides one inbound lane and one outbound lane with the outbound lane that is under stop sign control.

Left-turn movements from Weaver Parkway to the two access drives is accommodated via the existing two-way, left-turn lane on Weaver Parkway.

A copy of the proposed site plan is included in the Appendix.

School Operations

As proposed, the private school will have an enrollment of approximately 420 students in sixth through twelfth grade and approximately 60 staff/faculty. The school will provide both a middle school (sixth to eighth grade) and a high school (ninth to twelfth grade). In addition, approximately 80 to 90 percent of the students will attend after-school programs. Further, the school will have six to seven vans that will transport students to and from the school. **Table 2** summarizes the start and end times of the school day and the numbers of students for various grades.

Table 2
START AND END OF TIMES OF THE SCHOOL DAY AND ENROLLMENT

Classes	Enrollment	Start and End Times
Middle School (Grades 6, 7, and 8)	180 students	8:30 A.M. to 3:00 P.M.
High School (Grades 9, 10, 11, and 12)	240 students	8:15 A.M. to 3:15 P.M.

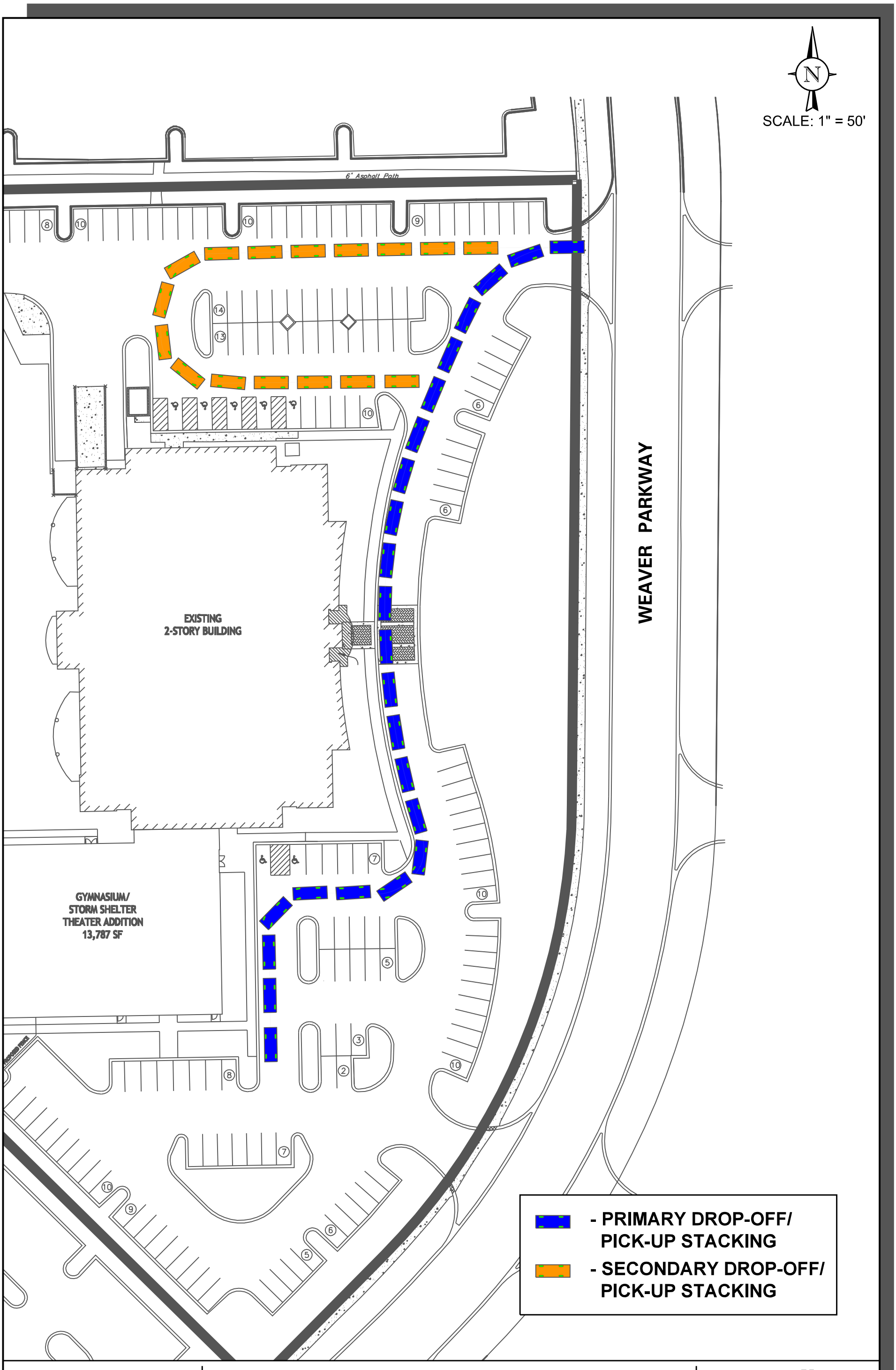
Further, the school will generally be open to students from 7:30 A.M. to 5:30 P.M. with the after-school programs extending from 3:15 P.M. to 5:30 P.M. In addition, students will be allowed to arrive at the school as early 7:30 A.M. The provision of the early drop-off, the after-school programs, and the staggered start and end times of the various classes will distribute the drop-off traffic over approximately 1.0 hours in the morning and the pick-up traffic over approximately 2.5 hours in the afternoon/evening. As such, the surging of traffic often associated with the fixed start and end times of many schools will be minimized, which will reduce the impact of the school traffic on the area roadway system and along the internal circulation system.

School Parking

Parking for the school will generally be provided on the north and south sides of the school building. The parking lot will serve staff/faculty, students, and visitors and provide a total of approximately 180 perpendicular parking spaces with two-way circulation. Approximately, 60 to 80 parking spaces on the north side of the building will be reserved for student (juniors and seniors) parking. Staff/faculty parking will be generally provided on the south side of the building. It is important to note that staff/faculty typically arrive in advance of the start of school and, as such, their arrival does not conflict with the peak period of the student drop-off activity during the morning. Visitor parking will generally be provided on the east side of the school. Dedicated loading lanes are proposed to be provided along the east side of the main building and along the east side of the expansion. All student drop-off/pick-up, including the six to seven vans, is to occur along the loading lane on the east side of the expansion.

Student Drop-Off/Pick-Up Operations

As discussed above, student drop-off and pick-up, including the six to seven vans, will occur along the loading lane located on the east side of the expansion. Stacking/queuing for parents/caregivers will primarily be along the south and west sides of the main school building. If necessary, additional stacking/queuing can be provided around the parking lot on the north side of the building. As shown in **Figure 5**, a total of approximately 24 vehicles can be stacked/queued along the loading lane and the south side of the building and along the north-south circulation road. Further, an additional 16 vehicles can be stacked/queued around the parking lot on the north side of the building.



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STUDENT DROP-OFF/PICK-UP STACKING

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To better facilitate the morning drop-off period (approximately 7:30 A.M. to 8:30 A.M.) and afternoon pick-up period (approximately 2:30 P.M. to 3:30 P.M.), the north-south circulation road that extends along the front of the building will be restricted to one-way southbound traffic flow. During this time, the northbound access drive will be restricted to inbound traffic flow and the southbound access drive will be restricted to outbound traffic flow. Further, several staff members will be stationed in the loading zone and along the circulation system to assist with the unloading/loading of students, to manage the drop-off operations, and to direct traffic through the campus.

It is important to note that the projected stacking/queueing associated with the drop-off/pick-up operations will be minimized due to the following:

- Given that the early opening of the school in the morning, the after-school programs, and the staggered start and end times of the various classes, the drop-off/pick-up traffic will be distributed over approximately 1.0 hours in the morning and 2.5 hours in the afternoon/evening, which will minimize the surging of traffic associated with the fixed start and end times of the school day.

- The total volume of drop-off/pick-up traffic will be reduced due to carpooling and that a percentage of students will ride the vans to and from school.

- Approximately 60 to 80 high school students will be permitted to drive to school and park in the north parking lot.

- The number of staff members the school has committed to assist with the unloading/loading of students and to manage the operations.

- As discussed previously, staff/faculty typically arrive in advance of the start of school and, as such, their arrival does not conflict with the peak period of the student drop-off activity during the morning.

According to the school officials, the number of siblings at their existing schools ranges from approximately 18 to 27 percent.

Pick-Up Operations – After-School Programs

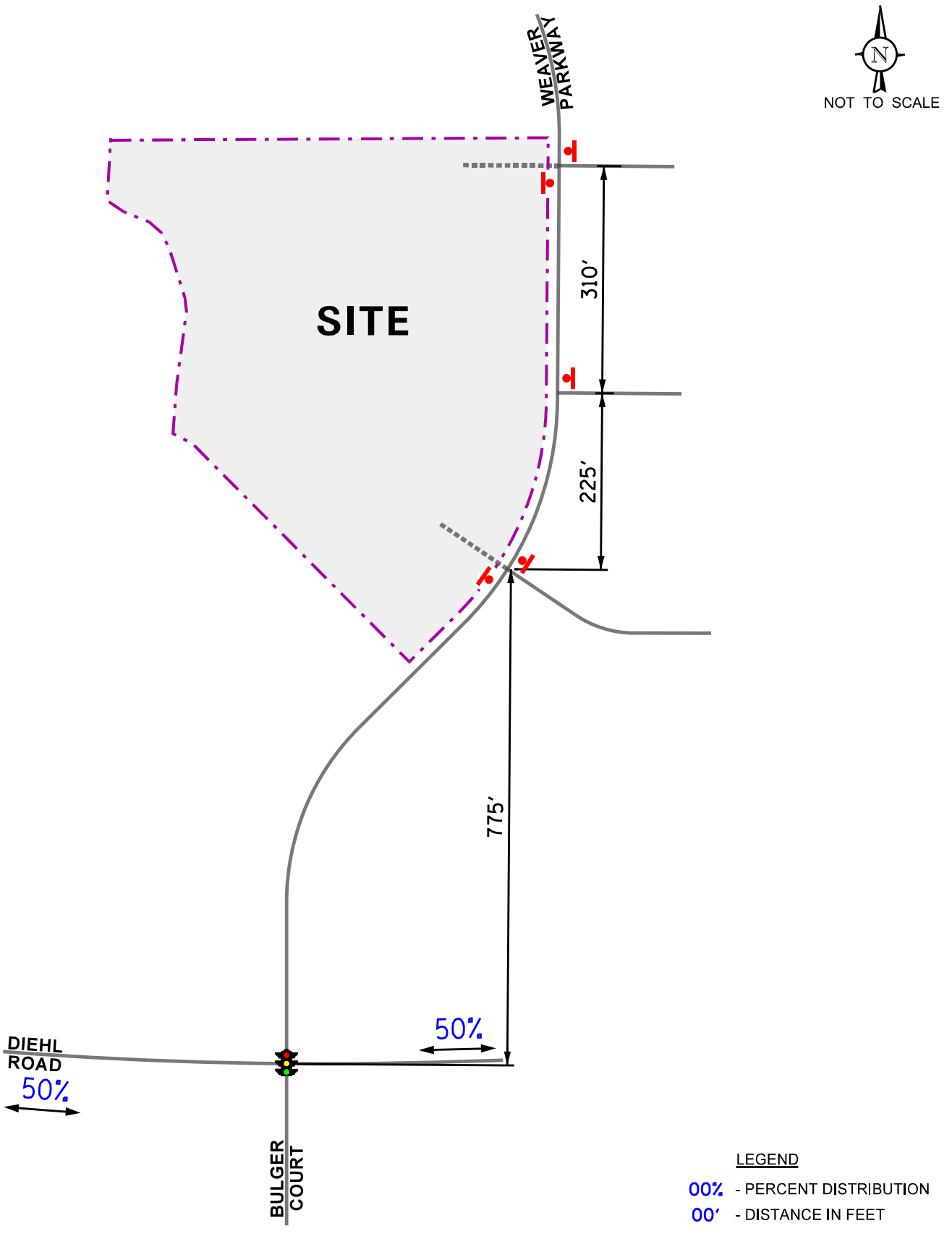
Given that the pick-up of students for the after-school programs will be distributed over an approximately two-hour period, parents/caregivers will be able to use either loading zone to pick-up their student or park in one of the parking spaces and wait for their student. As such, both access drives and the entire circulation system will provide for two-way circulation and no one-way restrictions will be implanted during the pick-up times for the after-school programs.

Staff Members

As previously indicated, the school will station staff members throughout the campus to assist with the unloading/loading of students, to manage the operations, and to direct traffic. Staff will/should be located at the loading zone and at the primary internal intersections/locations.

Directional Distribution

The directions from which the students, parents/caregivers, and faculty/staff of the proposed school will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. To provide a worst analysis, it was assumed that all the school traffic will access the school via the intersection of the eastern section of Weaver Parkway with Diehl Road. However, access to the office complex and subsequently to the school is also provided via the western section of Weaver Parkway with Diehl Road and via the right-turn in/right-turn out access drive with Winfield Road. **Figure 6** illustrates the directional distribution of the development-generated traffic.



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Directional Distribution

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Estimated Site Traffic Generation

The volume of traffic projected to be generated by the proposed school was based on its operation as provided by school officials. **Table 3** shows the projected arrival and departure of the students as provided by school officials.

Table 3
ARRIVAL AND DEPARTURE OF STUDENTS

Time of Day	Approximate Students
Before the Start of School (7:30 A.M. to 8:30 A.M.)	420
After the End of School (2:30 P.M. to 3:30 P.M.)	85
After the After-School Programs (3:30 P.M. to 5:30 P.M.)	335

In addition, based on information provided by school officials, it was assumed that approximately 30 percent of the students will ride the school vans to/from school or will carpool. According to the school officials, the number of siblings in their existing schools range from approximately 18 to 27 percent. Further, it is important to note that the number of students per day will also be reduced due to students that are absent. **Table 4** shows the estimated morning and evening peak hour traffic volumes that will be generated by the school.

Table 4
ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

Type/Size	Morning Peak Hour			Afternoon Peak Hour			Evening Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Staff/Faculty	55	5	60	5	40	45	0	15	15
Students that Drive	70	0	70	0	15	15	0	30	30
Student Drop-off/Pick-Up	225	225	450	45	45	90	90	90	180
Total	**350**	**230**	**580**	**50**	**100**	**150**	**90**	**135**	**225**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

School Traffic Assignment

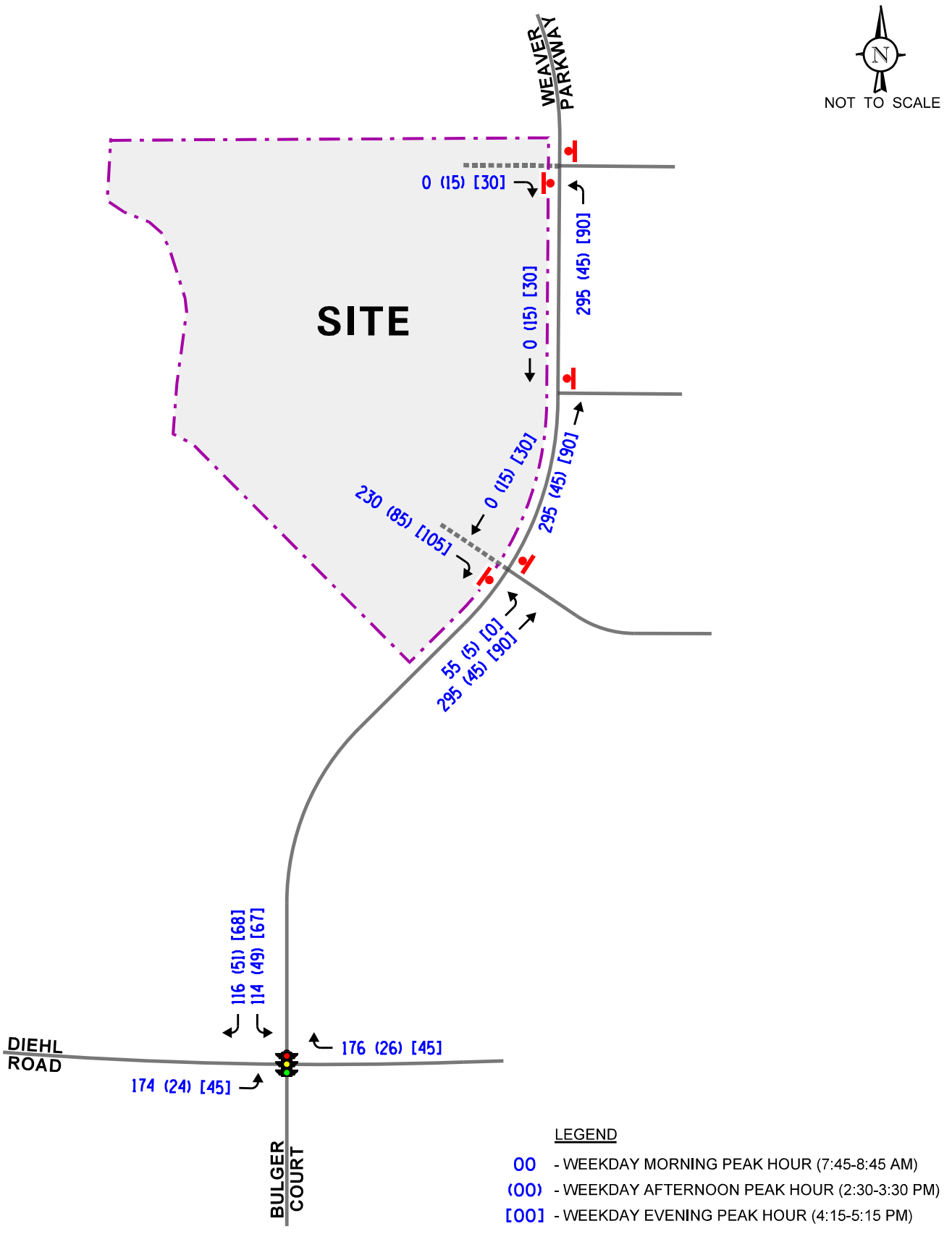
The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed school were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6) which is illustrated in **Figure 7**.

Background (No-Build) Traffic Conditions

The existing traffic volumes were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on AADT projections provided by CMAP in a letter dated November 19, 2024, the existing traffic volumes are projected to increase by a compounded annual growth rate of 0.9 percent per year. As such, the existing traffic volumes were increased by a total of approximately 6.0 percent over six years (buildout year plus five years) to project Year 2030 traffic volumes. A copy of the CMAP letter is included in the Appendix. **Figure 8** illustrates the Year 2030 no-build traffic volumes.

Total Projected Traffic Volumes

The school-generated traffic (Figure 7) was added to the existing traffic volumes increased by a regional growth factor (Figure 8) to determine the Year 2030 total projected traffic volumes. Also included in the total projected traffic volumes is reassigned traffic from the overflow parking currently utilizing the site. The total projected traffic volumes are illustrated in **Figure 9**.



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Site-Generated Traffic Volumes

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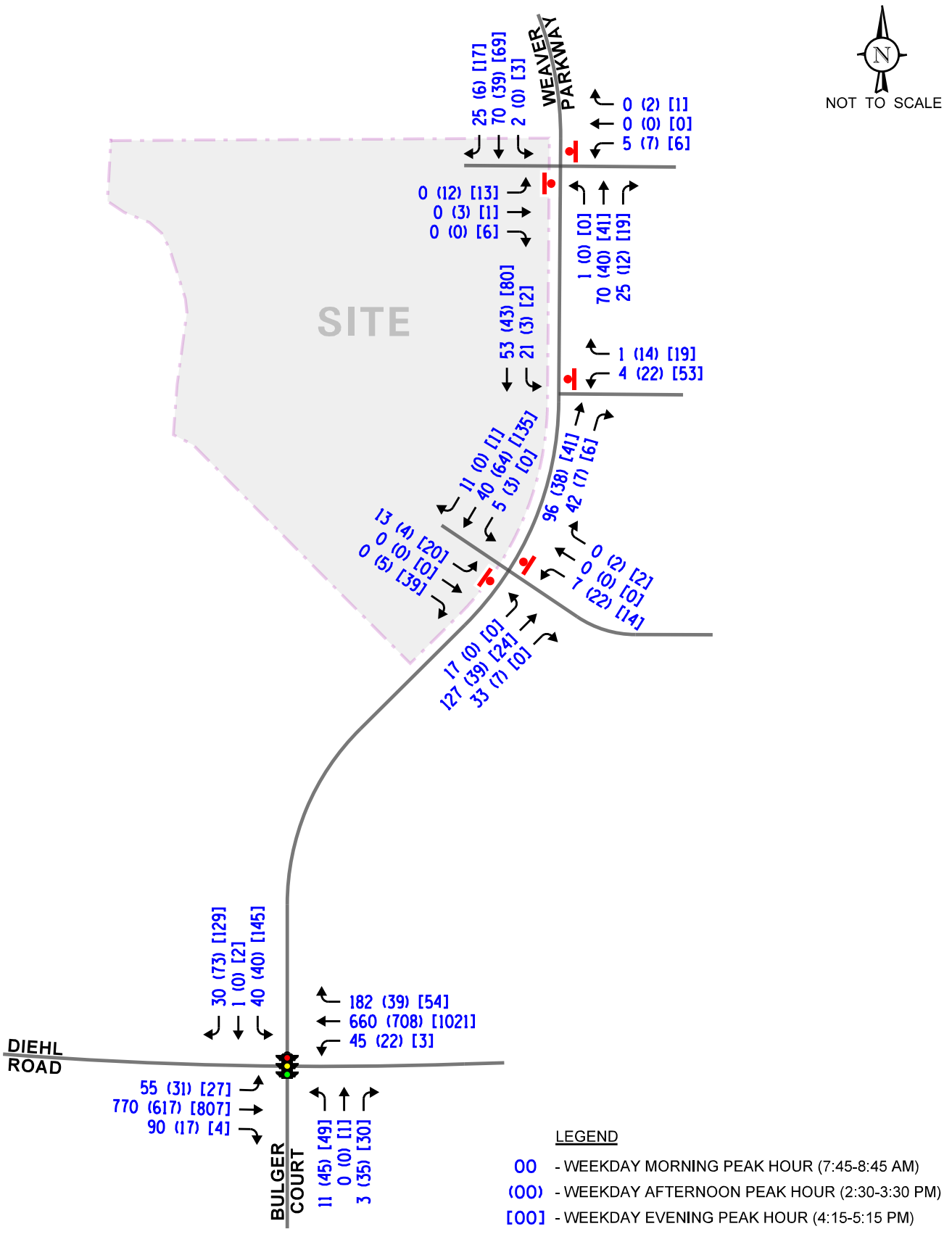

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Year 2030 No-Build Traffic Volumes

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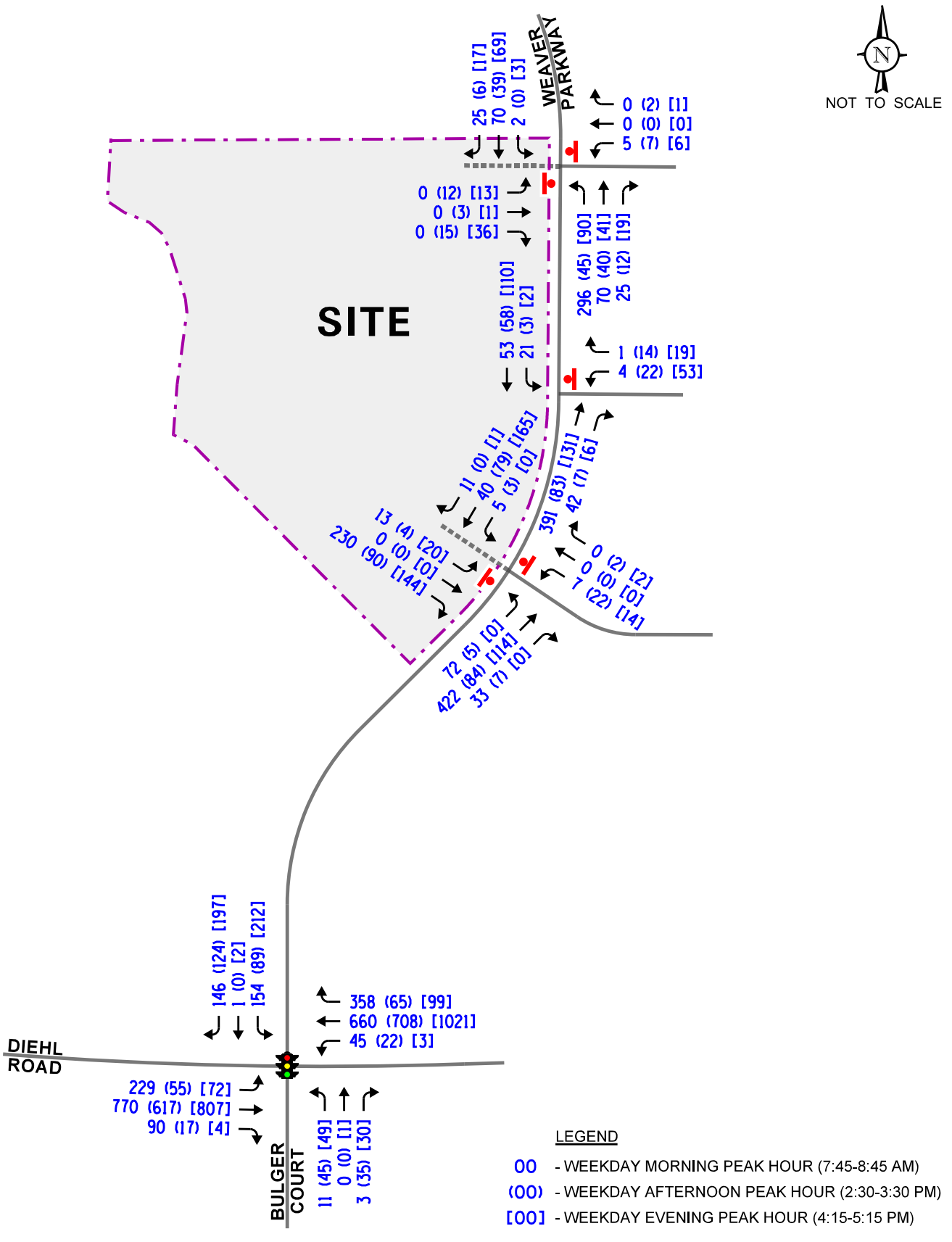

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Year 2030 Total Traffic Volumes

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5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday afternoon, and weekday evening peak hours for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersections were accomplished using field-measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected, conditions are presented in **Tables 5** through **8**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
DIEHL ROAD WITH WEAVER PARKWAY/BULGER COURT – SIGNALIZED

	Peak Hour	Eastbound			Westbound			Northbound		Southbound		Overall
		L	T	R	L	T	R	L	T/R	L	T/R	
Existing Conditions	Weekday Morning	E 61.9	A 7.5	A 1.9	E 67.9	A 6.7	A 0.6	D 54.4	A 0.0	E 55.1	C 26.4	B 11.0
		B – 10.2			A – 8.7			D – 42.7		D – 42.8		
	Weekday Afternoon	E 71.7	A 6.7	A 0.0	E 75.3	A 6.6	A 0.5	E 61.3	A 0.3	E 60.2	A 0.8	B 11.1
		A – 9.5			A – 8.4			C – 34.5		C – 21.9		
	Weekday Evening	E 71.4	A 7.9	A 0.0	E 70.3	B 11.0	A 0.8	E 56.0	C 30.9	E 62.3	B 17.6	B 15.4
		A – 9.9			B – 10.6			D – 46.3		D – 41.2		
No-Build Conditions	Weekday Morning	E 62.0	A 7.7	A 1.9	E 67.9	A 6.8	A 0.6	D 54.4	A 0.0	E 55.4	C 26.2	B 11.0
		B – 10.4			A – 8.7			D – 42.7		D – 42.7		
	Weekday Afternoon	E 71.7	A 6.8	A 0.0	E 75.3	A 6.8	A 0.5	E 61.3	A 0.3	E 60.5	A 0.9	B 11.2
		A – 9.6			A – 8.5			C – 34.5		C – 22.0		
	Weekday Evening	E 71.5	A 8.1	A 0.0	E 70.3	B 11.3	A 0.8	E 56.0	C 30.9	E 63.9	B 17.8	B 15.6
		B – 10.1			B – 10.9			D – 46.3		D – 42.0		
Projected Conditions	Weekday Morning	E 65.9	B 10.1	A 2.0	E 67.9	B 12.8	A 1.1	D 54.4	A 0.0	E 71.2	B 14.8	C 20.3
		C – 22.3			B – 10.7			D – 42.7		D – 43.6		
	Weekday Afternoon	E 73.2	A 8.4	A 0.0	E 75.3	A 9.7	A 0.7	E 56.6	A 0.4	E 63.3	A 1.8	B 15.2
		B – 14.1			B – 10.7			C – 31.9		C – 27.5		
	Weekday Evening	E 73.4	B 11.5	A 0.0	E 70.3	B 18.2	A 0.8	D 51.2	C 30.9	E 57.1	B 11.6	C 20.5
		B – 16.5			B – 16.8			D – 43.4		D – 35.1		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 6
UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Weaver Parkway with South Site Access/Duly Access[1]						
• Eastbound Approach	B	11.1	A	9.5	B	10.2
• Westbound Approach	A	9.8	A	9.6	B	10.1
• Northbound Left Turn	A	7.3	A	0.0	A	0.0
• Southbound Left Turn	A	7.5	A	7.3	A	0.0
Weaver Parkway with Northwestern Access Drive[1]						
• Westbound Approach	A	9.5	A	9.3	A	9.6
• Southbound Left Turn	A	7.5	A	7.3	A	7.3
Weaver Parkway with North Site Access/Northwestern Cancer Center Access[1]						
• Eastbound Approach	A	0.0	B	10.0	A	9.4
• Westbound Approach	A	9.6	A	9.3	A	9.6
• Northbound Left Turn	A	7.4	A	0.0	A	0.0
• Southbound Left Turn	A	7.4	A	0.0	A	7.3

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control

Table 7
UNSIGNALIZED – NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Weaver Parkway with South Site Access/Duly Access[1]						
• Eastbound Approach	B	11.1	A	9.5	B	10.2
• Westbound Approach	A	9.8	A	9.6	B	10.2
• Northbound Left Turn	A	7.3	A	0.0	A	0.0
• Southbound Left Turn	A	7.5	A	7.3	A	0.0
Weaver Parkway with Northwestern Access Drive[1]						
• Westbound Approach	A	9.5	A	9.3	A	9.7
• Southbound Left Turn	A	7.5	A	7.3	A	7.3
Weaver Parkway with North Site Access/Northwestern Cancer Center Access[1]						
• Eastbound Approach	A	0.0	B	10.0	A	9.5
• Westbound Approach	A	9.6	A	9.4	A	9.6
• Northbound Left Turn	A	7.4	A	0.0	A	0.0
• Southbound Left Turn	A	7.4	A	0.0	A	7.3

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control

Table 8
UNSIGNALIZED – TOTAL CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Weaver Parkway with South Site Access/Duly Access[1]						
• Eastbound Approach	B	10.1	A	9.4	B	10.5
• Westbound Approach	C	16.9	B	11.0	B	11.9
• Northbound Left Turn	A	7.4	A	7.4	A	0.0
• Southbound Left Turn	A	8.3	A	7.4	A	0.0
Weaver Parkway with Northwestern Access Drive[1]						
• Westbound Approach	B	10.1	A	9.7	B	10.7
• Southbound Left Turn	A	8.4	A	7.5	A	7.5
Weaver Parkway with North Site Access/Northwestern Cancer Center Access[1]						
• Eastbound Approach	A	0.0	A	8.7	A	8.8
• Westbound Approach	C	24.2	A	9.5	B	10.3
• Northbound Left Turn	A	8.2	A	7.5	A	7.5
• Southbound Left Turn	A	7.4	A	8.2	A	8.2

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Diehl Road with Weaver Parkway/Bulger Court

The results of the capacity analysis indicate that the intersection currently operates at Level of Service (LOS) B during the weekday morning, weekday afternoon, and weekday evening peak hours. All the intersection movements operate at LOS C or better except the left-turn movements which operate at LOS E. The lower levels of service for the left-turn movements are due in part to the fact that the eastbound and westbound left-turn movements operate on a protected phase only and the northbound and southbound left-turn movements receive a limited amount of green time. It should be noted that the Diehl Road through movements are currently operating at LOS A/B.

Assuming Year 2030 no-build conditions the intersection is projected to continue to operate at LOS B during the weekday morning, weekday afternoon, and weekday evening peak hours. All the intersection movements are projected to continue to operate at LOS C or better except the left-turn movements which are projected to operate at LOS E.

Assuming Year 2030 total projected conditions, the intersection is projected to continue operating at LOS B during the during the weekday afternoon peak hour and on the threshold of LOS B/C during the weekday morning and weekday evening peak hours. All the intersection movements are projected to continue to operate at LOS C or better except the left-turn movements which are projected to operate at LOS E or D. If the 2030 projected traffic volumes are realized, the traffic signal timings may need to be optimized at this intersection to provide some additional green time to the southbound left-turn movement. The additional green time can be taken from the Diehl Road through phase as the through movements are projected to continue to operate at LOS A/B. As such, this intersection has sufficient capacity to accommodate the traffic projected to be generated by the proposed school and no roadway improvements are required. It is important to note that several of the turn movements at this intersection may experience some additional congestion during the school's peak periods, particurly during the morning peak period. However, the congestion should only occur for approximately 15 to 20 minutes before and after school and is inherent with most schools given the fixed start and end times of the school day.

Weaver Parkway with South Site Access Drive/Duly Access Drive

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS B or better during the weekday morning, weekday afternoon, and weekday evening peak hours. The northbound and southbound left-turn movements currently operate at LOS A during the peak hours.

Access to the school will be provided via the existing full access drive that is located at the southern end of the site and aligned opposite the southern access drive to the Duly office building. This access drive provides one inbound lane and one outbound lane with the outbound lane under stop sign control. Left-turn movements from Weaver Parkway to the access drive will be accommodated via the existing two-way, left-turn lane on Weaver Parkway.

Under Year 2030 no-build and total projected conditions, the critical approaches and movements are projected to continue operating at LOS B or better during the peak hours, with the exception of the westbound approach during the weekday morning peak hour, which is projected to operate at LOS C. As such, the existing site access drive and the overall intersection have sufficient capacity to accommodate the traffic estimated to be generated by the proposed school and no roadway improvements or traffic control modifications are required. It is important to note that the movements to/from the school access drive may experience some additional congestion during the school's peak periods, particurly during the morning peak hour. However, the congestion should only occur for approximately 15 to 20 minutes before and after school and is inherent with most schools given the fixed start and end times of the school day.

Weaver Parkway with Northwestern Access Drive

The results of the capacity analysis indicate that the westbound approach and the southbound left-turn movement currently operate at LOS A during the weekday morning, weekday afternoon, and weekday evening peak hours. Under Year 2030 no-build and total projected conditions, the critical approach and movement are projected to operate at LOS B or better during the peak hours. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by the school and no roadway improvements or traffic control modifications are required.

Weaver Parkway with North Site Access Drive/Northwestern Cancer Center Access Drive

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS B or better during the weekday morning, weekday afternoon, and weekday evening peak hours. The northbound and southbound left-turn movements currently operate at LOS A during the peak hours.

Access to the school will be provided via the existing full access drive located at the northern end of the site and aligned opposite the southern access drive to the Northwestern Proton Center. This access drive provides one inbound lane and one outbound lane with the outbound lane that is under stop sign control. Left-turn movements from Weaver Parkway to the access drive will be accommodated via the existing two-way, left-turn lane on Weaver Parkway.

Under Year 2030 no-build and total projected conditions, the critical approaches and movements are projected to continue to operate at LOS B or better during the peak hours, with the exception of the westbound approach during the weekday morning peak hour, which is projected to operate at LOS C. As such, the existing access drive and the overall intersection have sufficient reserve capacity to accommodate the traffic projected to be generated by the school and no roadway improvements or traffic control modifications are required. It is important to note that the movements to/from the school access drive may experience some additional congestion during the school's peak periods, particurly during the morning peak hour. However, the congestion should only occur for approximately 15 to 20 minutes before and after school and is inherent with most schools given the fixed start and end times of the school day.

Parking Evaluation

Parking for the school will generally be provided on the north and south sides of the school building. The parking lot will serve staff/faculty, students, and visitors and provide a total of approximately 180 perpendicular parking spaces with two-way circulation. Approximately, 60 to 80 parking spaces on the north side of the building will be reserved for student (juniors and seniors) parking. Staff/faculty parking will be generally provided on the south side of the building. Visitor parking will generally be provided on the east side of the school.

Table 9 shows (1) the parking requirements for schools per the Cantera Plan Unit Development (PUD) and (2) the total parking spaces that are required given the projected population of the proposed school. From Table 9 it can be seen that the proposed school is required to have a total of 126 parking spaces per the Cantera PUD requirements. As such, the 180 parking spaces proposed to be provided by the school exceed the requirements of the PUD.

Table 9
CANTERA PUD PARKING REQUIREMENTS

	Parking Requirements	Number of Staff & Students	Total Parking Spaces
Junior High School	0.1 space per Student	180 students	18
High School	0.2 space per Student	240 students	48
Staff/Faculty	1.0 space per Employee	60 staff	60
Total			126

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The proposed school is to occupy an approximately 75,000 square-foot vacant office building located on the west side of the eastern section of Weaver Parkway just north of Diehl Road. As proposed, the office building will be repurposed and expanded by approximately 13,800 square feet to provide an Orion STEM private school with the expansion housing a theater and gymnasium.

- Access to the school will be provided via the two existing access drives located on the west side of Weaver Parkway serving the office building:

    - The northern access drive is a full access drive that is located at the northern end of the site aligned opposite the southern access drive to the Northwestern Proton Center. This access drive provides one inbound lane and one outbound lane with the outbound lane that is under stop sign control.

    - The southern access drive is a full access drive that is located at the southern end of the site aligned opposite the southern access drive to the Duly office building. This access drive provides one inbound lane and one outbound lane with the outbound lane that is under stop sign control.

    - Left-turn movements from Weaver Parkway to the two access drives will be accommodated via the existing two-way, left-turn lane on Weaver Parkway.

- The proposed access system will be adequate and efficient in serving the proposed mixed-use development traffic.

- The existing roadway system generally has sufficient reserve capacity to accommodate the additional traffic to be generated by the proposed development and no roadway improvements are required to accommodate the development-generated traffic. If the 2030 projected traffic volumes are realized, the traffic signal timings at the Diehl Road/Weaver Parkway intersection may need to be optimized to provide some additional green time to the southbound left-turn movement. The additional green time can be taken from the Diehl Road through phase as these through movements are projected to continue to operate at LOS A/B.

- The movements to/from the school access drives and at the Diehl Road/Weaver Parkway intersection may experience some additional congestion during the school's peak periods, particurly during the morning peak hour. However, the congestion should only occur for approximately 15 to 20 minutes before and after school and is inherent with most schools given the fixed start and end times of the school day.

- The proposed school is anticipated to have highly attended after-school programs and will have staggered start and end times for the various classes. As such, the drop-off/pick-up traffic will be distributed over approximately 1.0 hours in the morning and 2.5 hours in the afternoon/evening. As such, the surging of traffic associated with the fixed start and end times of many schools will be minimized, which will reduce the impact of the school traffic on the area roadway system and along the internal circulation system.

- The projected stacking/queueing associated with the drop-off/pick-up operations will be minimized due to the following:

    - As discussed above, the reduced surging of traffic associated with the proposed school.

    - The total volume of drop-off/pick-up traffic will be reduced due to carpooling and the fact that a percentage of students will ride the bus to and from school.

    - Approximately 60 to 80 high school students will be permitted to drive to school and park in the north parking lot.

    - The number of staff members the school has committed to assist with the unloading/loading of students and to manage the operations.

    - Staff/faculty typically arrive in advance of the start of school and, as such, their arrival does not conflict with the peak period of the student drop-off activity during the morning.

- The 180 parking spaces proposed to be provided by the school exceed the 126 parking spaces that are required per the Cantera PUD.

Appendix

Traffic Count Summary Sheets
Site Plan
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- Diehl Rd
CITY/STATE: Warrenville, IL

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DATE: Tue, Dec 3 2024

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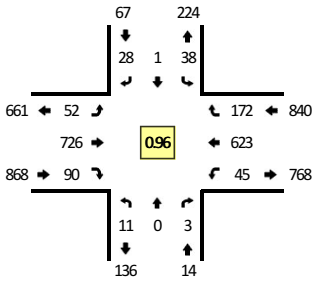
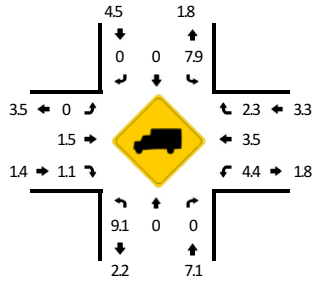
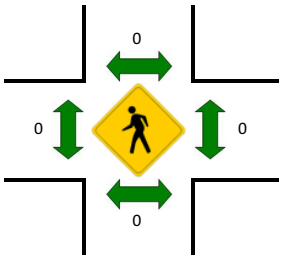
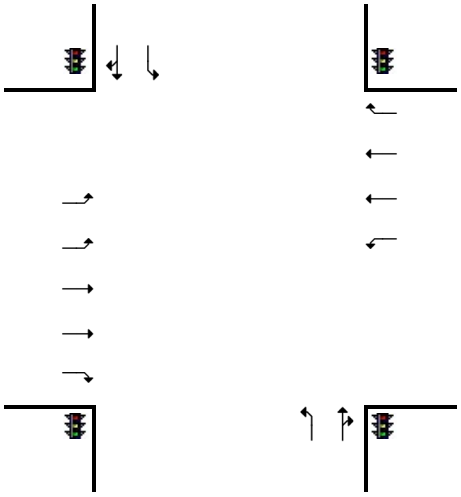
Peak 15-Min: 8:00 AM -- 8:15 AM

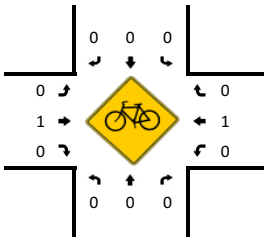


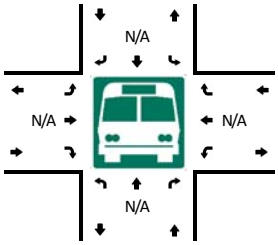


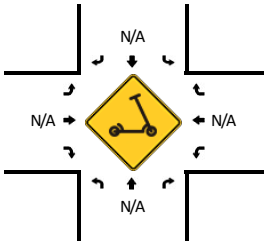
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				Diehl Rd (Eastbound)				Diehl Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	2	0	0	0	0	0	7	119	7	0	2	104	19	1	261	
7:15 AM	2	0	1	0	9	0	6	0	4	142	15	0	7	110	29	0	325	
7:30 AM	1	0	1	0	12	0	4	0	12	224	15	0	8	139	22	0	438	
7:45 AM	3	0	1	0	7	0	2	0	12	189	16	0	5	170	48	0	453	1477
8:00 AM	3	0	0	0	9	0	5	0	8	208	15	0	5	174	41	0	468	1684
8:15 AM	1	0	1	0	7	0	12	0	15	173	21	0	16	156	48	1	451	1810
8:30 AM	3	0	1	1	15	1	9	0	17	156	38	0	18	123	35	0	417	1789
8:45 AM	13	0	4	0	9	0	15	0	17	154	42	0	25	127	33	0	439	1775

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	0	0	0	36	0	20	0	32	832	60	0	20	696	164	0	1872
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	8	4		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

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CITY/STATE: Warrenville, IL

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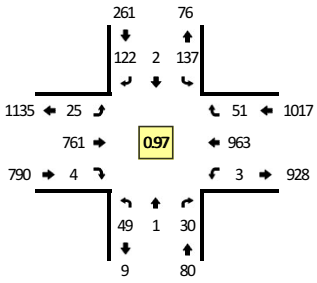
Peak 15-Min: 5:00 PM -- 5:15 PM



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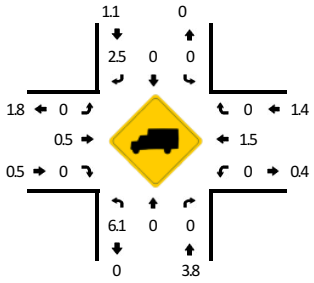

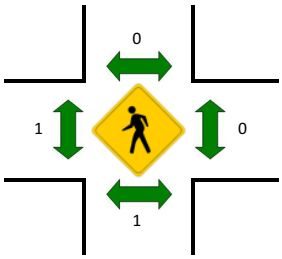

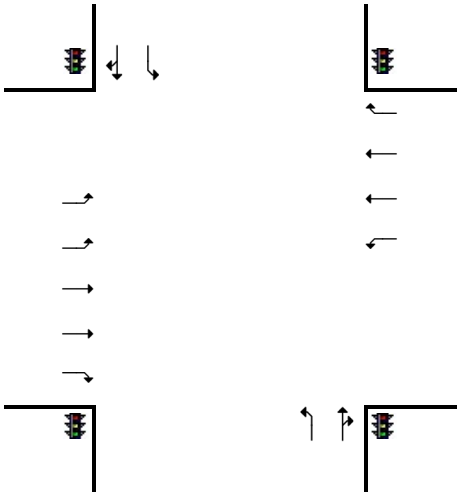

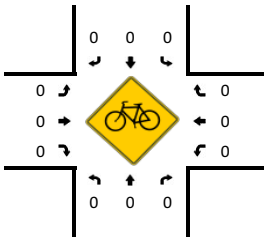

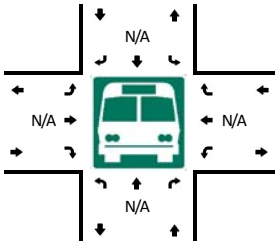

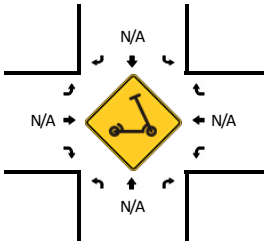

15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				Diehl Rd (Eastbound)				Diehl Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	19	0	9	0	8	1	12	0	8	155	13	0	5	155	7	0	392	
2:15 PM	23	0	4	0	8	0	23	0	7	137	11	0	2	133	6	0	354	
2:30 PM	19	0	10	0	6	0	20	0	13	149	6	1	5	143	17	0	389	
2:45 PM	12	0	12	0	14	0	13	0	8	134	6	0	9	183	7	0	398	1533
3:00 PM	9	0	6	0	10	0	20	0	1	172	3	0	4	165	6	0	396	1537
3:15 PM	5	0	7	0	8	0	16	0	6	127	2	0	3	177	7	1	359	1542
3:30 PM	21	0	3	0	13	1	18	0	10	142	3	0	0	186	15	0	412	1565
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5:00 PM	14	0	7	0	30	0	31	0	5	198	0	0	1	252	13	0	551	2148
5:15 PM	3	0	0	0	35	0	19	0	4	213	1	0	0	210	11	0	496	2109
5:30 PM	1	0	3	0	26	0	22	0	4	193	1	0	1	205	8	0	464	2039
5:45 PM	4	0	0	0	12	0	14	0	7	203	9	0	1	158	8	0	416	1927

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	0	28	0	120	0	124	0	20	792	0	0	4	1008	52	0	2204
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:37 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- South Business Dwys
CITY/STATE: Warrenville, IL

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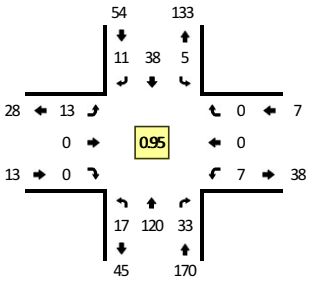
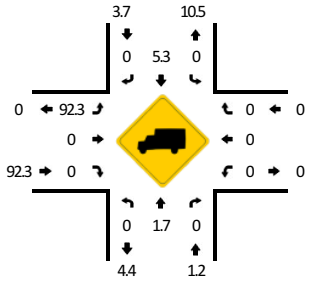
Peak 15-Min: 8:15 AM -- 8:30 AM





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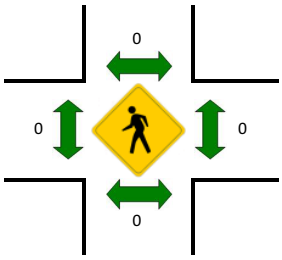

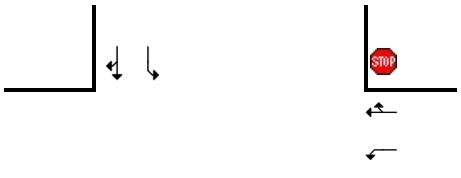

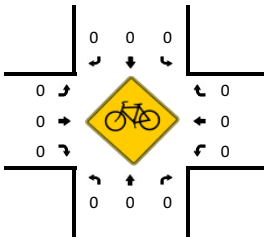

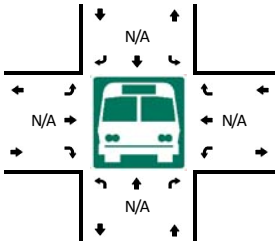

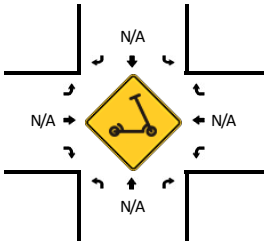

15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				South Business Dwys (Eastbound)				South Business Dwys (Westbound)				Total	Hourly Totals
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7:00 AM	4	15	3	0	1	0	4	0	4	0	0	0	0	0	0	0	31	
7:15 AM	5	10	5	0	1	8	3	0	2	0	0	0	3	0	0	0	37	
7:30 AM	3	14	4	0	0	5	3	0	4	0	0	0	2	0	0	0	35	
7:45 AM	7	33	9	0	1	3	3	0	3	0	0	0	0	0	0	0	59	162
8:00 AM	3	28	6	0	2	11	3	0	4	0	0	0	0	0	0	0	57	188
8:15 AM	4	31	9	0	0	11	3	0	3	0	0	0	3	0	0	0	64	215
8:30 AM	3	28	9	0	2	13	2	0	3	0	0	0	4	0	0	0	64	244
8:45 AM	4	26	6	0	1	13	1	0	5	0	0	0	2	0	0	0	58	243

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	124	36	0	0	44	12	0	12	0	0	0	12	0	0	0	256
Heavy Trucks	0	8	0		0	0	0		12	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

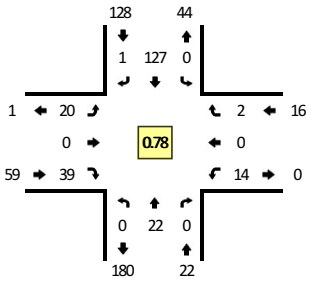
Type of peak hour being reported: System-wide Peak

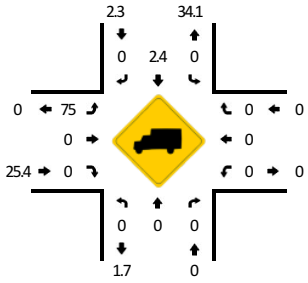
Method for determining peak hour: Total Entering Volume

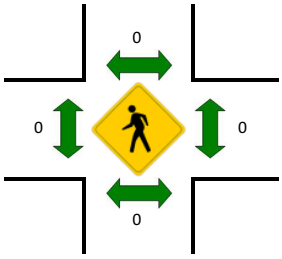
LOCATION: Weaver Pkwy -- South Business Dwys
CITY/STATE: Warrenville, IL

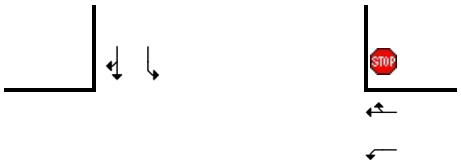
QC JOB #: 16849804
DATE: Tue, Dec 3 2024

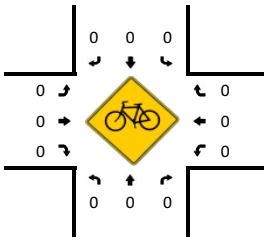
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

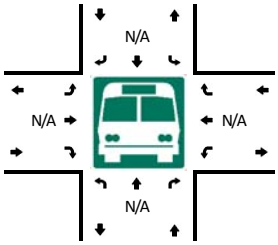


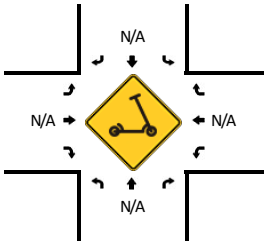












15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				South Business Dwys (Eastbound)				South Business Dwys (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	13	2	0	0	18	0	0	1	0	0	0	1	0	0	0	35	
2:15 PM	0	10	0	0	1	22	0	0	0	0	1	0	6	0	0	0	40	
2:30 PM	0	20	5	0	0	16	0	0	3	0	2	0	4	0	0	0	50	
2:45 PM	0	8	1	0	2	14	0	0	0	0	0	0	7	0	1	0	33	158
3:00 PM	0	5	1	0	1	17	0	0	1	0	3	0	4	0	0	0	32	155
3:15 PM	0	4	0	0	0	13	0	0	0	0	0	0	7	0	1	0	25	140
3:30 PM	0	8	2	0	0	23	0	0	3	0	3	0	4	0	1	0	44	134
3:45 PM	0	5	0	0	0	20	0	0	0	0	2	0	4	0	0	0	31	132
4:00 PM	0	6	0	0	0	27	0	0	7	0	8	0	5	0	0	0	53	153
4:15 PM	0	5	0	0	0	25	0	0	3	0	4	0	6	0	0	0	43	171
4:30 PM	0	5	0	0	0	34	1	0	6	0	22	0	3	0	1	0	72	199
4:45 PM	0	3	0	0	0	27	0	0	4	0	7	0	2	0	0	0	43	211
5:00 PM	0	9	0	0	0	41	0	0	7	0	6	0	3	0	1	0	67	225
5:15 PM	0	4	0	0	0	24	0	0	3	0	0	0	0	0	0	0	31	213
5:30 PM	2	6	0	0	0	16	0	0	8	0	5	0	4	0	0	0	41	182
5:45 PM	0	10	1	0	0	13	0	0	3	0	2	0	3	0	0	0	32	171

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	20	0	0	0	136	4	0	24	0	88	0	12	0	4	0	288
Heavy Trucks	0	0	0		0	0	0		20	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:37 PM

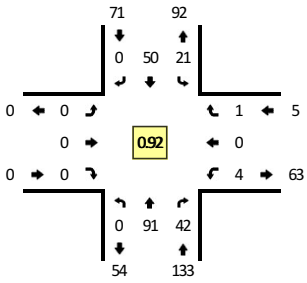
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

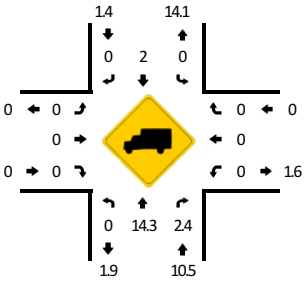
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- Central Business Dwy
CITY/STATE: Warrenville, IL

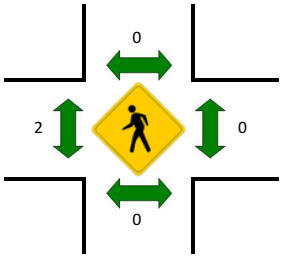
QC JOB #: 16849805
DATE: Tue, Dec 3 2024

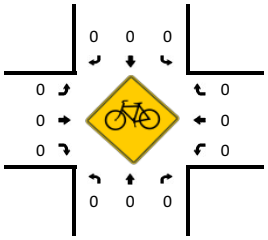
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

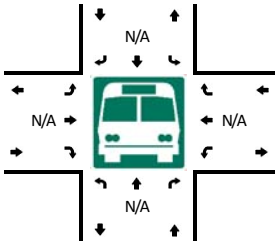


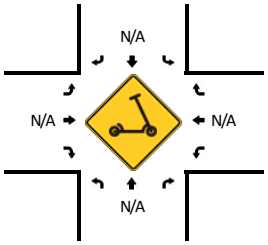


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				Central Business Dwy (Eastbound)				Central Business Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	13	5	0	5	5	0	0	0	0	0	0	0	0	0	0	28	
7:15 AM	0	10	3	0	6	12	0	0	0	0	0	0	0	0	1	0	32	
7:30 AM	0	14	4	0	6	8	0	0	0	0	0	0	0	0	0	0	32	
7:45 AM	0	24	12	0	5	7	0	0	0	0	0	0	0	0	0	0	48	140
8:00 AM	0	19	13	0	3	14	0	0	0	0	0	0	2	0	0	0	51	163
8:15 AM	0	25	9	0	8	14	0	0	0	0	0	0	0	0	1	0	57	188
8:30 AM	0	23	8	0	5	15	0	0	0	0	0	0	2	0	0	0	53	209
8:45 AM	0	23	8	0	3	14	0	0	0	0	0	0	1	0	0	0	49	210

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	100	36	0	32	56	0	0	0	0	0	0	0	0	4	0	228
Heavy Trucks	0	16	4		0	0	0		0	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:31 PM

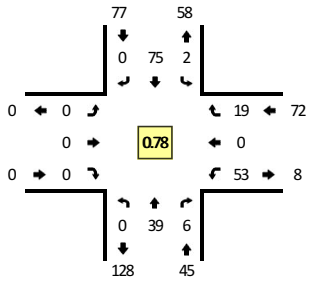
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

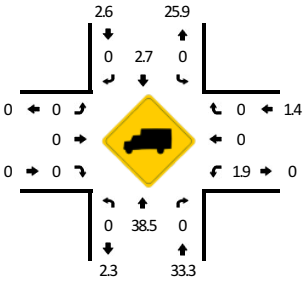
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- Central Business Dwy
CITY/STATE: Warrenville, IL

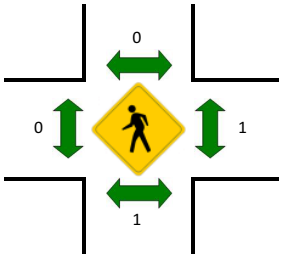
QC JOB #: 16849806
DATE: Tue, Dec 3 2024

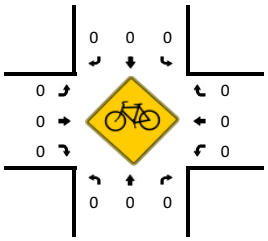
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

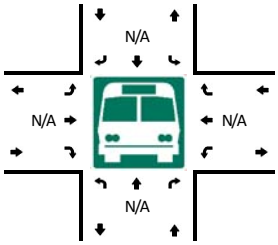


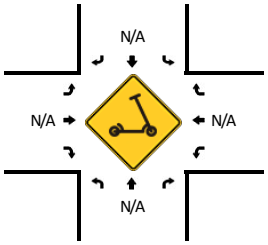


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				Central Business Dwy (Eastbound)				Central Business Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	12	2	0	0	13	0	0	0	0	0	0	6	0	2	0	35	
2:15 PM	0	6	4	0	0	14	0	0	0	0	0	0	8	0	5	0	37	
2:30 PM	0	20	3	0	1	12	0	0	0	0	0	0	4	0	7	0	47	
2:45 PM	0	5	3	0	2	11	0	0	0	0	0	0	4	0	3	0	28	147
3:00 PM	0	5	1	0	0	9	0	0	0	0	0	0	9	0	1	0	25	137
3:15 PM	0	5	0	0	0	8	0	0	0	0	0	0	5	0	3	0	21	121
3:30 PM	0	9	3	0	0	20	0	0	0	0	0	0	3	0	2	0	37	111
3:45 PM	0	4	1	0	2	11	0	0	0	0	0	0	9	0	2	0	29	112
4:00 PM	0	11	1	0	0	21	0	0	0	0	0	0	6	0	3	0	42	129
4:15 PM	0	7	2	0	0	14	0	0	0	0	0	0	11	0	5	0	39	147
4:30 PM	0	10	2	0	1	22	0	0	0	0	0	0	13	0	8	0	56	166
4:45 PM	0	7	0	0	1	15	0	0	0	0	0	0	12	0	2	0	37	174
5:00 PM	0	15	2	0	0	24	0	0	0	0	0	0	17	0	4	0	62	194
5:15 PM	0	5	2	0	0	18	0	0	0	0	0	0	7	0	3	0	35	190
5:30 PM	0	12	2	0	0	8	0	0	0	0	0	0	7	0	0	0	29	163
5:45 PM	0	10	3	0	0	9	0	0	0	0	0	0	4	0	2	0	28	154

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	8	0	0	96	0	0	0	0	0	0	68	0	16	0	248
Heavy Trucks	0	16	0		0	0	0		0	0	0		0	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:37 PM

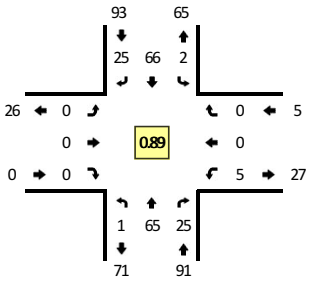
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

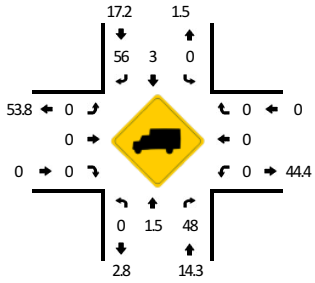
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- North Business Dwys
CITY/STATE: Warrenville, IL

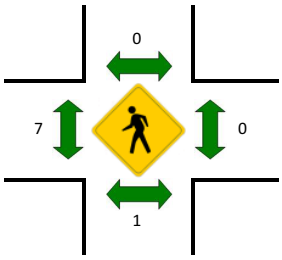
QC JOB #: 16849807
DATE: Tue, Dec 3 2024

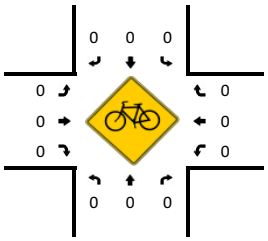
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

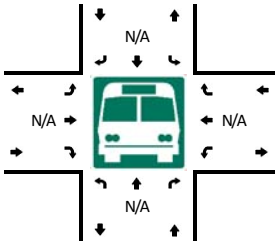


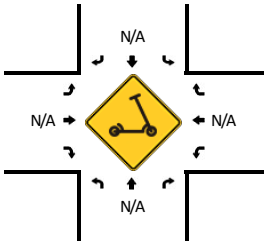


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				North Business Dwys (Eastbound)				North Business Dwys (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	6	5	0	0	10	6	0	0	0	0	0	0	0	0	0	29	
7:15 AM	2	6	2	0	0	16	13	0	0	0	0	0	2	0	0	0	41	
7:30 AM	1	10	4	0	0	12	6	0	0	0	0	0	2	0	0	0	35	
7:45 AM	0	16	8	0	0	10	7	0	0	0	0	0	2	0	0	0	43	148
8:00 AM	0	14	5	0	0	17	8	0	0	0	0	0	0	0	0	0	44	163
8:15 AM	0	19	6	0	2	21	5	0	0	0	0	0	0	0	0	0	53	175
8:30 AM	1	16	6	0	0	18	5	0	0	0	0	0	3	0	0	0	49	189
8:45 AM	0	14	9	0	1	16	4	0	0	0	0	0	0	0	0	0	44	190

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	76	24	0	8	84	20	0	0	0	0	0	0	0	0	0	212
Heavy Trucks	0	4	12		0	0	12		0	0	0		0	0	0		28
Buses																	
Pedestrians		0				0				12				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/18/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

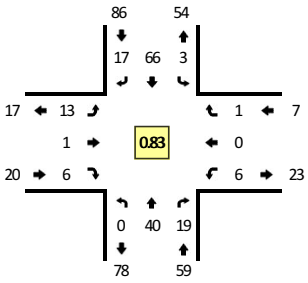
Type of peak hour being reported: System-wide Peak

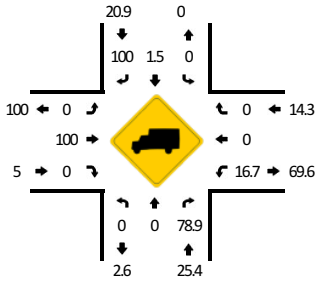
Method for determining peak hour: Total Entering Volume

LOCATION: Weaver Pkwy -- North Business Dwys
CITY/STATE: Warrenville, IL

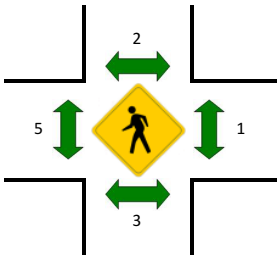
QC JOB #: 16849808
DATE: Tue, Dec 3 2024

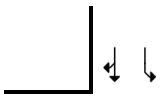
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

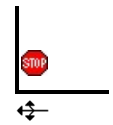


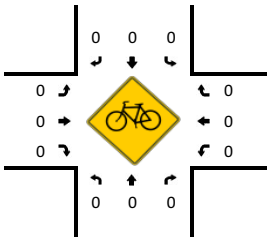


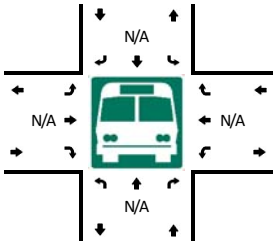
TRUE DATA TO IMPROVE MOBILITY

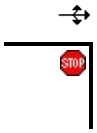


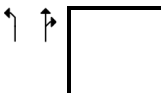


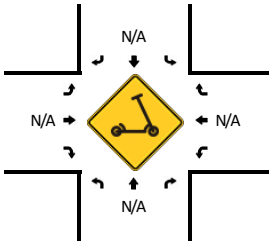












15-Min Count Period Beginning At	Weaver Pkwy (Northbound)				Weaver Pkwy (Southbound)				North Business Dwys (Eastbound)				North Business Dwys (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	11	2	0	0	11	2	0	0	1	0	0	2	0	0	0	29	
2:15 PM	0	11	1	0	2	11	1	0	0	0	0	0	3	0	0	0	29	
2:30 PM	0	21	6	0	0	10	2	0	8	0	0	0	4	0	1	0	52	
2:45 PM	0	7	1	0	0	12	1	0	1	1	0	0	0	0	0	0	23	133
3:00 PM	0	2	4	0	0	8	1	0	2	0	0	0	1	0	0	0	18	122
3:15 PM	0	7	1	0	0	6	2	0	1	2	0	0	2	0	1	0	22	115
3:30 PM	1	8	2	0	0	9	2	0	2	2	6	0	5	0	1	0	38	101
3:45 PM	0	4	2	0	0	11	1	0	0	1	1	0	1	0	0	0	21	99
4:00 PM	0	8	6	0	0	19	4	0	1	0	1	0	1	0	3	0	43	124
4:15 PM	0	10	2	0	0	12	3	0	4	1	2	0	1	0	1	0	36	138
4:30 PM	0	10	7	0	1	18	5	0	3	0	1	0	3	0	0	0	48	148
4:45 PM	0	5	6	0	0	14	5	0	3	0	2	0	1	0	0	0	36	163
5:00 PM	0	15	4	0	2	22	4	0	3	0	1	0	1	0	0	0	52	172
5:15 PM	0	6	2	0	1	13	4	0	2	2	2	0	3	0	0	0	35	171
5:30 PM	0	7	5	0	0	5	5	0	4	0	1	0	2	0	1	0	30	153
5:45 PM	0	7	5	0	1	8	1	0	0	0	0	0	1	0	0	0	23	140

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	16	0	8	88	16	0	12	0	4	0	4	0	0	0	208
Heavy Trucks	0	0	16		0	0	16		0	0	0		0	0	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

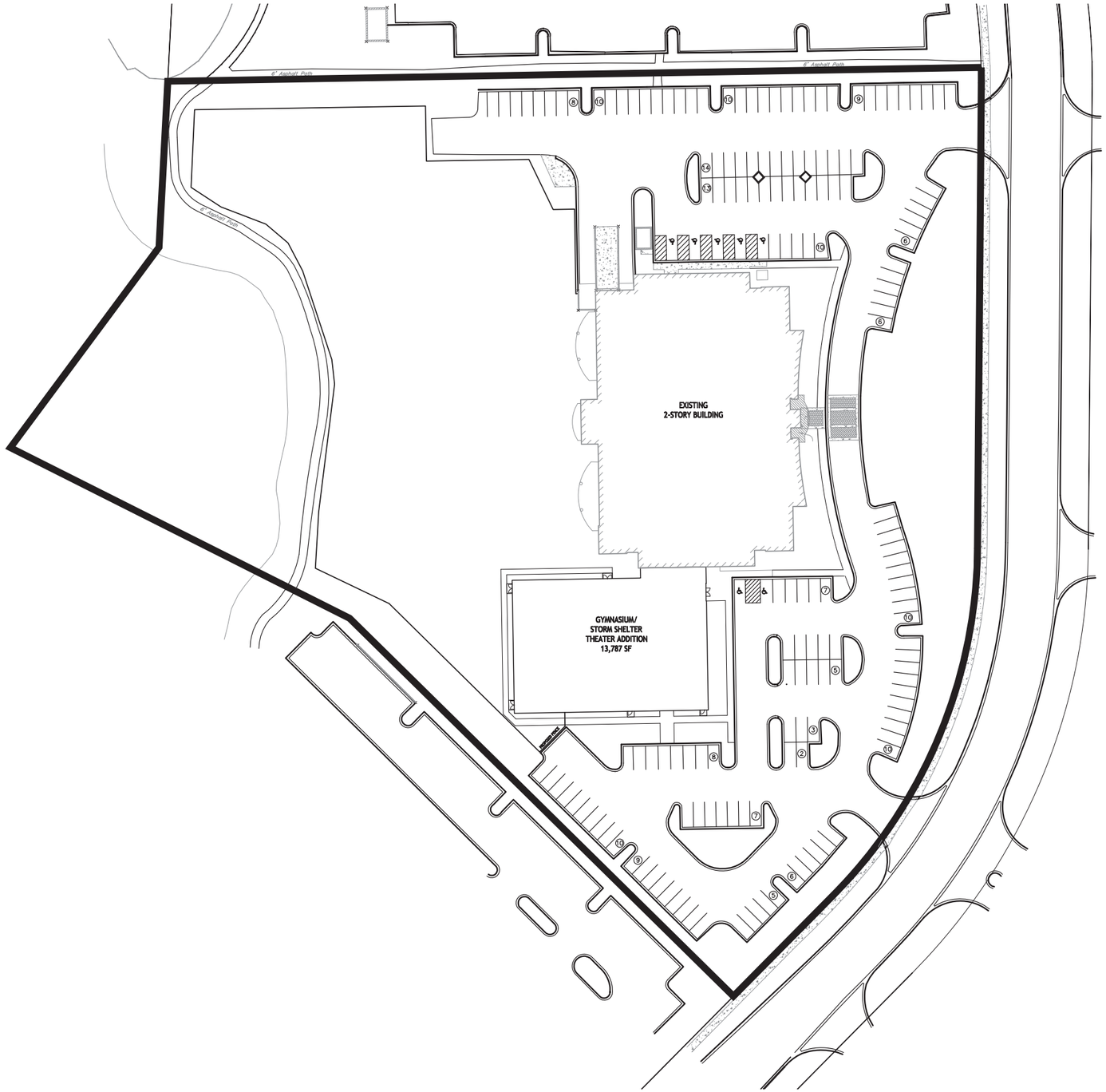
Report generated on 12/18/2024 12:37 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Site Plan

SITE PLAN
FOR
4520 WEAVER PARKWAY

WARRENVILLE, ILLINOIS



N

40 20 0 40

SCALE: 1 INCH = 40 FEET

PREPARED FOR:

W ESTATE, LLC
3644 WHITE EAGLE DRIVE
NAPERVILLE, ILLINOIS 60564

PREPARED BY:

CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60502–9675
PH: 630.862.2100 FAX: 630.862.2199
E–Mail: info@cemcon.com Website: www.cemcon.com

DISC NO.: 904503 FILE NAME: SITE PLAN
DRAWN BY: PRP FLD. BK. / PG. NO.: BK./PG.
COMPLETION DATE: 2–11–25 JOB NO.: 904.503
XREF : PROJECT MANAGER : RWB

PLOT FILE CREATED: 2/11/2025 BY: PETER PLUSKWA DRAWING PATH: P:\904503\DWG\ENGR\DRAWINGS\EXHIBITS\SITE PLAN.DWG

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

November 19, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Diehl Rd at Weaver Pkwy
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated November 18, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT (2020)	Year 2050 ADT
Diehl Road, at Weaver Parkway	8,100	10,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
S:\AdminGroups\ResearchAnalysis\2024_TrafficForecasts\Warrenville\du-55-24\du-55-24.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

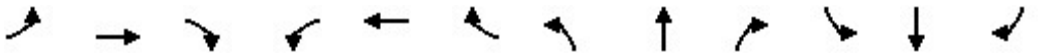
Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing

Weekday Morning Peak Hour



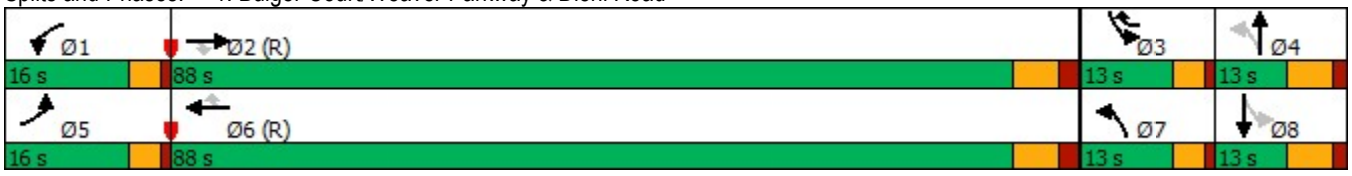
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	726	90	45	623	172	11	0	3	38	1	28
Future Volume (vph)	52	726	90	45	623	172	11	0	3	38	1	28
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.850			0.855	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3477	1599	1678	3410	1531	1711	1615	0	1671	1679	0
Flt Permitted	0.950			0.950						0.741		
Satd. Flow (perm)	3268	3477	1599	1678	3410	1531	1801	1615	0	1304	1679	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			179		371			29	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	4%	4%	2%	9%	0%	0%	8%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	756	94	47	649	179	11	3	0	40	30	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	16.0	88.0	88.0	16.0	88.0	13.0	13.0	13.0		13.0	13.0	
Total Split (%)	12.3%	67.7%	67.7%	12.3%	67.7%	10.0%	10.0%	10.0%		10.0%	10.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	7.6	95.5	95.5	8.9	96.9	114.6	8.2	5.8		12.5	6.5	
Actuated g/C Ratio	0.06	0.73	0.73	0.07	0.75	0.88	0.06	0.04		0.10	0.05	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.30	0.08	0.41	0.26	0.13	0.10	0.01		0.26	0.27	
Control Delay	61.9	7.5	1.9	67.9	6.7	0.6	54.4	0.0		55.1	26.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	61.9	7.5	1.9	67.9	6.7	0.6	54.4	0.0		55.1	26.4	
LOS	E	A	A	E	A	A	D	A		E	C	
Approach Delay		10.2			8.7			42.7			42.8	
Approach LOS		B			A			D			D	
Queue Length 50th (ft)	22	91	0	39	71	0	9	0		33	1	
Queue Length 95th (ft)	44	187	20	78	148	16	26	0		64	33	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	301	2554	1199	154	2541	1369	143	437		163	121	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.18	0.30	0.08	0.31	0.26	0.13	0.08	0.01		0.25	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 75 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 44.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	0	7	0	0	17	120	33	5	38	11
Future Vol, veh/h	13	0	0	7	0	0	17	120	33	5	38	11
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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	92	0	0	0	0	0	0	2	0	0	5	0
Mvmt Flow	14	0	0	7	0	0	18	126	35	5	40	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	236	253	46	236	242	144	52	0	0	161	0	0
Stage 1	56	56	-	180	180	-	-	-	-	-	-	-
Stage 2	180	197	-	56	62	-	-	-	-	-	-	-
Critical Hdwy	8.02	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	7.02	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.02	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.328	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	617	687	1029	778	697	965	1567	-	-	1448	-	-
Stage 1	771	852	-	870	775	-	-	-	-	-	-	-
Stage 2	695	761	-	961	847	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	611	677	1029	769	687	965	1567	-	-	1448	-	-
Mov Cap-2 Maneuver	602	664	-	756	673	-	-	-	-	-	-	-
Stage 1	763	849	-	860	766	-	-	-	-	-	-	-
Stage 2	687	753	-	958	844	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	9.8	0.7	0.7
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1567	-	-	602	756	-	1448	-	-
HCM Lane V/C Ratio	0.011	-	-	0.023	0.01	-	0.004	-	-
HCM Control Delay (s)	7.3	-	-	11.1	9.8	0	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	91	42	21	50
Future Vol, veh/h	4	1	91	42	21	50
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	14	2	0	2
Mvmt Flow	4	1	99	46	23	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	222	122	0	0	145	0
Stage 1	122	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	800	974	-	-	1462	-
Stage 1	929	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	787	974	-	-	1462	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	914	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	812	1462	-
HCM Lane V/C Ratio	-	-	0.007	0.016	-
HCM Control Delay (s)	-	-	9.5	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	0	0	0	5	0	0	1	66	25	2	66	25
Future Vol, veh/h	0	0	0	5	0	0	1	66	25	2	66	25
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	48	0	3	56
Mvmt Flow	0	0	0	6	0	0	1	74	28	2	74	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	182	196	88	182	196	88	102	0	0	102	0	0
Stage 1	92	92	-	90	90	-	-	-	-	-	-	-
Stage 2	90	104	-	92	106	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	807	717	976	807	717	1000	1503	-	-	1511	-	-
Stage 1	920	823	-	942	833	-	-	-	-	-	-	-
Stage 2	942	822	-	920	811	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	806	715	976	806	715	1000	1503	-	-	1511	-	-
Mov Cap-2 Maneuver	792	701	-	792	700	-	-	-	-	-	-	-
Stage 1	919	822	-	941	833	-	-	-	-	-	-	-
Stage 2	942	821	-	919	810	-	-	-	-	-	-	-

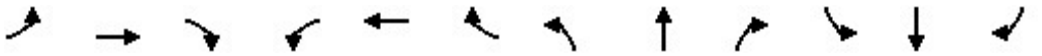
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0.1	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1503	-	-	-	792	1511	-	-
HCM Lane V/C Ratio	0.001	-	-	-	0.007	0.001	-	-
HCM Control Delay (s)	7.4	-	-	0	9.6	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Capacity Analysis Summary Sheets

Existing

Weekday Afternoon Peak Hour



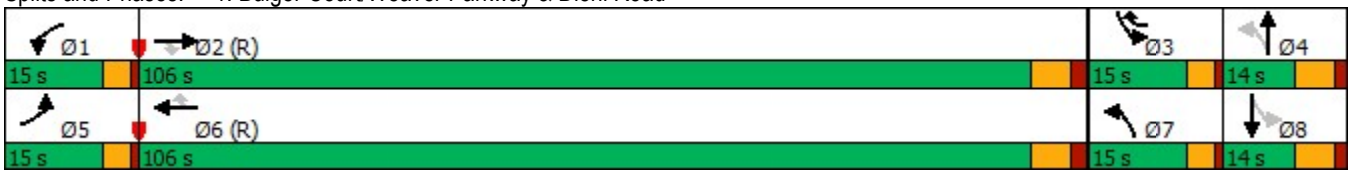
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	582	17	22	668	37	45	0	35	38	0	69
Future Volume (vph)	29	582	17	22	668	37	45	0	35	38	0	69
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	0.99								
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3512	1615	1745	3477	1369	1793	1524	0	1805	1620	0
Flt Permitted	0.950			0.950			0.667			0.734		
Satd. Flow (perm)	3268	3512	1580	1734	3477	1369	1259	1524	0	1395	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			51		439			391	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	14%	4%	0%	6%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	600	18	23	689	38	46	36	0	39	71	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	6.8	113.5	113.5	7.5	114.2	129.0	15.8	6.0		14.7	5.5	
Actuated g/C Ratio	0.05	0.76	0.76	0.05	0.76	0.86	0.11	0.04		0.10	0.04	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.23	0.01	0.26	0.26	0.03	0.28	0.07		0.25	0.16	
Control Delay	71.7	6.7	0.0	75.3	6.6	0.5	61.3	0.3		60.2	0.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.7	6.7	0.0	75.3	6.6	0.5	61.3	0.3		60.2	0.8	
LOS	E	A	A	E	A	A	E	A		E	A	
Approach Delay		9.5			8.4			34.5			21.9	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	14	96	0	22	112	0	41	0		34	0	
Queue Length 95th (ft)	32	138	0	54	156	5	80	0		70	0	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	239	2657	1215	127	2646	1208	188	496		188	456	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.23	0.01	0.18	0.26	0.03	0.24	0.07		0.21	0.16	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 37.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	5	22	0	2	0	37	7	3	60	0
Future Vol, veh/h	4	0	5	22	0	2	0	37	7	3	60	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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	75	0	0	0	0	0	0	3	14	0	2	0
Mvmt Flow	6	0	7	31	0	3	0	53	10	4	86	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	154	157	86	156	152	58	86	0	0	63	0	0
Stage 1	94	94	-	58	58	-	-	-	-	-	-	-
Stage 2	60	63	-	98	94	-	-	-	-	-	-	-
Critical Hdwy	7.85	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.175	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	693	752	978	837	757	1036	1523	-	-	1561	-	-
Stage 1	761	821	-	977	860	-	-	-	-	-	-	-
Stage 2	815	855	-	913	821	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	690	750	978	829	754	1036	1523	-	-	1561	-	-
Mov Cap-2 Maneuver	670	722	-	802	725	-	-	-	-	-	-	-
Stage 1	761	819	-	977	860	-	-	-	-	-	-	-
Stage 2	813	855	-	904	819	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.6	0	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1523	-	-	812	802	1036	1561	-	-
HCM Lane V/C Ratio	-	-	-	0.016	0.039	0.003	0.003	-	-
HCM Control Delay (s)	0	-	-	9.5	9.7	8.5	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	14	36	7	3	41
Future Vol, veh/h	22	14	36	7	3	41
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	7	11	0	0	2
Mvmt Flow	34	22	56	11	5	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	136	62	0	0	67	0
Stage 1	62	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.4	6.27	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	880	1010	-	-	1555	-
Stage 1	977	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	877	1010	-	-	1555	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	898	1555	-
HCM Lane V/C Ratio	-	-	0.063	0.003	-
HCM Control Delay (s)	-	-	9.3	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	12	3	0	7	0	2	0	38	12	0	37	6
Future Vol, veh/h	12	3	0	7	0	2	0	38	12	0	37	6
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	100	0	0	0	0	0	5	25	0	3	83
Mvmt Flow	22	5	0	13	0	4	0	69	22	0	67	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	164	73	155	158	80	78	0	0	91	0	0
Stage 1	73	73	-	80	80	-	-	-	-	-	-	-
Stage 2	82	91	-	75	78	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	838	596	995	838	751	1006	1533	-	-	1524	-	-
Stage 1	942	676	-	951	841	-	-	-	-	-	-	-
Stage 2	949	673	-	939	834	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	834	596	995	832	751	1006	1533	-	-	1524	-	-
Mov Cap-2 Maneuver	811	580	-	809	725	-	-	-	-	-	-	-
Stage 1	942	676	-	951	841	-	-	-	-	-	-	-
Stage 2	945	673	-	931	834	-	-	-	-	-	-	-

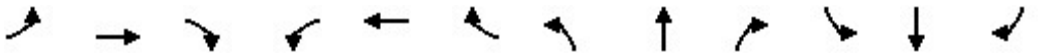
Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.3	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1533	-	-	751	846	1524	-	-
HCM Lane V/C Ratio	-	-	-	0.036	0.019	-	-	-
HCM Control Delay (s)	0	-	-	10	9.3	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Capacity Analysis Summary Sheets

Existing

Weekday Evening Peak Hour



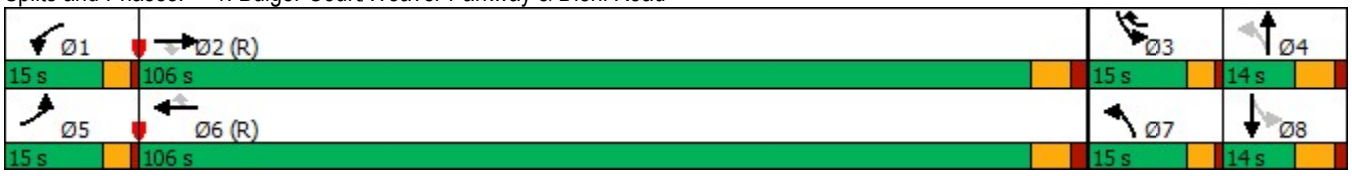
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	761	4	3	963	51	49	1	30	137	2	122
Future Volume (vph)	25	761	4	3	963	51	49	1	30	137	2	122
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00			1.00				0.98	
Frt			0.850			0.850		0.855			0.852	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3547	1615	1745	3477	1561	1760	1624	0	1805	1612	0
Flt Permitted	0.950			0.950			0.930			0.482		
Satd. Flow (perm)	3268	3547	1582	1741	3477	1561	1720	1624	0	916	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			53		31			126	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			1	1			1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	6%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	785	4	3	993	53	51	32	0	141	128	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	6.7	112.2	112.2	5.9	107.5	133.0	14.6	6.5		25.2	12.1	
Actuated g/C Ratio	0.04	0.75	0.75	0.04	0.72	0.89	0.10	0.04		0.17	0.08	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.18	0.30	0.00	0.04	0.40	0.04	0.30	0.32		0.55	0.52	
Control Delay	71.4	7.9	0.0	70.3	11.0	0.8	56.0	30.9		62.3	17.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.4	7.9	0.0	70.3	11.0	0.8	56.0	30.9		62.3	17.9	
LOS	E	A	A	E	B	A	E	C		E	B	
Approach Delay		9.9			10.6			46.3			41.2	
Approach LOS		A			B			D			D	
Queue Length 50th (ft)	12	120	0	3	220	0	42	1		123	2	
Queue Length 95th (ft)	29	230	0	15	321	9	78	38		180	65	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	239	2685	1217	127	2542	1382	194	117		257	250	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.11	0.29	0.00	0.02	0.39	0.04	0.26	0.27		0.55	0.51	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	39	14	0	2	0	23	0	0	127	1
Future Vol, veh/h	20	0	39	14	0	2	0	23	0	0	127	1
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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	75	0	0	0	0	0	0	0	0	0	2	0
Mvmt Flow	26	0	50	18	0	3	0	29	0	0	163	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	195	193	164	218	193	29	164	0	0	29	0	0
Stage 1	164	164	-	29	29	-	-	-	-	-	-	-
Stage 2	31	29	-	189	164	-	-	-	-	-	-	-
Critical Hdwy	7.85	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.175	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	633	708	886	747	708	1057	1427	-	-	1599	-	-
Stage 1	693	766	-	997	877	-	-	-	-	-	-	-
Stage 2	832	877	-	817	766	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	632	708	886	705	708	1057	1427	-	-	1599	-	-
Mov Cap-2 Maneuver	619	686	-	693	686	-	-	-	-	-	-	-
Stage 1	693	766	-	997	877	-	-	-	-	-	-	-
Stage 2	830	877	-	771	766	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	10.1	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1427	-	-	773	693	1057	1599	-	-
HCM Lane V/C Ratio	-	-	-	0.098	0.026	0.002	-	-	-
HCM Control Delay (s)	0	-	-	10.2	10.3	8.4	0	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	19	39	6	2	75
Future Vol, veh/h	53	19	39	6	2	75
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	0	38	0	0	3
Mvmt Flow	68	24	50	8	3	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	156	54	0	0	58	0
Stage 1	54	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	851	1041	-	-	1568	-
Stage 1	981	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	850	1041	-	-	1568	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	867	1568	-
HCM Lane V/C Ratio	-	-	0.106	0.002	-
HCM Control Delay (s)	-	-	9.6	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1	6	6	0	1	0	39	19	3	65	17
Future Vol, veh/h	13	1	6	6	0	1	0	39	19	3	65	17
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	100	0	17	0	0	0	0	79	0	2	100
Mvmt Flow	16	1	7	7	0	1	0	47	23	4	78	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	166	88	159	165	59	98	0	0	70	0	0
Stage 1	96	96	-	59	59	-	-	-	-	-	-	-
Stage 2	59	70	-	100	106	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.2	7.27	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.27	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.27	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.3	3.653	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	838	595	976	795	744	1034	1508	-	-	1552	-	-
Stage 1	916	659	-	935	859	-	-	-	-	-	-	-
Stage 2	976	689	-	871	811	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	835	593	976	786	742	1034	1508	-	-	1552	-	-
Mov Cap-2 Maneuver	809	576	-	763	716	-	-	-	-	-	-	-
Stage 1	916	657	-	935	859	-	-	-	-	-	-	-
Stage 2	975	689	-	861	809	-	-	-	-	-	-	-

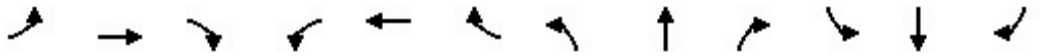
Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.6	0	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	835	793	1552	-	-
HCM Lane V/C Ratio	-	-	-	0.029	0.011	0.002	-	-
HCM Control Delay (s)	0	-	-	9.4	9.6	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Capacity Analysis Summary Sheets

Year 2030 No-Build

Weekday Morning Peak Hour



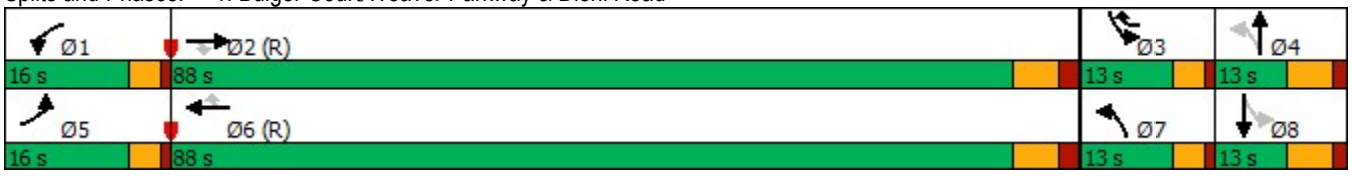
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	770	90	45	660	182	11	0	3	40	1	30
Future Volume (vph)	55	770	90	45	660	182	11	0	3	40	1	30
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.850			0.855	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3477	1599	1678	3410	1531	1711	1615	0	1671	1679	0
Flt Permitted	0.950			0.950						0.741		
Satd. Flow (perm)	3268	3477	1599	1678	3410	1531	1801	1615	0	1304	1679	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			190		352			31	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	4%	4%	2%	9%	0%	0%	8%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	802	94	47	688	190	11	3	0	42	32	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	16.0	88.0	88.0	16.0	88.0	13.0	13.0	13.0		13.0	13.0	
Total Split (%)	12.3%	67.7%	67.7%	12.3%	67.7%	10.0%	10.0%	10.0%		10.0%	10.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	7.7	95.5	95.5	8.9	96.7	114.4	8.2	5.8		12.5	6.5	
Actuated g/C Ratio	0.06	0.73	0.73	0.07	0.74	0.88	0.06	0.04		0.10	0.05	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.31	0.08	0.41	0.27	0.14	0.10	0.01		0.27	0.28	
Control Delay	62.0	7.7	1.9	67.9	6.8	0.6	54.4	0.0		55.4	26.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	62.0	7.7	1.9	67.9	6.8	0.6	54.4	0.0		55.4	26.2	
LOS	E	A	A	E	A	A	D	A		E	C	
Approach Delay		10.4			8.7			42.7			42.7	
Approach LOS		B			A			D			D	
Queue Length 50th (ft)	24	98	0	39	77	0	9	0		35	1	
Queue Length 95th (ft)	46	201	20	78	160	16	26	0		66	35	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	301	2553	1199	154	2536	1369	143	420		164	123	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.19	0.31	0.08	0.31	0.27	0.14	0.08	0.01		0.26	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 75 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 46.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	0	7	0	0	17	127	33	5	41	11
Future Vol, veh/h	13	0	0	7	0	0	17	127	33	5	41	11
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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	92	0	0	0	0	0	0	2	0	0	5	0
Mvmt Flow	14	0	0	7	0	0	18	134	35	5	43	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	264	49	247	253	152	55	0	0	169	0	0
Stage 1	59	59	-	188	188	-	-	-	-	-	-	-
Stage 2	188	205	-	59	65	-	-	-	-	-	-	-
Critical Hdwy	8.02	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	7.02	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.02	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.328	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	623	689	1025	784	698	974	1563	-	-	1445	-	-
Stage 1	768	850	-	876	775	-	-	-	-	-	-	-
Stage 2	704	762	-	958	845	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	617	678	1025	775	688	974	1563	-	-	1445	-	-
Mov Cap-2 Maneuver	608	664	-	760	673	-	-	-	-	-	-	-
Stage 1	759	847	-	865	766	-	-	-	-	-	-	-
Stage 2	696	753	-	955	842	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	9.8	0.7	0.7
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1563	-	-	608	760	-	1445	-	-
HCM Lane V/C Ratio	0.011	-	-	0.023	0.01	-	0.004	-	-
HCM Control Delay (s)	7.3	-	-	11.1	9.8	0	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	98	42	21	53
Future Vol, veh/h	4	1	98	42	21	53
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	14	2	0	2
Mvmt Flow	4	1	107	46	23	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	234	130	0	0	153	0
Stage 1	130	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	801	984	-	-	1459	-
Stage 1	933	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	788	984	-	-	1459	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	2.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	814	1459	-
HCM Lane V/C Ratio	-	-	0.007	0.016	-
HCM Control Delay (s)	-	-	9.5	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	0	1	73	25	2	69	25
Future Vol, veh/h	0	0	0	5	0	0	1	73	25	2	69	25
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	48	0	3	56
Mvmt Flow	0	0	0	6	0	0	1	82	28	2	78	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	194	208	92	194	208	96	106	0	0	110	0	0
Stage 1	96	96	-	98	98	-	-	-	-	-	-	-
Stage 2	98	112	-	96	110	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	812	718	971	812	718	1009	1498	-	-	1508	-	-
Stage 1	916	819	-	949	835	-	-	-	-	-	-	-
Stage 2	949	824	-	916	808	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	810	716	971	810	716	1009	1498	-	-	1508	-	-
Mov Cap-2 Maneuver	794	701	-	793	700	-	-	-	-	-	-	-
Stage 1	915	818	-	948	834	-	-	-	-	-	-	-
Stage 2	949	823	-	915	807	-	-	-	-	-	-	-

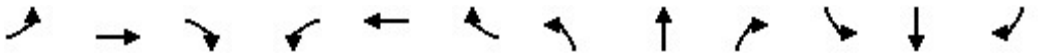
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0.1	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1498	-	-	-	793	1508	-	-
HCM Lane V/C Ratio	0.001	-	-	-	0.007	0.001	-	-
HCM Control Delay (s)	7.4	-	-	0	9.6	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Capacity Analysis Summary Sheets

Year 2030 No-Build

Weekday Afternoon Peak Hour



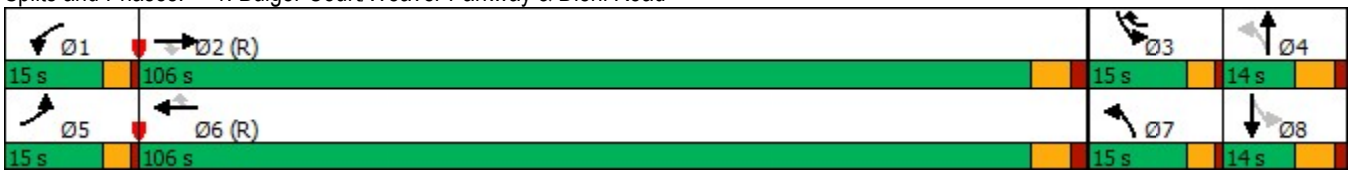
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	617	17	22	708	39	45	0	35	40	0	73
Future Volume (vph)	31	617	17	22	708	39	45	0	35	40	0	73
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	0.99								
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3512	1615	1745	3477	1369	1793	1524	0	1805	1620	0
Flt Permitted	0.950			0.950			0.678			0.734		
Satd. Flow (perm)	3268	3512	1580	1735	3477	1369	1280	1524	0	1395	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			51		419			372	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	14%	4%	0%	6%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	636	18	23	730	40	46	36	0	41	75	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	6.9	113.5	113.5	7.5	114.1	129.0	15.7	5.9		14.8	5.5	
Actuated g/C Ratio	0.05	0.76	0.76	0.05	0.76	0.86	0.10	0.04		0.10	0.04	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.21	0.24	0.01	0.26	0.28	0.03	0.28	0.08		0.26	0.18	
Control Delay	71.7	6.8	0.0	75.3	6.8	0.5	61.3	0.3		60.5	0.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.7	6.8	0.0	75.3	6.8	0.5	61.3	0.3		60.5	0.9	
LOS	E	A	A	E	A	A	E	A		E	A	
Approach Delay		9.6			8.5			34.5			22.0	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	15	103	0	22	121	0	41	0		36	0	
Queue Length 95th (ft)	34	147	0	54	167	5	80	0		74	0	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	239	2657	1215	127	2643	1207	188	477		189	438	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.24	0.01	0.18	0.28	0.03	0.24	0.08		0.22	0.17	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	5	22	0	2	0	39	7	3	64	0
Future Vol, veh/h	4	0	5	22	0	2	0	39	7	3	64	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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	75	0	0	0	0	0	0	3	14	0	2	0
Mvmt Flow	6	0	7	31	0	3	0	56	10	4	91	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	162	165	91	164	160	61	91	0	0	66	0	0
Stage 1	99	99	-	61	61	-	-	-	-	-	-	-
Stage 2	63	66	-	103	99	-	-	-	-	-	-	-
Critical Hdwy	7.85	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.175	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	685	744	972	826	749	1032	1517	-	-	1557	-	-
Stage 1	756	817	-	974	857	-	-	-	-	-	-	-
Stage 2	812	852	-	908	817	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	681	742	972	819	747	1032	1517	-	-	1557	-	-
Mov Cap-2 Maneuver	664	717	-	796	720	-	-	-	-	-	-	-
Stage 1	756	815	-	974	857	-	-	-	-	-	-	-
Stage 2	810	852	-	899	815	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.6	0	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1517	-	-	806	796	1032	1557	-	-
HCM Lane V/C Ratio	-	-	-	0.016	0.039	0.003	0.003	-	-
HCM Control Delay (s)	0	-	-	9.5	9.7	8.5	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	14	38	7	3	45
Future Vol, veh/h	22	14	38	7	3	45
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	7	11	0	0	2
Mvmt Flow	34	22	59	11	5	70

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	145	65	0	0	70	0
Stage 1	65	-	-	-	-	-
Stage 2	80	-	-	-	-	-
Critical Hdwy	6.4	6.27	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	869	1006	-	-	1552	-
Stage 1	974	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	866	1006	-	-	1552	-
Mov Cap-2 Maneuver	832	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	892	1552	-
HCM Lane V/C Ratio	-	-	0.063	0.003	-
HCM Control Delay (s)	-	-	9.3	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	3	0	7	0	2	0	40	12	0	41	6
Future Vol, veh/h	12	3	0	7	0	2	0	40	12	0	41	6
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	100	0	0	0	0	0	5	25	0	3	83
Mvmt Flow	22	5	0	13	0	4	0	73	22	0	75	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	167	176	81	167	170	84	86	0	0	95	0	0
Stage 1	81	81	-	84	84	-	-	-	-	-	-	-
Stage 2	86	95	-	83	86	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	822	586	985	822	739	1002	1523	-	-	1518	-	-
Stage 1	932	670	-	947	838	-	-	-	-	-	-	-
Stage 2	944	670	-	930	827	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	819	586	985	816	739	1002	1523	-	-	1518	-	-
Mov Cap-2 Maneuver	801	573	-	798	717	-	-	-	-	-	-	-
Stage 1	932	670	-	947	838	-	-	-	-	-	-	-
Stage 2	941	670	-	922	827	-	-	-	-	-	-	-

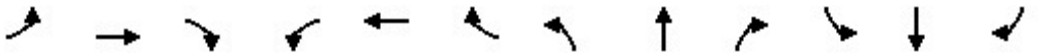
Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.4	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1523	-	-	742	836	1518	-	-
HCM Lane V/C Ratio	-	-	-	0.037	0.02	-	-	-
HCM Control Delay (s)	0	-	-	10	9.4	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Capacity Analysis Summary Sheets

Year 2030 No-Build

Weekday Evening Peak Hour



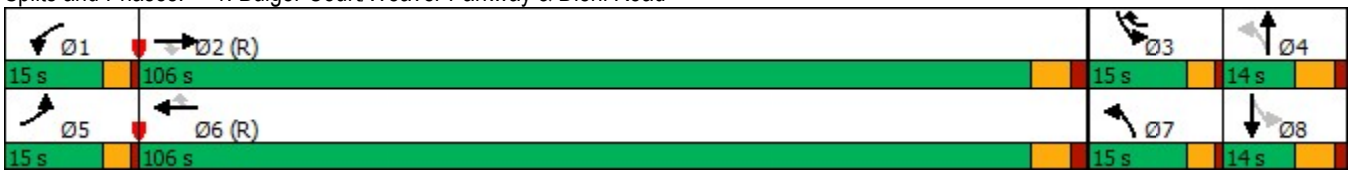
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	807	4	3	1021	54	49	1	30	145	2	129
Future Volume (vph)	27	807	4	3	1021	54	49	1	30	145	2	129
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00			1.00				0.98	
Frt			0.850			0.850		0.855			0.852	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3547	1615	1745	3477	1561	1760	1624	0	1805	1612	0
Flt Permitted	0.950			0.950			0.930			0.482		
Satd. Flow (perm)	3268	3547	1582	1741	3477	1561	1720	1624	0	916	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			56		31			133	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			1	1			1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	6%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	832	4	3	1053	56	51	32	0	149	135	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	6.8	112.3	112.3	5.9	107.6	132.9	14.6	6.5		25.1	12.0	
Actuated g/C Ratio	0.05	0.75	0.75	0.04	0.72	0.89	0.10	0.04		0.17	0.08	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.19	0.31	0.00	0.04	0.42	0.04	0.30	0.32		0.58	0.54	
Control Delay	71.5	8.1	0.0	70.3	11.3	0.8	56.0	30.9		63.9	17.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.5	8.1	0.0	70.3	11.3	0.8	56.0	30.9		63.9	17.8	
LOS	E	A	A	E	B	A	E	C		E	B	
Approach Delay		10.1			10.9			46.3			42.0	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	13	119	0	3	224	0	43	1		134	2	
Queue Length 95th (ft)	31	252	0	15	355	9	77	38		187	66	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	239	2693	1220	127	2552	1381	194	117		255	255	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.12	0.31	0.00	0.02	0.41	0.04	0.26	0.27		0.58	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 52.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	39	14	0	2	0	25	0	0	135	1
Future Vol, veh/h	20	0	39	14	0	2	0	25	0	0	135	1
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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	75	0	0	0	0	0	0	0	0	0	2	0
Mvmt Flow	26	0	50	18	0	3	0	32	0	0	173	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	208	206	174	231	206	32	174	0	0	32	0	0
Stage 1	174	174	-	32	32	-	-	-	-	-	-	-
Stage 2	34	32	-	199	174	-	-	-	-	-	-	-
Critical Hdwy	7.85	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.85	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.175	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	621	697	875	732	697	1053	1415	-	-	1595	-	-
Stage 1	684	759	-	993	874	-	-	-	-	-	-	-
Stage 2	828	874	-	807	759	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	619	697	875	690	697	1053	1415	-	-	1595	-	-
Mov Cap-2 Maneuver	610	678	-	682	678	-	-	-	-	-	-	-
Stage 1	684	759	-	993	874	-	-	-	-	-	-	-
Stage 2	826	874	-	761	759	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	10.2	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1415	-	-	763	682	1053	1595	-	-
HCM Lane V/C Ratio	-	-	-	0.099	0.026	0.002	-	-	-
HCM Control Delay (s)	0	-	-	10.2	10.4	8.4	0	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	19	41	6	2	83
Future Vol, veh/h	53	19	41	6	2	83
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	0	38	0	0	3
Mvmt Flow	68	24	53	8	3	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	169	57	0	0	61	0
Stage 1	57	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	837	1037	-	-	1563	-
Stage 1	977	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	835	1037	-	-	1563	-
Mov Cap-2 Maneuver	807	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	857	1563	-
HCM Lane V/C Ratio	-	-	0.108	0.002	-
HCM Control Delay (s)	-	-	9.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1	6	6	0	1	0	41	19	3	73	17
Future Vol, veh/h	13	1	6	6	0	1	0	41	19	3	73	17
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	100	0	17	0	0	0	0	79	0	2	100
Mvmt Flow	16	1	7	7	0	1	0	49	23	4	88	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	167	178	98	171	177	61	108	0	0	72	0	0
Stage 1	106	106	-	61	61	-	-	-	-	-	-	-
Stage 2	61	72	-	110	116	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.2	7.27	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.27	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.27	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.3	3.653	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	822	584	963	780	733	1032	1495	-	-	1549	-	-
Stage 1	905	652	-	932	857	-	-	-	-	-	-	-
Stage 2	974	688	-	860	803	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	820	582	963	772	731	1032	1495	-	-	1549	-	-
Mov Cap-2 Maneuver	798	568	-	753	708	-	-	-	-	-	-	-
Stage 1	905	650	-	932	857	-	-	-	-	-	-	-
Stage 2	973	688	-	850	801	-	-	-	-	-	-	-

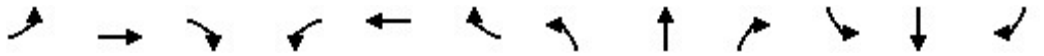
Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.6	0	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	824	783	1549	-	-
HCM Lane V/C Ratio	-	-	-	0.029	0.011	0.002	-	-
HCM Control Delay (s)	0	-	-	9.5	9.6	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Capacity Analysis Summary Sheets

Year 2030 Total Projected

Weekday Morning Peak Hour



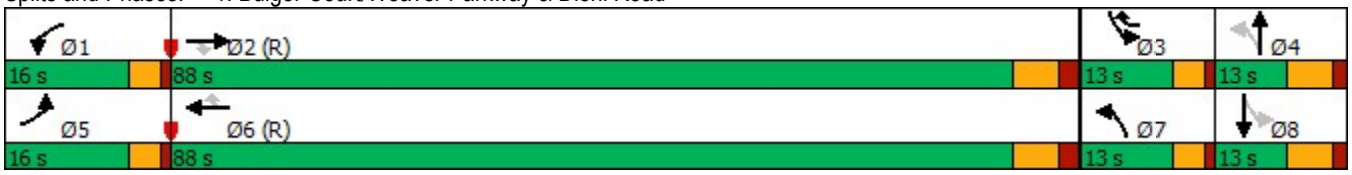
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	229	770	90	45	660	358	11	0	3	154	1	146
Future Volume (vph)	229	770	90	45	660	358	11	0	3	154	1	146
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.850			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3477	1599	1678	3410	1531	1711	1615	0	1671	1671	0
Flt Permitted	0.950			0.950						0.741		
Satd. Flow (perm)	3268	3477	1599	1678	3410	1531	1801	1615	0	1304	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			415		304			172	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.96	0.96	0.96	0.96	0.85	0.96	0.96	0.96	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	4%	4%	2%	9%	0%	0%	8%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	802	94	47	688	421	11	3	0	181	173	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	16.0	88.0	88.0	16.0	88.0	13.0	13.0	13.0		13.0	13.0	
Total Split (%)	12.3%	67.7%	67.7%	12.3%	67.7%	10.0%	10.0%	10.0%		10.0%	10.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	15.1	88.6	88.6	8.9	80.5	104.3	8.2	5.8		19.4	13.4	
Actuated g/C Ratio	0.12	0.68	0.68	0.07	0.62	0.80	0.06	0.04		0.15	0.10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.71	0.34	0.08	0.41	0.33	0.32	0.10	0.01		0.75	0.53	
Control Delay	65.9	10.1	2.0	67.9	12.8	1.1	54.4	0.0		71.2	14.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	65.9	10.1	2.0	67.9	12.8	1.1	54.4	0.0		71.2	14.8	
LOS	E	B	A	E	B	A	D	A		E	B	
Approach Delay		22.3			10.7			42.7			43.6	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	112	146	0	39	147	1	9	0		145	1	
Queue Length 95th (ft)	#178	201	20	78	168	19	26	0		#242	60	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	380	2372	1121	154	2177	1310	143	374		242	326	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.71	0.34	0.08	0.31	0.32	0.32	0.08	0.01		0.75	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 75 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 20.3 Intersection LOS: C
Intersection Capacity Utilization 52.8% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	230	7	0	0	55	439	33	5	41	0
Future Vol, veh/h	0	0	230	7	0	0	55	439	33	5	41	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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	95	95	95	70	95	95	95	95	70
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	5	0
Mvmt Flow	0	0	329	7	0	0	79	462	35	5	43	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	691	708	43	856	691	480	43	0	0	497	0	0
Stage 1	53	53	-	638	638	-	-	-	-	-	-	-
Stage 2	638	655	-	218	53	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	450	406	1033	308	420	*720	1579	-	-	*1080	-	-
Stage 1	965	855	-	536	491	-	-	-	-	-	-	-
Stage 2	536	478	-	789	855	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	431	384	1033	201	397	*720	1579	-	-	*1080	-	-
Mov Cap-2 Maneuver	451	403	-	311	416	-	-	-	-	-	-	-
Stage 1	917	851	-	509	466	-	-	-	-	-	-	-
Stage 2	509	454	-	536	851	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	16.9	1	0.9
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1579	-	-	1033	311	-	* 1080	-	-
HCM Lane V/C Ratio	0.05	-	-	0.318	0.024	-	0.005	-	-
HCM Control Delay (s)	7.4	-	-	10.1	16.9	0	8.3	-	-
HCM Lane LOS	A	-	-	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.4	0.1	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	14	380	59	32	42
Future Vol, veh/h	4	14	380	59	32	42
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	14	2	0	2
Mvmt Flow	4	15	413	64	35	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	561	445	0	0	477	0
Stage 1	445	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	583	766	-	-	1107	-
Stage 1	723	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	564	766	-	-	1107	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	3.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	725	1107	-
HCM Lane V/C Ratio	-	-	0.027	0.031	-
HCM Control Delay (s)	-	-	10.1	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	0	295	73	26	27	69	0
Future Vol, veh/h	0	0	0	5	0	0	295	73	26	27	69	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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	89	89	89	70	89	89	89	89	70
Heavy Vehicles, %	0	0	0	0	0	0	0	2	48	0	3	56
Mvmt Flow	0	0	0	6	0	0	421	82	29	30	78	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1077	1091	78	1077	1077	97	78	0	0	111	0	0
Stage 1	138	138	-	939	939	-	-	-	-	-	-	-
Stage 2	939	953	-	138	138	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	196	212	988	196	216	1007	1533	-	-	1506	-	-
Stage 1	870	786	-	315	339	-	-	-	-	-	-	-
Stage 2	315	333	-	870	786	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	152	150	988	152	154	1007	1533	-	-	1506	-	-
Mov Cap-2 Maneuver	178	188	-	193	198	-	-	-	-	-	-	-
Stage 1	631	770	-	228	246	-	-	-	-	-	-	-
Stage 2	229	242	-	853	770	-	-	-	-	-	-	-

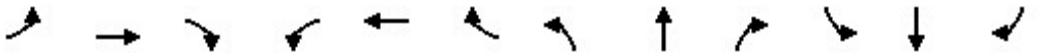
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	24.2	6.5	2.1
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1533	-	-	-	193	1506	-	-
HCM Lane V/C Ratio	0.275	-	-	-	0.029	0.02	-	-
HCM Control Delay (s)	8.2	-	-	0	24.2	7.4	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-	0.1	0.1	-	-

Capacity Analysis Summary Sheets

Year 2030 Total Projected

Weekday Afternoon Peak Hour



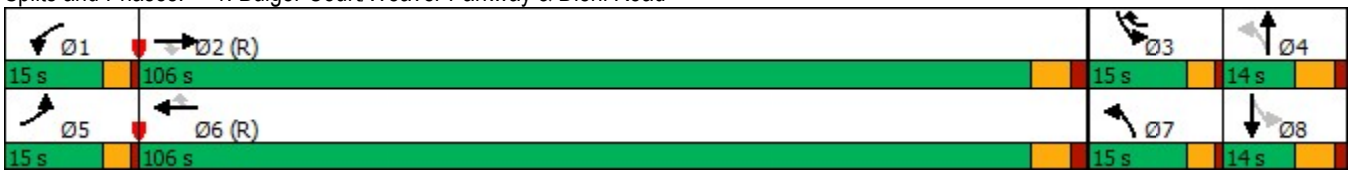
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	617	17	22	708	65	45	0	35	89	0	124
Future Volume (vph)	55	617	17	22	708	65	45	0	35	89	0	124
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	0.99								
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3512	1615	1745	3477	1369	1793	1524	0	1805	1620	0
Flt Permitted	0.950			0.950			0.909			0.476		
Satd. Flow (perm)	3268	3512	1580	1735	3477	1369	1716	1524	0	904	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			76		382			376	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.97	0.97	0.97	0.97	0.85	0.97	0.97	0.97	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	14%	4%	0%	6%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	636	18	23	730	76	46	36	0	105	146	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	8.4	109.4	109.4	7.5	106.6	127.2	14.7	5.5		22.5	9.8	
Actuated g/C Ratio	0.06	0.73	0.73	0.05	0.71	0.85	0.10	0.04		0.15	0.07	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.25	0.02	0.26	0.30	0.06	0.27	0.09		0.49	0.32	
Control Delay	73.2	8.4	0.0	75.3	9.7	0.7	56.6	0.4		63.3	1.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	73.2	8.4	0.0	75.3	9.7	0.7	56.6	0.4		63.3	1.8	
LOS	E	A	A	E	A	A	E	A		E	A	
Approach Delay		14.1			10.7			31.9			27.5	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	31	115	0	22	140	0	39	0		92	0	
Queue Length 95th (ft)	54	169	0	54	202	8	76	0		139	0	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	239	2578	1181	127	2491	1170	201	442		221	459	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.27	0.25	0.02	0.18	0.29	0.06	0.23	0.08		0.48	0.32	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 15.2 Intersection LOS: B
Intersection Capacity Utilization 48.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	85	22	0	2	5	84	7	3	84	0
Future Vol, veh/h	0	0	85	22	0	2	5	84	7	3	84	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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	3	14	0	2	0
Mvmt Flow	0	0	121	31	0	3	7	120	10	4	120	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	269	272	120	328	267	125	120	0	0	130	0	0
Stage 1	128	128	-	139	139	-	-	-	-	-	-	-
Stage 2	141	144	-	189	128	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	730	664	937	664	669	982	1480	-	-	1486	-	-
Stage 1	881	794	-	910	806	-	-	-	-	-	-	-
Stage 2	908	801	-	817	794	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	723	659	937	574	663	982	1480	-	-	1486	-	-
Mov Cap-2 Maneuver	735	662	-	608	664	-	-	-	-	-	-	-
Stage 1	877	792	-	906	802	-	-	-	-	-	-	-
Stage 2	901	797	-	709	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	11	0.4	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1480	-	-	937	608	982	1486	-	-
HCM Lane V/C Ratio	0.005	-	-	0.13	0.052	0.003	0.003	-	-
HCM Control Delay (s)	7.4	-	-	9.4	11.2	8.7	7.4	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	18	79	7	3	60
Future Vol, veh/h	27	18	79	7	3	60
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	7	11	0	0	2
Mvmt Flow	42	28	123	11	5	94

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	233	129	0	0	134	0
Stage 1	129	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.27	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	-	-	2.2	-
Pot Cap-1 Maneuver	784	941	-	-	1474	-
Stage 1	920	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	782	941	-	-	1474	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	922	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	835	1474	-
HCM Lane V/C Ratio	-	-	0.084	0.003	-
HCM Control Delay (s)	-	-	9.7	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	0	0	15	7	0	17	45	40	12	6	41	0
Future Vol, veh/h	0	0	15	7	0	17	45	40	12	6	41	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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	0	0	0	0	0	0	5	25	83	3	0
Mvmt Flow	0	0	27	13	0	31	82	73	22	11	75	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	361	356	75	359	345	84	75	0	0	95	0	0
Stage 1	97	97	-	248	248	-	-	-	-	-	-	-
Stage 2	264	259	-	111	97	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.93	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.947	-	-
Pot Cap-1 Maneuver	610	580	992	611	588	1002	1537	-	-	1125	-	-
Stage 1	914	819	-	771	710	-	-	-	-	-	-	-
Stage 2	756	702	-	899	819	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	563	544	992	566	552	1002	1537	-	-	1125	-	-
Mov Cap-2 Maneuver	592	568	-	602	569	-	-	-	-	-	-	-
Stage 1	866	811	-	730	672	-	-	-	-	-	-	-
Stage 2	693	665	-	866	811	-	-	-	-	-	-	-

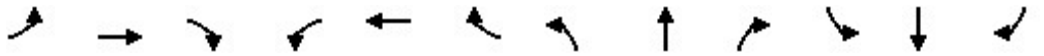
Approach	EB	WB	NB	SB
HCM Control Delay, s	8.7	9.5	3.5	1.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	992	839	1125	-	-
HCM Lane V/C Ratio	0.053	-	-	0.027	0.052	0.01	-	-
HCM Control Delay (s)	7.5	-	-	8.7	9.5	8.2	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.2	0	-	-

Capacity Analysis Summary Sheets

Year 2030 Total Projected

Weekday Evening Peak Hour



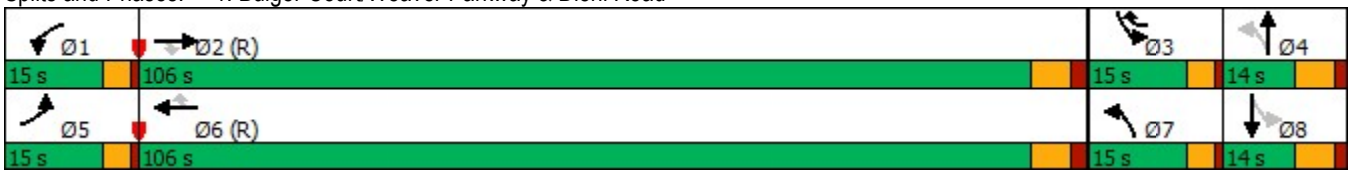
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	807	4	3	1021	99	49	1	30	212	2	197
Future Volume (vph)	72	807	4	3	1021	99	49	1	30	212	2	197
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	11	10	11	13	12	12	12	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		130	140		140	110		0	140		0
Storage Lanes	2		1	1		1	1		0	1		0
Taper Length (ft)	300			170			170			160		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00			1.00				0.98	
Frt			0.850			0.850		0.855			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3268	3547	1615	1745	3477	1561	1760	1624	0	1805	1610	0
Flt Permitted	0.950			0.950			0.930			0.482		
Satd. Flow (perm)	3268	3547	1582	1741	3477	1561	1720	1624	0	916	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			102		31			203	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		828			852			411			757	
Travel Time (s)		14.1			14.5			9.3			17.2	
Confl. Peds. (#/hr)			1	1			1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	6%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	832	4	3	1053	102	51	32	0	219	205	0
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6	4			8		
Detector Phase	5	2	2	1	6	3	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	3.0	3.0	4.0		3.0	4.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	9.5	13.0		9.5	13.0	
Total Split (s)	15.0	106.0	106.0	15.0	106.0	15.0	15.0	14.0		15.0	14.0	
Total Split (%)	10.0%	70.7%	70.7%	10.0%	70.7%	10.0%	10.0%	9.3%		10.0%	9.3%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.5	6.5	4.0	6.5	4.0	4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	8.8	103.6	103.6	5.9	92.9	125.3	14.3	6.5		33.8	20.9	
Actuated g/C Ratio	0.06	0.69	0.69	0.04	0.62	0.84	0.10	0.04		0.23	0.14	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.39	0.34	0.00	0.04	0.49	0.08	0.31	0.32		0.61	0.51	
Control Delay	73.4	11.5	0.0	70.3	18.2	0.8	51.2	30.9		57.1	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	73.4	11.5	0.0	70.3	18.2	0.8	51.2	30.9		57.1	11.6	
LOS	E	B	A	E	B	A	D	C		E	B	
Approach Delay		16.5			16.8			43.4			35.1	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	36	166	0	3	301	0	39	1		185	2	
Queue Length 95th (ft)	63	288	0	15	425	13	71	38		251	73	
Internal Link Dist (ft)		748			772			331			677	
Turn Bay Length (ft)	275		130	140		140	110			140		
Base Capacity (vph)	240	2524	1149	127	2359	1321	193	117		360	399	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.31	0.33	0.00	0.02	0.45	0.08	0.26	0.27		0.61	0.51	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 9 (6%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 20.5 Intersection LOS: C
Intersection Capacity Utilization 60.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Bulger Court/Weaver Parkway & Diehl Road



Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	105	14	0	2	0	115	0	0	204	0
Future Vol, veh/h	0	0	105	14	0	2	0	115	0	0	204	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	-	-	-	55	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	78	78	78	85	78	78	78	78	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	2	0
Mvmt Flow	0	0	124	18	0	3	0	147	0	0	262	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	411	409	262	471	409	147	262	0	0	147	0	0
Stage 1	262	262	-	147	147	-	-	-	-	-	-	-
Stage 2	149	147	-	324	262	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	590	557	782	535	557	970	1314	-	-	1470	-	-
Stage 1	747	695	-	916	806	-	-	-	-	-	-	-
Stage 2	913	806	-	692	695	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	588	557	782	450	557	970	1314	-	-	1470	-	-
Mov Cap-2 Maneuver	634	589	-	505	589	-	-	-	-	-	-	-
Stage 1	747	695	-	916	806	-	-	-	-	-	-	-
Stage 2	910	806	-	583	695	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	11.9	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1314	-	-	782	505	970	1470	-	-
HCM Lane V/C Ratio	-	-	-	0.158	0.036	0.003	-	-	-
HCM Control Delay (s)	0	-	-	10.5	12.4	8.7	0	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	39	111	6	3	112
Future Vol, veh/h	92	39	111	6	3	112
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	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	0	38	0	0	3
Mvmt Flow	118	50	142	8	4	144

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	298	146	0	0	150	0
Stage 1	146	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	733	971	-	-	1466	-
Stage 1	916	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	731	971	-	-	1466	-
Mov Cap-2 Maneuver	741	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	797	1466	-
HCM Lane V/C Ratio	-	-	0.211	0.003	-
HCM Control Delay (s)	-	-	10.7	7.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	30	12	0	15	90	41	19	20	73	0
Future Vol, veh/h	0	0	30	12	0	15	90	41	19	20	73	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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	83	83	83	85	83	83	83	83	85
Heavy Vehicles, %	0	0	0	17	0	0	0	0	79	85	2	0
Mvmt Flow	0	0	35	14	0	18	106	49	23	24	88	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	418	420	88	427	409	61	88	0	0	72	0	0
Stage 1	136	136	-	273	273	-	-	-	-	-	-	-
Stage 2	282	284	-	154	136	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.27	6.5	6.2	4.1	-	-	4.95	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.27	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.27	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.653	4	3.3	2.2	-	-	2.965	-	-
Pot Cap-1 Maneuver	558	533	976	522	541	1032	1520	-	-	1144	-	-
Stage 1	872	788	-	711	691	-	-	-	-	-	-	-
Stage 2	739	684	-	814	788	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	510	485	976	469	493	1032	1520	-	-	1144	-	-
Mov Cap-2 Maneuver	554	523	-	516	523	-	-	-	-	-	-	-
Stage 1	811	771	-	661	643	-	-	-	-	-	-	-
Stage 2	676	636	-	768	771	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	10.3	4.5	1.8
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	976	714	1144	-	-
HCM Lane V/C Ratio	0.07	-	-	0.036	0.046	0.021	-	-
HCM Control Delay (s)	7.5	-	-	8.8	10.3	8.2	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.1	0.1	-	-