Attachment 6

Buckwalter Parkway Healthcare Development

Traffic Impact Analysis

Bluffton, South Carolina

Prepared for

E4H – Environments for Health, LLC

Prepared by

Kimley»Horn

July 2024

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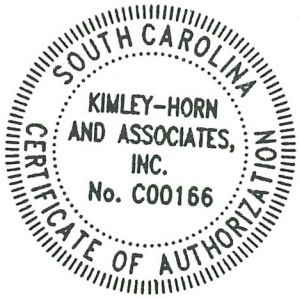

July 22, 2024

July 2024

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Executive Summary

The proposed Buckwalter Parkway Healthcare Development is located in the southeast quadrant of the Buckwalter Parkway at Parkside Drive/Mott Street intersection in Bluffton, South Carolina. This development is planned to consist of 50,250 square feet of medical office buildings. Based on the conceptual site plan provided in **Appendix A**, it is assumed that the project will access the roadway network through a new driveway along Buckwalter Parkway and a new driveway along Parkside Drive.

The project is proposed to be constructed and fully occupied by 2029. This study summarizes the results of the traffic analyses at the following study intersections:

1. US 278 (Fording Island Road) at Buckwalter Parkway
2. Buckwalter Parkway at Parkside Drive/Mott Street
3. Buckwalter Parkway at Ludlow Street/Site Access A
4. Buckwalter Parkway at Buckwalter Place Boulevard
5. Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard
6. Parkside Drive at Site Access B

Based on the results of the traffic analyses, the following improvements are recommended to mitigate the impact of the proposed development's traffic on the study area intersections:

US 278 (Fording Island Road) at Buckwalter Parkway

- No capacity improvements are recommended at this intersection.

Buckwalter Parkway at Parkside Drive/Mott Street

- Conduct a full signal warrant analysis per the Manual on Uniform Traffic Control Devices (MUTCD) once the development is built out and operational. When warranted, convert to a signalized intersection. This signal should be placed under coordination with the adjacent signal at Buckwalter Place Boulevard.

Buckwalter Parkway at Ludlow Street/Site Access A

- Construct Site Access A as a right-in/right-out driveway.
- Construct a northbound right-turn along Buckwalter Parkway with a full-width storage length of 250 feet and a taper length of 150 feet.
- Remove the existing southbound and northbound left-turn lane along Buckwalter Parkway and extend the raised median through the intersection.

Buckwalter Parkway at Buckwalter Place Boulevard

- No capacity improvements are recommended at this intersection.

Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard

- No capacity improvements are recommended at this intersection.

1 Introduction

The proposed Buckwalter Parkway Healthcare Development is located in the southeast quadrant of the Buckwalter Parkway at Parkside Drive/Mott Street intersection in Bluffton, South Carolina. This development is planned to consist of 50,250 square feet of medical office buildings. It is assumed that the project will access the roadway network through a new driveway along Buckwalter Parkway and a driveway along Parkside Drive. The location of the proposed development and conceptual site plan are illustrated in **Figure 1** and **Figure 2**, respectively. A conceptual site plan is also provided in **Appendix A**.

The project is proposed to be constructed and fully occupied by 2029. This study summarizes the results of the traffic analyses for the 2024 Existing, 2029 No-Build, and 2029 Build conditions at the following study intersections:

1. US 278 (Fording Island Road) at Buckwalter Parkway
2. Buckwalter Parkway at Parkside Drive/Mott Street
3. Buckwalter Parkway at Ludlow Street/Site Access A
4. Buckwalter Parkway at Buckwalter Place Boulevard
5. Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard
6. Parkside Drive at Site Access B

1.1 Existing Conditions

US 278 (Fording Island Road) is a divided, six-lane rural principal arterial with a posted speed limit of 55 miles per hour (mph). According to SCDOT count station data, US 278 (Fording Island Road) carried an annual average daily (AADT) traffic count of 65,500 vehicles per day (vpd) in 2022.

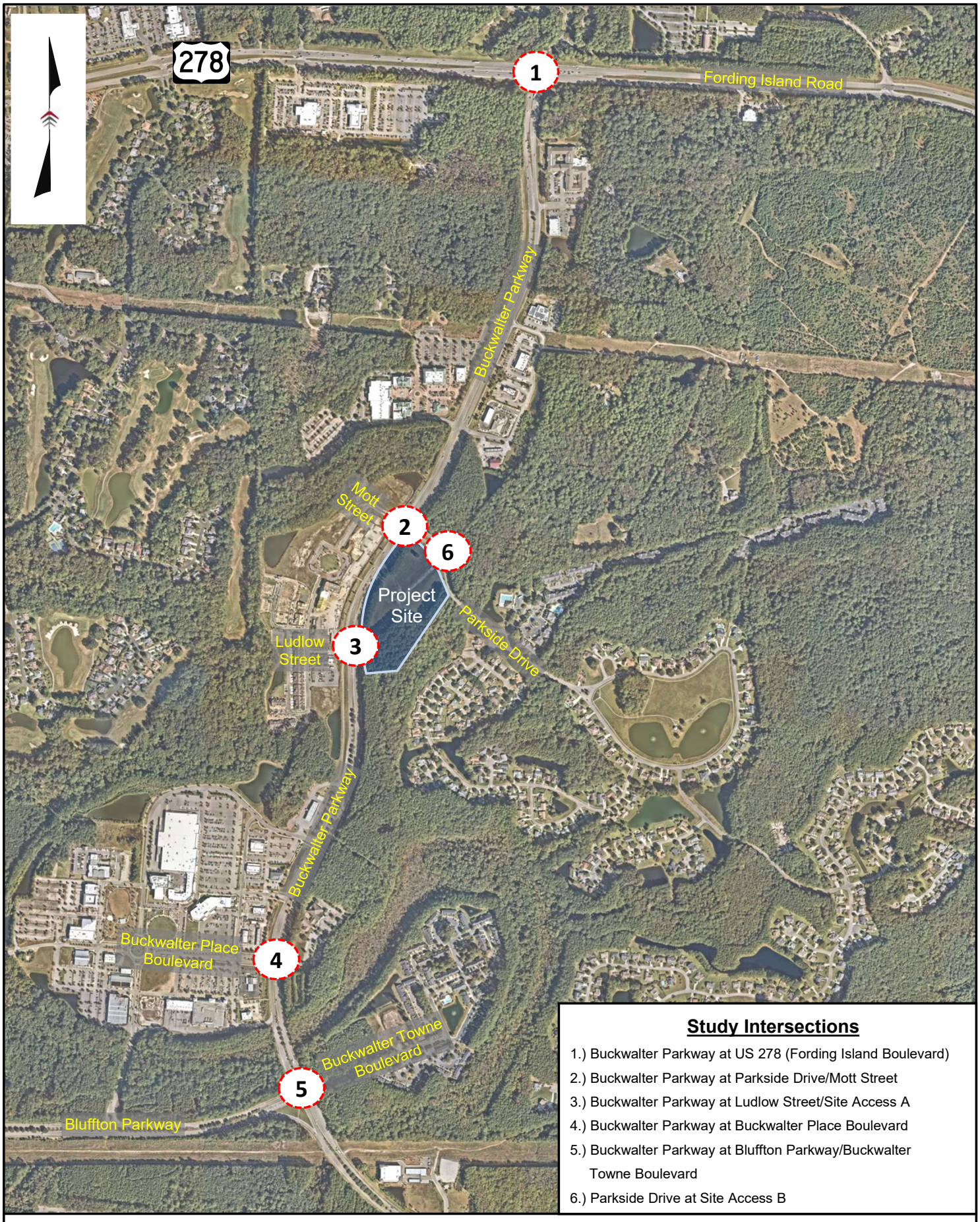
Buckwalter Parkway (L-1525) is a divided, four-lane urban minor arterial with a posted speed limit of 45 mph. According to SCDOT count station data, Buckwalter Parkway carried an AADT traffic count of 16,400 vpd in 2022.

Parkside Drive (L-1984) is a undivided, two-lane urban local with a posted speed limit of 25 mph. No SCDOT AADT data is provided along this roadway.

Buckwalter Place Boulevard (L-1087) is a divided, two-lane urban local with no posted speed limit. No SCDOT AADT data is provided along this roadway.

Bluffton Parkway (L-1087) is a divided, two-lane urban local road with a posted speed limit of 45 mph. According to SCDOT count station data, Bluffton Parkway carried an AADT traffic count of 16,600 vpd in 2022.

The existing roadway geometry and traffic control for the study network is illustrated in **Figure 3**.



Study Intersections

1.) Buckwalter Parkway at US 278 (Fording Island Boulevard)
2.) Buckwalter Parkway at Parkside Drive/Mott Street
3.) Buckwalter Parkway at Ludlow Street/Site Access A
4.) Buckwalter Parkway at Buckwalter Place Boulevard
5.) Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard
6.) Parkside Drive at Site Access B

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Buckwalter Parkway Healthcare Development
Figure 1 - Project Location Map

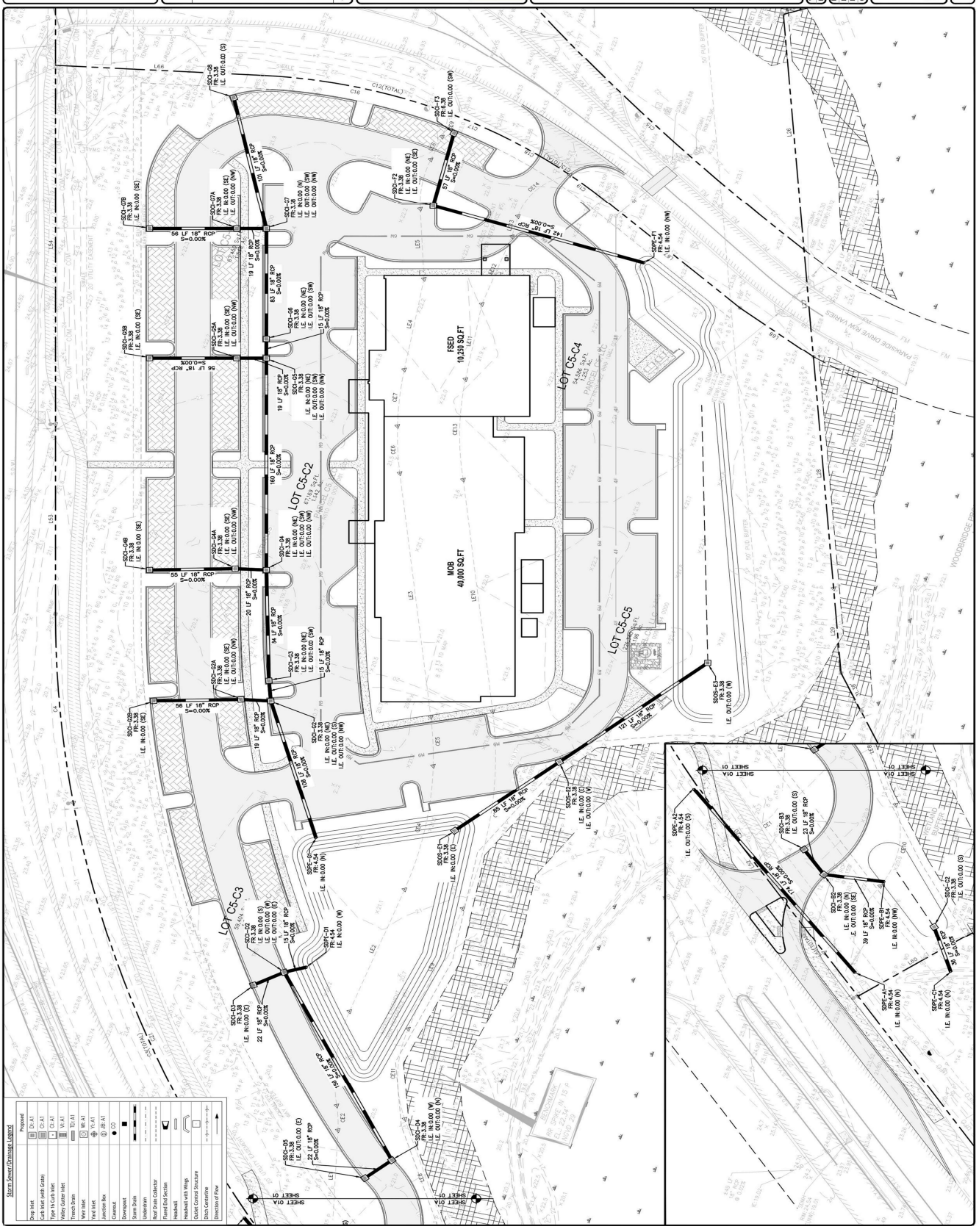

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Figure 2 - Conceptual Site Plan

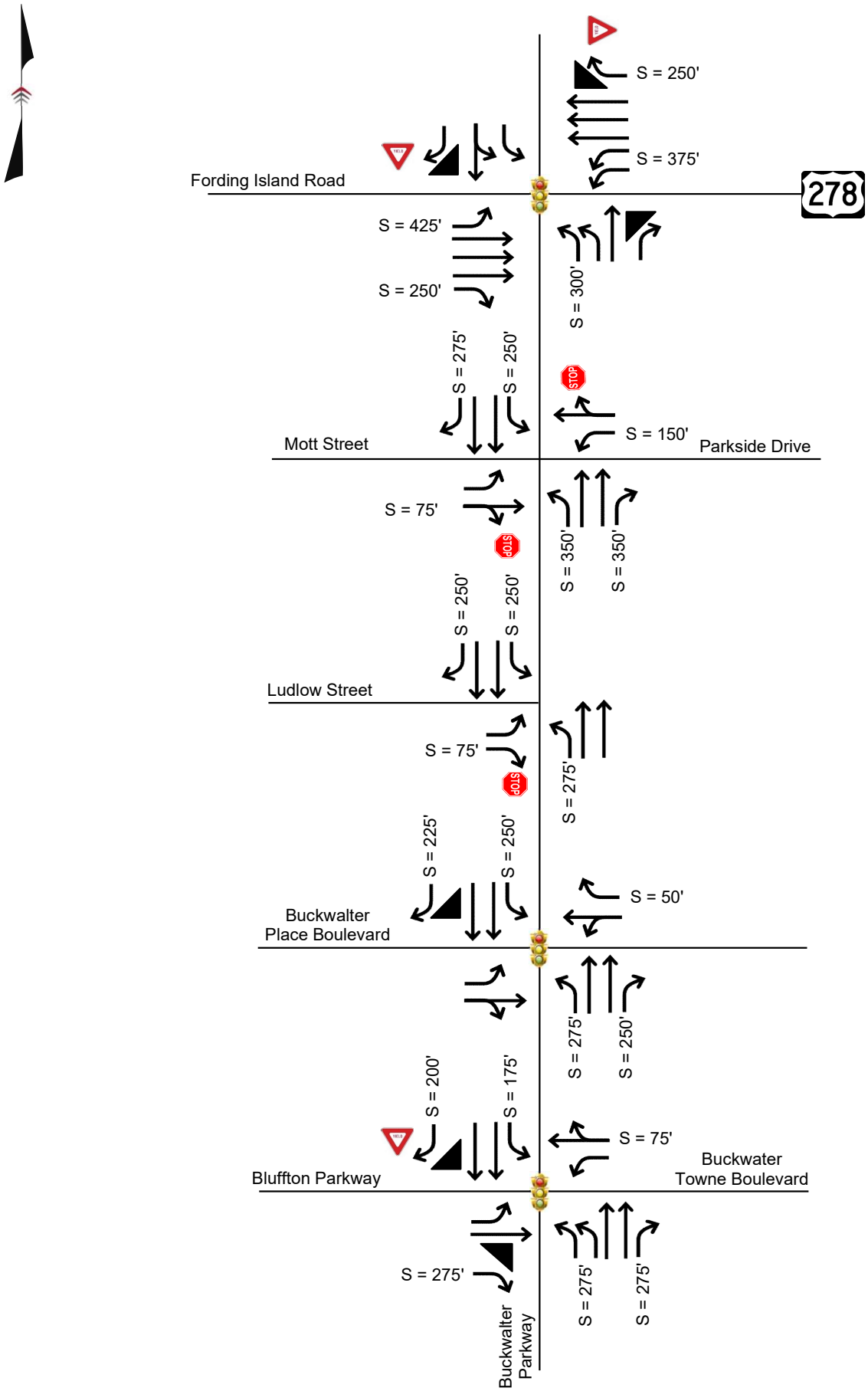

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Figure 3 - Existing Geometry and Traffic Control

2 Project Traffic

2.1 Trip Generation

The trip generation rates and equations published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual; 11th Edition* were used to estimate the trip generation potential for the development. The analysis was performed using the information for the land use code (LUC) 720 – Medical-Dental Office Building.

As shown in **Table 1**, the development is anticipated to generate 130 (103 In/27 Out) AM peak hour trips and 202 (61 In/141 Out) PM peak hour trips. The estimated trip generation is summarized in **Table 1**, and the trip generation calculations can be found in **Appendix B**.

Table 1 – Trip Generation Summary

Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
720 – Medical-Dental Office Building	50.3	KSF	2,058	130	103	27	202	61	141
Total Net New External Trips			**2,058**	**130**	**103**	**27**	**202**	**61**	**141**

2.2 Trip Distribution & Assignment

New external trips generated by the proposed development were distributed and assigned to the surrounding roadway network based on existing travel patterns, surrounding land uses, and the proposed site layout. The trip distribution percentages used in this analysis are as follows.

- 35% to/from the east via US 278 (Fording Island Road)
- 30% to/from the east via Bluffton Parkway
- 20% to/from the west via US 278 (Fording Island Road)
- 15% to/from the south via Buckwalter Parkway

The project trip distributions are illustrated in **Figure 4** and the project trip assignments are illustrated in **Figure 5**.

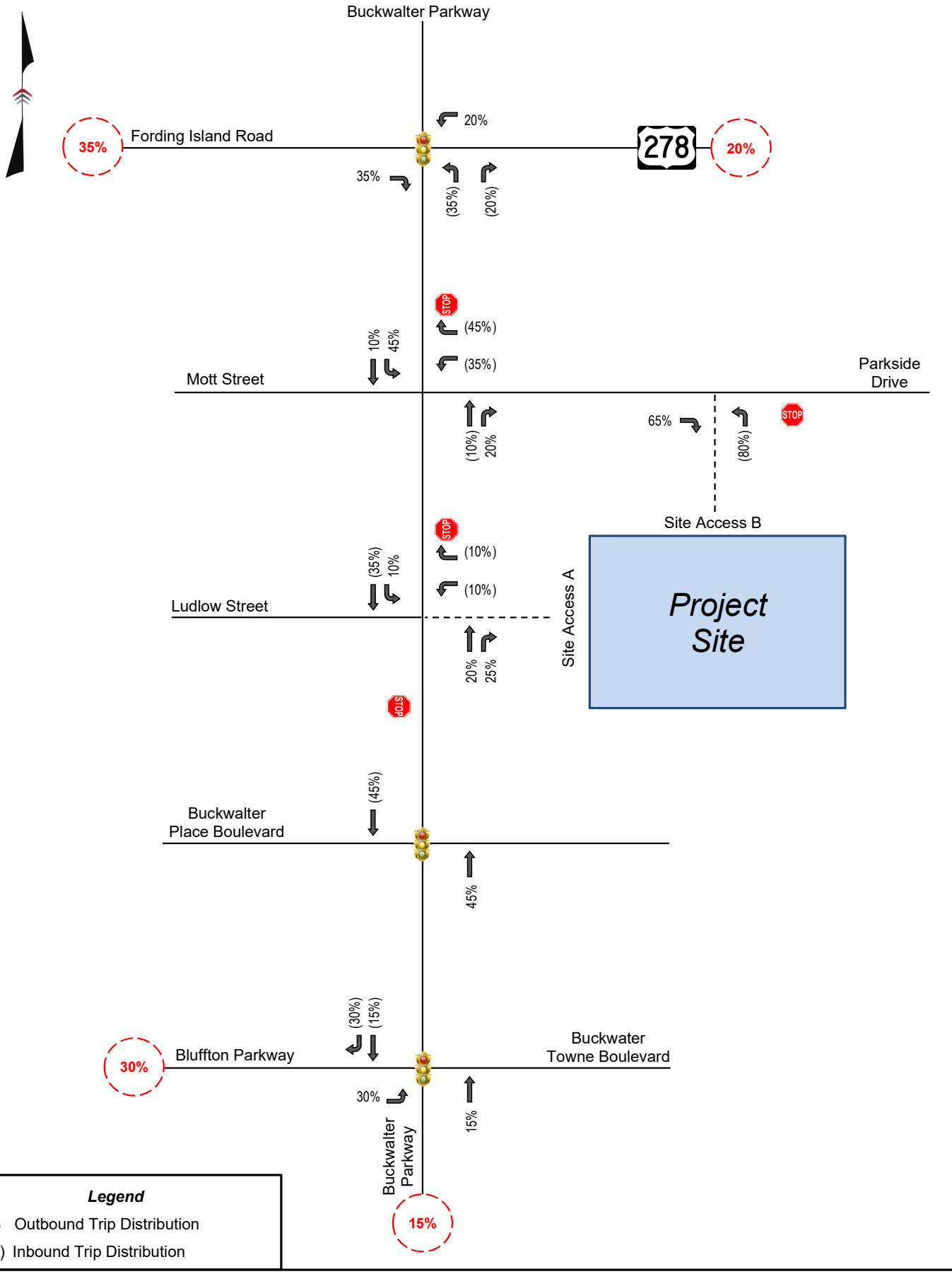

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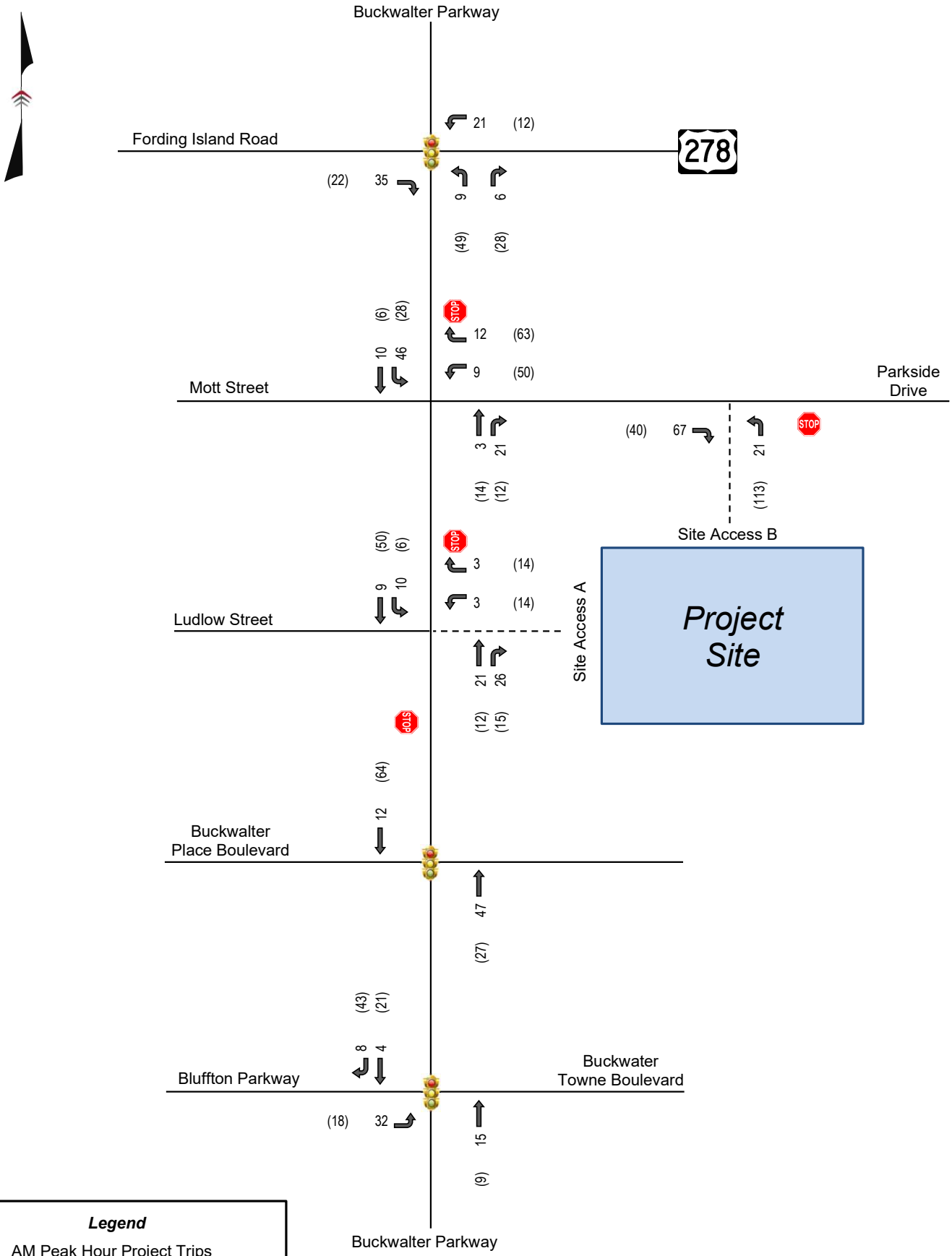
Figure 4 - Project Trip Distribution



Legend

xx AM Peak Hour Project Trips

(xx) PM Peak Hour Project Trips

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Figure 5 - Project Trip Assignment

3 Traffic Volume Development

The 2024 Existing traffic volumes were utilized in the analysis to develop future year traffic volumes for the projected 2029 conditions. The future year volumes consisted of the existing traffic volumes adjusted by an annual growth rate and the projected traffic volumes of the proposed development. Worksheets documenting the traffic volume development are provided in **Appendix C**.

3.1 2024 Existing Traffic Development

Peak hour intersection turning movement counts were conducted in the AM peak period (7:00 AM to 9:00 AM) and PM peak period (4:00 PM to 6:00 PM) at the following intersections:

1. US 278 (Fording Island Road) at Buckwalter Parkway – Tuesday, April 2, 2024
2. Buckwalter Parkway at Parkside Drive/Mott Street – Tuesday, April 2, 2024
3. Buckwalter Parkway at Ludlow Street – Tuesday, April 2, 2024
4. Buckwalter Parkway at Buckwalter Place Boulevard – Tuesday, April 2, 2024
5. Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard – Tuesday, March 19, 2024

*U-turn movements were considered left-turn movements as part of this analysis

Figure 6 illustrates the 2024 Existing Peak Hour Traffic Volumes for the AM and PM peak hours. The raw turning movement count data is included in **Appendix D**.

3.2 2029 No-Build Traffic Development

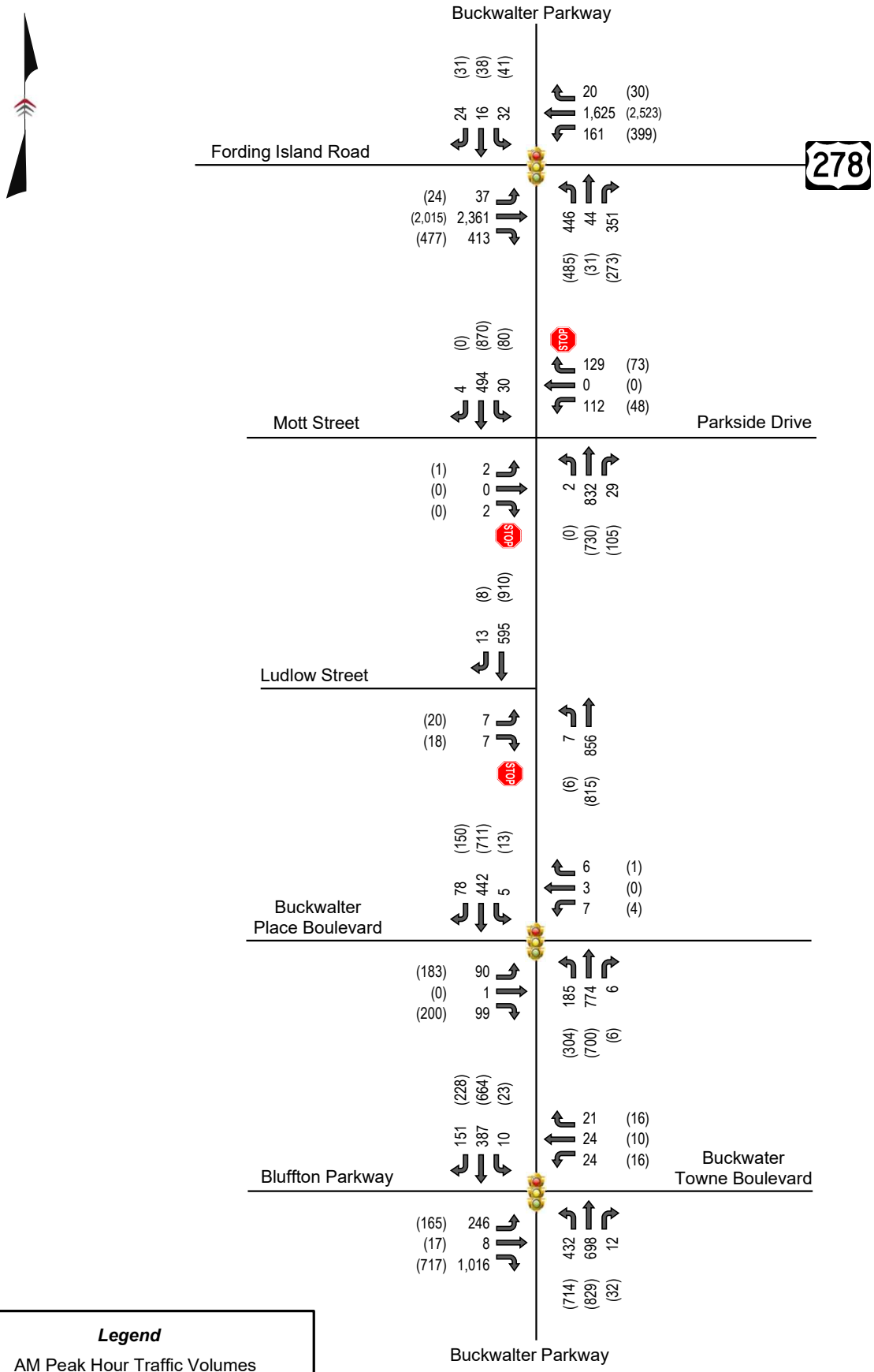
As mentioned previously, the development will be built and operational by 2029. The future-year traffic volumes consist of the 2024 Existing traffic volumes adjusted by a growth rate of 5% for the 2029 No-Build conditions. To determine the historical growth rate in the area, traffic count data was obtained from SCDOT and includes count stations along US 278 (Fording Island Road), Buckwalter Parkway, and Bluffton Parkway. Historic growth rate calculations are provided in **Appendix E**.

In addition to the historical growth rate, the approved development traffic volumes of Bluffton Commons (*Bluffton Commons – Turn Lane and Preliminary Signal Warrant Analysis*, BIHL Engineering, 2018), Elle Apartments, Parkways Multifamily, Cross Schools, and Bluffton Community Hospital were included as part of the 2029 No-Build AM and PM peaks. The AM and PM peak hour approved development volumes are illustrated in **Figure 7** and provided in **Appendix E**.

Figure 8 illustrates the 2029 No-Build traffic volumes for the AM and PM peak hours.

3.3 2029 Build Traffic Development

The proposed development traffic volumes were added to the 2029 No-Build traffic volumes to develop 2029 Build traffic volumes. **Figure 9** illustrates the 2029 Build traffic volumes during the AM and PM peak hours.



Legend

xx AM Peak Hour Traffic Volumes

(xx) PM Peak Hour Traffic Volumes

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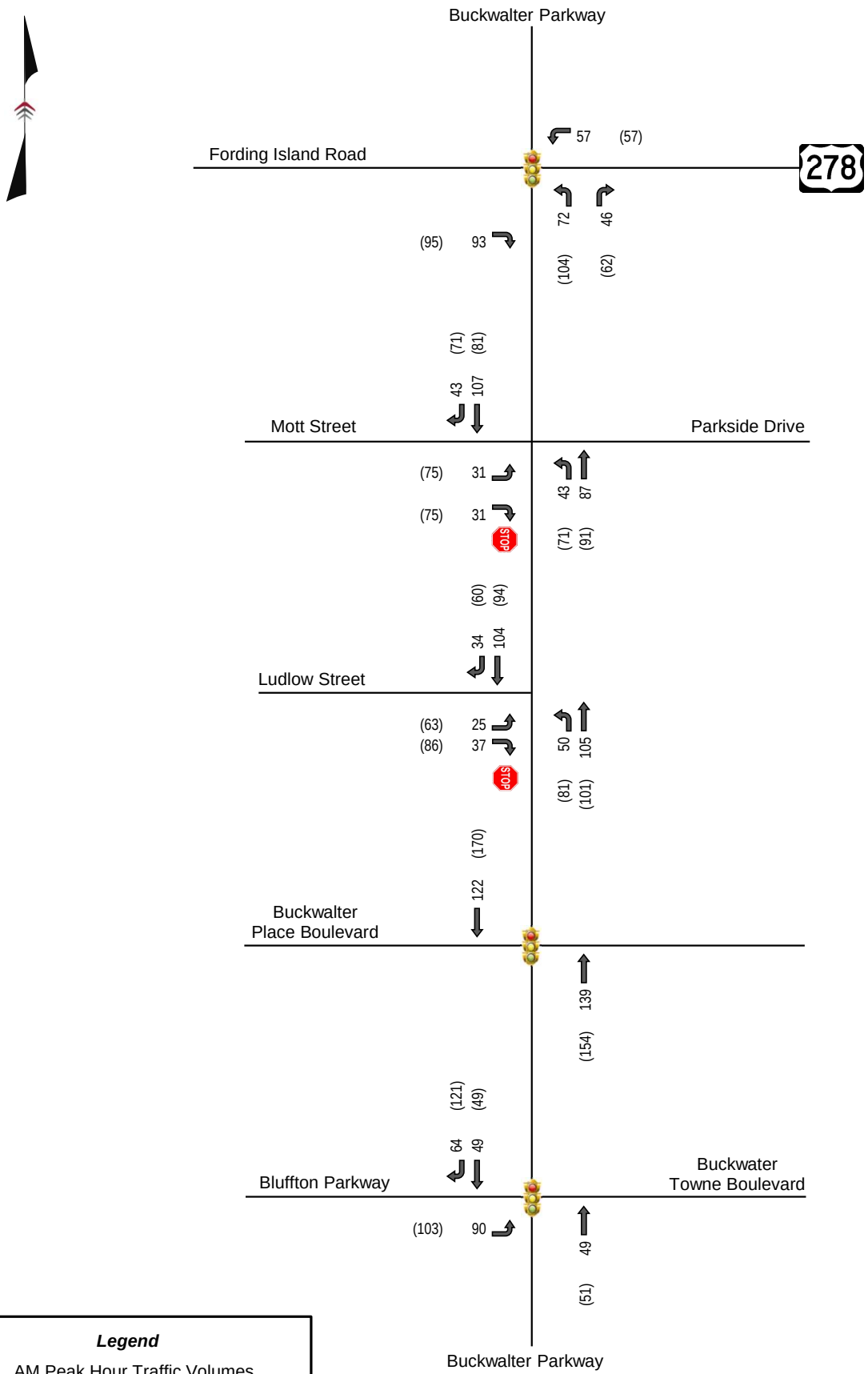
Figure 6 - 2024 Existing Peak Hour Volumes



Legend

xx AM Peak Hour Traffic Volumes

(xx) PM Peak Hour Traffic Volumes

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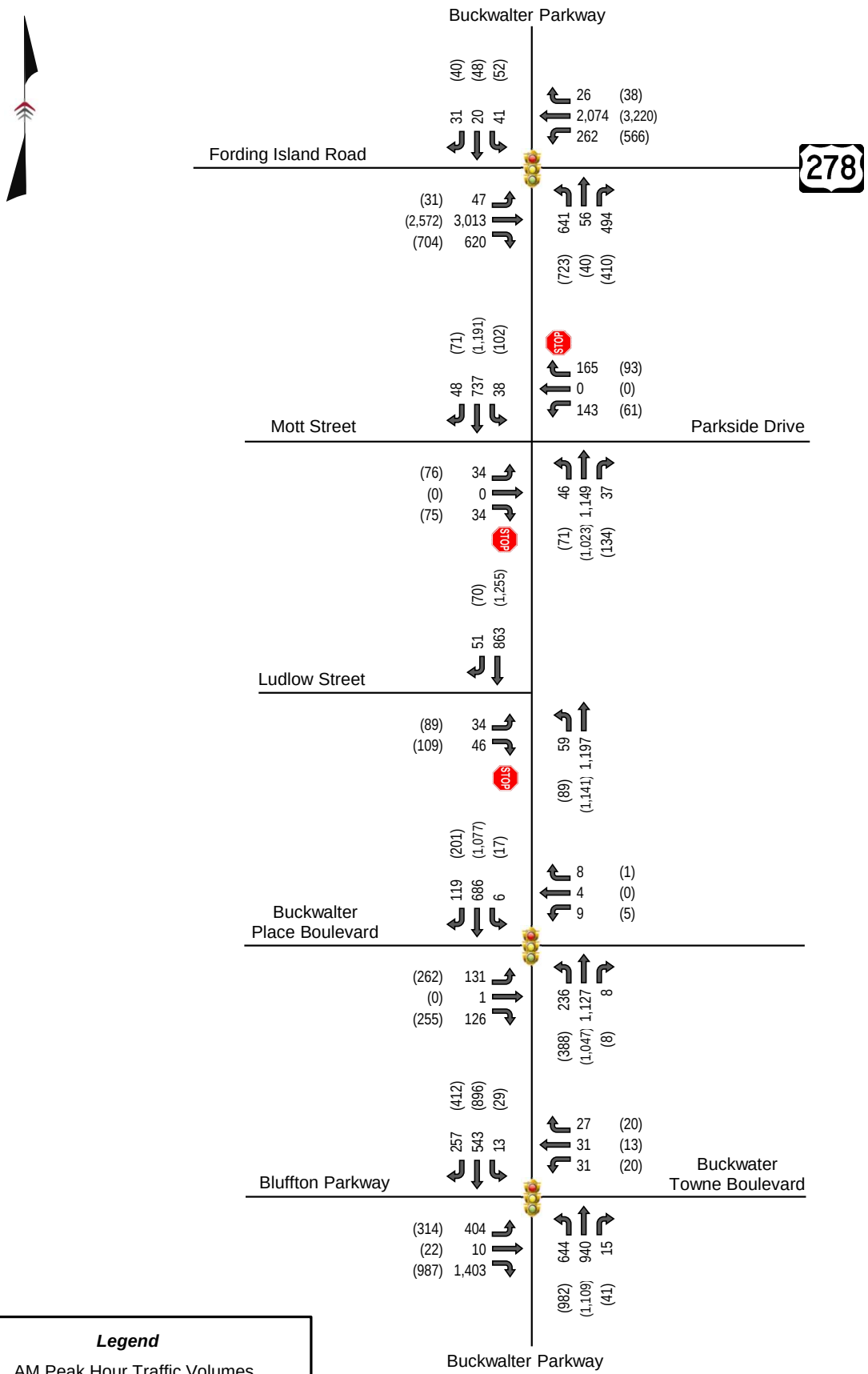
Figure 7 - Adjacent Developemnt Traffic Volumes



Legend

xx AM Peak Hour Traffic Volumes

(xx) PM Peak Hour Traffic Volumes

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Figure 8 - 2029 No-Build Peak Hour Volumes

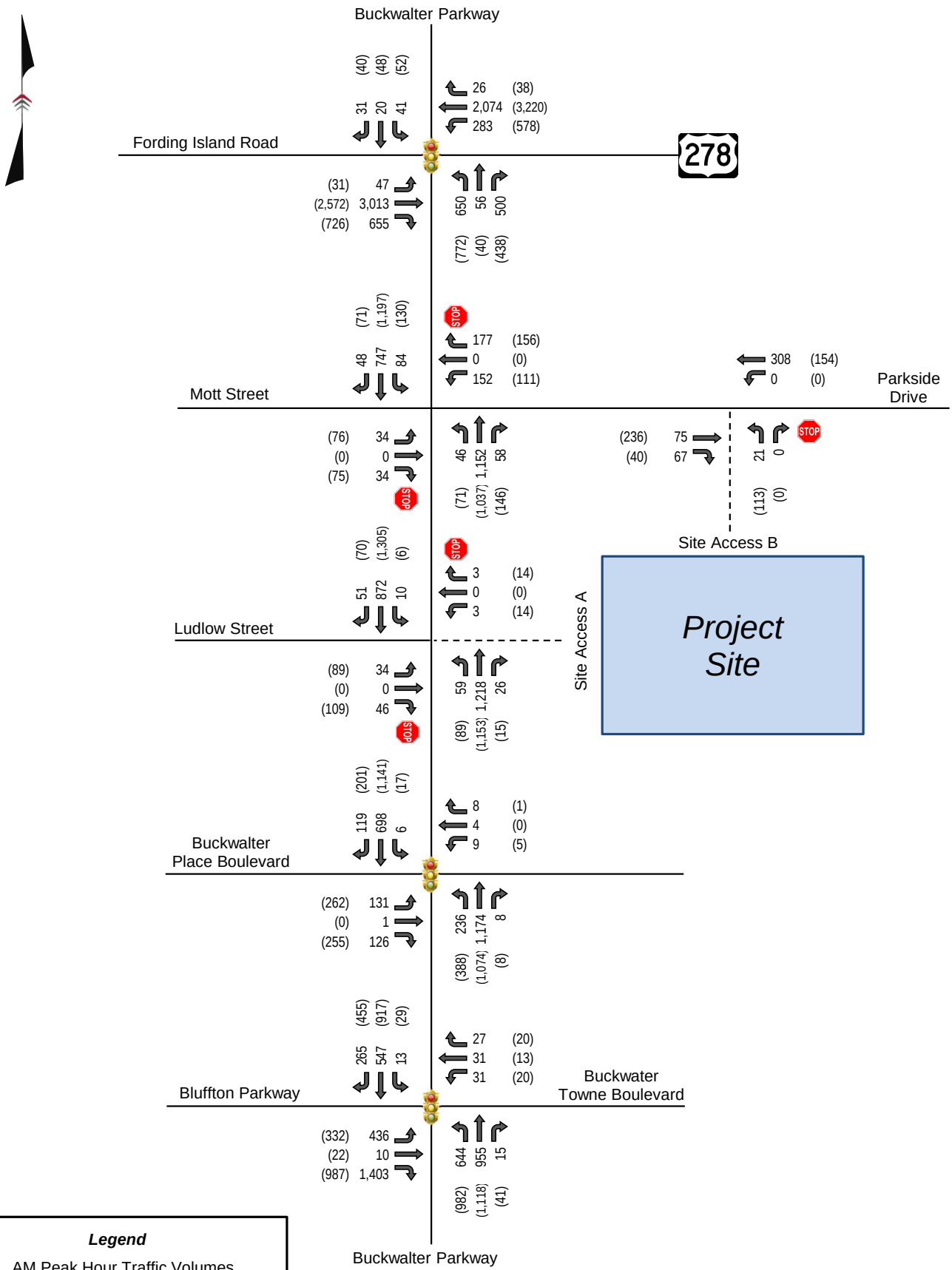

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Figure 9 - 2029 Build Peak Hour Volumes

4 Capacity Analysis

Capacity/level-of-Service (LOS) analyses were conducted using the *Highway Capacity Manual (HCM),* 6th Edition, methodologies of the *Synchro*, Version 12, traffic analysis software. Capacity analyses were conducted for the AM and PM peak hours of the 2024 Existing conditions, 2029 No-Build conditions, and 2029 Build conditions analysis scenarios.

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, gridlocked conditions with high vehicular delays, and are generally considered undesirable**. Table 2** lists the LOS control delay thresholds published in the *HCM* for signalized and unsignalized intersections.

Table 2 – *HCM* Level of Service Criteria

LOS	Control Delay per Vehicle (sec/veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

Existing peak hour factors (PHF) were utilized for the existing and future scenarios. Existing heavy vehicle percentages were utilized for all scenarios, with a minimum of 2% considered.

Unsignalized intersections operating at LOS A-LOS C are considered to operate with short delays, unsignalized intersections operating at LOS D-LOS E are considered to operate with moderate delays, and intersections operating at LOS F are considered to operate with long delays.

It should be noted that traffic signal timings are anticipated to be adjusted with the increase in traffic volumes in the study network between 2024 Existing conditions and 2029 No-Build conditions. Therefore, traffic signal timings were optimized under 2029 No-Build conditions. These optimized signal timings were used under 2029 Build conditions.

The following sections outline the results of the capacity analysis for each of the study intersections. The capacity analysis worksheets are included in **Appendix F**.

4.1 US 278 (Fording Island Road) at Buckwalter Parkway

The capacity analysis results for the signalized intersection of US 278 (Fording Island Road) at Buckwalter Parkway is summarized in **Table 3**.

Table 3 – US 278 (Fording Island Road) at Buckwalter Parkway Capacity Analysis Results

Condition	Measure	US 278 (Fording Island Road)			US 278 (Fording Island Road)			Buckwalter Parkway			Buckwalter Parkway			Intersection
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBTL	SBR	
AM Peak Hour														
2024 Existing	LOS (Delay)	C (32.0)			C (28.5)			F (85.2)			E (75.4)			D (36.3)
	Synchro 95th Q	29'	949'	194'	139'	488'	0'	#359'	88'	0'	66'	66'	0'	
2029 No-Build	LOS (Delay)	F (97.9)			D (42.0)			F (172.6)			E (78.3)			F (86.0)
	Synchro 95th Q	51'	#1577'	431'	#270'	726'	0'	#601'	105'	0'	76'	78'	0'	
2029 Build	LOS (Delay)	F (97.5)			D (46.0)			F (178.9)			E (78.3)			F (88.0)
	Synchro 95th Q	51'	#1577'	473'	#300'	726'	0'	#611'	105'	0'	76'	78'	0'	
PM Peak Hour														
2024 Existing	LOS (Delay)	D (38.9)			D (42.8)			F (97.7)			E (73.7)			D (46.3)
	Synchro 95th Q	21'	777'	240'	#328'	1007'	0'	#400'	66'	0'	86'	94'	0'	
2029 No-Build	LOS (Delay)	F (92.5)			F (117.0)			F (216.5)			F (86.5)			F (116.0)
	Synchro 95th Q	28'	#1400'	670'	#563'	#1786'	0'	#729'	85'	0'	113'	129'	0'	
2029 Build	LOS (Delay)	F (94.1)			F (118.6)			F (253.5)			F (86.5)			F (121.7)
	Synchro 95th Q	28'	#1400'	708'	#578'	#1786'	0'	#796'	85'	0'	113'	129'	0'	

Note:
1. Delay represented in sec/veh
2. $-Delay Exceeds 300 sec/veh
3. #-95th Percentile Volume Exceeds Capacity, Queue May Be Longer

Based on the results presented in **Table 3**, the overall intersection currently operates at LOS D during the AM and PM peak hour. The northbound approach along Buckwalter Parkway currently operates at LOS F during the AM and PM peak hour. Under 2029 No-Build conditions, the intersection is anticipated to operate at LOS F during the AM and PM peak hour. During the AM peak hour the northbound and eastbound approaches are anticipated to operate at LOS F. During the PM peak hour all approaches are anticipated to operate at LOS F.

With the addition of project traffic, the overall intersection, and all approaches, are expected to operate similarly when compared to the 2029 No-Build conditions during the AM and PM peak hour. Additionally, vehicle queues are expected to increase by four cars or less along the approaches during the AM and PM peak hour.

Based on the capacity analysis results presented in **Table 3**, the 2029 No-Build and 2029 Build conditions are anticipated to operate similarly; therefore, no capacity improvements are recommended at this intersection.

4.2 Buckwalter Parkway at Parkside Drive/Mott Street

The capacity analysis results for the unsignalized intersection of Buckwalter Parkway at Parkside Drive/Mott are summarized in **Table 4**.

Table 4 – Buckwalter Parkway at Parkside Drive/Mott Street Capacity Analysis Results

Condition	Measure	Mott Street			Parkside Drive			Buckwalter Parkway			Buckwalter Parkway			Intersection
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM Peak Hour														
2024 Existing	LOS (Delay)	C (23.1)			F (92.8)			A (8.6)*			B (10.7)*			N/A
	Synchro 95th Q	3'	0'		190'	28'		0'	0'	0'	5'	0'	0'	
2029 No-Build	LOS (Delay)	E (36.9)			F (181.1)			B (10.1)*			B (13.4)*			N/A
	Synchro 95th Q	40'	5'		305'	58'		5'	0'	0'	8'	0'	0'	
2029 Build	LOS (Delay)	F (72.1)			F (240.7)			B (10.1)*			B (14.8)*			N/A
	Synchro 95th Q	65'	5'		358'	63'		5'	0'	0'	20'	0'	0'	
2029 Build Improved	LOS (Delay)	D (42.9)			D (40.1)			A (8.2)			A (7.9)			B (13.5)
	Synchro 95th Q	87'	0'		180'	133'		68'	281'	14'	#141'	163'	13'	
PM Peak Hour														
2024 Existing	LOS (Delay)	F (63.2)			E (48.7)			A (0.0)*			B (10.5)*			N/A
	Synchro 95th Q	3'	0'		73'	13'		0'	0'	0'	10'	0'	0'	
2029 No-Build	LOS (Delay)	F (205.7)			F (96.1)			B (13.7)*			B (13.4)*			N/A
	Synchro 95th Q	185'	18'		128'	20'		15'	0'	0'	20'	0'	0'	
2029 Build	LOS (Delay)	F ($)			F ($)			B (13.8)*			B (14.3)*			N/A
	Synchro 95th Q	235'	18'		305'	43'		15'	0'	0'	28'	0'	0'	
2029 Build Improved	LOS (Delay)	E (69.0)			D (46.5)			B (12.7)			B (11.3)			B (19.3)
	Synchro 95th Q	#256'	40'		169'	78'		#280'	227'	21'	118'	316'	15'	

Note:
1. Delay in sec/veh
2. *Left-Turn Movement Delay
3. $-Delay Exceeds 300 sec/veh
4. #-95th Percentile Volume Exceeds Capacity, Queue May Be Longer

Based on the results presented in **Table 4**, the intersection of Buckwalter Parkway at Parkside Drive/Mott Street currently operates with long delays along the westbound approach during the AM peak hour, and the eastbound operates with long delays during the PM peak hour. Under 2029 No-Build and 2029 Build conditions the eastbound and westbound approach are anticipated to operate with long delays during the AM and PM peak hour.

To mitigate the long delays on the minor street approaches, a traffic signal was taken into consideration as an improvement. With implementation of a traffic signal, the overall intersection is expected to operate at LOS B during the AM and PM peak hour. Additionally, all approaches are expected to operate at LOS D or better, with the exception of the eastbound approach along Mott Street which is anticipated to operate at LOS E.

Traffic Signal Warrant Analysis

Utilizing guidance from Part 4 of the Manual on Uniform Traffic Control Devices (MUTCD), a signal warrant analysis was conducted for the intersection of Buckwalter Parkway at Parkside Drive/Mott. Since right-turn movement vehicles experience less delay along the minor street, three scenarios were analyzed that considered a reduction in the right-turn traffic volumes. Additionally, based on speeds along Buckwalter Parkway being greater than 40 mph, a 70% volume factor was included as part of the analysis for each scenario.

The results of the signal warrant analysis are summarized in **Table 5** below. The calculations for the signal warrant volume development and full analysis worksheets for each scenario are included in **Appendix G**.

Table 5 – Traffic Signal Warrant Analysis Results

Scenario	2029 Build 0% Right-Turn Reduction	2029 Build 50% Right-Turn Reduction	2029 Build 100% Right-Turn Reduction
Warrant 1 - Condition A (Eight-Hour Vehicular Volume)	Satisfied (13/8)	Satisfied (10/8)	Not Satisfied (2/8)
Warrant 1 - Condition B (Eight-Hour Vehicular Volume)	Satisfied (13/8)	Satisfied (13/8)	Satisfied (12/8)
Warrant 1 - Combination Warrant (Eight-Hour Vehicular Volume)	Satisfied (12/8)	Not Satisfied (4/8)	Not Satisfied (1/8)
Warrant 2 (Four-Hour Vehicular Volume)	Satisfied (12/4)	Satisfied (12/4)	Satisfied (12/4)
Warrant 3 (Peak-Hour Vehicular Volume)	Satisfied (12/1)	Satisfied (12/1)	Satisfied (11/1)

The results of the signal warrant analysis indicate that the applicable criteria meet MUTCD warrants based on the projected 2029 Build condition traffic volumes for each analyzed scenario. A full traffic signal warrant analysis should be conducted once the site is operational to confirm the actual volumes meet the necessary MUTCD warrants to implement the signal. When installed, it is recommended this intersection be coordinated with the adjacent signalized intersection of Buckwalter Parkway at Buckwalter Place Boulevard.

4.3 Buckwalter Parkway at Ludlow Street/Site Access A

The capacity analysis results for the unsignalized intersection of Buckwalter Parkway at Ludlow Street/Site Access A are summarized in **Table 6**. Site Access A is proposed to construct the westbound approach of the existing intersection and align with Ludlow Street. Site Access A is proposed to be full movement and consist of one ingress lane and one egress lane.

Table 6 – Buckwalter Parkway at Ludlow Street/Site Access A Capacity Analysis Results

Condition	Measure	Ludlow Street			Site Access A			Buckwalter Parkway			Buckwalter Parkway		
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Peak Hour													
2024 Existing	LOS (Delay)	C (17.7)			N/A			A (9.0)*			A (0.0)		
	Synchro 95th Q	3'	-	0'				0'	0'	-	-	0'	0'
2029 No-Build	LOS (Delay)	C (19.5)						B (10.9)*			A (0.0)		
	Synchro 95th Q	18'	-	8'				8'	0'	-	-	0'	0'
2029 Build	LOS (Delay)	C (23.5)			D (30.9)			B (10.9)*			B (12.5)*		
	Synchro 95th Q	25'	8'		3'	3'		8'	0'	0'	3'	0'	0'
2029 Build Improved	LOS (Delay)	B (12.6)			B (14.7)			A (0.0)			A (0.0)		
	Synchro 95th Q	-		8'	-		0'	-	0'	0'	-	0'	0'
PM Peak Hour													
2024 Existing	LOS (Delay)	D (28.8)			N/A			B (10.4)*			A (0.0)		
	Synchro 95th Q	18'	-	3'				20'	0'	-	-	0'	0'
2029 No-Build	LOS (Delay)	F (70.1)						C (15.1)			A (0.0)		
	Synchro 95th Q	135'	-	35'				20'	0'	-	-	0'	0'
2029 Build	LOS (Delay)	F (121.0)			F (54.3)			C (15.8)*			B (11.9)*		
	Synchro 95th Q	178'	38'		28'	25'		23'	0'	0'	0'	0'	0'
2029 Build Improved	LOS (Delay)	C (21.1)			B (14.7)			A (0.0)			A (7.6)		
	Synchro 95th Q	-		38'	-		3'	-	-	-	-	-	-

Note:
1. Delay in sec/veh
2. *Left-Turn Movement Delay

Based on the results presented in **Table 6**, the minor street approach along Ludlow Street currently operates at LOS C and LOS D during the AM and PM peak hour, respectively. Under 2029 No-Build conditions, Ludlow Street is anticipated to operate at LOS C and LOS F during the AM and PM peak hour, respectively.

With the addition of project traffic, Ludlow Street is anticipated to operate at LOS C during the AM peak hour, and LOS F with large delays during the PM peak hour. Site Access A is anticipated to operate at LOS D and LOS F during the AM and PM peak hour, respectively.

Although Site Access A is proposed to operate as full-movement, Beaufort County Council has adopted the *Access Management Plan Update Buckwalter Parkway (US 278 to Bluffton Parkway) Beaufort County, SC* (BIHL Engineering, 2021). The plan indicates that Ludlow Street and Site Access A should operate as right-in/right-out only movement driveways. Additionally, this plan indicates that right-turn lanes should be considered along Buckwalter Parkway at unsignalized intersections. The 2029 Build Improved conditions consider the roadway geometry identified in this access management plan. With these improvements, the eastbound and westbound approach are anticipated to operate at LOS B during the AM and PM peak hour with the exception of the eastbound approach along Ludlow Street which is anticipated to operate at LOS C during

the PM peak hour. The adopted access management plan is provided in **Appendix H**.

Based on the capacity analysis, and *Access Management Plan Update Buckwalter Parkway (US 278 to Bluffton Parkway) Beaufort County, SC* (BIHL Engineering, 2021), it is recommended to construct Site Access #1 as a right-in/right out only driveway with one ingress lane and one egress lane. The existing southbound left-turn lane and northbound left-turn lane along Buckwalter Parkway should be removed and the existing raised median should be extended through the intersection. Additionally. a northbound right-turn lane should be constructed along Buckwalter Parkway with a full-width storage length of 250 feet and a taper length of 150 feet.

4.4 Buckwalter Parkway at Buckwalter Place Boulevard

The capacity analysis results for the Buckwalter Parkway at Buckwalter Place Boulevard intersection are summarized in **Table 7**.

Table 7 – Buckwalter Parkway at Buckwalter Place Boulevard Capacity Analysis Results

Condition	Measure	Buckwalter Place Boulevard			Buckwalter Place Boulevard			Buckwalter Parkway			Buckwalter Parkway			Intersection
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBTL	SBR	
AM Peak Hour														
2024 Existing	LOS (Delay)	D (53.9)			D (46.0)			A (3.4)			A (6.4)			B (10.6)
	Synchro 95th Q	117'	48'		22'		0'	m52'	98'	m0'	8'	121'	21'	
2029 No-Build	LOS (Delay)	E (58.8)			D (50.9)			A (1.4)			A (9.7)			B (10.6)
	Synchro 95th Q	181'	56'		29'		0'	m53'	111'	m0'	11'	240'	29'	
2029 Build	LOS (Delay)	E (58.8)			D (50.9)			A (1.4)			A (9.9)			B (10.5)
	Synchro 95th Q	181'	56'		29'		0'	M53'	119'	m0'	11'	253'	30'	
PM Peak Hour														
2024 Existing	LOS (Delay)	E (59.3)			D (54.7)			A (2.4)			B (12.5)			B (16.3)
	Synchro 95th Q	#235'	0'		13'		0'	129'	85'	m0'	17'	233'	34'	
2029 No-Build	LOS (Delay)	E (62.6)			E (59.1)			A (8.8)			C (20.6)			C (22.2)
	Synchro 95th Q	#369'	0'		15'		0'	m313'	m143'	m0'	28'	537'	81'	
2029 Build	LOS (Delay)	E (63.5)			E (59.2)			A (9.7)			C (22.5)			C (23.4)
	Synchro 95th Q	#378'	0'		15'		0'	m#332'	m148'	m0'	28'	583'	87'	

Note:
1. Delay in sec/veh
2. #-95th Percentile Volume Exceeds Capacity, Queue May Be Longer

Based on the results presented in **Table 7**, the overall intersection currently operates at LOS B a during the AM and PM peak hour. Under 2029 No-Build conditions, the intersection is anticipated to operate at LOS B and LOS C during the AM and PM peak hour, respectively. With the addition of project traffic, the overall intersection, and all approaches, are expected to operate similarly when compared to the 2029 No-Build conditions during the AM and PM peak hour. Additionally, vehicle queues are expected to increase by two cars or less along all approaches.

Based on the capacity analysis results presented in **Table 7**, the 2029 No-Build and 2029 Build conditions are anticipated to operate similarly; therefore, no capacity improvements are recommended at this intersection.

4.5 Bluffton Parkway/Buckwalter Towne Boulevard at Buckwalter Parkway

The capacity analysis results for the signalized intersection of Bluffton Parkway/Buckwalter Towne Boulevard at Buckwalter Parkway are summarized in **Table 8**.

Table 8 – Bluffton Parkway/Buckwalter Towne Boulevard at Buckwalter Parkway Capacity Analysis Results

Condition	Measure	Bluffton Parkway			Buckwalter Towne Boulevard			Buckwalter Parkway			Buckwalter Parkway			Intersection
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBTL	SBR	
AM Peak Hour														
2024 Existing	LOS (Delay)	D (51.5)			C (34.4)			C (26.0)			A (3.4)			C (25.0)
	Synchro 95th Q	#312'	18'	0'	38'	46'		199'	191'	0'	25'	96'	18'	
2029 No-Build	LOS (Delay)	D (52.5)			C (29.0)			D (38.6)			C (21.7)			D (36.9)
	Synchro 95th Q	325'	6'	0'	38'	45'		340'	431'	0'	m31'	278'	129'	
2029 Build	LOS (Delay)	D (52.7)			C (27.0)			D (39.2)			C (25.4)			D (38.2)
	Synchro 95th Q	#516'	17'	#26'	38'	45'		340'	433'	0'	m30'	295'	157'	
PM Peak Hour														
2024 Existing	LOS (Delay)	D (53.8)			D (43.1)			E (57.2)			C (28.8)			D (48.9)
	Synchro 95th Q	212'	34'	0'	32'	34'		#480'	251'	1'	51'	111'	13'	
2029 No-Build	LOS (Delay)	E (73.9)			D (37.2)			D (40.3)			E (69.2)			D (51.3)
	Synchro 95th Q	#496'	39'	0'	38'	37'		#607'	444'	9'	m43'	#543'	198'	
2029 Build	LOS (Delay)	E (78.7)			D (37.2)			D (40.2)			E (71.0)			D (52.3)
	Synchro 95th Q	#513'	39'	0'	38'	37'		#607'	450'	9'	m41'	#566'	224'	

Note:
1. Delay in sec/veh
2. #-95th Percentile Volume Exceeds Capacity, Queue May Be Longer

Based on the results presented in **Table 8**, the overall intersection currently operates at LOS C and LOS D during the AM and PM peak hour, respectively. Under 2029 No-Build conditions, the intersection is anticipated to operate at LOS D during the AM and PM peak hour. The eastbound approach is expected to operate at LOS D and LOS E during the AM and PM peak hour, respectively, and the northbound approach is expected to operate at LOS D along the northbound approach during the PM peak hour.

With the addition of project traffic, the overall intersection, and all approaches, are expected to operate similarly when compared to the 2029 No-Build conditions during the AM and PM peak hour. Additionally, vehicle queues are expected to increase by four cars or less along the approaches during the AM and PM peak hour.

Based on the capacity analysis results presented in **Table 8**, the 2029 No-Build and 2029 Build conditions are anticipated to operate similarly; therefore, no capacity improvements are recommended at this intersection.

4.6 Parkside Drive at Site Access B

The capacity analysis results for the proposed intersection of Parkside Drive at Site Access B intersection are summarized in **Table 9**. Site Access B is proposed to be constructed approximately 275 feet to the east of the intersection of Buckwalter Parkway at Lakeside drive, and is planned to be full movement with one ingress lane and one egress lane.

Table 9 – Parkside Drive at Site Access B Capacity Analysis Results

Condition	Measure	Parkside Drive		Parkside Drive		Site Access B	
		EBT	EBR	WBL	WBT	NBL	NBR
AM Peak Hour							
2029 Build	LOS (Delay)	A (0.0)		A (0.0)*		B (11.7)	
	Synchro 95th Q	0'		0'		3'	
PM Peak Hour							
2029 Build	LOS (Delay)	A (0.0)		A (0.0)*		B (13.2)	
	Synchro 95th Q	0'		0'		20'	

Note:
1. Delay in sec/veh
2. *Left-Turn Movement Delay

Based on the results presented in **Table 9**, Site Access B is anticipated to operate at LOS B during the AM and PM peak hour under 2029 Build conditions. A turn lane warrant analysis was conducted along the eastbound approach of Parkside Drive to determine if a right-turn lane should be considered for project traffic entering the site. Based on this analysis, it was determined that a eastbound right-turn lane would not be necessary, and is therefore not recommended. Turn lane warrant analysis worksheets are included in **Appendix I**

Based on the capacity analysis results presented in **Table 9**, Site Access B should be constructed as a full access driveway with one ingress lane and one egress. Site Access B should be placed under minor street stop control. No additional mitigation is recommended for this location.

5 Conclusion

The proposed Buckwalter Parkway Healthcare Development is located in the southeast quadrant of the Buckwalter Parkway at Parkside Drive/Mott Street intersection in Bluffton, South Carolina. This development is planned to consist of 50,400 square feet of medical office buildings to be constructed and fully occupied by 2029. Based on the conceptual site plan, it is assumed that the project will access the roadway network through a new driveway along Buckwalter Parkway and a new driveway along Parkside Drive.

Based on the results of the traffic analyses, the following improvements are recommended to mitigate the impact of the proposed development's traffic on the study area intersections:

US 278 (Fording Island Road) at Buckwalter Parkway

- No capacity improvements are recommended at this intersection.

Buckwalter Parkway at Parkside Drive/Mott Street

- Conduct a full signal warrant analysis per the Manual on Uniform Traffic Control Devices (MUTCD) once the development is built out and operational. When warranted, convert to a signalized intersection. This signal should be placed under coordination with the adjacent signal at Buckwalter Place Boulevard.

Buckwalter Parkway at Ludlow Street/Site Access A

- Construct Site Access A as a right-in/right-out driveway.
- Construct a northbound right-turn along Buckwalter Parkway with a full-width storage length of 250 feet and a taper length of 150 feet.
- Remove the existing southbound and northbound left-turn lane along Buckwalter Parkway and extend the raised median through the intersection.

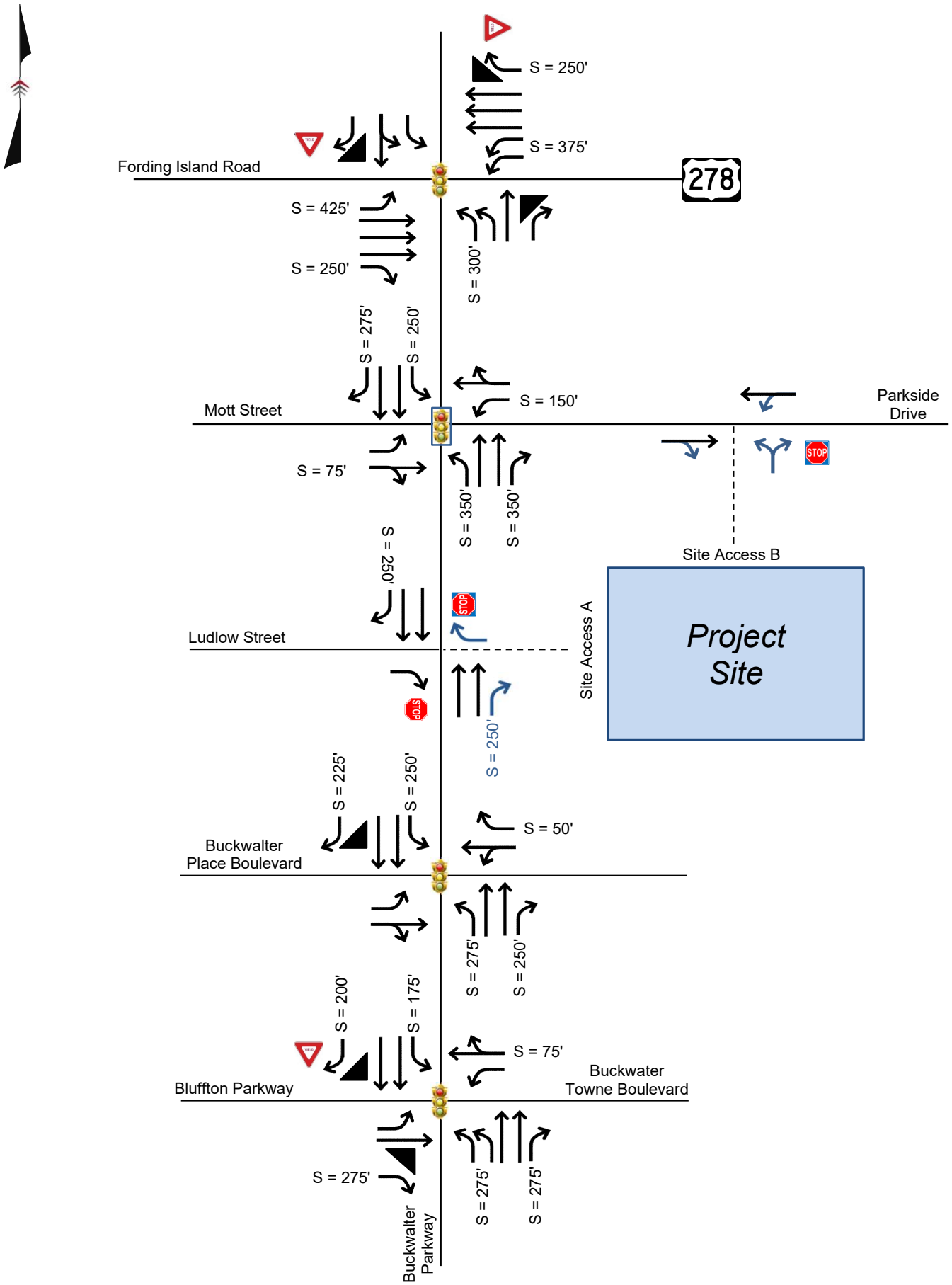
Buckwalter Parkway at Buckwalter Place Boulevard

- No capacity improvements are recommended at this intersection.

Buckwalter Parkway at Bluffton Parkway/Buckwalter Towne Boulevard

- No capacity improvements are recommended at this intersection.

The recommended geometry and traffic control is shown on **Figure 10**.

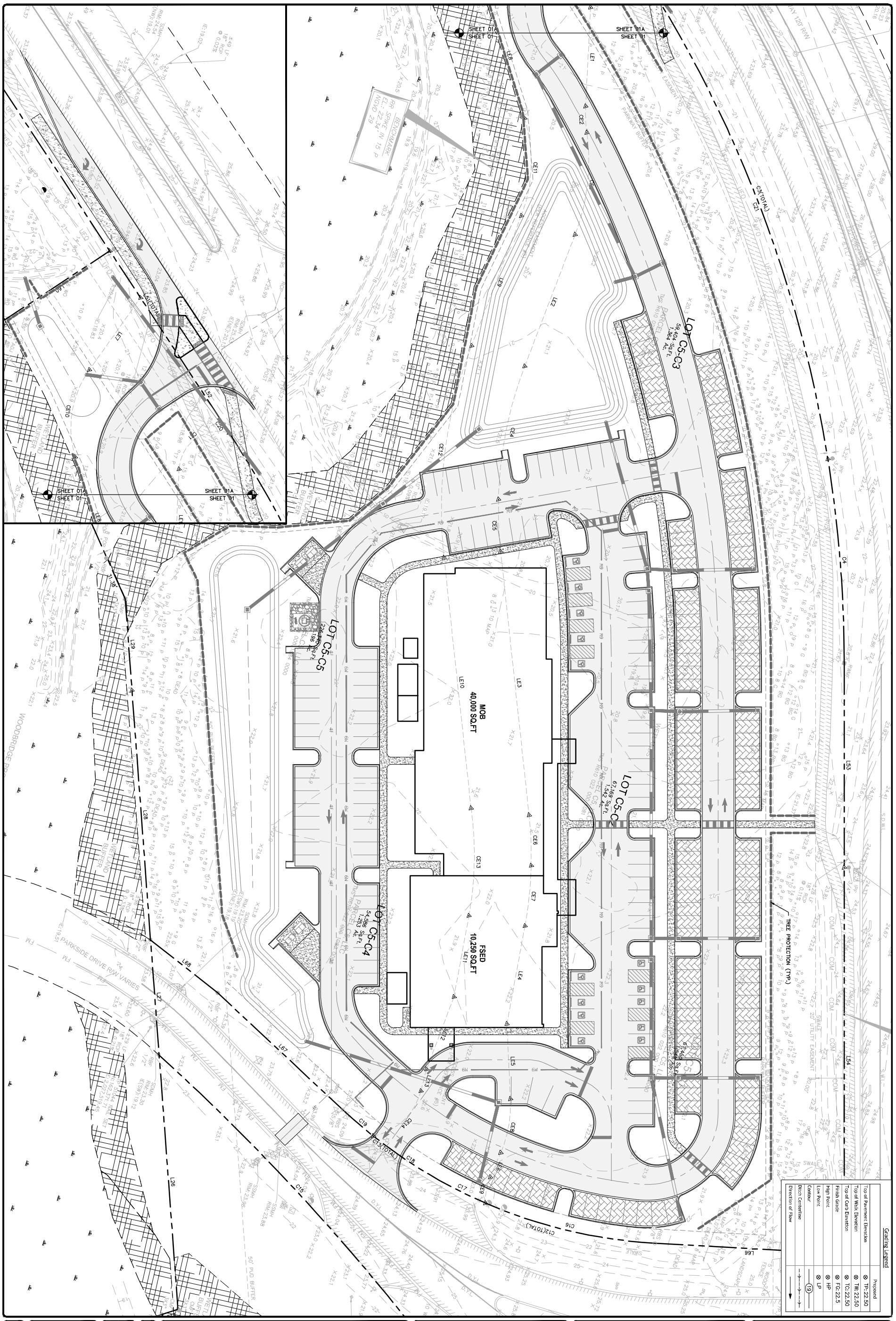


Kimley»Horn

Buckwalter Parkway Healthcare Development

Figure 10 - Recommended Geometry and Traffic Control

Appendix A – Conceptual Site Plan



C501

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Grading Plan

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton,
South Carolina 29910
(843) 837-5250
www.WardEdwards.com

No.	Description	Date
8		
7		
6		
5		
4		
3		
2		
1		

Plan Revisions

WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION — SOUTH CAROLINA

LICENSED No. 22816 ENGINEER — 05/13/24 — PAUL R. MOORE — SOUTH CAROLINA PROFESSIONAL

Vert. Datum: NAVD88
Horiz. Datum: NAD83

Project #: 23064O
Date: 05/13/24
Designed by: ASH
Checked by: CPB

Scale: 1" = 30' (0, 30, 60 Feet)

Permit Set - NOT FOR CONSTRUCTION

Appendix B – Trip Generation Calculations

Buckwalter Parkway Healthcare Development Trip Generation									
Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Office Land Uses			2,053	130	103	27	202	61	141
720 - Medical-Dental Office Building	50.3	KSF	2,053	130	103	27	202	61	141
Subtotal			2,053	130	103	27	202	61	141
Total Net New External Trips			2,053	130	103	27	202	61	141

Note: Trip generation was calculated using the following data:

Daily Traffic Generation

Office Land Uses

720 - Medical-Dental Office Building — ITE 720 = T = 42.97 * (X) + (-108.01); (50 % In; 50 % Out)

AM Peak-Hour Traffic Generation

Office Land Uses

720 - Medical-Dental Office Building — ITE 720 = LN (T) = 0.9 * LN (X) + (1.34); (79 % In; 21 % Out)

PM Peak-Hour Traffic Generation

Office Land Uses

720 - Medical-Dental Office Building — ITE 720 = T = 4.07 * (X) + (-3.17); (30 % In; 70 % Out)

Appendix C – Traffic Volume Development Worksheets

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	2	35	2,361	413	7	154	1,625	20	0	446	44	351	0	32	16	24
AM Volume Balancing	-2	2	0	0	-7	7	0	0	0	0	0	0	0	0	0	0
AM 2024 EXISTING TRAFFIC	**0**	**37**	**2,361**	**413**	**0**	**161**	**1,625**	**20**	**0**	**446**	**44**	**351**	**0**	**32**	**16**	**24**
AM Heavy Vehicle Percentage	2%	2%	5%	4%	2%	1%	4%	5%	2%	1%	2%	1%	2%	2%	2%	2%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	10	652	114	0	44	449	6	0	123	12	97	0	9	4	7
AM 2029 NO-BUILD TRAFFIC (No AD)	0	47	3,013	527	0	205	2,074	26	0	569	56	448	0	41	20	31
Approved Development 1: Bluffton Commons (Washington Square)				49		28				35		21				
Approved Development 2: Cross Schools				16		10				11		7				
Approved Development 3: Elle Apartments				1		1				2		2				
Approved Development 4: Parkways Multifamily				4		3				13		8				
Approved Development 5: Bluffton Community Hospital				23		15				11		8				
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	0	0	93	0	57	0	0	0	72	0	46	0	0	0	0
AM 2029 NO-BUILD TRAFFIC	**0**	**47**	**3,013**	**620**	**0**	**262**	**2,074**	**26**	**0**	**641**	**56**	**494**	**0**	**41**	**20**	**31**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering				**35%**		**20%**										
	Exiting										**35%**		**20%**				

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	**35**	0	**21**	0	0	0	**9**	0	**6**	0	0	0	0
AM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**35**	**0**	**21**	**0**	**0**	**0**	**9**	**0**	**6**	**0**	**0**	**0**	**0**
AM 2029 BUILD-OUT TRAFFIC		**0**	**47**	**3,013**	**655**	**0**	**283**	**2,074**	**26**	**0**	**650**	**56**	**500**	**0**	**41**	**20**	**31**
AM 2029 BUILD-OUT IMPROVED		**0**	**47**	**3,013**	**655**	**0**	**283**	**2,074**	**26**	**0**	**650**	**56**	**500**	**0**	**41**	**20**	**31**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	3	21	2,015	477	7	392	2,523	30	0	485	31	273	0	41	38	31
PM Volume Balancing	-3	3	0	0	-7	7	0	0	0	0	0	0	0	0	0	0
PM 2024 EXISTING TRAFFIC	**0**	**24**	**2,015**	**477**	**0**	**399**	**2,523**	**30**	**0**	**485**	**31**	**273**	**0**	**41**	**38**	**31**
PM Heavy Vehicle Percentage	2%	2%	2%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%	2%	2%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	7	557	132	0	110	697	8	0	134	9	75	0	11	10	9
PM 2029 NO-BUILD TRAFFIC (No AD)	0	31	2,572	609	0	509	3,220	38	0	619	40	348	0	52	48	40
Approved Development 1: Bluffton Commons (Washington Square)				64		36				67		38				
Approved Development 2: Cross Schools				4		2				7		4				
Approved Development 3: Elle Apartments				3		2				2		1				
Approved Development 4: Parkways Multifamily				13		9				8		5				
Approved Development 5: Bluffton Community Hospital				11		8				20		14				
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	0	0	95	0	57	0	0	0	104	0	62	0	0	0	0
PM 2029 NO-BUILD TRAFFIC	**0**	**31**	**2,572**	**704**	**0**	**566**	**3,220**	**38**	**0**	**723**	**40**	**410**	**0**	**52**	**48**	**40**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering				**35%**		**20%**										
	Exiting										**35%**		**20%**				

"PM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	**22**	0	**12**	0	0	0	**49**	0	**28**	0	0	0	0
PM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**22**	**0**	**12**	**0**	**0**	**0**	**49**	**0**	**28**	**0**	**0**	**0**	**0**
PM 2029 BUILD-OUT TRAFFIC		**0**	**31**	**2,572**	**726**	**0**	**578**	**3,220**	**38**	**0**	**772**	**40**	**438**	**0**	**52**	**48**	**40**
PM 2029 BUILD-OUT IMPROVED		**0**	**31**	**2,572**	**726**	**0**	**578**	**3,220**	**38**	**0**	**772**	**40**	**438**	**0**	**52**	**48**	**40**

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	0	2	0	2	0	112	0	129	1	1	815	29	0	30	494	4
AM Volume Balancing	0	0	0	0	0	0	0	0	-1	1	17	0	0	0	0	0
AM 2024 EXISTING TRAFFIC	**0**	**2**	**0**	**2**	**0**	**112**	**0**	**129**	**0**	**2**	**832**	**29**	**0**	**30**	**494**	**4**
AM Heavy Vehicle Percentage	2%	2%	2%	2%	2%	4%	2%	2%	2%	2%	1%	10%	2%	10%	3%	2%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	1	0	1	0	31	0	36	0	1	230	8	0	8	136	1
AM 2029 NO-BUILD TRAFFIC (No AD)	0	3	0	3	0	143	0	165	0	3	1,062	37	0	38	630	5
Approved Development 1: Bluffton Commons (Washington Square)		31		31						43	25				34	43
Approved Development 2: Cross Schools											18				26	
Approved Development 3: Elle Apartments											4				2	
Approved Development 4: Parkways Multifamily											21				7	
Approved Development 5: Bluffton Community Hospital											19				38	
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	31	0	31	0	0	0	0	0	43	87	0	0	0	107	43
AM 2029 NO-BUILD TRAFFIC	**0**	**34**	**0**	**34**	**0**	**143**	**0**	**165**	**0**	**46**	**1,149**	**37**	**0**	**38**	**737**	**48**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering												**20%**		**45%**	**10%**	
Distribution	Exiting						**35%**		**45%**			**10%**					

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	**9**	0	**12**	0	0	**3**	**21**	0	**46**	**10**	0
AM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**9**	**0**	**12**	**0**	**0**	**3**	**21**	**0**	**46**	**10**	**0**
AM 2029 BUILD-OUT TRAFFIC		**0**	**34**	**0**	**34**	**0**	**152**	**0**	**177**	**0**	**46**	**1,152**	**58**	**0**	**84**	**747**	**48**
AM 2029 BUILD-OUT IMPROVED		**0**	**68**	**0**	**34**	**0**	**155**	**0**	**177**	**0**	**105**	**1,118**	**58**	**0**	**94**	**737**	**48**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	0	1	0	0	0	48	0	73	0	0	730	105	3	77	865	0
PM Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0	-3	3	5	0
PM 2024 EXISTING TRAFFIC	**0**	**1**	**0**	**0**	**0**	**48**	**0**	**73**	**0**	**0**	**730**	**105**	**0**	**80**	**870**	**0**
PM Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	1%	2%	2%	1%	1%	2%	2%	1%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	0	0	0	0	13	0	20	0	0	202	29	0	22	240	0
PM 2029 NO-BUILD TRAFFIC (No AD)	0	1	0	0	0	61	0	93	0	0	932	134	0	102	1,110	0
Approved Development 1: Bluffton Commons (Washington Square)		75		75						71	30				29	71
Approved Development 2: Cross Schools											11				6	
Approved Development 3: Elle Apartments											3				5	
Approved Development 4: Parkways Multifamily											13				22	
Approved Development 5: Bluffton Community Hospital											34				19	
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	75	0	75	0	0	0	0	0	71	91	0	0	0	81	71
PM 2029 NO-BUILD TRAFFIC	**0**	**76**	**0**	**75**	**0**	**61**	**0**	**93**	**0**	**71**	**1,023**	**134**	**0**	**102**	**1,191**	**71**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering												**20%**		**45%**	**10%**	
Distribution	Exiting						**35%**		**45%**			**10%**					

"PM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	**50**	0	**63**	0	0	**14**	**12**	0	**28**	**6**	0
PM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**50**	**0**	**63**	**0**	**0**	**14**	**12**	**0**	**28**	**6**	**0**
PM 2029 BUILD-OUT TRAFFIC		**0**	**76**	**0**	**75**	**0**	**111**	**0**	**156**	**0**	**71**	**1,037**	**146**	**0**	**130**	**1,197**	**71**
PM 2029 BUILD-OUT IMPROVED		**0**	**165**	**0**	**75**	**0**	**125**	**0**	**156**	**0**	**160**	**948**	**146**	**0**	**136**	**1,191**	**71**

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	0	7	0	7	0	0	0	0	0	7	856	0	0	0	592	13
AM Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
AM 2024 EXISTING TRAFFIC	**0**	**7**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**7**	**856**	**0**	**0**	**0**	**595**	**13**
AM Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	3%	8%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	2	0	2	0	0	0	0	0	2	236	0	0	0	164	4
AM 2029 NO-BUILD TRAFFIC (No AD)	0	9	0	9	0	0	0	0	0	9	1,092	0	0	0	759	17
Approved Development 1: Bluffton Commons (Washington Square)		25		37						50	43				31	34
Approved Development 2: Cross Schools											18				26	
Approved Development 3: Elle Apartments											4				2	
Approved Development 4: Parkways Multifamily											21				7	
Approved Development 5: Bluffton Community Hospital											19				38	
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	25	0	37	0	0	0	0	0	50	105	0	0	0	104	34
AM 2029 NO-BUILD TRAFFIC	**0**	**34**	**0**	**46**	**0**	**0**	**0**	**0**	**0**	**59**	**1,197**	**0**	**0**	**0**	**863**	**51**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering											**20%**	**25%**		**10%**		
Distribution	Exiting						**10%**		**10%**							**35%**	

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	**3**	0	**3**	0	0	**21**	**26**	0	**10**	**9**	0
AM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**21**	**26**	**0**	**10**	**9**	**0**
AM 2029 BUILD-OUT TRAFFIC		**0**	**34**	**0**	**46**	**0**	**3**	**0**	**3**	**0**	**59**	**1,218**	**26**	**0**	**10**	**872**	**51**
AM 2029 BUILD-OUT IMPROVED		**0**	**0**	**0**	**46**	**0**	**0**	**0**	**3**	**0**	**0**	**1,277**	**26**	**0**	**0**	**875**	**51**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	0	20	0	18	0	0	0	0	1	5	807	0	0	0	910	8
PM Volume Balancing	0	0	0	0	0	0	0	0	-1	1	8	0	0	0	0	0
PM 2024 EXISTING TRAFFIC	**0**	**20**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**6**	**815**	**0**	**0**	**0**	**910**	**8**
PM Heavy Vehicle Percentage	2%	2%	2%	11%	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	0%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	6	0	5	0	0	0	0	0	2	225	0	0	0	251	2
PM 2029 NO-BUILD TRAFFIC (No AD)	0	26	0	23	0	0	0	0	0	8	1,040	0	0	0	1,161	10
Approved Development 1: Bluffton Commons (Washington Square)		63		86						81	40				42	60
Approved Development 2: Cross Schools											11				6	
Approved Development 3: Elle Apartments											3				5	
Approved Development 4: Parkways Multifamily											13				22	
Approved Development 5: Bluffton Community Hospital											34				19	
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	63	0	86	0	0	0	0	0	81	101	0	0	0	94	60
PM 2029 NO-BUILD TRAFFIC	**0**	**89**	**0**	**109**	**0**	**0**	**0**	**0**	**0**	**89**	**1,141**	**0**	**0**	**0**	**1,255**	**70**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering											**20%**	**25%**		**10%**		
Distribution	Exiting						**10%**		**10%**							**35%**	

"PM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	**14**	0	**14**	0	0	**12**	**15**	0	**6**	**50**	0
PM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**14**	**0**	**14**	**0**	**0**	**12**	**15**	**0**	**6**	**50**	**0**
PM 2029 BUILD-OUT TRAFFIC		**0**	**89**	**0**	**109**	**0**	**14**	**0**	**14**	**0**	**89**	**1,153**	**15**	**0**	**6**	**1,305**	**70**
PM 2029 BUILD-OUT IMPROVED		**0**	**0**	**0**	**109**	**0**	**0**	**0**	**14**	**0**	**0**	**1,242**	**15**	**0**	**0**	**1,319**	**70**

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	0	90	1	99	0	7	3	6	1	184	762	5	3	2	428	78
AM Volume Balancing	0	0	0	0	0	0	0	0	-1	1	12	1	-3	3	14	0
AM 2024 EXISTING TRAFFIC	**0**	**90**	**1**	**99**	**0**	**7**	**3**	**6**	**0**	**185**	**774**	**6**	**0**	**5**	**442**	**78**
AM Heavy Vehicle Percentage	2%	2%	2%	4%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	3%	1%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	25	0	27	0	2	1	2	0	51	214	2	0	1	122	22
AM 2029 NO-BUILD TRAFFIC (No AD)	0	115	1	126	0	9	4	8	0	236	988	8	0	6	564	100
Approved Development 1: Bluffton Commons (Washington Square)											93				68	
Approved Development 2: Cross Schools											18				26	
Approved Development 3: Elle Apartments											4				2	
Approved Development 4: Parkways Multifamily											21				7	
Approved Development 5: Bluffton Community Hospital		16									3				19	19
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	16	0	0	0	0	0	0	0	0	139	0	0	0	122	19
AM 2029 NO-BUILD TRAFFIC	**0**	**131**	**1**	**126**	**0**	**9**	**4**	**8**	**0**	**236**	**1,127**	**8**	**0**	**6**	**686**	**119**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering											**45%**					
	Exiting															**45%**	

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	0	0	0	0	0	**47**	0	0	0	**12**	0
AM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**47**	**0**	**0**	**0**	**12**	**0**
AM 2029 BUILD-OUT TRAFFIC		**0**	**131**	**1**	**126**	**0**	**9**	**4**	**8**	**0**	**236**	**1,174**	**8**	**0**	**6**	**698**	**119**
AM 2029 BUILD-OUT IMPROVED		**0**	**131**	**1**	**126**	**0**	**9**	**4**	**8**	**0**	**236**	**1,174**	**8**	**0**	**6**	**698**	**119**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	0	183	0	200	0	4	0	1	4	300	585	5	6	7	647	150
PM Volume Balancing	0	0	0	0	0	0	0	0	-4	4	115	1	-6	6	64	0
PM 2024 EXISTING TRAFFIC	**0**	**183**	**0**	**200**	**0**	**4**	**0**	**1**	**0**	**304**	**700**	**6**	**0**	**13**	**711**	**150**
PM Heavy Vehicle Percentage	2%	1%	2%	2%	2%	2%	2%	2%	2%	1%	0%	2%	2%	2%	2%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	51	0	55	0	1	0	0	0	84	193	2	0	4	196	41
PM 2029 NO-BUILD TRAFFIC (No AD)	0	234	0	255	0	5	0	1	0	388	893	8	0	17	907	191
Approved Development 1: Bluffton Commons (Washington Square)											121				128	
Approved Development 2: Cross Schools											11				6	
Approved Development 3: Elle Apartments											3				5	
Approved Development 4: Parkways Multifamily											13				22	
Approved Development 5: Bluffton Community Hospital		28									6				9	10
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	28	0	0	0	0	0	0	0	0	154	0	0	0	170	10
PM 2029 NO-BUILD TRAFFIC	**0**	**262**	**0**	**255**	**0**	**5**	**0**	**1**	**0**	**388**	**1,047**	**8**	**0**	**17**	**1,077**	**201**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering											**45%**					
	Exiting															**45%**	

"PM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	0	0	0	0	0	0	0	**27**	0	0	0	**64**	0
PM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	**0**	**0**	**0**	**64**	**0**
PM 2029 BUILD-OUT TRAFFIC		**0**	**262**	**0**	**255**	**0**	**5**	**0**	**1**	**0**	**388**	**1,074**	**8**	**0**	**17**	**1,141**	**201**
PM 2029 BUILD-OUT IMPROVED		**0**	**262**	**0**	**255**	**0**	**5**	**0**	**1**	**0**	**388**	**1,074**	**8**	**0**	**17**	**1,141**	**201**

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	0	246	8	1,016	0	24	24	21	1	431	698	12	0	10	387	151
AM Volume Balancing	0	0	0	0	0	0	0	0	-1	1	0	0	0	0	0	0
AM 2024 EXISTING TRAFFIC	**0**	**246**	**8**	**1,016**	**0**	**24**	**24**	**21**	**0**	**432**	**698**	**12**	**0**	**10**	**387**	**151**
AM Heavy Vehicle Percentage	2%	0%	2%	2%	2%	4%	4%	5%	2%	2%	0%	8%	2%	20%	2%	2%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	68	2	281	0	7	7	6	0	119	193	3	0	3	107	42
AM 2029 NO-BUILD TRAFFIC (No AD)	0	314	10	1,297	0	31	31	27	0	551	891	15	0	13	494	193
Approved Development 1: Bluffton Commons (Washington Square)		62									31				23	45
Approved Development 2: Cross Schools				60						41	18				26	
Approved Development 3: Elle Apartments		4		4						2						2
Approved Development 4: Parkways Multifamily		21		21						6						7
Approved Development 5: Bluffton Community Hospital		3		21						44						10
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	90	0	106	0	0	0	0	0	93	49	0	0	0	49	64
AM 2029 NO-BUILD TRAFFIC	**0**	**404**	**10**	**1,403**	**0**	**31**	**31**	**27**	**0**	**644**	**940**	**15**	**0**	**13**	**543**	**257**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering		**30%**									**15%**					
	Exiting															**15%**	**30%**

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	**32**	0	0	0	0	0	0	0	0	**15**	0	0	0	**4**	**8**
AM TOTAL PROJECT TRIPS		**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**4**	**8**
AM 2029 BUILD-OUT TRAFFIC		**0**	**436**	**10**	**1,403**	**0**	**31**	**31**	**27**	**0**	**644**	**955**	**15**	**0**	**13**	**547**	**265**
AM 2029 BUILD-OUT IMPROVED		**0**	**436**	**10**	**1,403**	**0**	**31**	**31**	**27**	**0**	**644**	**955**	**15**	**0**	**13**	**547**	**265**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	1	164	17	717	0	16	10	16	2	712	829	32	1	22	664	228
PM Volume Balancing	-1	1	0	0	0	0	0	0	-2	2	0	0	-1	1	0	0
PM 2024 EXISTING TRAFFIC	**0**	**165**	**17**	**717**	**0**	**16**	**10**	**16**	**0**	**714**	**829**	**32**	**0**	**23**	**664**	**228**
PM Heavy Vehicle Percentage	2%	4%	18%	3%	2%	6%	10%	6%	2%	1%	1%	2%	2%	2%	2%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	46	5	198	0	4	3	4	0	197	229	9	0	6	183	63
PM 2029 NO-BUILD TRAFFIC (No AD)	0	211	22	915	0	20	13	20	0	911	1,058	41	0	29	847	291
Approved Development 1: Bluffton Commons (Washington Square)		81									40				43	85
Approved Development 2: Cross Schools				16						23	11				6	
Approved Development 3: Elle Apartments		3		4						5						5
Approved Development 4: Parkways Multifamily		13		13						22						22
Approved Development 5: Bluffton Community Hospital		6		39						21						9
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	103	0	72	0	0	0	0	0	71	51	0	0	0	49	121
PM 2029 NO-BUILD TRAFFIC	**0**	**314**	**22**	**987**	**0**	**20**	**13**	**20**	**0**	**982**	**1,109**	**41**	**0**	**29**	**896**	**412**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New Distribution	Entering		**30%**									**15%**					
	Exiting															**15%**	**30%**

"PM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	**18**	0	0	0	0	0	0	0	0	**9**	0	0	0	**21**	**43**
PM TOTAL PROJECT TRIPS		**0**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**21**	**43**
PM 2029 BUILD-OUT TRAFFIC		**0**	**332**	**22**	**987**	**0**	**20**	**13**	**20**	**0**	**982**	**1,118**	**41**	**0**	**29**	**917**	**455**
PM 2029 BUILD-OUT IMPROVED		**0**	**332**	**22**	**987**	**0**	**20**	**13**	**20**	**0**	**982**	**1,118**	**41**	**0**	**29**	**917**	**455**

AM Peak Hour

AM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM Adjusted Turning Movement Counts[1]	0	0	59	0	0	0	241	0	0	0	0	0	0	0	0	0
AM Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM 2024 EXISTING TRAFFIC	**0**	**0**	**59**	**0**	**0**	**0**	**241**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
AM Heavy Vehicle Percentage	2%	2%	10%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
AM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
AM 2029 NO-BUILD TRAFFIC GROWTH	0	0	16	0	0	0	67	0	0	0	0	0	0	0	0	0
AM 2029 NO-BUILD TRAFFIC (No AD)	0	0	75	0	0	0	308	0	0	0	0	0	0	0	0	0
Approved Development 1: Bluffton Commons (Washington Square)																
Approved Development 2: Cross Schools																
Approved Development 3: Elle Apartments																
Approved Development 4: Parkways Multifamily																
Approved Development 5: Bluffton Community Hospital																
TOTAL AM APPROVED DEVELOPMENT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM 2029 NO-BUILD TRAFFIC	**0**	**0**	**75**	**0**	**0**	**0**	**308**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering				**65%**												
Distribution	Exiting										**80%**						

"AM PROJECT TRIPS"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	**67**	0	0	0	0	0	**21**	0	0	0	0	0	0
AM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**67**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**
AM 2029 BUILD-OUT TRAFFIC		**0**	**0**	**75**	**67**	**0**	**0**	**308**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**
AM 2029 BUILD-OUT IMPROVED		**0**	**0**	**75**	**77**	**0**	**0**	**308**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**

PM Peak Hour

PM 2024 EXISTING TRAFFIC	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM Adjusted Turning Movement Counts[1]	0	0	182	0	0	0	121	0	0	0	0	0	0	0	0	0
PM Volume Balancing	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 2024 EXISTING TRAFFIC	**0**	**0**	**185**	**0**	**0**	**0**	**121**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Heavy Vehicle Percentage	2%	2%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
PM 2029 NO-BUILD TRAFFIC	**EBU**	**EBL**	**EBT**	**EBR**	**WBU**	**WBL**	**WBT**	**WBR**	**NBU**	**NBL**	**NBT**	**NBR**	**SBU**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
PM 2029 NO-BUILD TRAFFIC GROWTH	0	0	51	0	0	0	33	0	0	0	0	0	0	0	0	0
PM 2029 NO-BUILD TRAFFIC (No AD)	0	0	236	0	0	0	154	0	0	0	0	0	0	0	0	0
Approved Development 1: Bluffton Commons (Washington Square)																
Approved Development 2: Cross Schools																
Approved Development 3: Elle Apartments																
Approved Development 4: Parkways Multifamily																
Approved Development 5: Bluffton Community Hospital																
TOTAL PM APPROVED DEVELOPMENT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 2029 NO-BUILD TRAFFIC	**0**	**0**	**236**	**0**	**0**	**0**	**154**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

"SITE TRAFFIC DISTRUBUTION"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Net New	Entering				**65%**												
Distribution	Exiting										**80%**						

"PM PROJECT TRIPS"

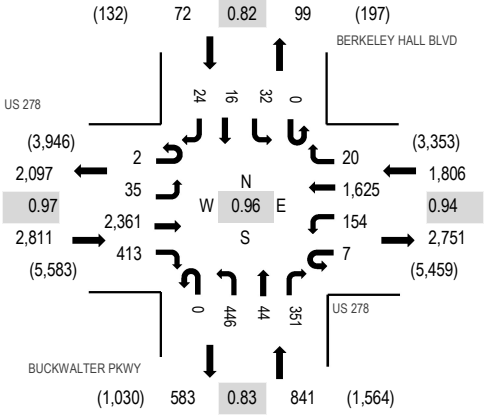
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trip	Net New	0	0	0	**40**	0	0	0	0	0	**113**	0	0	0	0	0	0
PM TOTAL PROJECT TRIPS		**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**113**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2029 BUILD-OUT TRAFFIC		**0**	**0**	**236**	**40**	**0**	**0**	**154**	**0**	**0**	**113**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2029 BUILD-OUT IMPROVED		**0**	**0**	**236**	**46**	**0**	**0**	**154**	**0**	**0**	**127**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix D – Raw Turning Movement Counts

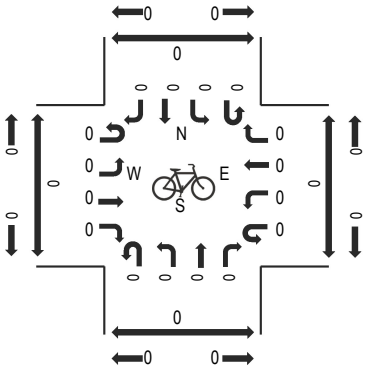
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 BUCKWALTER PKWY & US 278 AM
Date: Tuesday, April 2, 2024
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

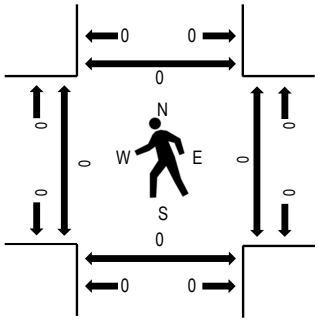
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US 278 Eastbound				US 278 Westbound				BUCKWALTER PKWY Northbound				BERKELEY HALL BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	624	73	0	19	255	2	0	78	2	57	0	3	2	5	1,124	5,216	0	0	0	0
7:15 AM	2	4	661	84	1	21	298	4	0	96	4	67	0	4	3	2	1,251	5,395	0	0	0	0
7:30 AM	1	6	629	116	1	38	436	3	0	89	6	64	0	4	5	4	1,402	5,530	0	0	0	0
7:45 AM	1	8	587	104	2	38	411	7	0	134	15	114	0	7	6	5	1,439	5,471	0	0	0	0
8:00 AM	0	5	556	103	2	40	349	7	0	129	8	88	0	6	3	7	1,303	5,416	0	0	0	0
8:15 AM	0	16	589	90	2	38	429	3	0	94	15	85	0	15	2	8	1,386		0	0	0	0
8:30 AM	1	16	568	84	2	31	425	5	0	110	11	69	0	8	6	7	1,343		0	0	0	0
8:45 AM	1	21	556	73	2	48	425	9	0	137	16	76	0	10	3	7	1,384		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	26	2	0	1	14	0	0	2	0	2	0	0	0	0	47
Lights	2	35	2,240	395	7	152	1,568	19	0	443	44	347	0	32	16	24	5,324
Mediums	0	0	95	16	0	1	43	1	0	1	0	2	0	0	0	0	159
Total	2	35	2,361	413	7	154	1,625	20	0	446	44	351	0	32	16	24	5,530

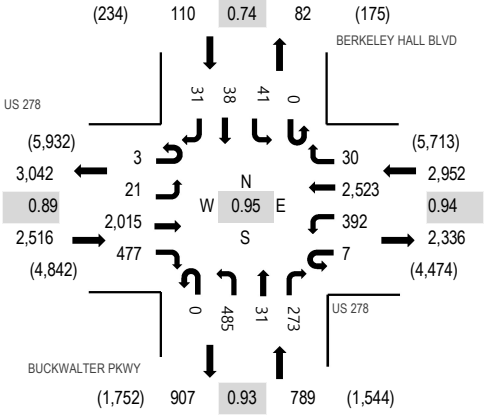
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.0%				0.8%				0.5%				0.0%		0.8%
Heavy Vehicle %	0.0%	0.0%	1.1%	0.5%	0.0%	0.6%	0.9%	0.0%	0.0%	0.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.8%
Peak Hour Factor			0.97				0.94				0.83				0.82		0.96
Peak Hour Factor	0.50	0.69	0.95	0.89	1.00	0.82	0.95	0.67	0.00	0.86	0.78	0.78	0.00	0.65	0.71	0.91	0.96

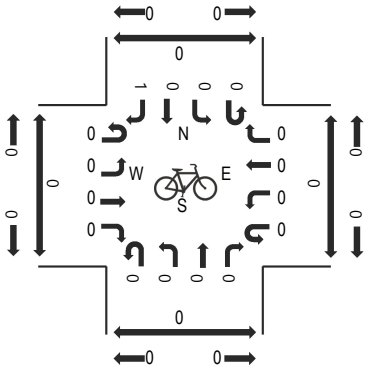
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 BUCKWALTER PKWY & US 278 PM
Date: Tuesday, April 2, 2024
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

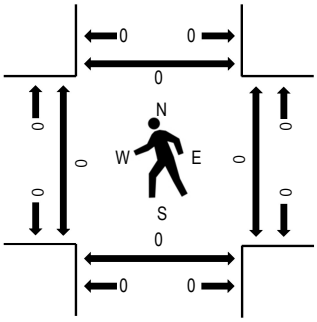
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US 278 Eastbound				US 278 Westbound				BUCKWALTER PKWY Northbound				BERKELEY HALL BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	2	7	432	109	3	77	539	9	0	131	6	77	0	10	17	16	1,435	6,108	0	0	0	0
4:15 PM	3	8	483	127	0	73	670	2	0	116	6	83	0	13	7	9	1,600	6,345	0	0	0	0
4:30 PM	2	4	499	102	3	102	668	11	0	125	6	73	0	7	11	10	1,623	6,367	0	0	0	0
4:45 PM	1	7	463	108	2	87	570	9	0	106	10	60	0	7	12	8	1,450	6,177	0	0	0	0
5:00 PM	0	2	559	144	1	94	620	7	0	127	12	71	0	17	8	10	1,672	6,225	0	0	0	0
5:15 PM	0	8	494	123	1	109	665	3	0	127	3	69	0	10	7	3	1,622		0	0	0	0
5:30 PM	0	9	431	121	3	94	574	8	0	111	11	54	0	5	5	7	1,433		0	0	0	0
5:45 PM	1	10	465	118	1	92	605	11	0	94	5	61	1	17	5	12	1,498		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	8	0	0	0	0	0	0	0	0	0	12
Lights	3	21	1,983	468	7	391	2,466	30	0	484	31	273	0	41	38	31	6,267
Mediums	0	0	28	9	0	1	49	0	0	1	0	0	0	0	0	0	88
Total	3	21	2,015	477	7	392	2,523	30	0	485	31	273	0	41	38	31	6,367

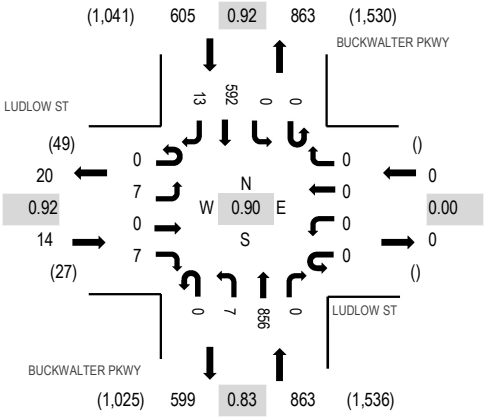
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.6%				2.0%				0.1%				0.0%		1.6%
Heavy Vehicle %	0.0%	0.0%	1.6%	1.9%	0.0%	0.3%	2.3%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%
Peak Hour Factor			0.89				0.94				0.93				0.74		0.95
Peak Hour Factor	0.67	0.73	0.90	0.88	0.67	0.90	0.94	0.70	0.00	0.95	0.75	0.88	0.25	0.72	0.69	0.67	0.95

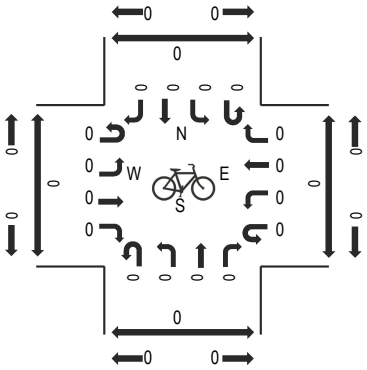
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 BUCKWALTER PKWY & LUDLOW ST AM
Date: Tuesday, April 2, 2024
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

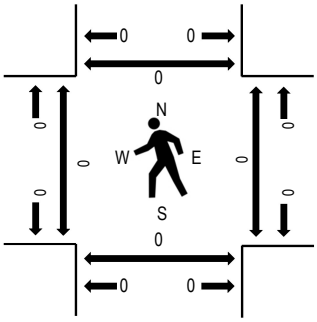
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	LUDLOW ST Eastbound				LUDLOW ST Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	4	121	0	0	0	83	4	212	1,203	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	0	0	6	119	0	0	0	121	3	250	1,362	0	0	1	0
7:30 AM	0	0	0	2	0	0	0	0	0	3	177	0	0	0	147	2	331	1,482	0	0	0	0
7:45 AM	0	1	0	1	0	0	0	0	0	1	267	0	0	0	139	1	410	1,468	0	0	0	0
8:00 AM	0	3	0	3	0	0	0	0	0	2	211	0	0	0	147	5	371	1,401	0	0	0	0
8:15 AM	0	3	0	1	0	0	0	0	0	1	201	0	0	0	159	5	370		0	0	0	0
8:30 AM	0	4	0	2	0	0	0	0	1	2	202	0	0	0	102	4	317		0	0	0	0
8:45 AM	0	4	0	2	0	0	0	0	0	2	216	0	1	0	114	4	343		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6
Lights	0	7	0	7	0	0	0	0	0	7	844	0	0	0	573	12	1,450
Mediums	0	0	0	0	0	0	0	0	0	0	9	0	0	0	16	1	26
Total	0	7	0	7	0	0	0	0	0	7	856	0	0	0	592	13	1,482

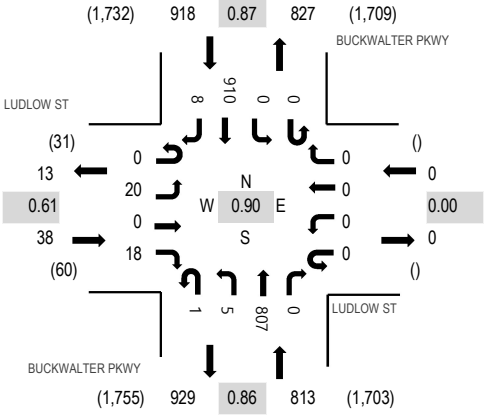
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				0.3%				0.5%			0.4%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.4%
Peak Hour Factor		0.92				0.00				0.83				0.92			0.90
Peak Hour Factor	0.00	0.88	0.00	0.67	0.00	0.00	0.00	0.00	0.25	0.58	0.82	0.00	0.25	0.00	0.93	0.90	0.90

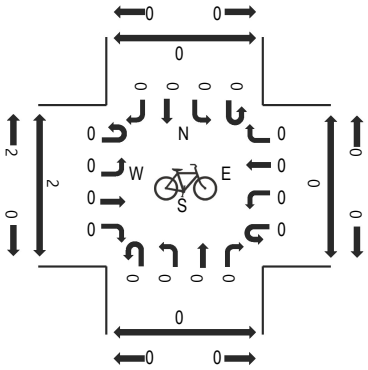
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 BUCKWALTER PKWY & LUDLOW ST PM
Date: Tuesday, April 2, 2024
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

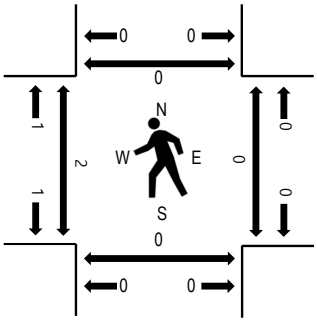
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	LUDLOW ST Eastbound				LUDLOW ST Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	2	0	3	0	0	0	0	0	2	257	0	0	0	203	2	469	1,726	2	0	0	0
4:15 PM	0	1	0	1	0	0	0	0	0	5	220	0	0	0	206	0	433	1,747	0	0	0	0
4:30 PM	0	0	0	5	0	0	0	0	0	3	215	0	0	0	198	1	422	1,759	1	0	0	0
4:45 PM	0	0	0	10	0	0	0	0	0	1	187	0	0	0	200	4	402	1,756	0	0	0	0
5:00 PM	0	2	0	3	0	0	0	0	0	1	220	0	0	0	262	2	490	1,769	2	0	0	0
5:15 PM	0	10	0	8	0	0	0	0	0	1	200	0	0	0	224	2	445		0	0	0	0
5:30 PM	0	6	0	5	0	0	0	0	1	2	194	0	0	0	209	2	419		0	0	0	0
5:45 PM	0	2	0	2	0	0	0	0	0	1	193	0	0	0	215	2	415		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Lights	0	20	0	16	0	0	0	0	1	5	800	0	0	0	906	8	1,756
Mediums	0	0	0	2	0	0	0	0	0	0	5	0	0	0	4	0	11
Total	0	20	0	18	0	0	0	0	1	5	807	0	0	0	910	8	1,769

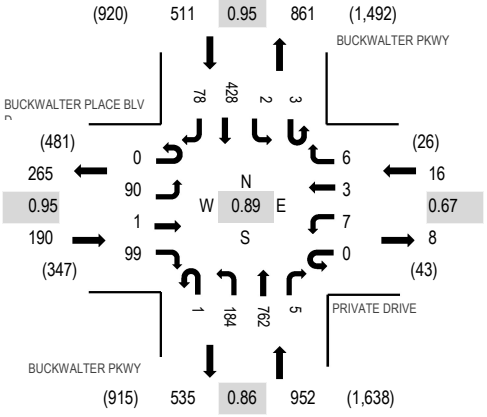
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		5.3%				0.0%				0.9%				0.4%			0.7%
Heavy Vehicle %	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.4%	0.0%	0.7%
Peak Hour Factor		0.61				0.00				0.86				0.87			0.90
Peak Hour Factor	0.00	0.50	0.00	0.65	0.00	0.00	0.00	0.00	0.25	0.55	0.86	0.00	0.00	0.00	0.87	0.63	0.90

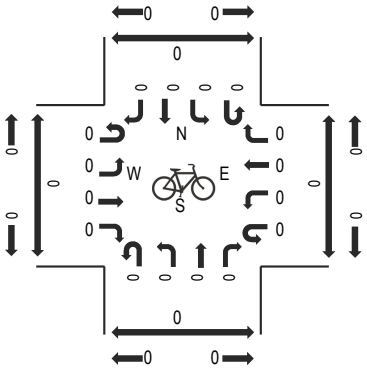
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 BUCKWALTER PKWY & PRIVATE DRIVE AM
Date: Tuesday, April 2, 2024
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

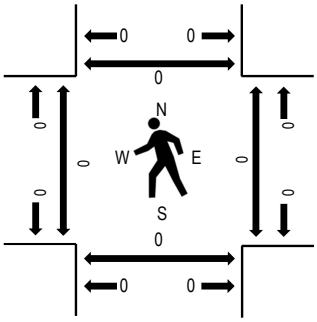
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BUCKWALTER PLACE BLVD Eastbound				PRIVATE DRIVE Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	18	2	9	0	0	0	0	0	20	116	4	1	8	54	13	245	1,372	0	1	0	0
7:15 AM	0	18	0	19	0	0	0	1	0	24	118	7	0	3	84	18	292	1,538	0	0	0	0
7:30 AM	0	19	0	23	0	0	0	0	0	37	160	0	0	0	98	28	365	1,642	0	0	0	0
7:45 AM	0	21	0	29	0	1	0	0	0	51	225	1	1	1	117	23	470	1,669	0	0	0	0
8:00 AM	0	21	0	25	0	0	0	0	1	44	180	0	0	0	118	22	411	1,559	0	0	0	0
8:15 AM	0	22	0	23	0	4	1	3	0	35	174	1	0	0	115	18	396		0	0	0	0
8:30 AM	0	26	1	22	0	2	2	3	0	54	183	3	2	1	78	15	392		0	0	0	0
8:45 AM	0	25	0	24	0	4	0	5	0	42	150	8	0	3	65	34	360		3	0	2	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	4
Lights	0	88	1	95	0	7	3	6	1	183	758	5	3	2	415	77	1,644
Mediums	0	1	0	4	0	0	0	0	0	1	3	0	0	0	11	1	21
Total	0	90	1	99	0	7	3	6	1	184	762	5	3	2	428	78	1,669

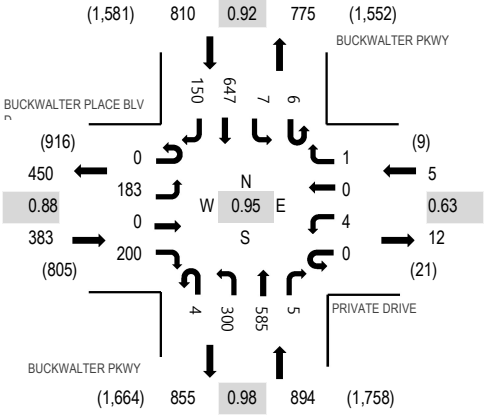
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.5%				0.0%				0.1%				0.4%			0.2%
Heavy Vehicle %	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.5%	0.0%	0.2%
Peak Hour Factor		0.95				0.67				0.86				0.95			0.89
Peak Hour Factor	0.00	0.90	0.25	0.86	0.00	0.63	0.38	0.55	0.25	0.85	0.85	0.38	0.38	0.38	0.95	0.81	0.89

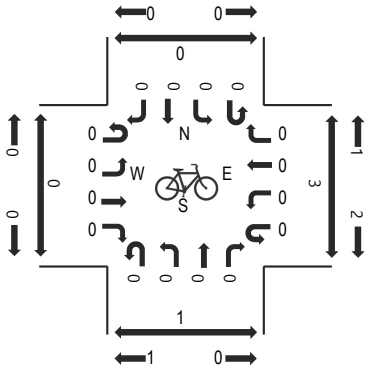
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 BUCKWALTER PKWY & PRIVATE DRIVE PM
Date: Tuesday, April 2, 2024
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

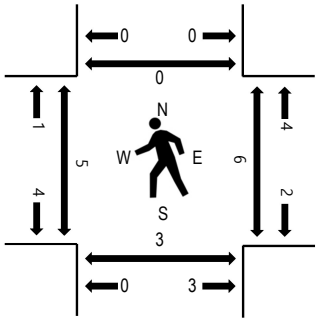
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BUCKWALTER PLACE BLVD Eastbound				PRIVATE DRIVE Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	56	0	60	0	1	0	2	0	89	176	2	4	1	136	56	583	2,076	0	0	0	0
4:15 PM	0	52	0	66	0	0	0	0	1	67	158	0	0	0	148	39	531	2,041	0	0	0	0
4:30 PM	0	54	0	48	0	0	0	0	1	57	114	0	3	0	149	34	460	2,050	2	0	0	0
4:45 PM	0	37	0	42	0	1	0	0	1	76	150	1	1	0	157	36	502	2,092	0	0	0	0
5:00 PM	0	47	0	56	0	1	0	1	1	72	147	2	3	4	179	35	548	2,077	3	4	2	0
5:15 PM	0	46	0	53	0	2	0	0	1	79	148	1	1	2	160	47	540		0	1	0	0
5:30 PM	0	53	0	49	0	0	0	0	1	73	140	1	1	1	151	32	502		2	1	1	0
5:45 PM	0	34	0	52	0	0	0	1	1	74	121	3	2	3	146	50	487		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	181	0	196	0	4	0	1	4	297	583	5	6	7	637	150	2,071
Mediums	0	2	0	4	0	0	0	0	0	3	1	0	0	0	10	0	20
Total	0	183	0	200	0	4	0	1	4	300	585	5	6	7	647	150	2,092

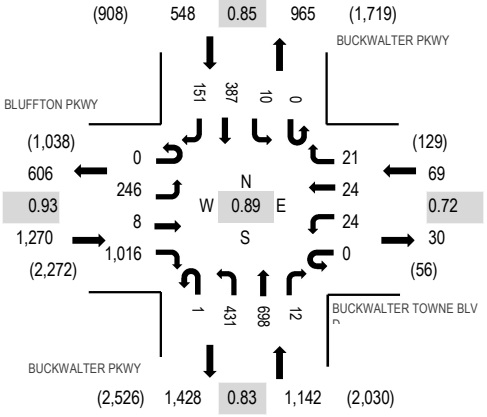
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.6%				0.0%				0.6%				1.2%			1.0%
Heavy Vehicle %	0.0%	1.1%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.3%	0.0%	0.0%	0.0%	1.5%	0.0%	1.0%
Peak Hour Factor		0.88				0.63				0.98				0.92			0.95
Peak Hour Factor	0.00	0.89	0.00	0.82	0.00	0.50	0.00	0.25	1.00	0.95	0.85	0.58	0.50	0.63	0.90	0.74	0.95

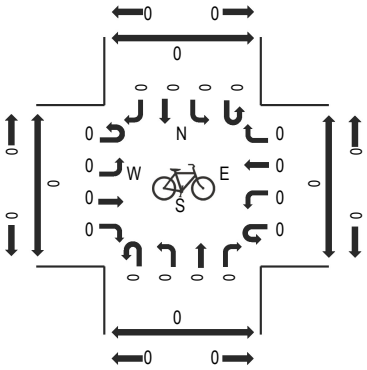
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 BUCKWALTER PKWY & BUCKWALTER TOWNE BLVD AM
Date: Tuesday, March 19, 2024
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

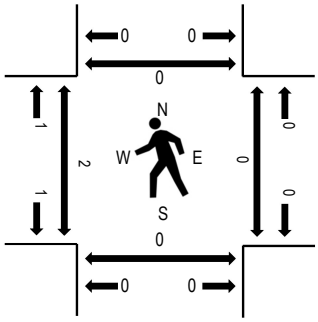
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BLUFFTON PKWY Eastbound				BUCKWALTER TOWNE Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	26	1	138	0	6	1	5	0	40	103	2	0	1	47	12	382	2,536	0	1	0	0
7:15 AM	0	37	1	207	0	8	4	9	0	93	136	2	0	0	60	22	579	2,838	0	0	0	0
7:30 AM	0	56	2	277	0	4	5	11	0	66	173	2	0	5	97	26	724	3,029	0	0	0	0
7:45 AM	0	65	0	275	0	9	2	3	0	123	229	1	0	1	118	25	851	3,018	0	0	0	0
8:00 AM	0	59	3	195	0	2	5	4	0	129	169	4	0	3	74	37	684	2,803	2	0	0	0
8:15 AM	0	66	3	269	0	9	12	3	1	113	127	5	0	1	98	63	770		0	0	0	0
8:30 AM	0	53	3	264	0	7	7	5	0	112	148	5	0	1	71	37	713		0	0	0	0
8:45 AM	0	67	2	203	0	3	1	4	0	81	161	5	0	3	84	22	636		0	2	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Lights	0	245	8	997	0	23	23	20	1	421	695	11	0	8	379	148	2,979
Mediums	0	1	0	17	0	1	1	1	0	10	3	1	0	2	8	3	48
Total	0	246	8	1,016	0	24	24	21	1	431	698	12	0	10	387	151	3,029

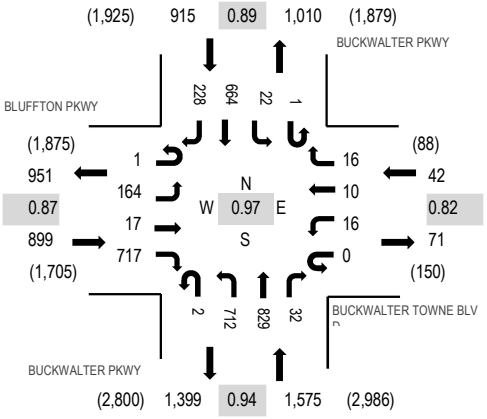
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.2%				0.0%				0.0%				0.0%			0.1%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Peak Hour Factor		0.93				0.72				0.83				0.85			0.89
Peak Hour Factor	0.00	0.93	0.92	0.92	0.00	0.75	0.54	0.64	0.25	0.92	0.77	0.95	0.00	0.50	0.82	0.64	0.89

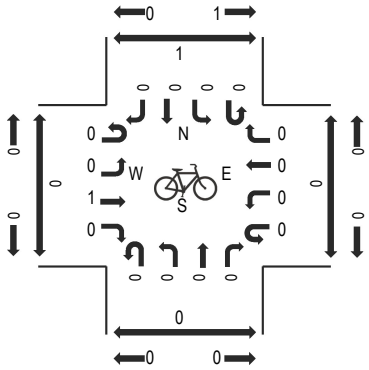
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 BUCKWALTER PKWY & BUCKWALTER TOWNE BLVD PM
Date: Tuesday, March 19, 2024
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

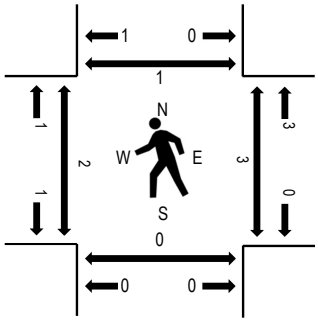
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BLUFFTON PKWY Eastbound				BUCKWALTER TOWNE Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	55	2	201	0	6	2	3	1	190	218	10	0	8	126	64	886	3,431	0	0	0	0
4:15 PM	0	37	5	184	0	1	1	6	1	168	217	6	0	5	187	58	876	3,367	1	1	0	1
4:30 PM	0	31	7	179	0	2	3	5	0	194	200	8	1	4	156	58	848	3,378	1	0	0	0
4:45 PM	1	41	3	153	0	7	4	2	0	160	194	8	0	5	195	48	821	3,301	0	2	0	0
5:00 PM	0	35	5	172	0	3	3	8	1	179	168	5	0	4	177	62	822	3,273	4	1	0	0
5:15 PM	0	34	1	199	0	1	4	2	0	169	187	7	1	11	208	63	887		0	1	0	0
5:30 PM	0	41	3	141	0	2	4	5	0	167	175	8	1	6	161	57	771		0	2	0	0
5:45 PM	1	29	4	141	0	6	5	3	1	154	180	10	0	15	188	56	793		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Lights	1	158	14	693	0	15	9	15	2	703	823	32	1	22	648	228	3,364
Mediums	0	6	3	24	0	1	1	1	0	8	6	0	0	0	16	0	66
Total	1	164	17	717	0	16	10	16	2	712	829	32	1	22	664	228	3,431

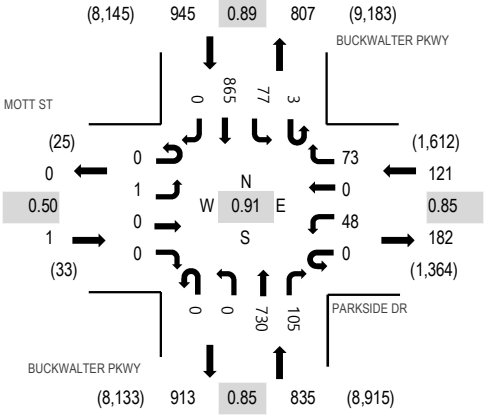
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				0.1%				0.0%			0.0%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Peak Hour Factor		0.87				0.82				0.94				0.89			0.97
Peak Hour Factor	0.25	0.75	0.71	0.89	0.00	0.57	0.80	0.66	0.50	0.92	0.95	0.80	0.50	0.60	0.89	0.94	0.97

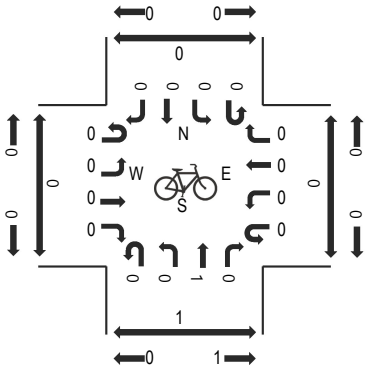
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 BUCKWALTER PKWY & PARKSIDE DR AM
Date: Tuesday, April 2, 2024
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

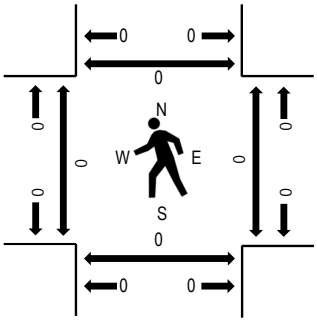
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MOTT ST Eastbound				PARKSIDE DR Westbound				BUCKWALTER PKWY Northbound				BUCKWALTER PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	0	0	0	0	4	0	16	0	0	56	2	2	2	24	0	106	605	0	0	0	0
6:15 AM	0	0	0	0	0	12	0	23	0	0	59	1	0	3	37	0	135	730	0	0	0	0
6:30 AM	0	1	0	0	0	12	0	16	0	0	75	4	0	2	34	0	144	886	0	0	0	0
6:45 AM	0	0	0	0	0	7	0	33	0	0	100	5	0	2	71	2	220	1,108	0	0	0	0
7:00 AM	0	0	0	0	0	9	0	26	0	0	112	4	0	2	76	2	231	1,342	0	0	0	0
7:15 AM	0	0	0	0	0	21	0	37	0	0	122	1	0	1	109	0	291	1,516	0	0	0	0
7:30 AM	0	0	0	0	0	18	0	33	1	1	171	4	0	8	129	1	366	1,619	0	0	0	0
7:45 AM	0	2	0	1	0	20	0	38	0	0	252	8	0	5	125	3	454	1,609	0	0	0	0
8:00 AM	0	0	0	1	0	33	0	28	0	0	207	6	0	9	121	0	405	1,531	0	0	0	0
8:15 AM	0	0	0	0	0	41	0	30	0	0	185	11	0	8	119	0	394	1,444	0	0	0	0
8:30 AM	0	0	0	1	0	11	0	23	0	0	200	12	0	14	95	0	356	1,353	0	0	0	0
8:45 AM	0	0	0	0	0	12	0	28	0	0	208	16	0	6	106	0	376	1,276	0	0	0	0
9:00 AM	0	0	0	0	0	9	0	20	1	0	151	10	1	11	115	0	318	1,251	0	0	0	0
9:15 AM	0	0	0	0	0	7	0	16	0	0	148	9	0	10	113	0	303	1,249	0	0	0	0
9:30 AM	0	0	0	0	0	8	0	25	0	0	124	6	0	5	110	1	279	1,202	0	0	0	0
9:45 AM	0	0	0	1	0	15	0	22	0	0	164	9	0	3	137	0	351	1,230	0	0	0	0
10:00 AM	0	1	0	0	0	17	0	20	0	0	144	7	1	10	116	0	316	1,222	0	0	0	0
10:15 AM	0	0	0	1	0	10	0	16	0	0	112	10	1	2	104	0	256	1,230	0	0	0	0
10:30 AM	0	1	0	0	0	7	0	20	0	0	148	12	1	6	112	0	307	1,341	0	0	1	0
10:45 AM	0	2	0	0	0	14	0	16	0	0	148	13	1	12	137	0	343	1,415	0	0	0	0
11:00 AM	0	0	0	0	1	8	0	19	0	0	131	9	1	10	145	0	324	1,457	0	0	0	0
11:15 AM	0	0	0	0	0	8	0	17	1	0	147	9	1	14	170	0	367	1,538	0	2	0	0
11:30 AM	0	1	0	1	0	9	0	13	0	1	156	11	2	12	175	0	381	1,575	0	0	0	0
11:45 AM	0	2	0	0	0	5	0	19	0	0	170	9	1	7	170	2	385	1,545	0	0	0	0
12:00 PM	0	1	0	0	0	8	0	19	0	0	183	19	0	10	165	0	405	1,525	0	0	0	0
12:15 PM	0	0	0	0	0	8	0	8	0	0	177	16	0	6	189	0	404	1,481	0	1	0	0
12:30 PM	0	0	0	0	0	8	0	21	0	1	154	6	1	7	153	0	351	1,471	0	0	0	0
12:45 PM	0	0	0	0	0	9	0	15	0	0	171	4	0	6	158	2	365	1,486	0	0	0	0
1:00 PM	0	0	0	0	0	15	0	12	0	0	145	17	0	11	158	3	361	1,487	0	0	0	0
1:15 PM	0	0	0	0	0	9	0	21	0	0	203	10	0	15	136	0	394	1,496	0	0	0	0
1:30 PM	0	0	0	0	0	9	0	17	1	0	143	13	2	18	162	1	366	1,481	0	0	0	0
1:45 PM	0	1	0	0	0	17	0	18	0	0	159	7	0	16	148	0	366	1,474	0	0	0	0
2:00 PM	0	1	0	0	0	7	0	11	0	0	168	15	1	13	154	0	370	1,485	0	0	0	0
2:15 PM	0	0	0	0	0	11	0	12	0	0	164	11	0	17	164	0	379	1,542	0	1	0	0

2:30 PM	0	2	0	0	0	11	0	19	1	0	149	12	0	14	151	0	359	1,596	0	0	0	0
2:45 PM	0	3	0	0	0	9	0	15	0	0	153	10	0	11	176	0	377	1,666	0	0	0	0
3:00 PM	0	0	0	1	0	15	0	11	0	0	200	22	1	17	159	1	427	1,721	0	0	0	0
3:15 PM	0	0	0	0	0	9	0	9	1	0	186	25	1	18	184	0	433	1,780	0	2	0	0
3:30 PM	0	1	0	0	0	11	0	12	0	0	191	16	1	20	177	0	429	1,799	0	0	1	0
3:45 PM	0	1	0	0	0	21	0	15	0	0	155	27	0	23	190	0	432	1,821	0	0	0	0
4:00 PM	0	2	0	1	0	12	0	9	1	0	218	37	1	16	189	0	486	1,816	0	0	0	0
4:15 PM	0	0	0	0	0	12	0	13	0	1	186	30	2	24	184	0	452	1,855	0	0	0	0
4:30 PM	0	1	0	0	0	10	0	15	1	0	172	32	0	30	189	1	451	1,883	0	0	0	0
4:45 PM	0	0	0	0	0	12	0	23	0	0	151	31	0	17	192	1	427	1,884	0	0	0	0
5:00 PM	0	0	0	0	0	15	0	19	0	0	201	24	0	21	245	0	525	1,902	0	0	0	0
5:15 PM	0	1	0	0	0	13	0	23	0	0	182	26	1	20	214	0	480	1,768	0	0	0	0
5:30 PM	0	0	0	0	0	10	0	15	0	0	172	33	2	23	197	0	452	1,639	0	0	0	0
5:45 PM	0	0	0	0	0	10	0	16	0	0	175	22	0	13	209	0	445	1,524	0	0	0	0
6:00 PM	0	0	0	0	0	14	0	13	1	1	152	26	2	19	163	0	391	1,361	0	0	0	0
6:15 PM	0	0	0	0	0	15	0	11	0	0	130	20	0	20	155	0	351		0	0	0	0
6:30 PM	0	0	0	1	0	12	0	19	0	0	126	18	0	16	145	0	337		0	0	0	0
6:45 PM	0	0	0	0	0	11	0	6	0	0	105	23	0	18	119	0	282		0	0	0	0

Peak Rolling Hour Flow Rates

	Eastbound				Westbound				Northbound				Southbound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	1	0	0	0	47	0	72	0	0	726	104	3	77	860	0	1,890
Mediums	0	0	0	0	0	1	0	1	0	0	3	1	0	0	5	0	11
Total	0	1	0	0	0	48	0	73	0	0	730	105	3	77	865	0	1,902

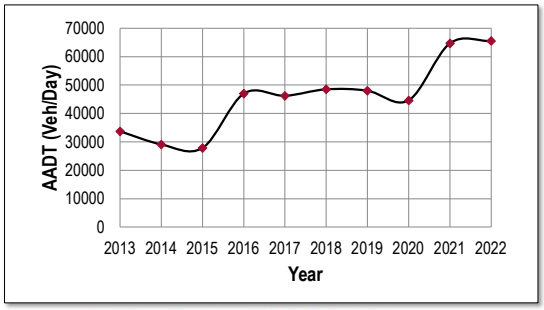
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Heavy Vehicle %		0.0%				1.7%				0.6%				0.5%			0.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	1.4%	0.0%	0.0%	0.5%	1.0%	0.0%	0.0%	0.6%	0.0%	0.6%
Peak Hour Factor		0.50				0.85				0.85				0.89			0.91
Peak Hour Factor	0.00	0.50	0.00	0.75	0.25	0.68	0.00	0.89	0.50	0.25	0.84	0.88	0.63	0.78	0.88	0.50	0.91

Appendix E – Historic Growth Rate Calculations and Background Development Volumes

Index 1
Station ID 07-0179
Location US278 : SC 170 (OKATIE HWY) TO SC 46 (BLUFFTON RD), L- 4790

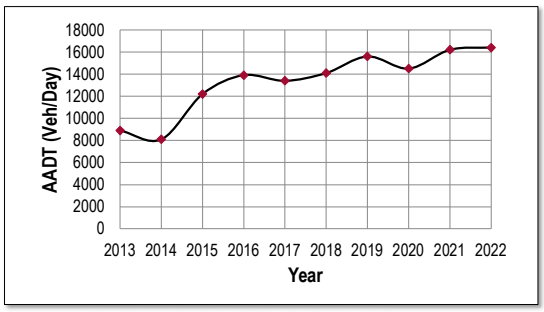
Year	AADT
2013	33700
2014	29100
2015	27900
2016	47000
2017	46200
2018	48500
2019	48000
2020	44600
2021	64700
2022	65500



Short-Term Growth for Station 07-0179 is 7.8% per year.
Long-Term Growth for Station 07-0179 is 7.7% per year.

Index 2
Station ID 07-0553
Location L-1525 : L- 749 (BUCKWALTER TOWNE BLVD), L- 1863 TO US 278 (FORDING ISLAND RD)

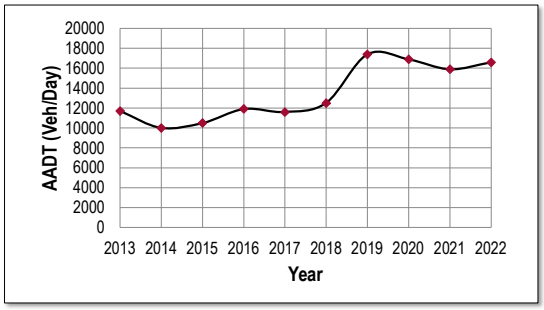
Year	AADT
2013	8900
2014	8100
2015	12200
2016	13900
2017	13400
2018	14100
2019	15600
2020	14500
2021	16200
2022	16400



Short-Term Growth for Station 07-0553 is 3.8% per year.
Long-Term Growth for Station 07-0553 is 7.0% per year.

Index 3
Station ID 07-0554
Location L-1863 : SC 170 (OKATIE HWY) TO L- 749 (BUCKWALTER TOWNE BLVD), L- 1525

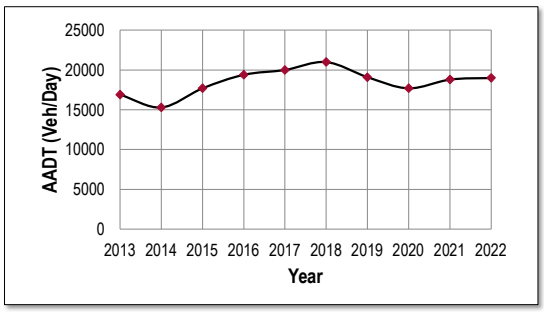
Year	AADT
2013	11700
2014	10000
2015	10500
2016	11900
2017	11600
2018	12500
2019	17400
2020	16900
2021	15900
2022	16600



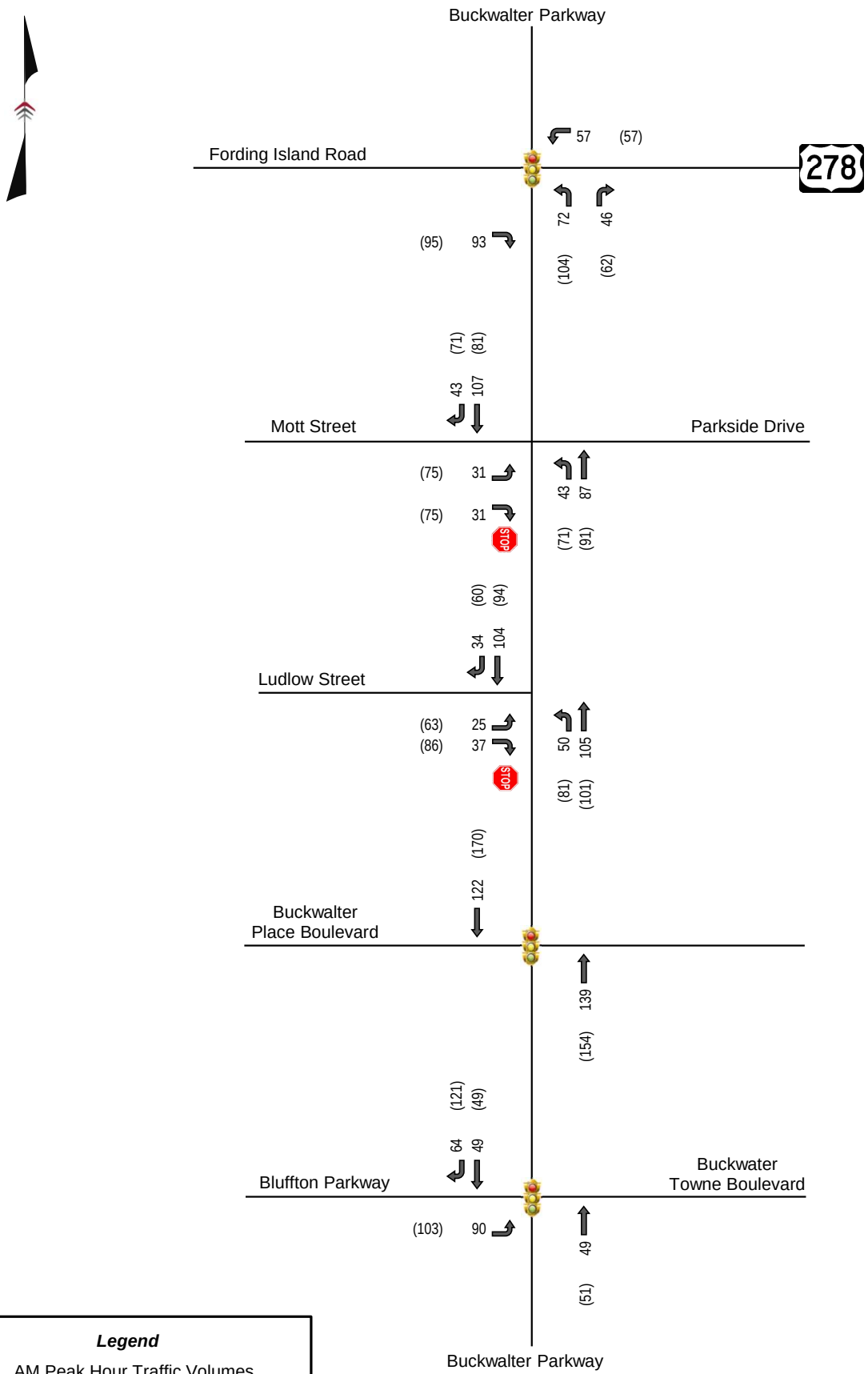
Short-Term Growth for Station 07-0554 is 7.3% per year.
Long-Term Growth for Station 07-0554 is 4.0% per year.

Index 4
Station ID 07-0552
Location L-1525 : L- 1526 (BLUFFTON PKWY), L- 2321 TO L- 749 (BUCKWALTER TOWNE BLVD), L- 1863

Year	AADT
2013	16900
2014	15300
2015	17700
2016	19400
2017	20000
2018	21000
2019	19100
2020	17700
2021	18800
2022	19000



Short-Term Growth for Station 07-0552 is -2.5% per year.
Long-Term Growth for Station 07-0552 is 1.3% per year.



Legend

xx AM Peak Hour Traffic Volumes

(xx) PM Peak Hour Traffic Volumes

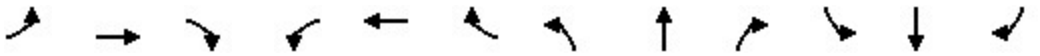
Kimley»Horn

Buckwalter Parkway Healthcare Development

Figure 7 - Adjacent Developemnt Traffic Volumes

Appendix F – Capacity Analysis Worksheets

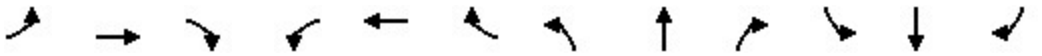
2024 Existing Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	2459	430	168	1693	21	465	46	366	25	25	25
v/c Ratio	0.18	0.87	0.43	0.65	0.56	0.02	0.89	0.16	0.22	0.24	0.23	0.12
Control Delay (s/veh)	11.8	35.8	9.9	88.0	22.1	0.0	89.5	64.2	0.3	81.8	81.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.8	35.8	9.9	88.0	22.1	0.0	89.5	64.2	0.3	81.8	81.3	1.2
Queue Length 50th (ft)	14	871	109	94	437	0	264	45	0	28	28	0
Queue Length 95th (ft)	29	949	194	139	488	0	#359	88	0	66	66	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	242	2818	991	271	3020	975	545	293	1599	112	116	209
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.87	0.43	0.62	0.56	0.02	0.85	0.16	0.23	0.22	0.22	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	2361	413	161	1625	20	446	44	351	32	16	24
Future Volume (veh/h)	37	2361	413	161	1625	20	446	44	351	32	16	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1841	1885	1841	1826	1885	1870	1885	1870	1870	1870
Adj Flow Rate, veh/h	39	2459	430	168	1693	0	465	46	0	25	28	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	4	1	4	5	1	2	1	2	2	2
Cap, veh/h	241	2838	888	213	2913		511	274		99	104	
Arrive On Green	0.05	0.57	0.57	0.06	0.58	0.00	0.15	0.15	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	4985	1560	3483	5025	1547	3483	1870	1598	1781	1870	1585
Grp Volume(v), veh/h	39	2459	430	168	1693	0	465	46	0	25	28	0
Grp Sat Flow(s),veh/h/ln	1781	1662	1560	1742	1675	1547	1742	1870	1598	1781	1870	1585
Q Serve(g_s), s	1.4	68.6	26.8	7.8	35.0	0.0	21.5	3.5	0.0	2.2	2.3	0.0
Cycle Q Clear(g_c), s	1.4	68.6	26.8	7.8	35.0	0.0	21.5	3.5	0.0	2.2	2.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	2838	888	213	2913		511	274		99	104	
V/C Ratio(X)	0.16	0.87	0.48	0.79	0.58		0.91	0.17		0.25	0.27	
Avail Cap(c_a), veh/h	290	2838	888	272	2913		547	294		119	125	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.7	30.0	21.0	75.8	21.8	0.0	68.8	61.1	0.0	74.0	74.1	0.0
Incr Delay (d2), s/veh	0.3	3.9	1.9	11.3	0.9	0.0	18.7	0.3	0.0	1.3	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	26.2	9.7	3.8	13.1	0.0	10.8	1.7	0.0	1.1	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.1	33.8	22.8	87.2	22.7	0.0	87.5	61.4	0.0	75.4	75.5	0.0
LnGrp LOS	B	C	C	F	C		F	E		E	E	
Approach Vol, veh/h		2928			1861			511			53	
Approach Delay, s/veh		32.0			28.5			85.2			75.4	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	100.0		16.2	14.5	101.7		31.3				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	12.8	93.2		10.9	12.8	93.2		25.7				
Max Q Clear Time (g_c+I1), s	9.8	70.6		4.3	3.4	37.0		23.5				
Green Ext Time (p_c), s	0.1	22.3		0.0	0.0	48.1		0.5				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	36.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	2	112	0	129	2	832	29	30	494	4
Future Vol, veh/h	2	0	2	112	0	129	2	832	29	30	494	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	75	150	-	-	350	-	350	275	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	4	2	2	2	1	10	10	3	2
Mvmt Flow	2	0	2	126	0	145	2	935	33	34	555	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1095	1595	278	1285	1566	468	559	0	0	968	0	0
Stage 1	623	623	-	939	939	-	-	-	-	-	-	-
Stage 2	472	972	-	346	627	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.58	6.54	6.94	4.14	-	-	4.3	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.3	-	-
Pot Cap-1 Maneuver	168	106	719	~ 120	110	542	1008	-	-	660	-	-
Stage 1	440	476	-	280	341	-	-	-	-	-	-	-
Stage 2	542	329	-	637	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	118	100	719	~ 115	104	542	1008	-	-	660	-	-
Mov Cap-2 Maneuver	118	100	-	~ 115	104	-	-	-	-	-	-	-
Stage 1	439	451	-	279	340	-	-	-	-	-	-	-
Stage 2	396	328	-	602	449	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	23.1	92.8	0	0.6
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1008	-	-	118	719	115	542	660	-	-
HCM Lane V/C Ratio	0.002	-	-	0.019	0.003	1.094	0.267	0.051	-	-
HCM Control Delay (s/veh)	8.6	-	-	36.1	10	183.5	14	10.7	-	-
HCM Lane LOS	A	-	-	E	B	F	B	B	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0	7.6	1.1	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	7	7	856	595	13
Future Vol, veh/h	7	7	7	856	595	13
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	75	275	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	1	3	8
Mvmt Flow	8	8	8	951	661	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1153	331	675	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	191	665	912	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	665	912	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	580	-	-	-	-	-

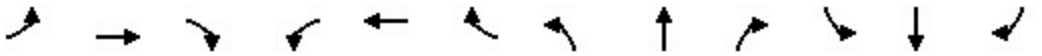
Approach	EB	NB	SB
HCM Control Delay, s/v	17.7	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	912	-	189	665	-	-
HCM Lane V/C Ratio	0.009	-	0.041	0.012	-	-
HCM Control Delay (s/veh)	9	-	24.9	10.5	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q (veh)	0	-	0.1	0	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	112	11	7	208	870	7	6	497	88
v/c Ratio	0.59	0.39	0.06	0.02	0.29	0.31	0.00	0.01	0.22	0.08
Control Delay (s/veh)	59.4	12.1	40.8	0.1	5.4	5.7	0.0	10.2	9.8	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.4	12.1	40.8	0.1	5.4	5.7	0.0	10.2	9.8	2.4
Queue Length 50th (ft)	69	1	7	0	35	78	0	1	72	0
Queue Length 95th (ft)	117	48	22	0	m52	98	m0	8	121	21
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	300	422	313	409	790	2740	1221	383	2213	1043
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	0.34	0.27	0.04	0.02	0.26	0.32	0.01	0.02	0.22	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1	99	7	3	6	185	774	6	5	442	78
Future Volume (veh/h)	90	1	99	7	3	6	185	774	6	5	442	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1870	1870	1885	1885	1870	1870	1856	1885
Adj Flow Rate, veh/h	101	1	111	8	3	7	208	870	7	6	497	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	4	2	2	2	1	1	2	2	3	1
Cap, veh/h	198	1	145	80	22	146	742	2851	1262	501	2429	
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.05	0.80	0.80	0.69	0.69	0.00
Sat Flow, veh/h	1414	14	1573	257	235	1585	1795	3582	1585	632	3526	1598
Grp Volume(v), veh/h	101	0	112	11	0	7	208	870	7	6	497	0
Grp Sat Flow(s),veh/h/ln	1414	0	1587	491	0	1585	1795	1791	1585	632	1763	1598
Q Serve(g_s), s	0.0	0.0	7.6	0.1	0.0	0.4	3.4	7.2	0.1	0.3	5.6	0.0
Cycle Q Clear(g_c), s	7.5	0.0	7.6	7.6	0.0	0.4	3.4	7.2	0.1	0.3	5.6	0.0
Prop In Lane	1.00		0.99	0.73		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	0	146	102	0	146	742	2851	1262	501	2429	
V/C Ratio(X)	0.51	0.00	0.77	0.11	0.00	0.05	0.28	0.31	0.01	0.01	0.20	
Avail Cap(c_a), veh/h	373	0	342	275	0	342	958	2851	1262	501	2429	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.7	0.0	48.8	45.8	0.0	45.5	3.9	3.0	2.3	5.4	6.2	0.0
Incr Delay (d2), s/veh	2.0	0.0	8.1	0.5	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	3.3	0.3	0.0	0.2	0.9	1.6	0.0	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.7	0.0	56.8	46.3	0.0	45.7	4.1	3.3	2.3	5.4	6.4	0.0
LnGrp LOS	D		E	D		D	A	A	A	A	A	
Approach Vol, veh/h		213			18			1085			503	
Approach Delay, s/veh		53.9			46.0			3.4			6.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		93.6		16.4	11.8	81.8		16.4				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		74.0		23.7	19.2	49.0		23.7				
Max Q Clear Time (g_c+I1), s		9.2		9.6	5.4	7.6		9.6				
Green Ext Time (p_c), s		16.2		0.6	0.5	7.3		0.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			10.6									
HCM 6th LOS			B									

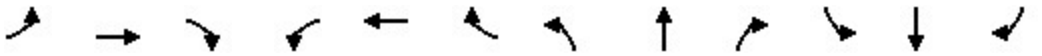
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	254	8	1047	25	47	445	720	12	10	399	156
v/c Ratio	0.89	0.02	0.66	0.08	0.12	0.73	0.30	0.01	0.07	0.24	0.19
Control Delay (s/veh)	74.2	33.8	2.1	35.1	22.5	50.1	9.3	0.0	45.9	16.7	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	33.8	2.1	35.1	22.5	50.1	9.3	0.0	45.9	16.7	2.4
Queue Length 50th (ft)	172	4	0	14	14	154	97	0	7	66	1
Queue Length 95th (ft)	#312	18	0	38	46	199	191	0	25	96	18
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	304	411	1583	303	390	764	2382	1014	198	1633	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.02	0.66	0.08	0.12	0.58	0.30	0.01	0.05	0.24	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



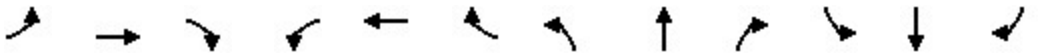
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	8	1016	24	24	21	432	698	12	10	387	151
Future Volume (veh/h)	246	8	1016	24	24	21	432	698	12	10	387	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1841	1841	1826	1870	1900	1781	1604	1870	1870
Adj Flow Rate, veh/h	254	8	0	25	25	22	445	720	12	10	399	0
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
Percent Heavy Veh, %	0	2	2	4	4	5	2	0	8	20	2	2
Cap, veh/h	340	413		367	199	176	531	2168	907	37	1673	
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.15	0.60	0.60	0.05	0.94	0.00
Sat Flow, veh/h	1380	1870	1585	1385	903	795	3456	3610	1510	1527	3554	1585
Grp Volume(v), veh/h	254	8	0	25	0	47	445	720	12	10	399	0
Grp Sat Flow(s),veh/h/ln	1380	1870	1585	1385	0	1698	1728	1805	1510	1527	1777	1585
Q Serve(g_s), s	19.9	0.4	0.0	1.6	0.0	2.4	13.8	10.9	0.4	0.7	0.9	0.0
Cycle Q Clear(g_c), s	22.3	0.4	0.0	2.0	0.0	2.4	13.8	10.9	0.4	0.7	0.9	0.0
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	413		367	0	375	531	2168	907	37	1673	
V/C Ratio(X)	0.75	0.02		0.07	0.00	0.13	0.84	0.33	0.01	0.27	0.24	
Avail Cap(c_a), veh/h	340	413		367	0	375	770	2168	907	201	1673	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.00
Uniform Delay (d), s/veh	43.3	33.5	0.0	34.3	0.0	34.3	45.2	11.0	8.8	51.4	1.7	0.0
Incr Delay (d2), s/veh	8.8	0.0	0.0	0.1	0.0	0.1	5.5	0.0	0.0	3.9	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.2	0.0	0.5	0.0	1.0	6.1	3.9	0.1	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.1	33.5	0.0	34.4	0.0	34.5	50.7	11.0	8.8	55.3	2.1	0.0
LnGrp LOS	D	C		C		C	D	B	A	E	A	
Approach Vol, veh/h		262			72			1177			409	
Approach Delay, s/veh		51.5			34.4			26.0			3.4	
Approach LOS		D			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.4	57.6		30.0	8.1	71.9		30.0				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	24.5	44.2		24.3	14.5	54.2		24.3				
Max Q Clear Time (g_c+I1), s	15.8	2.9		24.3	2.7	12.9		4.4				
Green Ext Time (p_c), s	1.2	5.6		0.0	0.0	11.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		25.0	
HCM 6th LOS		C	

Notes

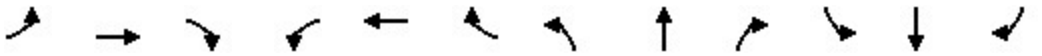
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	2121	502	420	2656	32	511	33	287	39	44	33
v/c Ratio	0.15	0.83	0.53	0.91	0.85	0.03	0.95	0.11	0.18	0.34	0.37	0.12
Control Delay (s/veh)	12.0	38.3	12.0	92.4	31.1	0.0	94.5	60.3	0.2	80.4	81.1	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.0	38.3	12.0	92.4	31.1	0.0	94.5	60.3	0.2	80.4	81.1	1.0
Queue Length 50th (ft)	8	703	131	226	921	0	277	30	0	42	47	0
Queue Length 95th (ft)	21	777	240	#328	1007	0	#400	66	0	86	94	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	179	2530	942	469	3089	1008	534	284	1583	118	123	259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.84	0.53	0.90	0.86	0.03	0.96	0.12	0.18	0.33	0.36	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	2015	477	399	2523	30	485	31	273	41	38	31
Future Volume (veh/h)	24	2015	477	399	2523	30	485	31	273	41	38	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1870	1870	1900	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	2121	502	420	2656	0	511	33	0	42	42	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	133	2482	770	459	2935		524	279		109	115	
Arrive On Green	0.04	0.49	0.49	0.13	0.57	0.00	0.15	0.15	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	5106	1585	3510	5106	1585	3510	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	25	2121	502	420	2656	0	511	33	0	42	42	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1755	1702	1585	1755	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.9	58.0	37.8	18.8	73.2	0.0	23.0	2.4	0.0	3.6	3.4	0.0
Cycle Q Clear(g_c), s	0.9	58.0	37.8	18.8	73.2	0.0	23.0	2.4	0.0	3.6	3.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	2482	770	459	2935		524	279		109	115	
V/C Ratio(X)	0.19	0.85	0.65	0.91	0.90		0.98	0.12		0.38	0.37	
Avail Cap(c_a), veh/h	190	2482	770	460	2935		524	279		122	128	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	35.9	30.7	68.2	29.9	0.0	67.3	58.5	0.0	71.6	71.6	0.0
Incr Delay (d2), s/veh	0.7	4.0	4.3	22.8	5.2	0.0	33.0	0.2	0.0	2.2	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	23.5	14.6	9.6	28.6	0.0	12.6	1.2	0.0	1.7	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.1	39.9	34.9	91.0	35.1	0.0	100.2	58.7	0.0	73.8	73.5	0.0
LnGrp LOS	C	D	C	F	D		F	E		E	E	
Approach Vol, veh/h		2648			3076			544			84	
Approach Delay, s/veh		38.9			42.8			97.7			73.7	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	84.0		16.9	12.9	98.1		31.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	20.8	77.2		10.9	11.8	86.2		23.7				
Max Q Clear Time (g_c+I1), s	20.8	60.0		5.6	2.9	75.2		25.0				
Green Ext Time (p_c), s	0.0	16.8		0.1	0.0	11.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		46.3
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	48	0	73	0	730	105	80	870	0
Future Vol, veh/h	1	0	0	48	0	73	0	730	105	80	870	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	75	150	-	-	350	-	350	275	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	1	2	1	1	2	1	2
Mvmt Flow	1	0	0	53	0	80	0	802	115	88	956	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1533	2049	478	1456	1934	401	956	0	0	917	0	0
Stage 1	1132	1132	-	802	802	-	-	-	-	-	-	-
Stage 2	401	917	-	654	1132	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.92	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.31	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	80	55	534	91	65	602	715	-	-	740	-	-
Stage 1	216	276	-	344	395	-	-	-	-	-	-	-
Stage 2	597	349	-	422	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	48	534	83	57	602	715	-	-	740	-	-
Mov Cap-2 Maneuver	63	48	-	83	57	-	-	-	-	-	-	-
Stage 1	216	243	-	344	395	-	-	-	-	-	-	-
Stage 2	517	349	-	372	243	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	63.2	48.7	0	0.9
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	715	-	-	63	-	83	602	740	-	-
HCM Lane V/C Ratio	-	-	-	0.017	-	0.636	0.133	0.119	-	-
HCM Control Delay (s/veh)	0	-	-	63.2	0	104.7	11.9	10.5	-	-
HCM Lane LOS	A	-	-	F	A	F	B	B	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	-	2.9	0.5	0.4	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	18	6	815	910	8
Future Vol, veh/h	20	18	6	815	910	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	75	275	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	11	2	1	0	2
Mvmt Flow	22	20	7	906	1011	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1478	506	1020	0	-	0
Stage 1	1011	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.84	7.12	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.41	2.22	-	-	-
Pot Cap-1 Maneuver	117	488	676	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	116	488	676	-	-	-
Mov Cap-2 Maneuver	116	-	-	-	-	-
Stage 1	309	-	-	-	-	-
Stage 2	597	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	28.8	0.1	0
HCM LOS	D		

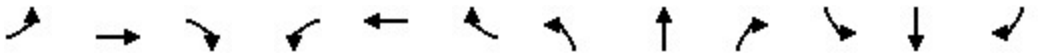
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	676	-	116	488	-	-
HCM Lane V/C Ratio	0.01	-	0.192	0.041	-	-
HCM Control Delay (s/veh)	10.4	-	43.2	12.7	-	-
HCM Lane LOS	B	-	E	B	-	-
HCM 95th %tile Q (veh)	0	-	0.7	0.1	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	193	211	4	1	320	737	6	14	748	158
v/c Ratio	0.81	0.34	0.03	0.00	0.59	0.28	0.00	0.03	0.36	0.16
Control Delay (s/veh)	72.6	1.5	40.0	0.0	15.8	4.4	0.0	14.3	15.5	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.6	1.5	40.0	0.0	15.8	4.4	0.0	14.3	15.5	2.7
Queue Length 50th (ft)	143	0	3	0	61	75	0	5	161	0
Queue Length 95th (ft)	#235	0	13	0	129	85	m0	17	233	34
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	280	650	150	376	657	2632	1162	397	2029	975
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	0.69	0.32	0.03	0.00	0.49	0.28	0.01	0.04	0.37	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	0	200	4	0	1	304	700	6	13	711	150
Future Volume (veh/h)	183	0	200	4	0	1	304	700	6	13	711	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1870	1870	1885	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	193	0	211	4	0	1	320	737	6	14	748	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	2	2	2	2	1	0	2	2	2	2
Cap, veh/h	328	0	243	87	0	243	586	2687	1180	491	2136	
Arrive On Green	0.15	0.00	0.15	0.15	0.00	0.15	0.19	1.00	1.00	0.60	0.60	0.00
Sat Flow, veh/h	1429	0	1585	177	0	1585	1795	3610	1585	717	3554	1585
Grp Volume(v), veh/h	193	0	211	4	0	1	320	737	6	14	748	0
Grp Sat Flow(s),veh/h/ln	1429	0	1585	177	0	1585	1795	1805	1585	717	1777	1585
Q Serve(g_s), s	0.0	0.0	15.6	0.4	0.0	0.1	8.5	0.0	0.0	1.0	12.8	0.0
Cycle Q Clear(g_c), s	12.2	0.0	15.6	16.0	0.0	0.1	8.5	0.0	0.0	1.0	12.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	0	243	87	0	243	586	2687	1180	491	2136	
V/C Ratio(X)	0.59	0.00	0.87	0.05	0.00	0.00	0.55	0.27	0.01	0.03	0.35	
Avail Cap(c_a), veh/h	391	0	313	139	0	313	778	2687	1180	491	2136	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.2	0.0	49.6	57.5	0.0	43.1	6.9	0.0	0.0	9.7	12.1	0.0
Incr Delay (d2), s/veh	1.7	0.0	18.3	0.2	0.0	0.0	0.7	0.2	0.0	0.1	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	7.4	0.1	0.0	0.0	2.2	0.1	0.0	0.2	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.9	0.0	68.0	57.7	0.0	43.1	7.6	0.2	0.0	9.8	12.5	0.0
LnGrp LOS	D		E	E		D	A	A	A	A	B	
Approach Vol, veh/h		404			5			1063			762	
Approach Delay, s/veh		59.3			54.7			2.4			12.5	
Approach LOS		E			D			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.3		24.7	17.2	78.1		24.7				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		84.0		23.7	24.2	54.0		23.7				
Max Q Clear Time (g_c+I1), s		2.0		17.6	10.5	14.8		18.0				
Green Ext Time (p_c), s		13.0		0.8	0.8	11.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay, s/veh	16.3	
HCM 6th LOS	B	

Notes

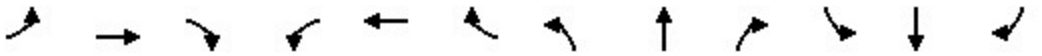
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	181	19	788	18	29	785	911	35	25	730	251
v/c Ratio	0.80	0.07	0.50	0.08	0.10	1.11	0.38	0.03	0.17	0.42	0.27
Control Delay (s/veh)	72.4	40.2	1.1	40.6	22.6	112.4	11.6	0.1	58.0	13.1	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.4	40.2	1.1	40.6	22.6	112.4	11.6	0.1	58.0	13.1	1.1
Queue Length 50th (ft)	135	12	0	12	7	~358	189	0	20	88	0
Queue Length 95th (ft)	212	34	0	32	34	#480	251	1	51	111	13
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	272	326	1568	270	338	707	2353	1068	213	1719	898
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.06	0.50	0.07	0.09	1.11	0.39	0.03	0.12	0.42	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	17	717	16	10	16	714	829	32	23	664	228
Future Volume (veh/h)	165	17	717	16	10	16	714	829	32	23	664	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1633	1856	1811	1752	1811	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	181	19	0	18	11	18	785	911	35	25	730	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	18	3	6	10	6	1	1	2	2	2	2
Cap, veh/h	263	269		269	99	161	711	2315	1024	84	1738	
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.16	0.20	0.65	0.65	0.03	0.33	0.00
Sat Flow, veh/h	1359	1633	1572	1349	598	978	3483	3582	1585	1781	3554	1585
Grp Volume(v), veh/h	181	19	0	18	0	29	785	911	35	25	730	0
Grp Sat Flow(s),veh/h/ln	1359	1633	1572	1349	0	1576	1742	1791	1585	1781	1777	1585
Q Serve(g_s), s	15.7	1.2	0.0	1.4	0.0	1.9	24.5	14.5	1.0	1.6	19.2	0.0
Cycle Q Clear(g_c), s	17.6	1.2	0.0	2.6	0.0	1.9	24.5	14.5	1.0	1.6	19.2	0.0
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	269		269	0	260	711	2315	1024	84	1738	
V/C Ratio(X)	0.69	0.07		0.07	0.00	0.11	1.10	0.39	0.03	0.30	0.42	
Avail Cap(c_a), veh/h	314	331		320	0	319	711	2315	1024	215	1738	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	50.1	42.3	0.0	43.4	0.0	42.6	47.8	10.1	7.7	56.2	27.1	0.0
Incr Delay (d2), s/veh	4.9	0.1	0.0	0.1	0.0	0.2	65.8	0.5	0.1	1.8	0.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.5	0.0	0.5	0.0	0.8	16.8	5.2	0.3	0.8	8.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.0	42.4	0.0	43.5	0.0	42.8	113.6	10.6	7.7	58.0	27.8	0.0
LnGrp LOS	E	D		D		D	F	B	A	E	C	
Approach Vol, veh/h		200			47			1731			755	
Approach Delay, s/veh		53.8			43.1			57.2			28.8	
Approach LOS		D			D			E			C	

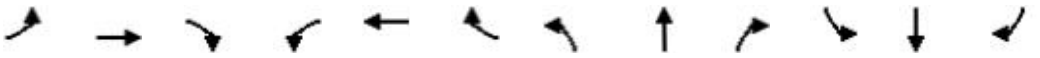
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	64.5		25.5	11.2	83.4		25.5				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	24.5	54.2		24.3	14.5	64.2		24.3				
Max Q Clear Time (g_c+I1), s	26.5	21.2		19.6	3.6	16.5		4.6				
Green Ext Time (p_c), s	0.0	10.8		0.2	0.0	15.7		0.1				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		48.9	
HCM 6th LOS		D	

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

2029 No-Build Conditions

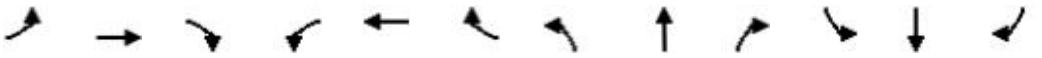


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	3139	646	273	2160	27	668	58	515	31	33	32
v/c Ratio	0.32	1.14	0.65	1.01	0.72	0.02	1.19	0.19	0.32	0.30	0.31	0.15
Control Delay (s/veh)	21.7	102.9	17.1	133.2	27.6	0.0	160.9	63.7	0.5	84.1	84.2	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.7	102.9	17.1	133.2	27.6	0.0	160.9	63.7	0.5	84.1	84.2	1.6
Queue Length 50th (ft)	18	~1505	284	~167	660	0	~465	57	0	35	37	0
Queue Length 95th (ft)	51	#1577	431	#270	726	0	#601	105	0	76	78	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	160	2751	991	268	2968	961	559	300	1599	110	114	207
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.14	0.65	1.02	0.73	0.03	1.19	0.19	0.32	0.28	0.29	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	3013	620	262	2074	26	641	56	494	41	20	31
Future Volume (veh/h)	47	3013	620	262	2074	26	641	56	494	41	20	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1841	1885	1841	1826	1885	1870	1885	1870	1870	1870
Adj Flow Rate, veh/h	49	3139	646	273	2160	0	668	58	0	32	36	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	4	1	4	5	1	2	1	2	2	2
Cap, veh/h	183	2725	853	264	2860		551	296		101	106	
Arrive On Green	0.05	0.55	0.55	0.08	0.57	0.00	0.16	0.16	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	4985	1560	3483	5025	1547	3483	1870	1598	1781	1870	1585
Grp Volume(v), veh/h	49	3139	646	273	2160	0	668	58	0	32	36	0
Grp Sat Flow(s),veh/h/ln	1781	1662	1560	1742	1675	1547	1742	1870	1598	1781	1870	1585
Q Serve(g_s), s	1.8	92.2	54.1	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Cycle Q Clear(g_c), s	1.8	92.2	54.1	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	2725	853	264	2860		551	296		101	106	
V/C Ratio(X)	0.27	1.15	0.76	1.03	0.76		1.21	0.20		0.32	0.34	
Avail Cap(c_a), veh/h	202	2725	853	264	2860		551	296		115	121	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	38.2	29.6	77.9	27.5	0.0	71.0	61.7	0.0	76.4	76.5	0.0
Incr Delay (d2), s/veh	0.8	73.1	6.2	64.2	1.9	0.0	111.2	0.3	0.0	1.8	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	53.0	20.5	8.0	20.9	0.0	20.3	2.2	0.0	1.4	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	111.4	35.8	142.1	29.4	0.0	182.2	62.0	0.0	78.2	78.4	0.0
LnGrp LOS	C	F	D	F	C		F	E		E	E	
Approach Vol, veh/h		3834			2433			726			68	
Approach Delay, s/veh		97.6			42.0			172.6			78.3	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	99.0		16.7	15.2	102.8		34.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	12.8	92.2		10.9	10.8	94.2		26.7				
Max Q Clear Time (g_c+I1), s	14.8	94.2		5.1	3.8	56.8		28.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	36.2		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		86.0
HCM 7th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	24.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	34	143	0	165	46	1149	37	38	737	48
Future Vol, veh/h	34	0	34	143	0	165	46	1149	37	38	737	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	75	150	-	-	350	-	350	275	-	250
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, %	2	2	2	4	2	2	2	1	10	10	3	2
Mvmt Flow	38	0	38	161	0	185	52	1291	42	43	828	54

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1662	2349	414	1894	2362	646	882	0	0	1333	0	0
Stage 1	913	913	-	1394	1394	-	-	-	-	-	-	-
Stage 2	749	1436	-	499	967	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.58	6.54	6.94	4.14	-	-	4.3	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.3	-	-
Pot Cap-1 Maneuver	64	35	587	~ 42	35	415	762	-	-	473	-	-
Stage 1	294	350	-	~ 146	207	-	-	-	-	-	-	-
Stage 2	370	197	-	517	331	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 30	30	587	~ 33	30	415	762	-	-	473	-	-
Mov Cap-2 Maneuver	99	101	-	~ 103	112	-	-	-	-	-	-	-
Stage 1	268	319	-	~ 136	193	-	-	-	-	-	-	-
Stage 2	191	184	-	439	301	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	36.94	181.08	0.38	0.62
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	762	-	-	99	587	103	415	473	-	-
HCM Lane V/C Ratio	0.068	-	-	0.385	0.065	1.559	0.447	0.09	-	-
HCM Control Delay (s/veh)	10.1	-	-	62.3	11.6	$ 366.3	20.5	13.4	-	-
HCM Lane LOS	B	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.6	0.2	12.2	2.3	0.3	-	-

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	46	59	1197	863	51
Future Vol, veh/h	34	46	59	1197	863	51
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	75	275	-	-	250
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	1	3	8
Mvmt Flow	38	51	66	1330	959	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1755	479	1016	0	-	0
Stage 1	959	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	76	532	679	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	69	532	679	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	301	-	-	-	-	-
Stage 2	405	-	-	-	-	-

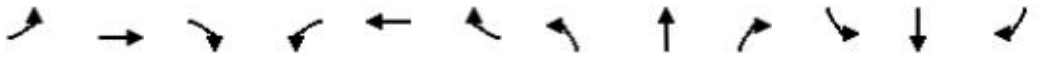
Approach	EB	NB	SB
HCM Control Delay, s/v	19.46	0.51	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	679	-	188	532	-	-
HCM Lane V/C Ratio	0.097	-	0.201	0.096	-	-
HCM Control Delay (s/veh)	10.9	-	28.9	12.5	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.7	0.3	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	143	14	9	265	1266	9	7	771	134
v/c Ratio	0.72	0.41	0.06	0.03	0.49	0.46	0.00	0.02	0.35	0.12
Control Delay (s/veh)	72.3	10.8	45.2	0.2	7.6	5.5	0.0	13.0	13.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.3	10.8	45.2	0.2	7.6	5.5	0.0	13.0	13.1	2.4
Queue Length 50th (ft)	120	1	10	0	40	314	0	2	151	0
Queue Length 95th (ft)	181	56	29	0	m53	111	m0	11	240	29
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	307	453	325	407	688	2715	1209	257	2202	1054
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	0.48	0.32	0.04	0.02	0.39	0.47	0.01	0.03	0.35	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1	126	9	4	8	236	1127	8	6	686	119
Future Volume (veh/h)	131	1	126	9	4	8	236	1127	8	6	686	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1870	1870	1885	1885	1870	1870	1856	1885
Adj Flow Rate, veh/h	147	1	142	10	4	9	265	1266	9	7	771	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	4	2	2	2	1	1	2	2	3	1
Cap, veh/h	230	1	199	87	27	200	582	2790	1235	344	2343	
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.14	1.00	1.00	0.66	0.66	0.00
Sat Flow, veh/h	1412	11	1576	311	215	1585	1795	3582	1585	434	3526	1598
Grp Volume(v), veh/h	147	0	143	14	0	9	265	1266	9	7	771	0
Grp Sat Flow(s),veh/h/ln	1412	0	1587	526	0	1585	1795	1791	1585	434	1763	1598
Q Serve(g_s), s	2.2	0.0	11.2	0.2	0.0	0.6	6.3	0.0	0.0	0.7	12.2	0.0
Cycle Q Clear(g_c), s	13.7	0.0	11.2	11.4	0.0	0.6	6.3	0.0	0.0	0.7	12.2	0.0
Prop In Lane	1.00		0.99	0.71		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	201	114	0	200	582	2790	1235	344	2343	
V/C Ratio(X)	0.64	0.00	0.71	0.12	0.00	0.04	0.46	0.45	0.01	0.02	0.33	
Avail Cap(c_a), veh/h	363	0	350	244	0	350	833	2790	1235	344	2343	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.74	0.74	0.74	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	0.0	54.5	51.0	0.0	49.9	5.6	0.0	0.0	7.4	9.4	0.0
Incr Delay (d2), s/veh	3.0	0.0	4.6	0.5	0.0	0.1	0.4	0.4	0.0	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.8	0.4	0.0	0.3	1.6	0.2	0.0	0.1	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.6	0.0	59.1	51.5	0.0	50.0	6.0	0.4	0.0	7.5	9.7	0.0
LnGrp LOS	E		E	D		D	A	A	A	A	A	
Approach Vol, veh/h		290			23			1540			778	
Approach Delay, s/veh		58.8			50.9			1.4			9.7	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		107.3		22.7	14.8	92.4		22.7				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		89.0		28.7	27.2	56.0		28.7				
Max Q Clear Time (g_c+I1), s		2.0		15.7	8.3	14.2		13.4				
Green Ext Time (p_c), s		32.6		0.8	0.7	12.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.6									
HCM 7th LOS			B									

Notes

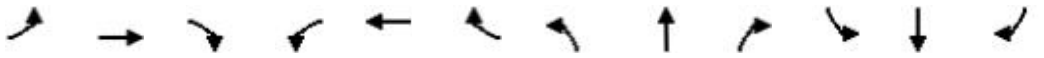
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	416	10	1446	32	60	664	969	15	13	560	265
v/c Ratio	0.89	0.01	0.91	0.06	0.10	0.85	0.51	0.01	0.11	0.52	0.39
Control Delay (s/veh)	62.1	24.7	10.6	26.2	15.7	60.0	24.3	0.0	51.6	44.9	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.1	24.7	10.6	26.2	15.7	60.0	24.3	0.0	51.6	44.9	13.2
Queue Length 50th (ft)	325	6	0	18	18	276	248	0	11	143	1
Queue Length 95th (ft)	437	17	#26	38	45	340	431	0	m31	278	129
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)						275		275	175		200
Base Capacity (vph)	548	749	1583	551	697	858	1884	813	121	1068	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.01	0.91	0.06	0.09	0.77	0.51	0.02	0.11	0.52	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



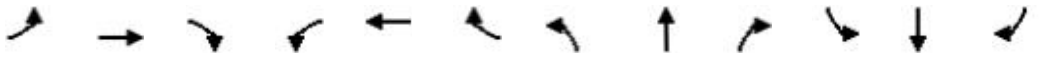
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	10	1403	31	31	27	644	940	15	13	543	257
Future Volume (veh/h)	404	10	1403	31	31	27	644	940	15	13	543	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1841	1841	1826	1870	1900	1781	1604	1870	1870
Adj Flow Rate, veh/h	416	10	0	32	32	28	664	969	15	13	560	0
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
Percent Heavy Veh, %	0	2	2	4	4	5	2	0	8	20	2	2
Cap, veh/h	493	645		527	312	273	739	1789	748	44	1103	
Arrive On Green	0.34	0.34	0.00	0.34	0.34	0.34	0.21	0.50	0.50	0.06	0.62	0.00
Sat Flow, veh/h	1364	1870	1585	1383	906	792	3456	3610	1510	1527	3554	1585
Grp Volume(v), veh/h	416	10	0	32	0	60	664	969	15	13	560	0
Grp Sat Flow(s),veh/h/ln	1364	1870	1585	1383	0	1698	1728	1805	1510	1527	1777	1585
Q Serve(g_s), s	38.7	0.5	0.0	2.0	0.0	3.1	24.3	24.1	0.7	1.1	11.3	0.0
Cycle Q Clear(g_c), s	41.9	0.5	0.0	2.5	0.0	3.1	24.3	24.1	0.7	1.1	11.3	0.0
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	645		527	0	586	739	1789	748	44	1103	
V/C Ratio(X)	0.84	0.02		0.06	0.00	0.10	0.90	0.54	0.02	0.30	0.51	
Avail Cap(c_a), veh/h	571	752		607	0	683	864	1789	748	123	1103	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	43.1	28.0	0.0	28.9	0.0	28.9	49.7	22.6	16.7	60.0	19.1	0.0
Incr Delay (d2), s/veh	9.9	0.0	0.0	0.0	0.0	0.1	11.0	1.2	0.0	3.5	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.2	0.0	0.7	0.0	1.3	11.3	10.0	0.2	0.4	3.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.0	28.1	0.0	28.9	0.0	29.0	60.8	23.8	16.8	63.5	20.7	0.0
LnGrp LOS	D	C		C		C	E	C	B	E	C	
Approach Vol, veh/h		426			92			1648			573	
Approach Delay, s/veh		52.5			29.0			38.6			21.7	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.3	46.2		50.5	9.2	70.2		50.5				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	32.5	28.2		52.3	10.5	50.2		52.3				
Max Q Clear Time (g_c+I1), s	26.3	13.3		43.9	3.1	26.1		5.1				
Green Ext Time (p_c), s	1.5	5.4		1.0	0.0	12.6		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh		36.9
HCM 7th LOS		D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

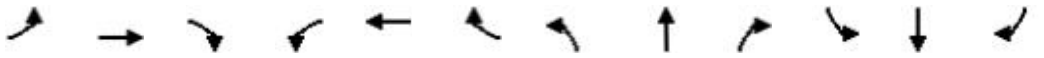


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	2707	741	596	3389	40	761	42	432	49	57	42
v/c Ratio	0.23	1.10	0.80	1.18	1.13	0.04	1.31	0.13	0.27	0.50	0.55	0.18
Control Delay (s/veh)	15.4	99.0	29.4	164.8	101.3	0.0	208.4	65.5	0.4	99.8	102.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.4	99.0	29.4	164.8	101.3	0.0	208.4	65.5	0.4	99.8	102.7	1.8
Queue Length 50th (ft)	13	~1334	464	~435	~1745	0	~594	43	0	60	70	0
Queue Length 95th (ft)	28	#1400	670	#563	#1786	0	#729	85	0	113	129	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	147	2440	923	502	2979	971	578	307	1583	101	106	229
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	1.11	0.80	1.19	1.14	0.04	1.32	0.14	0.27	0.49	0.54	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	2572	704	566	3220	38	723	40	410	52	48	40
Future Volume (veh/h)	31	2572	704	566	3220	38	723	40	410	52	48	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1870	1870	1900	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	2707	741	596	3389	0	761	42	0	53	54	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	120	2458	763	506	2964		582	310		99	104	
Arrive On Green	0.05	0.48	0.48	0.14	0.58	0.00	0.17	0.17	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	5106	1585	3510	5106	1585	3510	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	2707	741	596	3389	0	761	42	0	53	54	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1755	1702	1585	1755	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	86.2	81.5	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Cycle Q Clear(g_c), s	1.3	86.2	81.5	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	2458	763	506	2964		582	310		99	104	
V/C Ratio(X)	0.27	1.10	0.97	1.18	1.14		1.31	0.14		0.54	0.52	
Avail Cap(c_a), veh/h	148	2458	763	506	2964		582	310		108	114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.0	46.4	45.2	76.6	37.6	0.0	74.7	63.7	0.0	82.3	82.2	0.0
Incr Delay (d2), s/veh	1.2	52.5	26.2	99.2	69.0	0.0	150.2	0.2	0.0	4.4	4.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	46.4	35.9	18.4	58.7	0.0	25.4	1.6	0.0	2.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.2	98.9	71.5	175.9	106.6	0.0	224.9	63.9	0.0	86.7	86.2	0.0
LnGrp LOS	D	F	E	F	F		F	E		F	F	
Approach Vol, veh/h		3481			3985			803			107	
Approach Delay, s/veh		92.5			117.0			216.5			86.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	93.0		17.1	14.3	110.7		37.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	25.8	86.2		10.9	10.8	101.2		29.7				
Max Q Clear Time (g_c+I1), s	27.8	88.2		7.2	3.3	105.9		31.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	116.0	
HCM 7th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	0	75	61	0	93	71	1023	134	102	1191	71
Future Vol, veh/h	76	0	75	61	0	93	71	1023	134	102	1191	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	75	150	-	-	350	-	350	275	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	1	2	1	1	2	1	2
Mvmt Flow	84	0	82	67	0	102	78	1124	147	112	1309	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2251	2960	654	2159	2891	562	1387	0	0	1271	0	0
Stage 1	1533	1533	-	1280	1280	-	-	-	-	-	-	-
Stage 2	718	1427	-	879	1611	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.92	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.31	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 23	14	409	~ 27	16	473	490	-	-	542	-	-
Stage 1	122	177	-	175	235	-	-	-	-	-	-	-
Stage 2	386	199	-	309	162	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 12	9	409	~ 14	11	473	490	-	-	542	-	-
Mov Cap-2 Maneuver	~ 58	40	-	~ 66	40	-	-	-	-	-	-	-
Stage 1	97	140	-	147	197	-	-	-	-	-	-	-
Stage 2	254	167	-	196	128	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/veh	205.67	96.14	0.79	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	490	-	-	58	409	66	473	542	-	-
HCM Lane V/C Ratio	0.159	-	-	1.446	0.201	1.014	0.216	0.207	-	-
HCM Control Delay (s/veh)	13.7	-	-	$ 392.8	16	220.3	14.7	13.4	-	-
HCM Lane LOS	B	-	-	F	C	F	B	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	7.4	0.7	5.1	0.8	0.8	-	-

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

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	89	109	89	1141	1255	70
Future Vol, veh/h	89	109	89	1141	1255	70
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	75	275	-	-	250
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	11	2	1	0	2
Mvmt Flow	99	121	99	1268	1394	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2226	697	1472	0	-	0
Stage 1	1394	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Critical Hdwy	6.84	7.12	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.41	2.22	-	-	-
Pot Cap-1 Maneuver	~ 37	363	454	-	-	-
Stage 1	195	-	-	-	-	-
Stage 2	388	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 29	363	454	-	-	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	153	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	70.05	1.09	0
HCM LOS	F		

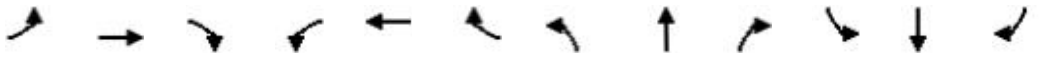
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	454	-	110	363	-	-
HCM Lane V/C Ratio	0.218	-	0.897	0.333	-	-
HCM Control Delay (s/veh)	15.1	-	131.6	19.8	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.8	-	5.4	1.4	-	-

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

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	276	268	5	1	408	1102	8	18	1134	212
v/c Ratio	0.89	0.39	0.03	0.00	0.86	0.44	0.00	0.08	0.73	0.27
Control Delay (s/veh)	80.2	1.7	39.2	0.0	53.8	6.2	0.0	26.4	35.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.2	1.7	39.2	0.0	53.8	6.2	0.0	26.4	35.6	8.1
Queue Length 50th (ft)	222	0	3	0	229	128	0	9	445	26
Queue Length 95th (ft)	#369	0	15	0	m313	m143	m0	28	537	81
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	334	693	154	430	505	2483	1097	209	1536	778
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	0.83	0.39	0.03	0.00	0.81	0.44	0.01	0.09	0.74	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	0	255	5	0	1	388	1047	8	17	1077	201
Future Volume (veh/h)	262	0	255	5	0	1	388	1047	8	17	1077	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1870	1870	1885	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	276	0	268	5	0	1	408	1102	8	18	1134	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	2	2	2	2	1	0	2	2	2	2
Cap, veh/h	389	0	301	83	0	301	443	2583	1134	334	1951	
Arrive On Green	0.19	0.00	0.19	0.19	0.00	0.19	0.16	0.95	0.95	0.55	0.55	0.00
Sat Flow, veh/h	1429	0	1585	146	0	1585	1795	3610	1585	508	3554	1585
Grp Volume(v), veh/h	276	0	268	5	0	1	408	1102	8	18	1134	0
Grp Sat Flow(s),veh/h/ln	1429	0	1585	146	0	1585	1795	1805	1585	508	1777	1585
Q Serve(g_s), s	0.0	0.0	21.4	0.6	0.0	0.1	12.7	3.2	0.0	2.2	27.5	0.0
Cycle Q Clear(g_c), s	19.1	0.0	21.4	22.0	0.0	0.1	12.7	3.2	0.0	2.2	27.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	0	301	83	0	301	443	2583	1134	334	1951	
V/C Ratio(X)	0.71	0.00	0.89	0.06	0.00	0.00	0.92	0.43	0.01	0.05	0.58	
Avail Cap(c_a), veh/h	455	0	374	135	0	374	641	2583	1134	334	1951	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.68	0.68	0.68	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.4	0.0	51.3	62.1	0.0	42.7	18.7	1.0	0.9	13.7	19.4	0.0
Incr Delay (d2), s/veh	4.2	0.0	19.4	0.3	0.0	0.0	10.6	0.4	0.0	0.3	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	10.1	0.2	0.0	0.0	7.8	0.8	0.0	0.3	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.6	0.0	70.8	62.4	0.0	42.7	29.3	1.3	0.9	14.0	20.7	0.0
LnGrp LOS	D		E	E		D	C	A	A	B	C	
Approach Vol, veh/h		544			6			1518			1152	
Approach Delay, s/veh		62.6			59.1			8.8			20.6	
Approach LOS		E			E			A			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		99.0		31.0	21.7	77.4		31.0				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		87.0		30.7	30.2	51.0		30.7				
Max Q Clear Time (g_c+I1), s		5.2		23.4	14.7	29.5		24.0				
Green Ext Time (p_c), s		24.9		1.2	1.2	13.9		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			22.2									
HCM 7th LOS			C									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

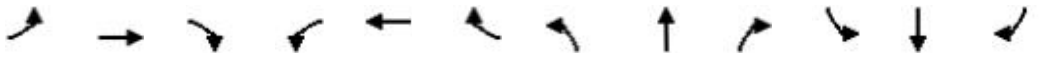
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	345	24	1085	22	36	1079	1219	45	32	985	453
v/c Ratio	1.00	0.05	0.69	0.06	0.08	0.97	0.58	0.04	0.23	0.94	0.66
Control Delay (s/veh)	98.2	37.1	2.5	37.4	20.2	65.6	19.7	1.4	52.0	54.5	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	98.2	37.1	2.5	37.4	20.2	65.6	19.7	1.4	52.0	54.5	18.2
Queue Length 50th (ft)	~294	15	0	14	9	462	367	0	28	256	110
Queue Length 95th (ft)	#496	39	0	38	37	#607	444	9	m43	#543	198
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)						275		275	175		200
Base Capacity (vph)	343	412	1568	340	427	1106	2084	951	142	1039	683
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.06	0.69	0.06	0.08	0.98	0.58	0.05	0.23	0.95	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	22	987	20	13	20	982	1109	41	29	896	412
Future Volume (veh/h)	314	22	987	20	13	20	982	1109	41	29	896	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1633	1856	1811	1752	1811	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	345	24	0	22	14	22	1079	1219	45	32	985	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	18	3	6	10	6	1	1	2	2	2	2
Cap, veh/h	378	418		385	157	247	1112	2007	888	94	1044	
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.32	0.56	0.56	0.02	0.10	0.00
Sat Flow, veh/h	1350	1633	1572	1343	614	964	3483	3582	1585	1781	3554	1585
Grp Volume(v), veh/h	345	24	0	22	0	36	1079	1219	45	32	985	0
Grp Sat Flow(s),veh/h/ln	1350	1633	1572	1343	0	1578	1742	1791	1585	1781	1777	1585
Q Serve(g_s), s	31.0	1.4	0.0	1.6	0.0	2.3	39.7	29.5	1.7	2.3	35.8	0.0
Cycle Q Clear(g_c), s	33.3	1.4	0.0	3.1	0.0	2.3	39.7	29.5	1.7	2.3	35.8	0.0
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	418		385	0	404	1112	2007	888	94	1044	
V/C Ratio(X)	0.91	0.06		0.06	0.00	0.09	0.97	0.61	0.05	0.34	0.94	
Avail Cap(c_a), veh/h	378	418		385	0	404	1112	2007	888	144	1044	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.60	0.60	0.00
Uniform Delay (d), s/veh	50.5	36.5	0.0	37.7	0.0	36.8	43.6	19.0	12.9	61.6	57.6	0.0
Incr Delay (d2), s/veh	26.0	0.1	0.0	0.1	0.0	0.1	20.1	1.4	0.1	1.3	11.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	0.6	0.0	0.6	0.0	0.9	19.5	11.8	0.6	1.1	18.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.5	36.6	0.0	37.7	0.0	36.9	63.8	20.4	13.0	62.9	69.4	0.0
LnGrp LOS	E	D		D		D	E	C	B	E	E	
Approach Vol, veh/h		369			58			2343			1017	
Approach Delay, s/veh		73.9			37.2			40.3			69.2	
Approach LOS		E			D			D			E	

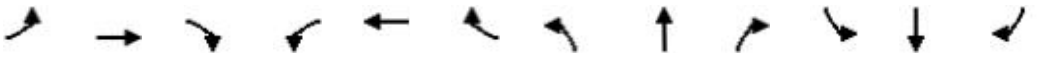
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	47.0	44.0		39.0	12.4	78.6		39.0				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	41.5	38.2		33.3	10.5	69.2		33.3				
Max Q Clear Time (g_c+I1), s	41.7	37.8		35.3	4.3	31.5		5.1				
Green Ext Time (p_c), s	0.0	0.3		0.0	0.0	20.9		0.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	51.3
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

2029 Build Conditions

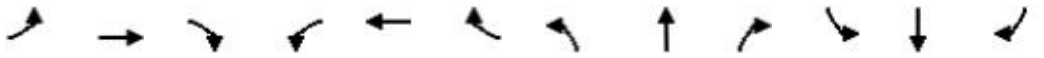


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	3139	682	295	2160	27	677	58	521	31	33	32
v/c Ratio	0.32	1.14	0.68	1.10	0.72	0.02	1.21	0.19	0.32	0.30	0.31	0.15
Control Delay (s/veh)	21.7	102.9	18.0	152.1	27.6	0.0	166.6	63.7	0.5	84.1	84.2	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.7	102.9	18.0	152.1	27.6	0.0	166.6	63.7	0.5	84.1	84.2	1.6
Queue Length 50th (ft)	18	~1505	312	~193	660	0	~476	57	0	35	37	0
Queue Length 95th (ft)	51	#1577	473	#300	726	0	#611	105	0	76	78	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	160	2751	998	268	2968	961	559	300	1599	110	114	207
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.14	0.68	1.10	0.73	0.03	1.21	0.19	0.33	0.28	0.29	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	3013	655	283	2074	26	650	56	500	41	20	31
Future Volume (veh/h)	47	3013	655	283	2074	26	650	56	500	41	20	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1841	1885	1841	1826	1885	1870	1885	1870	1870	1870
Adj Flow Rate, veh/h	49	3139	682	295	2160	0	677	58	0	32	36	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	4	1	4	5	1	2	1	2	2	2
Cap, veh/h	183	2725	853	264	2860		551	296		101	106	
Arrive On Green	0.05	0.55	0.55	0.08	0.57	0.00	0.16	0.16	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	4985	1560	3483	5025	1547	3483	1870	1598	1781	1870	1585
Grp Volume(v), veh/h	49	3139	682	295	2160	0	677	58	0	32	36	0
Grp Sat Flow(s),veh/h/ln	1781	1662	1560	1742	1675	1547	1742	1870	1598	1781	1870	1585
Q Serve(g_s), s	1.8	92.2	59.4	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Cycle Q Clear(g_c), s	1.8	92.2	59.4	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	2725	853	264	2860		551	296		101	106	
V/C Ratio(X)	0.27	1.15	0.80	1.12	0.76		1.23	0.20		0.32	0.34	
Avail Cap(c_a), veh/h	202	2725	853	264	2860		551	296		115	121	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	38.2	30.8	77.9	27.5	0.0	71.0	61.7	0.0	76.4	76.5	0.0
Incr Delay (d2), s/veh	0.8	73.1	7.8	90.2	1.9	0.0	117.9	0.3	0.0	1.8	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	53.0	22.7	8.9	20.9	0.0	20.8	2.2	0.0	1.4	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	111.4	38.6	168.1	29.4	0.0	188.9	62.0	0.0	78.2	78.4	0.0
LnGrp LOS	C	F	D	F	C		F	E		E	E	
Approach Vol, veh/h		3870			2455			735			68	
Approach Delay, s/veh		97.5			46.0			178.9			78.3	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	99.0		16.7	15.2	102.8		34.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	12.8	92.2		10.9	10.8	94.2		26.7				
Max Q Clear Time (g_c+I1), s	14.8	94.2		5.1	3.8	56.8		28.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	36.2		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			88.0									
HCM 7th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	33.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	34	152	0	177	46	1152	58	84	747	48
Future Vol, veh/h	34	0	34	152	0	177	46	1152	58	84	747	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	350	-	350	275	-	250
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, %	2	2	2	4	2	2	2	1	10	10	3	2
Mvmt Flow	38	0	38	171	0	199	52	1294	65	94	839	54

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1779	2491	420	2006	2480	647	893	0	0	1360	0	0
Stage 1	1028	1028	-	1398	1398	-	-	-	-	-	-	-
Stage 2	751	1463	-	608	1082	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.58	6.54	6.94	4.14	-	-	4.3	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.58	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.3	-	-
Pot Cap-1 Maneuver	52	29	582	~ 34	29	414	755	-	-	462	-	-
Stage 1	250	310	-	~ 145	206	-	-	-	-	-	-	-
Stage 2	369	191	-	444	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 20	21	582	~ 24	22	414	755	-	-	462	-	-
Mov Cap-2 Maneuver	61	64	-	~ 93	95	-	-	-	-	-	-	-
Stage 1	199	246	-	~ 135	192	-	-	-	-	-	-	-
Stage 2	179	178	-	330	232	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	72.05	240.74	0.37	1.41
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	755	-	-	61	582	93	414	462	-	-
HCM Lane V/C Ratio	0.068	-	-	0.622	0.066	1.846	0.481	0.204	-	-
HCM Control Delay (s/veh)	10.1	-	-	132.5	11.6	$ 496	21.5	14.8	-	-
HCM Lane LOS	B	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.6	0.2	14.3	2.5	0.8	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	46	3	0	3	59	1218	26	10	872	51
Future Vol, veh/h	34	0	46	3	0	3	59	1218	26	10	872	51
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	-	-	75	-	-	-	275	-	-	250	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	1	2	2	3	8
Mvmt Flow	38	0	51	3	0	3	66	1353	29	11	969	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1799	2504	484	2006	2547	691	1026	0	0	1382	0	0
Stage 1	991	991	-	1499	1499	-	-	-	-	-	-	-
Stage 2	808	1513	-	507	1048	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	50	28	528	35	26	387	673	-	-	492	-	-
Stage 1	264	322	-	128	184	-	-	-	-	-	-	-
Stage 2	341	181	-	517	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	25	528	28	23	387	673	-	-	492	-	-
Mov Cap-2 Maneuver	145	103	-	90	98	-	-	-	-	-	-	-
Stage 1	258	315	-	116	166	-	-	-	-	-	-	-
Stage 2	305	163	-	456	296	-	-	-	-	-	-	-

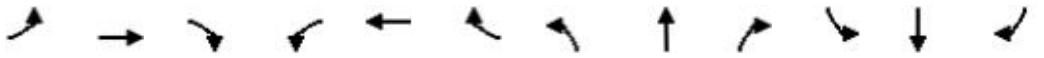
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	23.47	30.86	0.49	0.13
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	673	-	-	145	528	146	492	-	-
HCM Lane V/C Ratio	0.097	-	-	0.26	0.097	0.046	0.023	-	-
HCM Control Delay (s/veh)	10.9	-	-	38.3	12.5	30.9	12.5	-	-
HCM Lane LOS	B	-	-	E	B	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1	0.3	0.1	0.1	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	143	14	9	265	1319	9	7	784	134
v/c Ratio	0.72	0.41	0.06	0.03	0.49	0.48	0.00	0.02	0.35	0.12
Control Delay (s/veh)	72.3	10.8	45.2	0.2	8.8	5.5	0.0	13.5	13.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.3	10.8	45.2	0.2	8.8	5.5	0.0	13.5	13.5	2.5
Queue Length 50th (ft)	120	1	10	0	31	315	0	2	155	0
Queue Length 95th (ft)	181	56	29	0	m53	119	m0	11	253	30
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	307	453	325	407	703	2715	1209	242	2192	1050
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	0.48	0.32	0.04	0.02	0.38	0.49	0.01	0.03	0.36	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1	126	9	4	8	236	1174	8	6	698	119
Future Volume (veh/h)	131	1	126	9	4	8	236	1174	8	6	698	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1870	1870	1885	1885	1870	1870	1856	1885
Adj Flow Rate, veh/h	147	1	142	10	4	9	265	1319	9	7	784	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	4	2	2	2	1	1	2	2	3	1
Cap, veh/h	230	1	199	87	27	200	578	2790	1235	329	2334	
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.14	1.00	1.00	0.66	0.66	0.00
Sat Flow, veh/h	1412	11	1576	311	215	1585	1795	3582	1585	413	3526	1598
Grp Volume(v), veh/h	147	0	143	14	0	9	265	1319	9	7	784	0
Grp Sat Flow(s),veh/h/ln	1412	0	1587	526	0	1585	1795	1791	1585	413	1763	1598
Q Serve(g_s), s	2.2	0.0	11.2	0.2	0.0	0.6	6.7	0.0	0.0	0.8	12.6	0.0
Cycle Q Clear(g_c), s	13.7	0.0	11.2	11.4	0.0	0.6	6.7	0.0	0.0	0.8	12.6	0.0
Prop In Lane	1.00		0.99	0.71		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	201	114	0	200	578	2790	1235	329	2334	
V/C Ratio(X)	0.64	0.00	0.71	0.12	0.00	0.04	0.46	0.47	0.01	0.02	0.34	
Avail Cap(c_a), veh/h	363	0	350	244	0	350	824	2790	1235	329	2334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.71	0.71	0.71	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	0.0	54.5	51.0	0.0	49.9	5.9	0.0	0.0	7.6	9.6	0.0
Incr Delay (d2), s/veh	3.0	0.0	4.6	0.5	0.0	0.1	0.4	0.4	0.0	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.8	0.4	0.0	0.3	1.8	0.2	0.0	0.1	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.6	0.0	59.1	51.5	0.0	50.0	6.3	0.4	0.0	7.7	9.9	0.0
LnGrp LOS	E		E	D		D	A	A	A	A	A	
Approach Vol, veh/h		290			23			1593			791	
Approach Delay, s/veh		58.8			50.9			1.4			9.9	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		107.3		22.7	15.2	92.0		22.7				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		89.0		28.7	27.2	56.0		28.7				
Max Q Clear Time (g_c+I1), s		2.0		15.7	8.7	14.6		13.4				
Green Ext Time (p_c), s		35.1		0.8	0.7	12.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

Notes

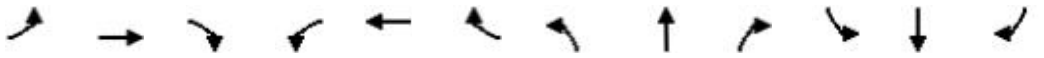
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	449	10	1446	32	60	664	985	15	13	564	273
v/c Ratio	0.91	0.01	0.91	0.06	0.09	0.85	0.53	0.01	0.16	0.56	0.42
Control Delay (s/veh)	63.1	23.9	10.6	25.1	15.1	60.0	25.1	0.0	55.9	48.0	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.1	23.9	10.6	25.1	15.1	60.0	25.1	0.0	55.9	48.0	14.7
Queue Length 50th (ft)	348	5	0	17	17	276	271	0	11	145	1
Queue Length 95th (ft)	#516	17	#26	38	45	340	433	0	m30	295	157
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	548	749	1583	551	697	858	1837	794	121	1000	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.01	0.91	0.06	0.09	0.77	0.54	0.02	0.11	0.56	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	10	1403	31	31	27	644	955	15	13	547	265
Future Volume (veh/h)	436	10	1403	31	31	27	644	955	15	13	547	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1841	1841	1826	1870	1900	1781	1604	1870	1870
Adj Flow Rate, veh/h	449	10	0	32	32	28	664	985	15	13	564	0
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
Percent Heavy Veh, %	0	2	2	4	4	5	2	0	8	20	2	2
Cap, veh/h	524	686		558	332	291	739	1751	732	26	1025	
Arrive On Green	0.37	0.37	0.00	0.37	0.37	0.37	0.21	0.49	0.49	0.03	0.58	0.00
Sat Flow, veh/h	1364	1870	1585	1383	906	792	3456	3610	1510	1527	3554	1585
Grp Volume(v), veh/h	449	10	0	32	0	60	664	985	15	13	564	0
Grp Sat Flow(s),veh/h/ln	1364	1870	1585	1383	0	1698	1728	1805	1510	1527	1777	1585
Q Serve(g_s), s	41.9	0.4	0.0	2.0	0.0	3.0	24.3	25.1	0.7	1.1	12.8	0.0
Cycle Q Clear(g_c), s	44.9	0.4	0.0	2.4	0.0	3.0	24.3	25.1	0.7	1.1	12.8	0.0
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	524	686		558	0	623	739	1751	732	26	1025	
V/C Ratio(X)	0.86	0.01		0.06	0.00	0.10	0.90	0.56	0.02	0.49	0.55	
Avail Cap(c_a), veh/h	572	752		607	0	683	864	1751	732	123	1025	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	41.7	26.2	0.0	27.0	0.0	27.0	49.7	23.7	17.4	62.2	22.3	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.0	0.0	0.1	11.0	1.3	0.1	12.7	2.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	0.2	0.0	0.7	0.0	1.3	11.3	10.5	0.2	0.5	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.3	26.2	0.0	27.0	0.0	27.1	60.8	25.0	17.5	74.9	24.3	0.0
LnGrp LOS	D	C		C		C	E	C	B	E	C	
Approach Vol, veh/h		459			92			1664			577	
Approach Delay, s/veh		52.7			27.0			39.2			25.4	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.3	43.3		53.4	7.7	68.9		53.4				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	32.5	28.2		52.3	10.5	50.2		52.3				
Max Q Clear Time (g_c+I1), s	26.3	14.8		46.9	3.1	27.1		5.0				
Green Ext Time (p_c), s	1.5	5.1		0.8	0.0	12.5		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	38.2
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

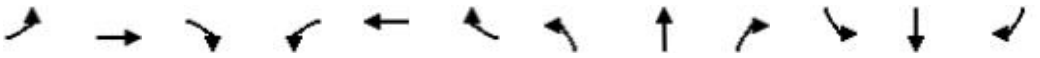
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	75	67	0	308	21	0
Future Vol, veh/h	75	67	0	308	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	2	2	2	2	2
Mvmt Flow	83	74	0	342	23	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	158	0	463	121
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	342	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1422	-	557	931
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1422	-	557	931
Mov Cap-2 Maneuver	-	-	-	-	557	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.74
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	557	-	-	1422	-
HCM Lane V/C Ratio	0.042	-	-	-	-
HCM Control Delay (s/veh)	11.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

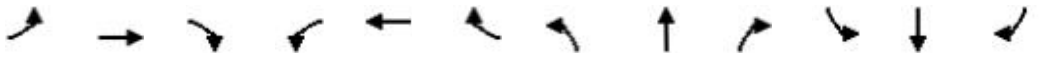


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	2707	764	608	3389	40	813	42	461	49	57	42
v/c Ratio	0.23	1.10	0.82	1.21	1.13	0.04	1.40	0.13	0.29	0.50	0.55	0.18
Control Delay (s/veh)	15.4	99.0	30.7	172.9	101.3	0.0	243.1	65.5	0.4	99.8	102.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.4	99.0	30.7	172.9	101.3	0.0	243.1	65.5	0.4	99.8	102.7	1.8
Queue Length 50th (ft)	13	~1334	491	~450	~1745	0	~660	43	0	60	70	0
Queue Length 95th (ft)	28	#1400	708	#578	#1786	0	#796	85	0	113	129	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	147	2440	928	502	2979	971	578	307	1583	101	106	229
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	1.11	0.82	1.21	1.14	0.04	1.41	0.14	0.29	0.49	0.54	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	2572	726	578	3220	38	772	40	438	52	48	40
Future Volume (veh/h)	31	2572	726	578	3220	38	772	40	438	52	48	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1870	1870	1900	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	2707	764	608	3389	0	813	42	0	53	54	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	120	2458	763	506	2964		582	310		99	104	
Arrive On Green	0.05	0.48	0.48	0.14	0.58	0.00	0.17	0.17	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	5106	1585	3510	5106	1585	3510	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	2707	764	608	3389	0	813	42	0	53	54	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1755	1702	1585	1755	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	86.2	86.2	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Cycle Q Clear(g_c), s	1.3	86.2	86.2	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	2458	763	506	2964		582	310		99	104	
V/C Ratio(X)	0.27	1.10	1.00	1.20	1.14		1.40	0.14		0.54	0.52	
Avail Cap(c_a), veh/h	148	2458	763	506	2964		582	310		108	114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.0	46.4	46.4	76.6	37.6	0.0	74.7	63.7	0.0	82.3	82.2	0.0
Incr Delay (d2), s/veh	1.2	52.5	32.9	108.6	69.0	0.0	188.6	0.2	0.0	4.4	4.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	46.4	39.0	19.0	58.7	0.0	28.5	1.6	0.0	2.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.2	98.9	79.3	185.2	106.6	0.0	263.3	63.9	0.0	86.7	86.2	0.0
LnGrp LOS	D	F	F	F	F		F	E		F	F	
Approach Vol, veh/h		3504			3997			855			107	
Approach Delay, s/veh		94.1			118.6			253.5			86.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	93.0		17.1	14.3	110.7		37.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	25.8	86.2		10.9	10.8	101.2		29.7				
Max Q Clear Time (g_c+I1), s	27.8	88.2		7.2	3.3	105.9		31.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	121.7	
HCM 7th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	50.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	0	75	111	0	156	71	1037	146	130	1197	71
Future Vol, veh/h	76	0	75	111	0	156	71	1037	146	130	1197	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	350	-	350	275	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	1	2	1	1	2	1	2
Mvmt Flow	84	0	82	122	0	171	78	1140	160	143	1315	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2327	3057	658	2239	2975	570	1393	0	0	1300	0	0
Stage 1	1601	1601	-	1296	1296	-	-	-	-	-	-	-
Stage 2	726	1456	-	943	1679	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.92	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.31	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 20	12	407	~ 23	14	467	487	-	-	529	-	-
Stage 1	110	164	-	171	231	-	-	-	-	-	-	-
Stage 2	382	193	-	282	150	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	8	407	~ 11	9	467	487	-	-	529	-	-
Mov Cap-2 Maneuver	~ 35	16	-	~ 54	26	-	-	-	-	-	-	-
Stage 1	~ 81	119	-	144	194	-	-	-	-	-	-	-
Stage 2	203	162	-	164	109	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	$ 450.33	$ 317.37	0.78	1.33
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	487	-	-	35	407	54	467	529	-	-
HCM Lane V/C Ratio	0.16	-	-	2.393	0.202	2.258	0.367	0.27	-	-
HCM Control Delay (s/veh)	13.8	-	-	$ 878.9	16.1	$ 739.4	17.1	14.3	-	-
HCM Lane LOS	B	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	9.4	0.7	12.2	1.7	1.1	-	-

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

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	0	109	14	0	14	89	1153	15	6	1305	70
Future Vol, veh/h	89	0	109	14	0	14	89	1153	15	6	1305	70
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	-	-	75	-	-	-	275	-	-	250	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	11	2	2	2	2	1	2	2	0	2
Mvmt Flow	99	0	121	16	0	16	99	1281	17	7	1450	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2302	2959	725	2226	3028	649	1528	0	0	1298	0	0
Stage 1	1463	1463	-	1487	1487	-	-	-	-	-	-	-
Stage 2	838	1496	-	738	1541	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.12	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.41	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 21	14	348	24	13	412	432	-	-	530	-	-
Stage 1	135	191	-	130	186	-	-	-	-	-	-	-
Stage 2	327	184	-	376	175	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 15	11	348	~ 12	10	412	432	-	-	530	-	-
Mov Cap-2 Maneuver	~ 84	77	-	59	49	-	-	-	-	-	-	-
Stage 1	133	189	-	100	144	-	-	-	-	-	-	-
Stage 2	242	142	-	242	173	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	20.97	54.25	1.12	0.05
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	432	-	-	84	348	103	530	-	-
HCM Lane V/C Ratio	0.229	-	-	1.177	0.348	0.301	0.013	-	-
HCM Control Delay (s/veh)	15.8	-	-	243.7	20.8	54.3	11.9	-	-
HCM Lane LOS	C	-	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-	7.1	1.5	1.1	0	-	-

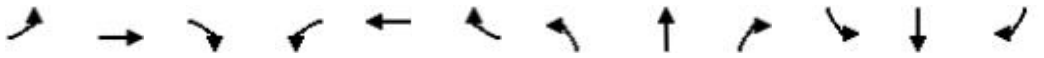
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	276	268	5	1	408	1131	8	18	1201	212
v/c Ratio	0.91	0.39	0.03	0.00	0.87	0.45	0.00	0.09	0.79	0.27
Control Delay (s/veh)	82.7	1.7	40.0	0.0	58.0	6.1	0.0	26.5	38.3	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.7	1.7	40.0	0.0	58.0	6.1	0.0	26.5	38.3	9.0
Queue Length 50th (ft)	225	0	3	0	249	133	0	9	485	31
Queue Length 95th (ft)	#378	0	15	0	m#332	m148	m0	28	583	87
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	323	688	148	418	499	2494	1102	199	1508	762
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	0.85	0.39	0.03	0.00	0.82	0.45	0.01	0.09	0.80	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	0	255	5	0	1	388	1074	8	17	1141	201
Future Volume (veh/h)	262	0	255	5	0	1	388	1074	8	17	1141	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1870	1870	1885	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	276	0	268	5	0	1	408	1131	8	18	1201	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	2	2	2	2	1	0	2	2	2	2
Cap, veh/h	388	0	300	82	0	300	439	2586	1135	321	1907	
Arrive On Green	0.19	0.00	0.19	0.19	0.00	0.19	0.18	0.95	0.95	0.54	0.54	0.00
Sat Flow, veh/h	1429	0	1585	142	0	1585	1795	3610	1585	494	3554	1585
Grp Volume(v), veh/h	276	0	268	5	0	1	408	1131	8	18	1201	0
Grp Sat Flow(s),veh/h/ln	1429	0	1585	142	0	1585	1795	1805	1585	494	1777	1585
Q Serve(g_s), s	0.0	0.0	21.5	0.6	0.0	0.1	14.4	3.3	0.0	2.3	30.7	0.0
Cycle Q Clear(g_c), s	19.1	0.0	21.5	22.0	0.0	0.1	14.4	3.3	0.0	2.3	30.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	0	300	82	0	300	439	2586	1135	321	1907	
V/C Ratio(X)	0.71	0.00	0.89	0.06	0.00	0.00	0.93	0.44	0.01	0.06	0.63	
Avail Cap(c_a), veh/h	444	0	362	126	0	362	627	2586	1135	321	1907	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.67	0.67	0.67	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.5	0.0	51.4	62.2	0.0	42.8	21.3	1.0	0.9	14.5	21.1	0.0
Incr Delay (d2), s/veh	4.5	0.0	20.9	0.3	0.0	0.0	12.0	0.4	0.0	0.3	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	10.3	0.2	0.0	0.0	7.6	0.8	0.0	0.3	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.0	0.0	72.3	62.5	0.0	42.8	33.3	1.3	0.9	14.8	22.7	0.0
LnGrp LOS	E		E	E		D	C	A	A	B	C	
Approach Vol, veh/h		544			6			1547			1219	
Approach Delay, s/veh		63.5			59.2			9.7			22.5	
Approach LOS		E			E			A			C	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	99.1	30.9	23.3	75.8	30.9
Change Period (Y+Rc), s	6.0	6.3	5.8	6.0	6.3
Max Green Setting (Gmax), s	88.0	29.7	31.2	51.0	29.7
Max Q Clear Time (g_c+I1), s	5.3	23.5	16.4	32.7	24.0
Green Ext Time (p_c), s	26.2	1.1	1.2	12.9	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	23.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

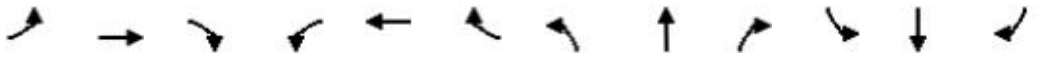
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	354	24	1085	22	36	1079	1229	45	32	1008	500
v/c Ratio	1.03	0.05	0.69	0.06	0.08	0.97	0.58	0.04	0.23	0.97	0.71
Control Delay (s/veh)	104.3	37.1	2.5	37.4	20.2	65.6	19.8	1.4	50.9	59.3	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	104.3	37.1	2.5	37.4	20.2	65.6	19.8	1.4	50.9	59.3	20.5
Queue Length 50th (ft)	~319	15	0	14	9	462	372	0	28	272	136
Queue Length 95th (ft)	#513	39	0	38	37	#607	450	9	m41	#566	224
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	343	412	1568	340	427	1106	2084	951	142	1039	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.06	0.69	0.06	0.08	0.98	0.59	0.05	0.23	0.97	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	22	987	20	13	20	982	1118	41	29	917	455
Future Volume (veh/h)	322	22	987	20	13	20	982	1118	41	29	917	455
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1633	1856	1811	1752	1811	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	354	24	0	22	14	22	1079	1229	45	32	1008	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	18	3	6	10	6	1	1	2	2	2	2
Cap, veh/h	378	418		385	157	247	1112	2007	888	94	1044	
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.32	0.56	0.56	0.02	0.10	0.00
Sat Flow, veh/h	1350	1633	1572	1343	614	964	3483	3582	1585	1781	3554	1585
Grp Volume(v), veh/h	354	24	0	22	0	36	1079	1229	45	32	1008	0
Grp Sat Flow(s),veh/h/ln	1350	1633	1572	1343	0	1578	1742	1791	1585	1781	1777	1585
Q Serve(g_s), s	31.0	1.4	0.0	1.6	0.0	2.3	39.7	29.9	1.7	2.3	36.7	0.0
Cycle Q Clear(g_c), s	33.3	1.4	0.0	3.1	0.0	2.3	39.7	29.9	1.7	2.3	36.7	0.0
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	418		385	0	404	1112	2007	888	94	1044	
V/C Ratio(X)	0.94	0.06		0.06	0.00	0.09	0.97	0.61	0.05	0.34	0.97	
Avail Cap(c_a), veh/h	378	418		385	0	404	1112	2007	888	144	1044	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	50.9	36.5	0.0	37.7	0.0	36.8	43.6	19.1	12.9	61.6	58.0	0.0
Incr Delay (d2), s/veh	30.6	0.1	0.0	0.1	0.0	0.1	20.1	1.4	0.1	1.1	13.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	0.6	0.0	0.6	0.0	0.9	19.5	11.9	0.6	1.1	19.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.5	36.6	0.0	37.7	0.0	36.9	63.8	20.5	13.0	62.7	71.3	0.0
LnGrp LOS	F	D		D		D	E	C	B	E	E	
Approach Vol, veh/h		378			58			2353			1040	
Approach Delay, s/veh		78.7			37.2			40.2			71.0	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	47.0	44.0		39.0	12.4	78.6		39.0				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	41.5	38.2		33.3	10.5	69.2		33.3				
Max Q Clear Time (g_c+I1), s	41.7	38.7		35.3	4.3	31.9		5.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.0		0.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	52.3
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.8

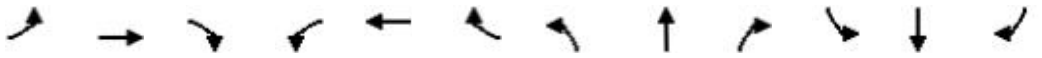
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	236	40	0	154	113	0
Future Vol, veh/h	236	40	0	154	113	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	2	2	2	2	2
Mvmt Flow	262	44	0	171	126	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	307	0	456	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1254	-	563	755
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	563	755
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.23
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	563	-	-	1254	-
HCM Lane V/C Ratio	0.223	-	-	-	-
HCM Control Delay (s/veh)	13.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0	-

2029 Build Improved Conditions

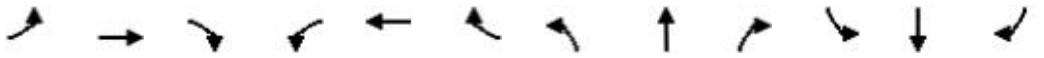


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	3139	682	295	2160	27	677	58	521	31	33	32
v/c Ratio	0.32	1.14	0.68	1.10	0.72	0.02	1.21	0.19	0.32	0.30	0.31	0.15
Control Delay (s/veh)	21.7	102.9	18.0	152.1	27.6	0.0	166.6	63.7	0.5	84.1	84.2	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.7	102.9	18.0	152.1	27.6	0.0	166.6	63.7	0.5	84.1	84.2	1.6
Queue Length 50th (ft)	18	~1505	312	~193	660	0	~476	57	0	35	37	0
Queue Length 95th (ft)	51	#1577	473	#300	726	0	#611	105	0	76	78	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	160	2751	998	268	2968	961	559	300	1599	110	114	207
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.14	0.68	1.10	0.73	0.03	1.21	0.19	0.33	0.28	0.29	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	3013	655	283	2074	26	650	56	500	41	20	31
Future Volume (veh/h)	47	3013	655	283	2074	26	650	56	500	41	20	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1841	1885	1841	1826	1885	1870	1885	1870	1870	1870
Adj Flow Rate, veh/h	49	3139	682	295	2160	0	677	58	0	32	36	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	4	1	4	5	1	2	1	2	2	2
Cap, veh/h	183	2725	853	264	2860		551	296		101	106	
Arrive On Green	0.05	0.55	0.55	0.08	0.57	0.00	0.16	0.16	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	4985	1560	3483	5025	1547	3483	1870	1598	1781	1870	1585
Grp Volume(v), veh/h	49	3139	682	295	2160	0	677	58	0	32	36	0
Grp Sat Flow(s),veh/h/ln	1781	1662	1560	1742	1675	1547	1742	1870	1598	1781	1870	1585
Q Serve(g_s), s	1.8	92.2	59.4	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Cycle Q Clear(g_c), s	1.8	92.2	59.4	12.8	54.8	0.0	26.7	4.5	0.0	2.9	3.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	2725	853	264	2860		551	296		101	106	
V/C Ratio(X)	0.27	1.15	0.80	1.12	0.76		1.23	0.20		0.32	0.34	
Avail Cap(c_a), veh/h	202	2725	853	264	2860		551	296		115	121	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	38.2	30.8	77.9	27.5	0.0	71.0	61.7	0.0	76.4	76.5	0.0
Incr Delay (d2), s/veh	0.8	73.1	7.8	90.2	1.9	0.0	117.9	0.3	0.0	1.8	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	53.0	22.7	8.9	20.9	0.0	20.8	2.2	0.0	1.4	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	111.4	38.6	168.1	29.4	0.0	188.9	62.0	0.0	78.2	78.4	0.0
LnGrp LOS	C	F	D	F	C		F	E		E	E	
Approach Vol, veh/h		3870			2455			735			68	
Approach Delay, s/veh		97.5			46.0			178.9			78.3	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	99.0		16.7	15.2	102.8		34.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	12.8	92.2		10.9	10.8	94.2		26.7				
Max Q Clear Time (g_c+I1), s	14.8	94.2		5.1	3.8	56.8		28.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	36.2		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		88.0	
HCM 7th LOS		F	

Notes

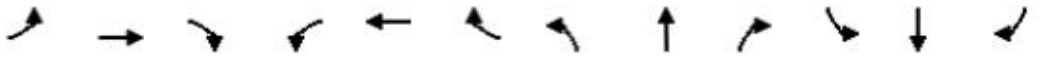
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	38	174	199	118	1256	65	106	828	54
v/c Ratio	0.24	0.06	0.48	0.40	0.38	0.65	0.07	0.75	0.43	0.06
Control Delay (s/veh)	27.2	0.2	30.8	17.4	12.5	12.0	2.1	45.3	9.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.2	0.2	30.8	17.4	12.5	12.0	2.1	45.3	9.4	2.2
Queue Length 50th (ft)	21	0	52	31	22	148	0	26	83	0
Queue Length 95th (ft)	87	0	180	133	68	281	14	#141	163	13
Internal Link Dist (ft)		571		343		1027			3744	
Turn Bay Length (ft)			150		350		350	275		250
Base Capacity (vph)	589	900	669	837	545	3416	1406	251	3350	1515
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	0.04	0.26	0.24	0.22	0.37	0.05	0.42	0.25	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	0	34	155	0	177	105	1118	58	94	737	48
Future Volume (veh/h)	68	0	34	155	0	177	105	1118	58	94	737	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1870	1870	1885	1752	1752	1856	1870
Adj Flow Rate, veh/h	76	0	38	174	0	199	118	1256	65	106	828	54
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	4	2	2	2	1	10	10	3	2
Cap, veh/h	171	0	317	313	0	317	439	2445	1013	270	2407	1082
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.20	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1183	0	1585	1348	0	1585	629	3582	1485	389	3526	1585
Grp Volume(v), veh/h	76	0	38	174	0	199	118	1256	65	106	828	54
Grp Sat Flow(s),veh/h/ln	1183	0	1585	1348	0	1585	629	1791	1485	389	1763	1585
Q Serve(g_s), s	6.4	0.0	2.0	12.4	0.0	11.7	9.8	17.5	1.5	18.7	9.9	1.1
Cycle Q Clear(g_c), s	18.1	0.0	2.0	14.4	0.0	11.7	19.7	17.5	1.5	36.1	9.9	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	317	313	0	317	439	2445	1013	270	2407	1082
V/C Ratio(X)	0.44	0.00	0.12	0.56	0.00	0.63	0.27	0.51	0.06	0.39	0.34	0.05
Avail Cap(c_a), veh/h	294	0	482	454	0	482	546	3055	1266	336	3006	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	33.5	39.4	0.0	37.4	10.8	7.9	5.4	16.7	6.7	5.3
Incr Delay (d2), s/veh	1.8	0.0	0.2	1.5	0.0	2.1	0.3	0.2	0.0	0.9	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.8	4.2	0.0	4.7	1.2	5.3	0.4	1.6	3.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.5	0.0	33.6	40.9	0.0	39.4	11.1	8.1	5.4	17.7	6.8	5.3
LnGrp LOS	D		C	D		D	B	A	A	B	A	A
Approach Vol, veh/h		114			373			1439			988	
Approach Delay, s/veh		42.9			40.1			8.2			7.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	75.6	26.4	75.6	26.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	87.0	31.0	87.0	31.0
Max Q Clear Time (g_c+I1), s	21.7	20.1	38.1	16.4
Green Ext Time (p_c), s	47.9	0.2	26.9	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	13.5
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	46	0	0	3	0	1277	26	0	875	51
Future Vol, veh/h	0	0	46	0	0	3	0	1277	26	0	875	51
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	-	-	-	-	-	-	-	-	275	-	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	1	2	2	3	8
Mvmt Flow	0	0	51	0	0	3	0	1419	29	0	972	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	486	-	-	709	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	527	0	0	376	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	527	-	-	376	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

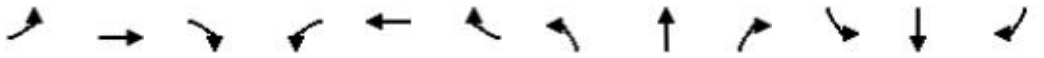
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.56	14.65	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	527	376	-	-
HCM Lane V/C Ratio	-	-	0.097	0.009	-	-
HCM Control Delay (s/veh)	-	-	12.6	14.7	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	143	14	9	265	1319	9	7	784	134
v/c Ratio	0.72	0.41	0.06	0.03	0.49	0.48	0.00	0.02	0.35	0.12
Control Delay (s/veh)	72.3	10.8	45.2	0.2	8.8	5.5	0.0	13.5	13.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.3	10.8	45.2	0.2	8.8	5.5	0.0	13.5	13.5	2.5
Queue Length 50th (ft)	120	1	10	0	31	315	0	2	155	0
Queue Length 95th (ft)	181	56	29	0	m53	119	m0	11	253	30
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	307	453	325	407	703	2715	1209	242	2192	1050
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	0.48	0.32	0.04	0.02	0.38	0.49	0.01	0.03	0.36	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1	126	9	4	8	236	1174	8	6	698	119
Future Volume (veh/h)	131	1	126	9	4	8	236	1174	8	6	698	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1870	1870	1885	1885	1870	1870	1856	1885
Adj Flow Rate, veh/h	147	1	142	10	4	9	265	1319	9	7	784	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	4	2	2	2	1	1	2	2	3	1
Cap, veh/h	230	1	199	87	27	200	578	2790	1235	329	2334	
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.14	1.00	1.00	0.66	0.66	0.00
Sat Flow, veh/h	1412	11	1576	311	215	1585	1795	3582	1585	413	3526	1598
Grp Volume(v), veh/h	147	0	143	14	0	9	265	1319	9	7	784	0
Grp Sat Flow(s),veh/h/ln	1412	0	1587	526	0	1585	1795	1791	1585	413	1763	1598
Q Serve(g_s), s	2.2	0.0	11.2	0.2	0.0	0.6	6.7	0.0	0.0	0.8	12.6	0.0
Cycle Q Clear(g_c), s	13.7	0.0	11.2	11.4	0.0	0.6	6.7	0.0	0.0	0.8	12.6	0.0
Prop In Lane	1.00		0.99	0.71		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	201	114	0	200	578	2790	1235	329	2334	
V/C Ratio(X)	0.64	0.00	0.71	0.12	0.00	0.04	0.46	0.47	0.01	0.02	0.34	
Avail Cap(c_a), veh/h	363	0	350	244	0	350	824	2790	1235	329	2334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.71	0.71	0.71	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	0.0	54.5	51.0	0.0	49.9	5.9	0.0	0.0	7.6	9.6	0.0
Incr Delay (d2), s/veh	3.0	0.0	4.6	0.5	0.0	0.1	0.4	0.4	0.0	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.8	0.4	0.0	0.3	1.8	0.2	0.0	0.1	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.6	0.0	59.1	51.5	0.0	50.0	6.3	0.4	0.0	7.7	9.9	0.0
LnGrp LOS	E		E	D		D	A	A	A	A	A	
Approach Vol, veh/h		290			23			1593			791	
Approach Delay, s/veh		58.8			50.9			1.4			9.9	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		107.3		22.7	15.2	92.0		22.7				
Change Period (Y+Rc), s		6.0		6.3	5.8	6.0		6.3				
Max Green Setting (Gmax), s		89.0		28.7	27.2	56.0		28.7				
Max Q Clear Time (g_c+I1), s		2.0		15.7	8.7	14.6		13.4				
Green Ext Time (p_c), s		35.1		0.8	0.7	12.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

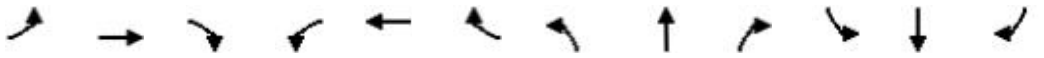
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	449	10	1446	32	60	664	985	15	13	564	273
v/c Ratio	0.91	0.01	0.91	0.06	0.09	0.85	0.53	0.01	0.16	0.56	0.42
Control Delay (s/veh)	63.1	23.9	10.6	25.1	15.1	60.0	25.1	0.0	55.9	48.0	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.1	23.9	10.6	25.1	15.1	60.0	25.1	0.0	55.9	48.0	14.7
Queue Length 50th (ft)	348	5	0	17	17	276	271	0	11	145	1
Queue Length 95th (ft)	#516	17	#26	38	45	340	433	0	m30	295	157
Internal Link Dist (ft)		2577			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	548	749	1583	551	697	858	1837	794	121	1000	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.01	0.91	0.06	0.09	0.77	0.54	0.02	0.11	0.56	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	10	1403	31	31	27	644	955	15	13	547	265
Future Volume (veh/h)	436	10	1403	31	31	27	644	955	15	13	547	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1841	1841	1826	1870	1900	1781	1604	1870	1870
Adj Flow Rate, veh/h	449	10	0	32	32	28	664	985	15	13	564	0
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
Percent Heavy Veh, %	0	2	2	4	4	5	2	0	8	20	2	2
Cap, veh/h	524	686		558	332	291	739	1751	732	26	1025	
Arrive On Green	0.37	0.37	0.00	0.37	0.37	0.37	0.21	0.49	0.49	0.03	0.58	0.00
Sat Flow, veh/h	1364	1870	1585	1383	906	792	3456	3610	1510	1527	3554	1585
Grp Volume(v), veh/h	449	10	0	32	0	60	664	985	15	13	564	0
Grp Sat Flow(s),veh/h/ln	1364	1870	1585	1383	0	1698	1728	1805	1510	1527	1777	1585
Q Serve(g_s), s	41.9	0.4	0.0	2.0	0.0	3.0	24.3	25.1	0.7	1.1	12.8	0.0
Cycle Q Clear(g_c), s	44.9	0.4	0.0	2.4	0.0	3.0	24.3	25.1	0.7	1.1	12.8	0.0
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	524	686		558	0	623	739	1751	732	26	1025	
V/C Ratio(X)	0.86	0.01		0.06	0.00	0.10	0.90	0.56	0.02	0.49	0.55	
Avail Cap(c_a), veh/h	572	752		607	0	683	864	1751	732	123	1025	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	41.7	26.2	0.0	27.0	0.0	27.0	49.7	23.7	17.4	62.2	22.3	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.0	0.0	0.1	11.0	1.3	0.1	12.7	2.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	0.2	0.0	0.7	0.0	1.3	11.3	10.5	0.2	0.5	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.3	26.2	0.0	27.0	0.0	27.1	60.8	25.0	17.5	74.9	24.3	0.0
LnGrp LOS	D	C		C		C	E	C	B	E	C	
Approach Vol, veh/h		459			92			1664			577	
Approach Delay, s/veh		52.7			27.0			39.2			25.4	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.3	43.3		53.4	7.7	68.9		53.4				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	32.5	28.2		52.3	10.5	50.2		52.3				
Max Q Clear Time (g_c+I1), s	26.3	14.8		46.9	3.1	27.1		5.0				
Green Ext Time (p_c), s	1.5	5.1		0.8	0.0	12.5		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	38.2
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

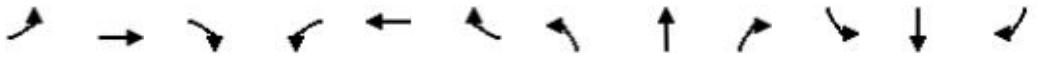
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	75	77	0	308	24	0
Future Vol, veh/h	75	77	0	308	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	2	2	2	2	2
Mvmt Flow	83	86	0	342	27	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	169	0	468	126
Stage 1	-	-	-	-	126	-
Stage 2	-	-	-	-	342	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1409	-	553	924
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1409	-	553	924
Mov Cap-2 Maneuver	-	-	-	-	553	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.84
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	553	-	-	1409	-
HCM Lane V/C Ratio	0.048	-	-	-	-
HCM Control Delay (s/veh)	11.8	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

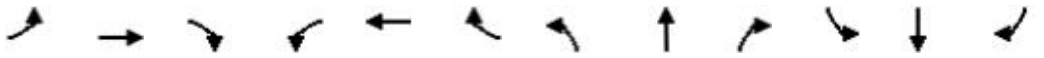


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	2707	764	608	3389	40	813	42	461	49	57	42
v/c Ratio	0.23	1.10	0.82	1.21	1.13	0.04	1.40	0.13	0.29	0.50	0.55	0.18
Control Delay (s/veh)	15.4	99.0	30.7	172.9	101.3	0.0	243.1	65.5	0.4	99.8	102.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.4	99.0	30.7	172.9	101.3	0.0	243.1	65.5	0.4	99.8	102.7	1.8
Queue Length 50th (ft)	13	~1334	491	~450	~1745	0	~660	43	0	60	70	0
Queue Length 95th (ft)	28	#1400	708	#578	#1786	0	#796	85	0	113	129	0
Internal Link Dist (ft)		1686			1905			3744			589	
Turn Bay Length (ft)	425		250	375		250	300		400	125		125
Base Capacity (vph)	147	2440	928	502	2979	971	578	307	1583	101	106	229
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	1.11	0.82	1.21	1.14	0.04	1.41	0.14	0.29	0.49	0.54	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	2572	726	578	3220	38	772	40	438	52	48	40
Future Volume (veh/h)	31	2572	726	578	3220	38	772	40	438	52	48	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1870	1870	1900	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	2707	764	608	3389	0	813	42	0	53	54	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	120	2458	763	506	2964		582	310		99	104	
Arrive On Green	0.05	0.48	0.48	0.14	0.58	0.00	0.17	0.17	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1781	5106	1585	3510	5106	1585	3510	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	2707	764	608	3389	0	813	42	0	53	54	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1755	1702	1585	1755	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	86.2	86.2	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Cycle Q Clear(g_c), s	1.3	86.2	86.2	25.8	103.9	0.0	29.7	3.4	0.0	5.2	5.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	2458	763	506	2964		582	310		99	104	
V/C Ratio(X)	0.27	1.10	1.00	1.20	1.14		1.40	0.14		0.54	0.52	
Avail Cap(c_a), veh/h	148	2458	763	506	2964		582	310		108	114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.0	46.4	46.4	76.6	37.6	0.0	74.7	63.7	0.0	82.3	82.2	0.0
Incr Delay (d2), s/veh	1.2	52.5	32.9	108.6	69.0	0.0	188.6	0.2	0.0	4.4	4.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	46.4	39.0	19.0	58.7	0.0	28.5	1.6	0.0	2.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.2	98.9	79.3	185.2	106.6	0.0	263.3	63.9	0.0	86.7	86.2	0.0
LnGrp LOS	D	F	F	F	F		F	E		F	F	
Approach Vol, veh/h		3504			3997			855			107	
Approach Delay, s/veh		94.1			118.6			253.5			86.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	93.0		17.1	14.3	110.7		37.0				
Change Period (Y+Rc), s	6.2	6.8		7.1	6.2	6.8		7.3				
Max Green Setting (Gmax), s	25.8	86.2		10.9	10.8	101.2		29.7				
Max Q Clear Time (g_c+I1), s	27.8	88.2		7.2	3.3	105.9		31.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	121.7	
HCM 7th LOS	F	

Notes

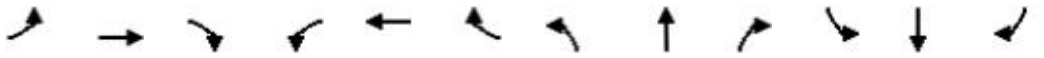
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	181	82	137	171	176	1042	160	149	1309	78
v/c Ratio	0.72	0.19	0.45	0.35	0.91	0.45	0.14	0.52	0.56	0.07
Control Delay (s/veh)	61.9	9.2	47.0	12.2	66.3	9.5	1.3	17.8	11.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.9	9.2	47.0	12.2	66.3	9.5	1.3	17.8	11.0	1.6
Queue Length 50th (ft)	143	0	101	16	105	187	0	55	264	0
Queue Length 95th (ft)	#256	40	169	78	#280	227	21	118	316	15
Internal Link Dist (ft)		571		343		1027			3744	
Turn Bay Length (ft)			150		350		350	275		250
Base Capacity (vph)	323	532	391	580	241	2895	1326	354	2895	1297
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	0.56	0.15	0.35	0.29	0.73	0.36	0.12	0.42	0.45	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	0	75	125	0	156	160	948	146	136	1191	71
Future Volume (veh/h)	165	0	75	125	0	156	160	948	146	136	1191	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1885	1870	1885	1885	1870	1885	1870
Adj Flow Rate, veh/h	181	0	82	137	0	171	176	1042	160	149	1309	78
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	1	2	1	1	2	1	2
Cap, veh/h	215	0	357	296	0	357	250	2442	1089	312	2442	1081
Arrive On Green	0.23	0.00	0.23	0.23	0.00	0.23	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1214	0	1585	1316	0	1585	390	3582	1598	465	3582	1585
Grp Volume(v), veh/h	181	0	82	137	0	171	176	1042	160	149	1309	78
Grp Sat Flow(s),veh/h/ln	1214	0	1585	1316	0	1585	390	1791	1598	465	1791	1585
Q Serve(g_s), s	16.9	0.0	5.4	12.2	0.0	12.1	53.1	16.8	4.6	27.2	23.6	2.1
Cycle Q Clear(g_c), s	29.0	0.0	5.4	17.7	0.0	12.1	76.8	16.8	4.6	44.1	23.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	0	357	296	0	357	250	2442	1089	312	2442	1081
V/C Ratio(X)	0.84	0.00	0.23	0.46	0.00	0.48	0.70	0.43	0.15	0.48	0.54	0.07
Avail Cap(c_a), veh/h	215	0	357	296	0	357	254	2473	1103	316	2473	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	0.0	40.8	48.0	0.0	43.4	29.5	9.2	7.2	19.1	10.3	6.9
Incr Delay (d2), s/veh	24.7	0.0	0.3	1.1	0.0	1.0	8.3	0.1	0.1	1.1	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	2.2	4.2	0.0	4.9	5.2	5.8	1.4	2.8	8.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.7	0.0	41.1	49.2	0.0	44.4	37.8	9.3	7.3	20.2	10.5	6.9
LnGrp LOS	F		D	D		D	D	A	A	C	B	A
Approach Vol, veh/h		263			308			1378			1536	
Approach Delay, s/veh		69.0			46.5			12.7			11.3	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	93.9	35.0	93.9	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	89.0	29.0	89.0	29.0
Max Q Clear Time (g_c+I1), s	78.8	31.0	46.1	19.7
Green Ext Time (p_c), s	9.1	0.0	36.3	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	19.3
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	109	0	0	14	0	1242	15	0	1319	70
Future Vol, veh/h	0	0	109	0	0	14	0	1242	15	0	1319	70
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	-	-	-	-	-	-	-	-	275	-	-	250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	11	2	2	2	2	1	2	2	0	2
Mvmt Flow	0	0	121	0	0	16	0	1380	17	0	1466	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	733	-	-	690	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.12	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.41	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	344	0	0	388	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	344	-	-	388	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	21.07	14.68	0	0
HCM LOS	C	B		

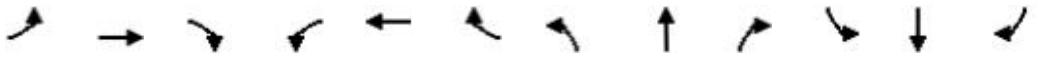
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	344	388	-	-
HCM Lane V/C Ratio	-	-	0.352	0.04	-	-
HCM Control Delay (s/veh)	-	-	21.1	14.7	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-	-

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	276	268	5	1	408	1131	8	18	1201	212
v/c Ratio	0.91	0.39	0.03	0.00	0.87	0.45	0.00	0.09	0.79	0.27
Control Delay (s/veh)	82.7	1.7	40.0	0.0	57.6	6.2	0.0	26.5	38.3	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.7	1.7	40.0	0.0	57.6	6.2	0.0	26.5	38.3	9.0
Queue Length 50th (ft)	225	0	3	0	249	136	0	9	485	31
Queue Length 95th (ft)	#378	0	15	0	m328	m150	m0	28	583	87
Internal Link Dist (ft)		706	444			982			2488	
Turn Bay Length (ft)				50	275		250	250		225
Base Capacity (vph)	323	688	148	418	499	2494	1102	199	1508	762
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	0.85	0.39	0.03	0.00	0.82	0.45	0.01	0.09	0.80	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	0	255	5	0	1	388	1074	8	17	1141	201
Future Volume (veh/h)	262	0	255	5	0	1	388	1074	8	17	1141	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1870	1870	1885	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	276	0	268	5	0	1	408	1131	8	18	1201	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	2	2	2	2	1	0	2	2	2	2
Cap, veh/h	388	0	300	82	0	300	439	2586	1135	321	1907	
Arrive On Green	0.19	0.00	0.19	0.19	0.00	0.19	0.18	0.95	0.95	0.54	0.54	0.00
Sat Flow, veh/h	1429	0	1585	142	0	1585	1795	3610	1585	494	3554	1585
Grp Volume(v), veh/h	276	0	268	5	0	1	408	1131	8	18	1201	0
Grp Sat Flow(s),veh/h/ln	1429	0	1585	142	0	1585	1795	1805	1585	494	1777	1585
Q Serve(g_s), s	0.0	0.0	21.5	0.6	0.0	0.1	14.4	3.3	0.0	2.3	30.7	0.0
Cycle Q Clear(g_c), s	19.1	0.0	21.5	22.0	0.0	0.1	14.4	3.3	0.0	2.3	30.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	0	300	82	0	300	439	2586	1135	321	1907	
V/C Ratio(X)	0.71	0.00	0.89	0.06	0.00	0.00	0.93	0.44	0.01	0.06	0.63	
Avail Cap(c_a), veh/h	444	0	362	126	0	362	627	2586	1135	321	1907	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.65	0.65	0.65	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.5	0.0	51.4	62.2	0.0	42.8	21.3	1.0	0.9	14.5	21.1	0.0
Incr Delay (d2), s/veh	4.5	0.0	20.9	0.3	0.0	0.0	11.7	0.4	0.0	0.3	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	10.3	0.2	0.0	0.0	7.5	0.8	0.0	0.3	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.0	0.0	72.3	62.5	0.0	42.8	33.0	1.3	0.9	14.8	22.7	0.0
LnGrp LOS	E		E	E		D	C	A	A	B	C	
Approach Vol, veh/h		544			6			1547			1219	
Approach Delay, s/veh		63.5			59.2			9.7			22.5	
Approach LOS		E			E			A			C	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	99.1	30.9	23.3	75.8	30.9
Change Period (Y+Rc), s	6.0	6.3	5.8	6.0	6.3
Max Green Setting (Gmax), s	88.0	29.7	31.2	51.0	29.7
Max Q Clear Time (g_c+I1), s	5.3	23.5	16.4	32.7	24.0
Green Ext Time (p_c), s	26.2	1.1	1.2	12.9	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	23.3
HCM 7th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

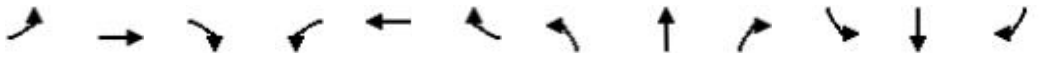
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	365	24	1085	22	36	1079	1229	45	32	1008	500
v/c Ratio	1.06	0.05	0.69	0.06	0.08	0.97	0.58	0.04	0.23	0.97	0.71
Control Delay (s/veh)	112.6	37.1	2.5	37.4	20.2	65.6	19.8	1.4	50.9	59.3	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	112.6	37.1	2.5	37.4	20.2	65.6	19.8	1.4	50.9	59.3	20.5
Queue Length 50th (ft)	~338	15	0	14	9	462	372	0	28	272	136
Queue Length 95th (ft)	#534	39	0	38	37	#607	450	9	m41	#566	224
Internal Link Dist (ft)		7696			571		1926			982	
Turn Bay Length (ft)			275			275		275	175		200
Base Capacity (vph)	343	412	1568	340	427	1106	2084	951	142	1039	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.06	0.69	0.06	0.08	0.98	0.59	0.05	0.23	0.97	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	22	987	20	13	20	982	1118	41	29	917	455
Future Volume (veh/h)	332	22	987	20	13	20	982	1118	41	29	917	455
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1633	1856	1811	1752	1811	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	365	24	0	22	14	22	1079	1229	45	32	1008	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	18	3	6	10	6	1	1	2	2	2	2
Cap, veh/h	378	418		385	157	247	1112	2007	888	94	1044	
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.32	0.56	0.56	0.02	0.10	0.00
Sat Flow, veh/h	1350	1633	1572	1343	614	964	3483	3582	1585	1781	3554	1585
Grp Volume(v), veh/h	365	24	0	22	0	36	1079	1229	45	32	1008	0
Grp Sat Flow(s),veh/h/ln	1350	1633	1572	1343	0	1578	1742	1791	1585	1781	1777	1585
Q Serve(g_s), s	31.0	1.4	0.0	1.6	0.0	2.3	39.7	29.9	1.7	2.3	36.7	0.0
Cycle Q Clear(g_c), s	33.3	1.4	0.0	3.1	0.0	2.3	39.7	29.9	1.7	2.3	36.7	0.0
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	418		385	0	404	1112	2007	888	94	1044	
V/C Ratio(X)	0.97	0.06		0.06	0.00	0.09	0.97	0.61	0.05	0.34	0.97	
Avail Cap(c_a), veh/h	378	418		385	0	404	1112	2007	888	144	1044	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	51.3	36.5	0.0	37.7	0.0	36.8	43.6	19.1	12.9	61.6	58.0	0.0
Incr Delay (d2), s/veh	37.3	0.1	0.0	0.1	0.0	0.1	20.1	1.4	0.1	1.1	13.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.8	0.6	0.0	0.6	0.0	0.9	19.5	11.9	0.6	1.1	19.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	88.6	36.6	0.0	37.7	0.0	36.9	63.8	20.5	13.0	62.7	71.3	0.0
LnGrp LOS	F	D		D		D	E	C	B	E	E	
Approach Vol, veh/h		389			58			2353			1040	
Approach Delay, s/veh		85.4			37.2			40.2			71.0	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	47.0	44.0		39.0	12.4	78.6		39.0				
Change Period (Y+Rc), s	5.5	5.8		5.7	5.5	5.8		5.7				
Max Green Setting (Gmax), s	41.5	38.2		33.3	10.5	69.2		33.3				
Max Q Clear Time (g_c+I1), s	41.7	38.7		35.3	4.3	31.9		5.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.0		0.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	53.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	236	46	0	154	127	0
Future Vol, veh/h	236	46	0	154	127	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	2	2	2	2	2
Mvmt Flow	262	51	0	171	141	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	313	0	459	288
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1247	-	560	751
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1247	-	560	751
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.58
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	560	-	-	1247	-
HCM Lane V/C Ratio	0.252	-	-	-	-
HCM Control Delay (s/veh)	13.6	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0	-

Appendix G – Signal Warrant Analysis

2024 Existing Traffic Volumes

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	35	0	88	0	0	290	12	2	9	166	2
7:00 AM	8:00 AM	0	2	0	1	0	68	0	134	1	1	657	17	0	16	439	6
8:00 AM	9:00 AM	0	0	0	2	0	97	0	109	0	0	800	45	0	37	441	0
9:00 AM	10:00 AM	0	0	0	1	0	39	0	83	1	0	587	34	1	29	475	1
10:00 AM	11:00 AM	0	4	0	1	0	48	0	72	0	0	552	42	4	30	469	0
11:00 AM	12:00 PM	0	3	0	1	1	30	0	68	1	1	604	38	5	43	660	2
12:00 PM	1:00 PM	0	1	0	0	0	33	0	63	0	1	685	45	1	29	665	2
1:00 PM	2:00 PM	0	1	0	0	0	50	0	68	1	0	650	47	2	60	604	4
2:00 PM	3:00 PM	0	6	0	0	0	38	0	57	1	0	634	48	1	55	645	0
3:00 PM	4:00 PM	0	2	0	1	0	56	0	47	1	0	732	90	3	78	710	1
4:00 PM	5:00 PM	0	3	0	1	0	46	0	60	2	1	727	130	3	87	754	2
5:00 PM	6:00 PM	0	1	0	0	0	48	0	73	0	0	730	105	3	77	865	0
6:00 PM	7:00 PM	0	0	0	1	0	52	0	49	1	1	513	87	2	73	582	0

2024 Existing Traffic Volumes - Minor Street Right-Turn 50% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	35	0	44	0	0	290	12	2	9	166	2
7:00 AM	8:00 AM	0	2	0	1	0	68	0	67	1	1	657	17	0	16	439	6
8:00 AM	9:00 AM	0	0	0	1	0	97	0	55	0	0	800	45	0	37	441	0
9:00 AM	10:00 AM	0	0	0	1	0	39	0	42	1	0	587	34	1	29	475	1
10:00 AM	11:00 AM	0	4	0	1	0	48	0	36	0	0	552	42	4	30	469	0
11:00 AM	12:00 PM	0	3	0	1	1	30	0	34	1	1	604	38	5	43	660	2
12:00 PM	1:00 PM	0	1	0	0	0	33	0	32	0	1	685	45	1	29	665	2
1:00 PM	2:00 PM	0	1	0	0	0	50	0	34	1	0	650	47	2	60	604	4
2:00 PM	3:00 PM	0	6	0	0	0	38	0	29	1	0	634	48	1	55	645	0
3:00 PM	4:00 PM	0	2	0	1	0	56	0	24	1	0	732	90	3	78	710	1
4:00 PM	5:00 PM	0	3	0	1	0	46	0	30	2	1	727	130	3	87	754	2
5:00 PM	6:00 PM	0	1	0	0	0	48	0	37	0	0	730	105	3	77	865	0
6:00 PM	7:00 PM	0	0	0	1	0	52	0	25	1	1	513	87	2	73	582	0

2024 Existing Traffic Volumes - Minor Street Right-Turn 100% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	35	0	0	0	0	290	12	2	9	166	2
7:00 AM	8:00 AM	0	2	0	0	0	68	0	0	1	1	657	17	0	16	439	6
8:00 AM	9:00 AM	0	0	0	0	0	97	0	0	0	0	800	45	0	37	441	0
9:00 AM	10:00 AM	0	0	0	0	0	39	0	0	1	0	587	34	1	29	475	1
10:00 AM	11:00 AM	0	4	0	0	0	48	0	0	0	0	552	42	4	30	469	0
11:00 AM	12:00 PM	0	3	0	0	1	30	0	0	1	1	604	38	5	43	660	2
12:00 PM	1:00 PM	0	1	0	0	0	33	0	0	0	1	685	45	1	29	665	2
1:00 PM	2:00 PM	0	1	0	0	0	50	0	0	1	0	650	47	2	60	604	4
2:00 PM	3:00 PM	0	6	0	0	0	38	0	0	1	0	634	48	1	55	645	0
3:00 PM	4:00 PM	0	2	0	0	0	56	0	0	1	0	732	90	3	78	710	1
4:00 PM	5:00 PM	0	3	0	0	0	46	0	0	2	1	727	130	3	87	754	2
5:00 PM	6:00 PM	0	1	0	0	0	48	0	0	0	0	730	105	3	77	865	0
6:00 PM	7:00 PM	0	0	0	0	0	52	0	0	1	1	513	87	2	73	582	0

2029 No-Build Traffic Volumes

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	45	0	112	0	0	370	15	3	11	212	3
7:00 AM	8:00 AM	0	3	0	1	0	87	0	171	1	1	839	22	0	20	560	8
8:00 AM	9:00 AM	0	0	0	3	0	124	0	139	0	0	1,021	57	0	47	563	0
9:00 AM	10:00 AM	0	0	0	1	0	50	0	106	1	0	749	43	1	37	606	1
10:00 AM	11:00 AM	0	5	0	1	0	61	0	92	0	0	705	54	5	38	599	0
11:00 AM	12:00 PM	0	4	0	1	1	38	0	87	1	1	771	48	6	55	842	3
12:00 PM	1:00 PM	0	1	0	0	0	42	0	80	0	1	874	57	1	37	849	3
1:00 PM	2:00 PM	0	1	0	0	0	64	0	87	1	0	830	60	3	77	771	5
2:00 PM	3:00 PM	0	8	0	0	0	48	0	73	1	0	809	61	1	70	823	0
3:00 PM	4:00 PM	0	3	0	1	0	71	0	60	1	0	934	115	4	100	906	1
4:00 PM	5:00 PM	0	4	0	1	0	59	0	77	3	1	928	166	4	111	962	3
5:00 PM	6:00 PM	0	1	0	0	0	61	0	93	0	0	932	134	4	98	1,104	0
6:00 PM	7:00 PM	0	0	0	1	0	66	0	63	1	1	655	111	3	93	743	0

2029 No-Build Traffic Volumes - Minor Street Right-Turn 50% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	45	0	42	0	0	370	15	3	11	212	3
7:00 AM	8:00 AM	0	3	0	1	0	87	0	64	1	1	839	22	0	20	560	8
8:00 AM	9:00 AM	0	0	0	2	0	124	0	52	0	0	1,021	57	0	47	563	0
9:00 AM	10:00 AM	0	0	0	1	0	50	0	40	1	0	749	43	1	37	606	1
10:00 AM	11:00 AM	0	5	0	1	0	61	0	35	0	0	705	54	5	38	599	0
11:00 AM	12:00 PM	0	4	0	1	1	38	0	33	1	1	771	48	6	55	842	3
12:00 PM	1:00 PM	0	1	0	0	0	42	0	30	0	1	874	57	1	37	849	3
1:00 PM	2:00 PM	0	1	0	0	0	64	0	33	1	0	830	60	3	77	771	5
2:00 PM	3:00 PM	0	8	0	0	0	48	0	28	1	0	809	61	1	70	823	0
3:00 PM	4:00 PM	0	3	0	1	0	71	0	23	1	0	934	115	4	100	906	1
4:00 PM	5:00 PM	0	4	0	1	0	59	0	29	3	1	928	166	4	111	962	3
5:00 PM	6:00 PM	0	1	0	0	0	61	0	35	0	0	932	134	4	98	1,104	0
6:00 PM	7:00 PM	0	0	0	1	0	66	0	24	1	1	655	111	3	93	743	0

2029 No-Build Traffic Volumes - Minor Street Right-Turn 100% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	45	0	0	0	0	370	15	3	11	212	3
7:00 AM	8:00 AM	0	3	0	0	0	87	0	0	1	1	839	22	0	20	560	8
8:00 AM	9:00 AM	0	0	0	0	0	124	0	0	0	0	1,021	57	0	47	563	0
9:00 AM	10:00 AM	0	0	0	0	0	50	0	0	1	0	749	43	1	37	606	1
10:00 AM	11:00 AM	0	5	0	0	0	61	0	0	0	0	705	54	5	38	599	0
11:00 AM	12:00 PM	0	4	0	0	1	38	0	0	1	1	771	48	6	55	842	3
12:00 PM	1:00 PM	0	1	0	0	0	42	0	0	0	1	874	57	1	37	849	3
1:00 PM	2:00 PM	0	1	0	0	0	64	0	0	1	0	830	60	3	77	771	5
2:00 PM	3:00 PM	0	8	0	0	0	48	0	0	1	0	809	61	1	70	823	0
3:00 PM	4:00 PM	0	3	0	0	0	71	0	0	1	0	934	115	4	100	906	1
4:00 PM	5:00 PM	0	4	0	0	0	59	0	0	3	1	928	166	4	111	962	3
5:00 PM	6:00 PM	0	1	0	0	0	61	0	0	0	0	932	134	4	98	1,104	0
6:00 PM	7:00 PM	0	0	0	0	0	66	0	0	1	1	655	111	3	93	743	0

2029 Build Traffic Volumes

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	47	0	114	0	0	371	19	3	20	214	3
7:00 AM	8:00 AM	0	3	0	1	0	91	0	176	1	1	840	36	0	52	567	8
8:00 AM	9:00 AM	0	0	0	3	0	146	0	166	0	0	1,027	82	0	103	576	0
9:00 AM	10:00 AM	0	0	0	1	0	83	0	149	1	0	758	66	1	90	618	1
10:00 AM	11:00 AM	0	5	0	1	0	97	0	138	0	0	715	76	5	87	610	0
11:00 AM	12:00 PM	0	4	0	1	1	75	0	135	1	1	782	63	6	91	850	3
12:00 PM	1:00 PM	0	1	0	0	0	72	0	118	0	1	883	71	1	69	856	3
1:00 PM	2:00 PM	0	1	0	0	0	91	0	122	1	0	838	81	3	125	782	5
2:00 PM	3:00 PM	0	8	0	0	0	84	0	119	1	0	819	80	1	115	833	0
3:00 PM	4:00 PM	0	3	0	1	0	108	0	107	1	0	944	133	4	142	915	1
4:00 PM	5:00 PM	0	4	0	1	0	96	0	124	3	1	938	178	4	138	968	3
5:00 PM	6:00 PM	0	1	0	0	0	91	0	132	0	0	940	140	4	111	1,107	0
6:00 PM	7:00 PM	0	0	0	1	0	79	0	80	1	1	659	113	3	99	744	0

2029 Build Traffic Volumes - Minor Street Right-Turn 50% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	47	0	57	0	0	371	19	3	20	214	3
7:00 AM	8:00 AM	0	3	0	1	0	91	0	88	1	1	840	36	0	52	567	8
8:00 AM	9:00 AM	0	0	0	2	0	146	0	83	0	0	1,027	82	0	103	576	0
9:00 AM	10:00 AM	0	0	0	1	0	83	0	75	1	0	758	66	1	90	618	1
10:00 AM	11:00 AM	0	5	0	1	0	97	0	69	0	0	715	76	5	87	610	0
11:00 AM	12:00 PM	0	4	0	1	1	75	0	68	1	1	782	63	6	91	850	3
12:00 PM	1:00 PM	0	1	0	0	0	72	0	59	0	1	883	71	1	69	856	3
1:00 PM	2:00 PM	0	1	0	0	0	91	0	61	1	0	838	81	3	125	782	5
2:00 PM	3:00 PM	0	8	0	0	0	84	0	60	1	0	819	80	1	115	833	0
3:00 PM	4:00 PM	0	3	0	1	0	108	0	54	1	0	944	133	4	142	915	1
4:00 PM	5:00 PM	0	4	0	1	0	96	0	62	3	1	938	178	4	138	968	3
5:00 PM	6:00 PM	0	1	0	0	0	91	0	66	0	0	940	140	4	111	1,107	0
6:00 PM	7:00 PM	0	0	0	1	0	79	0	40	1	1	659	113	3	99	744	0

2029 Build Traffic Volumes - Minor Street Right-Turn 100% Reduction

		MOTT ST				PARKSIDE DR				BUCKWALTER PKWY				BUCKWALTER PKWY			
		Eastbound				Westbound				Northbound				Southbound			
Start	Stop	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	7:00 AM	0	1	0	0	0	47	0	0	0	0	371	19	3	20	214	3
7:00 AM	8:00 AM	0	3	0	0	0	91	0	0	1	1	840	36	0	52	567	8
8:00 AM	9:00 AM	0	0	0	0	0	146	0	0	0	0	1,027	82	0	103	576	0
9:00 AM	10:00 AM	0	0	0	0	0	83	0	0	1	0	758	66	1	90	618	1
10:00 AM	11:00 AM	0	5	0	0	0	97	0	0	0	0	715	76	5	87	610	0
11:00 AM	12:00 PM	0	4	0	0	1	75	0	0	1	1	782	63	6	91	850	3
12:00 PM	1:00 PM	0	1	0	0	0	72	0	0	0	1	883	71	1	69	856	3
1:00 PM	2:00 PM	0	1	0	0	0	91	0	0	1	0	838	81	3	125	782	5
2:00 PM	3:00 PM	0	8	0	0	0	84	0	0	1	0	819	80	1	115	833	0
3:00 PM	4:00 PM	0	3	0	0	0	108	0	0	1	0	944	133	4	142	915	1
4:00 PM	5:00 PM	0	4	0	0	0	96	0	0	3	1	938	178	4	138	968	3
5:00 PM	6:00 PM	0	1	0	0	0	91	0	0	0	0	940	140	4	111	1,107	0
6:00 PM	7:00 PM	0	0	0	0	0	79	0	0	1	1	659	113	3	99	744	0

TRAFFIC SIGNAL WARRANT ANALYSIS

City/County:	**Bluffton**	85th-percentile speed on the major street exceeds 40 mph? (Y or N)	**Y**		
State:	**South Carolina**	Isolated community with a population of less than 10,000? (Y or N)	**N**	Analyzed by:	CES
Date:	**4/8/2024**	Apply 56% warrant to Warrant 1, Combination Warrant? (Y or N)	**N**	Analyzed by:	Kimley-Horn
Major Street:	**Buckwalter Parkway**	Approach Lanes - Major? (1 or 2)	**2**		
Minor Street:	**Parkside Drive/Mott Street**	Approach Lanes - Minor? (1 or 2)	**2**		

24-Hour Volume Summary	Major Street Total of Both Approaches	Minor Street Higher Volume Approach	Warrant 1, Condition A Major Street	Warrant 1, Condition A Minor Street	Warrant 1, Condition B Major Street	Warrant 1, Condition B Minor Street	Warrant 1, Combination Warrant 80% of 1A Major Street	Warrant 1, Combination Warrant 80% of 1A Minor Street	Warrant 1, Combination Warrant 80% of 1B Major Street	Warrant 1, Combination Warrant 80% of 1B Minor Street	Warrant 2	Warrant 3, Condition B
12:00 AM TO 01:00 AM												
01:00 AM TO 02:00 AM												
02:00 AM TO 03:00 AM												
03:00 AM TO 04:00 AM												
04:00 AM TO 05:00 AM												
05:00 AM TO 06:00 AM												
06:00 AM TO 07:00 AM	630	161	**150%**	**115%**	**100%**	**230%**	131%	101%	88%	201%	98%	54%
07:00 AM TO 08:00 AM	1,505	267	**358%**	**191%**	**239%**	**381%**	**314%**	**167%**	**209%**	**334%**	**334%**	**267%**
08:00 AM TO 09:00 AM	1788	312	**426%**	**223%**	**284%**	**446%**	**373%**	**195%**	**248%**	**390%**	**390%**	**312%**
09:00 AM TO 10:00 AM	1535	232	**365%**	**166%**	**244%**	**331%**	**320%**	**145%**	**213%**	**290%**	**290%**	**232%**
10:00 AM TO 11:00 AM	1493	235	**355%**	**168%**	**237%**	**336%**	**311%**	**147%**	**207%**	**294%**	**294%**	**235%**
11:00 AM TO 12:00 PM	1797	211	**428%**	**151%**	**285%**	**301%**	**374%**	**132%**	**250%**	**264%**	**264%**	**211%**
12:00 PM TO 01:00 PM	1884	190	**449%**	**136%**	**299%**	**271%**	**393%**	**119%**	**262%**	**238%**	**238%**	**190%**
01:00 PM TO 02:00 PM	1835	213	**437%**	**152%**	**291%**	**304%**	**382%**	**133%**	**255%**	**266%**	**266%**	**213%**
02:00 PM TO 03:00 PM	1849	203	**440%**	**145%**	**293%**	**290%**	**385%**	**127%**	**257%**	**254%**	**254%**	**203%**
03:00 PM TO 04:00 PM	2140	215	**510%**	**154%**	**340%**	**307%**	**446%**	**134%**	**297%**	**269%**	**269%**	**215%**
04:00 PM TO 05:00 PM	2233	220	**532%**	**157%**	**354%**	**314%**	**465%**	**138%**	**310%**	**275%**	**275%**	**220%**
05:00 PM TO 06:00 PM	2,302	223	**548%**	**159%**	**365%**	**319%**	**480%**	**139%**	**320%**	**279%**	**279%**	**223%**
06:00 PM TO 07:00 PM	1620	159	**386%**	**114%**	**257%**	**227%**	338%	99%	225%	199%	**199%**	**159%**
07:00 PM TO 08:00 PM												
08:00 PM TO 09:00 PM												
09:00 PM TO 10:00 PM												
10:00 PM TO 11:00 PM												
11:00 PM TO 12:00 AM												
			Threshold		Threshold		Threshold		Threshold		MUTCD Figure	MUTCD Figure
			420	140	630	70	480	160	720	80	4C-1 and 4C-2	4C-3 and 4C-4
			Summary		Summary		Summary		Summary		Summary	Summary
			TOTAL	13	TOTAL	13	TOTAL	12	TOTAL	12	TOTAL 12	TOTAL 12
			Met?	YES	Met?	YES	TOTAL	12	Met?	YES	Met? Yes	Met? Yes

Source: MUTCD, 2009 Edition
Created By: Kimley-Horn and Associates, Inc.

COMMENTS/NOTES:

2029 Build No Right-Turn Reductions - 70% Factor

The Bluffton Commons development trips were not included in the volumes based on the eastbound approach having the greater minor street volume.

TRAFFIC SIGNAL WARRANT ANALYSIS

City/County:	**Bluffton**	85th-percentile speed on the major street exceeds 40 mph? (Y or N)	**Y**		
State:	**South Carolina**	Isolated community with a population of less than 10,000? (Y or N)	**N**	Analyzed by:	CES
Date:	**4/8/2024**	Apply 56% warrant to Warrant 1, Combination Warrant? (Y or N)	**N**	Analyzed by:	Kimley-Horn
Major Street:	**Buckwalter Parkway**	Approach Lanes - Major? (1 or 2)	**2**		
Minor Street:	**Parkside Drive/Mott Street**	Approach Lanes - Minor? (1 or 2)	**2**		

24-Hour Volume Summary	Major Street Total of Both Approaches	Minor Street Higher Volume Approach	Warrant 1, Condition A Major Street	Warrant 1, Condition A Minor Street	Warrant 1, Condition B Major Street	Warrant 1, Condition B Minor Street	Warrant 1, Combination Warrant 80% of 1A Major Street	Warrant 1, Combination Warrant 80% of 1A Minor Street	Warrant 1, Combination Warrant 80% of 1B Major Street	Warrant 1, Combination Warrant 80% of 1B Minor Street	Warrant 2	Warrant 3, Condition B
12:00 AM TO 01:00 AM												
01:00 AM TO 02:00 AM												
02:00 AM TO 03:00 AM												
03:00 AM TO 04:00 AM												
04:00 AM TO 05:00 AM												
05:00 AM TO 06:00 AM												
06:00 AM TO 07:00 AM	630	104	150%	74%	**100%**	**149%**	131%	65%	88%	130%	63%	35%
07:00 AM TO 08:00 AM	1,505	179	**358%**	**128%**	**239%**	**256%**	**314%**	**112%**	**209%**	**224%**	**224%**	**179%**
08:00 AM TO 09:00 AM	1788	229	**426%**	**164%**	**284%**	**327%**	**373%**	**143%**	**248%**	**286%**	**286%**	**229%**
09:00 AM TO 10:00 AM	1535	158	**365%**	**113%**	**244%**	**226%**	320%	99%	213%	198%	**198%**	**158%**
10:00 AM TO 11:00 AM	1493	166	**355%**	**119%**	**237%**	**237%**	**311%**	**104%**	**207%**	**208%**	**208%**	**166%**
11:00 AM TO 12:00 PM	1797	144	**428%**	**103%**	**285%**	**206%**	374%	90%	250%	180%	**180%**	**144%**
12:00 PM TO 01:00 PM	1884	131	449%	94%	**299%**	**187%**	393%	82%	262%	164%	**164%**	**131%**
01:00 PM TO 02:00 PM	1835	152	**437%**	**109%**	**291%**	**217%**	382%	95%	255%	190%	**190%**	**152%**
02:00 PM TO 03:00 PM	1849	144	**440%**	**103%**	**293%**	**206%**	385%	90%	257%	180%	**180%**	**144%**
03:00 PM TO 04:00 PM	2140	162	**510%**	**116%**	**340%**	**231%**	**446%**	**101%**	**297%**	**203%**	**203%**	**162%**
04:00 PM TO 05:00 PM	2233	158	**532%**	**113%**	**354%**	**226%**	465%	99%	310%	198%	**198%**	**158%**
05:00 PM TO 06:00 PM	2,302	157	**548%**	**112%**	**365%**	**224%**	480%	98%	320%	196%	**196%**	**157%**
06:00 PM TO 07:00 PM	1620	119	386%	85%	**257%**	**170%**	338%	74%	225%	149%	**149%**	**119%**
07:00 PM TO 08:00 PM												
08:00 PM TO 09:00 PM												
09:00 PM TO 10:00 PM												
10:00 PM TO 11:00 PM												
11:00 PM TO 12:00 AM												
			Threshold		Threshold		Threshold		Threshold		MUTCD Figure	MUTCD Figure
			420	140	630	70	480	160	720	80	4C-1 and 4C-2	4C-3 and 4C-4
			Summary		Summary		Summary		Summary		Summary	Summary
			TOTAL	10	TOTAL	13	TOTAL	4	TOTAL	12	TOTAL 12	TOTAL 12
			Met?	YES	Met?	YES	TOTAL	4	Met?	NO	Met? Yes	Met? Yes

Source: MUTCD, 2009 Edition
Created By: Kimley-Horn and Associates, Inc.

COMMENTS/NOTES:

2029 Build with Minor Street Right-Turn 50% Reduction - 70% Factor

The Bluffton Commons development trips were not included in the volumes based on the eastbound approach having the greater minor street volume.

TRAFFIC SIGNAL WARRANT ANALYSIS

City/County:	**Bluffton**	85th-percentile speed on the major street exceeds 40 mph? (Y or N)	**Y**		
State:	**South Carolina**	Isolated community with a population of less than 10,000? (Y or N)	**N**	Analyzed by:	CES
Date:	**4/8/2024**	Apply 56% warrant to Warrant 1, Combination Warrant? (Y or N)	**N**	Analyzed by:	Kimley-Horn
Major Street:	**Buckwalter Parkway**	Approach Lanes - Major? (1 or 2)	**2**		
Minor Street:	**Parkside Drive/Mott Street**	Approach Lanes - Minor? (1 or 2)	**1**		

24-Hour Volume Summary	Major Street Total of Both Approaches	Minor Street Higher Volume Approach	Warrant 1, Condition A Major Street	Warrant 1, Condition A Minor Street	Warrant 1, Condition B Major Street	Warrant 1, Condition B Minor Street	Warrant 1, Combination Warrant 80% of 1A Major Street	Warrant 1, Combination Warrant 80% of 1A Minor Street	Warrant 1, Combination Warrant 80% of 1B Major Street	Warrant 1, Combination Warrant 80% of 1B Minor Street	Warrant 2	Warrant 3, Condition B
12:00 AM TO 01:00 AM												
01:00 AM TO 02:00 AM												
02:00 AM TO 03:00 AM												
03:00 AM TO 04:00 AM												
04:00 AM TO 05:00 AM												
05:00 AM TO 06:00 AM												
06:00 AM TO 07:00 AM	630	47	150%	45%	100%	89%	131%	39%	88%	78%	39%	20%
07:00 AM TO 08:00 AM	1,505	91	358%	87%	**239%**	**172%**	314%	76%	209%	152%	**152%**	**121%**
08:00 AM TO 09:00 AM	1788	146	**426%**	**139%**	**284%**	**275%**	**373%**	**122%**	**248%**	**243%**	**243%**	**195%**
09:00 AM TO 10:00 AM	1535	83	365%	79%	**244%**	**157%**	320%	69%	213%	138%	**138%**	**111%**
10:00 AM TO 11:00 AM	1493	97	355%	92%	**237%**	**183%**	311%	81%	207%	162%	**162%**	**129%**
11:00 AM TO 12:00 PM	1797	76	428%	72%	**285%**	**143%**	374%	63%	250%	127%	**127%**	**101%**
12:00 PM TO 01:00 PM	1884	72	449%	69%	**299%**	**136%**	393%	60%	262%	120%	**120%**	96%
01:00 PM TO 02:00 PM	1835	91	437%	87%	**291%**	**172%**	382%	76%	255%	152%	**152%**	**121%**
02:00 PM TO 03:00 PM	1849	84	440%	80%	**293%**	**158%**	385%	70%	257%	140%	**140%**	**112%**
03:00 PM TO 04:00 PM	2140	108	**510%**	**103%**	**340%**	**204%**	446%	90%	297%	180%	**180%**	**144%**
04:00 PM TO 05:00 PM	2233	96	532%	91%	**354%**	**181%**	465%	80%	310%	160%	**160%**	**128%**
05:00 PM TO 06:00 PM	2,302	91	548%	87%	**365%**	**172%**	480%	76%	320%	152%	**152%**	**121%**
06:00 PM TO 07:00 PM	1620	79	386%	75%	**257%**	**149%**	338%	66%	225%	132%	**132%**	**105%**
07:00 PM TO 08:00 PM												
08:00 PM TO 09:00 PM												
09:00 PM TO 10:00 PM												
10:00 PM TO 11:00 PM												
11:00 PM TO 12:00 AM												
			Threshold 420	105	Threshold 630	53	Threshold 480	120	Threshold 720	60	MUTCD Figure 4C-1 and 4C-2	MUTCD Figure 4C-3 and 4C-4
			Summary TOTAL	2	Summary TOTAL	12	Summary TOTAL	1	Summary TOTAL	12	Summary TOTAL 12	Summary TOTAL 11
			Met?	NO	Met?	YES	TOTAL 1		Met?	NO	Met? Yes	Met? Yes

Source: MUTCD, 2009 Edition
Created By: Kimley-Horn and Associates, Inc.

COMMENTS/NOTES:

2029 Build with Minor Street Right-Turn 100% Reduction - 70% Factor

The Bluffton Commons development trips were not included in the volumes based on the eastbound approach having the greater minor street volume.

Appendix H – Buckwalter Parkway Access Management Plan Update

Access Management Plan Update

Buckwalter Parkway
(US 278 to Bluffton Parkway)
Beaufort County, SC

Prepared for:
Beaufort County

BIHL ENGINEERING

Access Management Plan Update – Buckwalter Parkway (US 278 to Bluffton Parkway)
Beaufort County, South Carolina

Prepared for:
Beaufort County

Prepared by:
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October 2021

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1.0 Executive Summary

An access management plan was established in 2007 and further codified in Beaufort County's *Community Development Code* for the Buckwalter Parkway corridor in the Town of Bluffton, located in Beaufort County, South Carolina. Since the establishment of that plan, significant development has occurred along the Buckwalter Parkway corridor. As noted in the *Community Development Code,* there was a need to review and update the 2007 plan based on the current conditions of the corridor and to determine the most appropriate access management plan for the corridor intersections based on the existing and planned developments, existing and future traffic patterns, and crash history.

The corridor for this access management plan update extends from US 278 to Bluffton Parkway. The location of the corridor is shown in **Figure 1 (Appendix)**. The municipal boundaries for the Town of Bluffton along the corridor are shown in **Figure 2 (Appendix)** based on Beaufort County GIS.

Two scenarios were reviewed: the access points recommended in the 2007 plan (Scenario 1) and an updated access management plan (Scenario 2) which adjusts the access points to better fit intersection spacing goals and current development patterns.

The following key points and assumptions, which are based on coordination with Town and County staff, were applied in the analysis:

- It is unlikely that an eastern connection from Ludlow Street to the Woodside neighborhood shown in the 2007 Access Management Plan is feasible based on the current development patterns and the locations of wetlands
- Approximately 2,000 foot spacing between signalized intersections is desired along the corridor
- North-south connectivity is desired between parcels along Buckwalter Parkway
- Future connections to the Willow Run development and the new north-south roadway that connects to US 278 at Eagles Point should be included in the study

Based on a review of the corridor and the associated data, the recommended access management plan is shown in **Figures 3A and 3B (Appendix)** and the access locations are listed below by type of access.

- Signalized Intersection Access
    - Buckwalter Place Boulevard/Lord of Life Driveway (existing)
- Signalized Intersection Access (when warranted)
    - Berkeley Place Driveway #1/Pinellas Drive North (roadway improvements will be required)
    - Mott Street/Parkside Drive
    - Kroger Fuel Driveway
- Full Unsignalized Intersection Access
    - Cassidy Drive (existing)

- Right-in, right-out Intersection Access
  - Berkeley Place Driveway #2/Pinellas Drive South
  - Ludlow Street
  - Innovation Drive
  - Progressive Street (existing)
- Right-in only Intersection Access
  - Buckwalter Place Driveway (existing)

Table 1 shows a comparison of the access management between the two scenarios.

Table 1:
Comparison of Traffic Control by Scenario[1]

Location	Scenario 1 – 2007 Plan	Scenario 2 – 2021 Proposed Plan
US 278	Existing Signal	Existing Signal
Cassidy Drive	Undefined Unsignalized Access	Right-in, Right-out
Pinellas Drive N	Undefined Unsignalized Access	Proposed Signalization, when warranted
Pinellas Drive S	Proposed Signalization, when warranted	Right-in, Right-out
Mott St./Parkside Dr.	Undefined Unsignalized Access	Proposed Signalization, when warranted
Ludlow St.	Proposed Signalization, when warranted	Right-in, Right-out
Kroger Fuel Driveway	Right-in, Right-out	Proposed Signalization, when warranted
Innovation Dr.	Proposed Signalization, when warranted	Right-in, Right-out
Progressive Dr.	Right-in, Right-out	Right-in, Right-out
Buckwalter Place Blvd./Lord of Life Dwy.	Existing Signal	Existing Signal
Buckwalter Place Dwy.	Right-in Only	Right-in Only

[1]Roadway improvements may be required at all locations in both scenarios

In the proposed access management plan update (Scenario 2), all intersections are projected to operate at LOS D or better (assuming the planned intersections are signalized). Signalization implementation would be based on the intersections meeting traffic signal warrants.

In addition, this plan recommends the previously planned and new roadway connection improvements along the corridor. These are shown in **Figures 3A and 3B (Appendix)** as dashed lines. The exact location and design of these connection are conceptual in nature and are expected to be refined in the design process.

- New roadway between US 278 and Berkeley Place Driveway 1 on the west side of Buckwalter Parkway
- New east-west roadway from Cassidy Drive to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- New north-south roadway between Cassidy Drive and Pinellas Drive North
- New east-west roadway from Pinellas Drive North to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- Realignment and installation of new Berkeley Place Driveway 1, connecting to the Berkeley Place parking area further west and removing the existing curve and parking lot connection
- New east-west roadway from Pinellas Drive South to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- New north-south roadway between Pinellas Drive South and Parkside Drive
- Complete north-south connection between Berkeley Place and Bluffton Commons
- New north-south roadway between Innovation Drive and Bluffton Commons
- Conversion of Kroger Fuel Center Drive to full access intersection and installation of a new east-west roadway connecting to the new north-south access roads parallel to Buckwalter Parkway
- New north-south access roadway on the east side of Buckwalter Parkway, connecting the new Kroger Fuel Center Drive intersection and Buckwalter Towne Boulevard
- New connector between Lord of Life Church Road and new north-south access road
- Relocation of intersection of Bluffton Parkway at Buckwalter Parkway intersection (by others)

This study area on Buckwalter Parkway extends to just before Bluffton Parkway (north) signalized intersection. The recommended signalized intersection spacing goal of approximately 2,000 feet between signalized intersections should be applied for the remainder of Buckwalter Parkway to SC 46, as appropriate, to maximize the efficiency of the corridor. This spacing should be reviewed, and the exact locations of these signalized intersections should be studied further as projects develop in the remaining section of the Buckwalter Parkway corridor.

2.0 Introduction

An access management plan was established in 2007 for the Buckwalter Parkway corridor in the town of Bluffton, located in Beaufort County, South Carolina. This plan was further codified in the Beaufort County *Community Development Code*. Since the establishment of the access management plan, significant development has occurred along the Buckwalter Parkway corridor. There was a need to review and update the 2007 plan based on the current conditions of the corridor and determine the most appropriate access management plan for the corridor intersections based on the existing and planned developments, existing and future traffic patterns, and crash history.

The corridor extends from US 278 to Bluffton Parkway. The location of the corridor is shown in **Figure 1 (Appendix)**. The municipal boundaries for the Town of Bluffton along the corridor are shown in **Figure 2 (Appendix)** based on Beaufort County GIS.

3.0 Existing Conditions

The following section discusses the study area, existing roadway conditions, annual average daily traffic (AADT) data, turning movement counts, previous studies, area roadway projects, and crash analysis for the access management plan.

3.1 Study Area

The access management plan study area includes the following existing intersections.

- Buckwalter Parkway at Cassidy Drive
- Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1
- Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2
- Buckwalter Parkway at Parkside Drive/Mott Street
- Buckwalter Parkway at Ludlow Street
- Buckwalter Parkway at Kroger Fuel Center Drive
- Buckwalter Parkway at Innovation Drive
- Buckwalter Parkway at Progressive Street
- Buckwalter Parkway at Buckwalter Place Boulevard/Lord of Life Church Driveway
- Buckwalter Parkway at Buckwalter Place Driveway

Existing laneage at the study area intersections is shown in **Figure 4 (Appendix)**.

3.2 Existing Roadway Conditions

The study area includes South Carolina Department of Transportation (SCDOT), Beaufort County, Town of Bluffton, and privately owned roadways/driveways.

3.2.1 Study Area Roadways

The following section provides descriptions of the roadways in the study area.

US 278 (Fording Island Road) – US 278 is a six-lane, divided, principal arterial roadway with a grass median and a posted speed limit of 55 miles per hour (mph). Per SCDOT counts, US 278 had a 2019 Annual Average Daily Traffic (AADT) of 48,000 vehicles per day (vpd) within the study area.

Buckwalter Parkway – Buckwalter Parkway is a four-lane, divided, minor arterial with a landscaped median and a posted speed limit of 45 mph. Per SCDOT counts, Buckwalter Parkway had a 2019 AADT of 15,600 vpd between US 278 and Bluffton Parkway and a 2019 AADT of 19,100 vpd south of Bluffton Parkway.

Bluffton Parkway – Bluffton Parkway is a four-lane, divided, minor arterial with a landscaped median and a posted speed limit of 45 mph. Per SCDOT counts, Bluffton Parkway had a 2019 AADT of 17,400 vpd within the study area.

Cassidy Drive – Cassidy Drive is a three-lane, undivided roadway that provides access to the Vineyard Assisted Living & Memory Care facility.

Pinellas Drive – Pinellas Drive is a two-lane roadway that provides access to commercial development. Pinellas Drive intersects Buckwalter Parkway in two locations: once across from Berkeley Place Driveway #1 and again across from Berkeley Place Driveway #2.

Berkeley Place Driveway #1 – Berkeley Place Driveway #1 is a two-lane driveway providing access to the Berkeley Place shopping center. Berkeley Place Driveway #1 is across from Pinellas Drive North at its intersection with Buckwalter Parkway. The throat distance of the existing intersection is 30 feet between the stop bar and the beginning of the sharp curve into the Berkeley Place Shopping Center.

Berkeley Place Driveway #2 – Berkeley Place Driveway #2 is a two-lane driveway providing access to the Berkeley Place shopping center. Berkeley Place Driveway #2 is across from Pinellas Drive South at its intersection with Buckwalter Parkway.

Mott Street – Mott Street is a two-lane, divided roadway for the Bluffton Commons development.

Parkside Drive – Parkside Drive is a two-lane roadway with a posted speed limit of 25 mph that provides access for the Woodbridge community. Parkside Drive is across from Mott Street at its intersection with Buckwalter Parkway.

Ludlow Street – Ludlow Street is a two-lane, divided roadway for the Bluffton Commons development. Due to adjacent wetlands on the east side of the road where Ludlow Street would cross Buckwalter Parkway in the future. The new approach to this intersection would have a short throat distance.

Kroger Fuel Driveway – The Kroger Fuel Driveway is a two-lane driveway with right-in right-out (RIRO) access at its intersection with Buckwalter Parkway.

Innovation Drive – Innovation Drive is a two-lane driveway for the Buckwalter Place shopping center.

Progressive Street – Progressive Street is a two-lane driveway for the Buckwalter Place shopping center. Progressive Street is a RIRO access point at its intersection with Buckwalter Parkway.

Buckwalter Place Boulevard – Buckwalter Place Boulevard is a four-lane, divided roadway with a landscaped median. Buckwalter Place Boulevard is the main entrance for the Buckwalter Place shopping center and is signalized at its intersection with Buckwalter Parkway.

Lord of Life Church Driveway – Lord of Life Church Driveway is a two-lane driveway for the Lord of Life Lutheran Church. Lord of Life Church Driveway is across from Buckwalter Place Boulevard at its intersection with Buckwalter Parkway.

Buckwalter Place Driveway – Buckwalter Place Driveway is a one-lane, one-way entrance driveway for the Buckwalter Place shopping center.

3.3 AADT Data

Table 2 shows the SCDOT annual average daily traffic (AADT) volumes and percent growth per year on the study area roadways from 2011-2019.

The 8-year historic growth rates along the corridor ranged from 1.5% to 6% per year. The 3-year growth rate along the corridor was approximately 0% to 4% per year.

3.4 Turning Movement Counts

Peak hour intersection turning movement counts including vehicular, pedestrian, and heavy vehicle traffic were performed in May 2021 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM at the following intersections:

- Buckwalter Parkway at Cassidy Street
- Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1
- Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2
- Buckwalter Parkway at Innovation Drive
- Buckwalter Parkway at Progressive Street
- Buckwalter Parkway at Buckwalter Place Boulevard

Table 2:
SCDOT Average Annual Daily Traffic (AADT) Counts by Year

Roadway	Road Section		Year									% Growth /Year
	Start	End	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Buckwalter Parkway	US 278	Buckwalter Towne Boulevard	9,800	8,700	8,900	8,100	12,200	13,900	13,400	14,100	15,600	**6.0%**
Buckwalter Parkway	Buckwalter Towne Boulevard	Bluffton Parkway	16,900	16,600	16,900	15,300	17,700	19,400	20,000	21,000	19,100	**1.5%**

Source: SCDOT traffic count data

Due to the COVID-19 pandemic, traffic volumes and travel patterns have been impacted. All turning movements collected in May 2021 were adjusted using adjustment factors of 1.15 and 1.02 for the AM and PM peak hours, respectively, as stated in the SCDOT District 6 *Traffic Impact Analyses during COVID-19 Pandemic (Update)* memorandum (February 5, 2021). These adjusted traffic volumes were used in the Existing conditions analysis.

Existing peak hour intersection turning movement volumes are shown on **Figure 5 (Appendix)**. The turning movement count data is included in the **Appendix**.

Additional turning movement counts were collected in January 2021 at the following intersections:

- Buckwalter Parkway at Parkside Drive/Mott Street
- Buckwalter Parkway at Ludlow Street

Due to the COVID-19 pandemic, traffic volumes and travel patterns have been impacted. All turning movements collected in January 2021 were adjusted using adjustment factors of 1.19 and 1.13 for the AM and PM peak hours, respectively, as stated in the SCDOT District 6 *Traffic Impact Analyses during COVID-19 Pandemic* memorandum (September 28, 2020). These adjusted traffic volumes were used in the Existing conditions analysis.

3.5 Wetlands

Based on the available data in the Beaufort County GIS, **Figure 6 (Appendix)** shows the wetlands along the corridor. The locations of the wetlands should be considered when reviewing potential connectivity of developments along the corridor.

3.6 Previous Access Management Study (2007)

The *Access Management Plan: Buckwalter Parkway* **(Appendix)** was performed by SRS Engineering in 2007 and is incorporated into the *2010 Beaufort County Comprehensive Plan*. The results of that study are shown in **Figure 7**. The study area for the report was the northern segment of Buckwalter Parkway from US 278 to Bluffton Parkway. The purpose of the report was to review the future developments that were planned to access Buckwalter Parkway and to determine appropriate locations for signalized access points based on these future developments and the Bluffton Parkway Phase 4 roadway project.

The report looked at a future year of 2025 and analyzed the level of service for signalized intersections for two different alternatives. It was recommended that signalized intersections be located at Cinema South (now Pinellas Drive South/Berkeley Place Driveway #2), Sea Turtle South (now Ludlow Street), and Buckwalter Town Center North (now Innovation Drive).

The following additional connections were recommended in the plan:

- New roadway connecting US 278 and the west side of Buckwalter Parkway in the vicinity of Pinellas Drive North
- Connection between the Berkeley Place development and Bluffton Commons development
- New roadway from Pinellas Drive North to the future Willow Run development and the new north/south roadway planned by others connecting future Bluffton Parkway to US 278 in the vicinity of Eagle's Point
- New roadway from Pinellas Drive South to the future Willow Run development and the new north/south roadway planned by others connecting future Bluffton Parkway to US 278 in the vicinity of Eagle's Point

3.7 Community Development Code

The *Community Development Code* further identifies the access management along Buckwalter Parkway from US 278 to SC 46.

The intersection spacing along the Buckwalter Parkway corridor is recommended to be 2,000 feet between signalized intersections.

The *Community Development Code* outlines three conditions that shall be satisfied if the signalized access locations are desired to be changed.

- "The modified location must meet the warrants for signalization with the proposed development as defined in the Manual on Uniform Traffic Control Devices (MUTCD) by the Federal Highway Administration (FHWA) with the analysis and specific application of traffic signal warrants to be approved by the Beaufort County traffic engineer."
- "The modified location must provide adequate spacing (as defined in the spacing standards indicated above) from existing traffic signals, programmed traffic signals, and future signalization of primary roadway intersections, including:
    - Buckwalter Parkway at US 278
    - Buckwalter Parkway at Cinema South (2,800 feet south of US 278)
    - Buckwalter Parkway at Sea Turtle South (2,050 feet south of Cinema South)
    - Buckwalter Parkway at Buckwalter Town Center South (2,550 feet south of Cinema South)
    - Buckwalter Parkway at Bluffton Parkway and the Townes of Buckwalter (this signal will be relocated once Phase 5b of the Bluffton Parkway is completed)
    - Buckwalter Parkway at Bluffton Parkway and Hampton Hall
    - Buckwalter Parkway at H.E. McCracken Circle and Old Bridge Drive
    - Buckwalter Parkway at SC 46 (May River Road)"
- "The future signalized intersection location shall not have an adverse impact on existing or future LOS based on comparative analysis of conditions with the recommended signal locations indicated in Appendix 10-D: Buckwalter Parkway Access Management Plan of the Beaufort County

> Comprehensive Plan above. The developer shall be required to conduct LOS and signal system progression analysis to demonstrate compatibility of the proposed signal location with operation of the remainder of the signal system."

For other intersections along the corridor, right-in, right-out operations are desired. The minimum spacing is noted as a minimum of 500 feet with joint access driveways recommended. Single parcel access is "strongly discouraged." Cross connections between parcels shall be provided. "Driveways should be limited to the number needed to provide adequate access to a development. Factors such as alignment with opposing driveways and minimum spacing requirements will have a bearing on the location and number of driveways approved."

If a parcel has access to a signalized intersection location, any additional access points shall have a minimum spacing of 800 feet.

The *Community Development Code* also noted that "as changes are made to previously developed property or to the roadway, driveways will be evaluated for the need to be relocated, consolidated, or eliminated if they do not meet the access management standards."

3.8 Crash Analysis

Crash data obtained from the Town of Bluffton was reviewed for the Buckwalter Parkway corridor from US 278 to Bluffton Parkway. From June 9, 2018, thru June 9, 2021, there were 41 crashes on the corridor. Of these 41 crashes, it was found that 20 crashes, or approximately 50%, were angle crashes. **Table 3** summarizes the location along the corridor and the number of angle crashes experienced between June 9, 2013 and June 9, 2021.

Based on the existing intersection configurations, the two Pinellas Drive/Buckwalter Place driveways experienced the greatest number of angle crashes. If a traffic signal is installed, it is expected that many of the left turns or through movements at both locations would favor the signalized intersection due to their close proximity and connectivity. With installation of a signal, the number of angled crashes would likely be reduced.

Table 3:
Angle Crashes by Location June 9, 2018 – June 9, 2021

Intersection	# of Angle Crashes
Cassidy Drive	1
Pinellas Drive North	6
Pinellas Drive South	8
Mott Drive/Parkside Drive	2
Innovation Drive	2
Buckwalter Place Drive	1
Total	**20**

Source: Bluffton PD crash data

3.9 Existing Level of Service Analysis - Intersections

Capacity analyses were performed for the AM and PM peak hours in the Existing conditions using the Synchro, Version 10, software to determine the operating characteristics of the adjacent roadway network and the impacts of the proposed project. The analyses were conducted with methodologies contained in the Highway Capacity Manual, 6th Edition (HCM 6) (Transportation Research Board, 2016). The Synchro analysis worksheets are provided in the Appendix.

Capacity of an intersection is defined as the maximum number of vehicles that can pass through an intersection during a specified time, typically an hour. Capacity is described by level of service (LOS) for the operating characteristics of an intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. HCM 6 defines six levels of service, LOS A through LOS F, with A being the best and F being the worst.

LOS for signalized intersections is determined by the overall intersection operations and is reflected in average delay per vehicle. LOS D or better is typically considered acceptable for signalized intersections.

LOS for a two-way stop-controlled (TWSC) intersection is determined by the delay of the poorest performing minor approach, as LOS is not defined for TWSC intersections as a whole. It is not unusual for minor stop-controlled side streets and driveways on major streets to experience longer delays at LOS E and LOS F during peak hours while the majority of the traffic moving through the corridor typically experiences little or no delay.

Capacity analyses were performed for the Existing AM and PM peak hour conditions for the following intersections:

- Buckwalter Parkway at Cassidy Street
- Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1
- Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2
- Buckwalter Parkway at Parkside Drive/Mott Street
- Buckwalter Parkway at Ludlow Street
- Buckwalter Parkway at Kroger Gas Driveway
- Buckwalter Parkway at Innovation Drive
- Buckwalter Parkway at Progressive Street
- Buckwalter Parkway at Buckwalter Place Boulevard

Table 4 summarizes LOS and control delay (average seconds of delay per vehicle) for the Existing AM and PM peak hour conditions at the study area unsignalized intersections.

Based on the results of the analysis shown in **Table 4, t**he following intersection approaches are currently operating with elevated delay: Buckwalter Parkway at Berkeley Place Driveway #1 (AM and PM peak hour conditions), Buckwalter Parkway at Pinellas Drive South (AM and PM peak hour conditions), Buckwalter Parkway at Parkside Drive (AM and PM peak hour conditions), and Buckwalter Parkway at Innovation Drive (PM peak hour conditions).

Table 4:
2021 Level of Service and delay (average seconds per vehicle)

Intersection	Traffic Control[1]	Approach Direction	Existing Conditions	
			AM Peak Hour	PM Peak Hour
Buckwalter Parkway at Cassidy Drive	U	WB	C (19.1)	C (16.9)
Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1	U	EB	E (42.3)	F (60.5)
		WB	C (20.2)	D (26.8)
Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2	U	EB	C (19.5)	D (33.9)
		WB	F (50.5)	F (*)
Buckwalter Parkway at Parkside Drive/Mott Street	U	EB	A (0.0)	A (0.0)
		WB	F (156.2)	F (298.1)
Buckwalter Parkway at Ludlow Street	U	EB	D (25.5)	C (24.6)
Buckwalter Parkway at Kroger Fuel Driveway[3]	U	EB	B (11.1)	B (11.4)
Buckwalter Parkway at Innovation Drive	U	EB	D (29.8)	F (120.0)
Buckwalter Parkway at Progressive Street	U	EB	B (11.3)	B (12.6)

1. U= Unsignalized, S= Signalized
2. * = Estimated delay exceeds 300 seconds per vehicle
3. Estimated traffic volumes based on calculated trip generation and adjacent intersection traffic volumes

4.0 Future/Planned Conditions

Future traffic volumes were based on a combination of historic data, approved developments, and regional travel demand model data.

4.1 LATS Model – LRTP and 2040 Daily Traffic Volumes

The Lowcountry Area Transportation Study (LATS) travel demand model projected future traffic volumes along this corridor as part of the Long Range Transportation Plan (LRTP) for the metropolitan planning organization (MPO).

The 2010 AADT for this segment of Buckwalter Parkway in the LATS model was 10,600 vpd. The 2040 loaded network AADT for this segment was approximately 15,000 vpd with a volume to capacity ratio of 0.67, resulting in a level of service B.

The annual growth rate based on the traffic model volumes from year 2010 and year 2040 was 1.5% per year.

4.2 Planned Developments

There are two developments that have been approved along the corridor but have not yet been constructed, Willow Run and Bluffton Commons. **Figure 8** shows the current planned unit developments along the corridor per Town of Bluffton GIS.

Willow Run is a planned unit development in the Town of Bluffton that encompasses the area on the east side of the corridor east of the development on Pinellas Drive generally between US 278 and the existing neighborhoods. This development will be accessed on Buckwalter Parkway via Cassidy Drive, Pinellas Drive North and Pinellas Drive South.

Bluffton Commons is located west of Buckwalter Parkway between Mott Street and Ludlow Street. The proposed development is planned to include 100,000 square feet (sf) of retail space, a 100-room hotel, a 100-bed assisted living facility, and 100 mid-rise apartments. Bluffton Commons will access Buckwalter Parkway at Mott Street and Ludlow Street.

4.3 Developments Submitted for Consideration

The May River Marketplace is a development under consideration east of Buckwalter Parkway between Parkside Drive and Ludlow Street. The site is currently planned to have approximately 42,000 square feet of retail space and 6,000 square feet of retail space. Access for this project would be via Parkside Drive and a new access point across from Ludlow Street.

4.4 Year 2030 Projected Traffic Volumes

Year 2030 projected traffic volumes for the corridor were determined using a combination of historic growth for the non-specific growth and specific development traffic for the Bluffton Commons and May River Marketplace projects. For non-specific growth, a 2%/year growth rate was used for the Buckwalter Parkway corridor while a 1%/year growth rate was used for side street traffic volumes.

Table 5 summarizes LOS and control delay (average seconds of delay per vehicle) for the projected Year 2030 AM and PM peak hour conditions at the study area intersections.

Table 5:
Level of Service and delay (average seconds per vehicle)
2030 Scenario 2 Conditions

Intersection	Traffic Control[1]	Approach Direction	Existing Conditions	
			AM Peak Hour	PM Peak Hour
Buckwalter Parkway at Cassidy Drive	U	WB	D (31.1)	D (27.4)
Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1	S	N/A	A (5.5)	A (9.5)
Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2	U	EB	B (11.9)	B (14.8)
		WB	C (15.3)	B (14.8)
Buckwalter Parkway at Parkside Drive/Mott Street	S	N/A	A (9.4)	B (10.7)
Buckwalter Parkway at Ludlow Street	U	EB	B (12.4)	D (29.7)
		WB	B (12.9)	B (13.0)
Buckwalter Parkway at Kroger Fuel Driveway[2]	S	N/A	A (3.4)	A (6.6)
Buckwalter Parkway at Innovation Drive	U	EB	B (12.4)	B (14.9)
Buckwalter Parkway at Progressive Street	U	EB	B (11.2)	C (16.3)

1. U= Unsignalized, S= Signalized
2. Estimated traffic volumes based on calculated trip generation and adjacent intersection traffic volumes
3. N/A = Average delay per vehicle shown for overall intersection

The 2030 analysis assumed that the three planned intersections are signalized for the purposes of the study. These traffic signals would need to be warranted prior to installation.

Based on the 2030 analysis shown in **Table 5**, all intersections in Scenario 2 are projected to operate at LOS D or better.

5.0 Benefits of Access Management

Based on information provided by the Federal Highway Administration (FHWA) in "What is Access Management?", access management is the proactive management of vehicular access points to land parcels adjacent to all manner of roadways. In general, as the number of vehicular access points increases, the number of conflict points along a roadway also increases, which causes a decrease in mobility. **Figure 9** shows the relationship between mobility and access within the Roadway Functional Hierarchy.

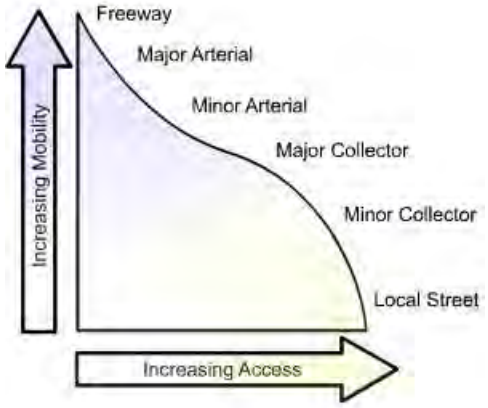

Figure 9: Conceptual Roadway Functional Hierarchy
Source: Figure 1 "What is Access Management?", FHWA. https://ops.fhwa.dot.gov/access_mgmt/what_is_accsmgmt.htm

FHWA identifies the following five main types of access management that can be applied to the transportation system: signalized intersection spacing (signal density), driveway spacing, turning lanes (implementation of designated left- and right-turn lanes at intersections), median treatments, and right-of-way management. Implementation of access management has been found to increase roadway capacity, reduce crashes, and provide economic benefit.

Guide for the Analysis of Multimodal Corridor Access Management (National Cooperative Highway Research Program (NCHRP) Research Report 900, 2018) found that travel speeds increase by two to three miles per hour (mph) for each one-signal-per-mile reduction. This report also shows that as the number of signals per mile decreases, the crash rate (in crashes per million vehicle miles) decreases as well. **Table 6** shows the average crash rate by signal density.

This report also found that providing left-and right-turn lanes increases free-flow and travel speeds along a corridor by a few miles per hour and decreases crash rates. The installation of left-turn lanes has a more significant impact on the reduction of crash rates than right-turn lanes.

Table 6: Average crash rates by different ranges of traffic signal densities	
Signals Per Mile	**Crash Rate (crashes per million vehicle miles)**
≤ 2	3.5
2.01 – 4	6.9
4.01 – 6	7.5
> 6	9.1

Source: Table 21 *Guide for the Analysis of Multimodal Corridor Access Management,* NCHRP Research Report 900, 2018)

Installing an access management plan that uses techniques such as installing non-traversable medians or restricting driveway spacing can often create some concern from business owners along a corridor due to there being limited access to their property. However, based on multiple studies compiled by FHWA in "Intersection Proven Safety Countermeasure", access management plans were shown to have little to no negative impact on business operations across many parts of the United States. In some cases, businesses reported sales increases or property value increases after access management plans were completed.

Access management plans are created to improve the efficiency and the safety of a roadway. Studies have shown that implementing access management techniques along a roadway can increase free-flow and travel speeds as well as decrease the number of accidents that can occur. Access management plans have also shown in some cases to be economically beneficial for businesses as well.

6.0 Access Management Plan

Based on the principles outlined in Section 5.0, the existing conditions and building on the previous 2007 Access Management Plan, an updated Access Management Plan was developed for the Buckwalter Parkway corridor for the study area.

Figures 3A and 3B show each intersection along the corridor, the distance of each intersection from US 278 and the spacing between each of the intersections.

6.1 Signalized Intersection Spacing

The existing intersections on the Buckwalter Parkway corridor are approximately 1,000 feet apart.

The goal for this corridor from the 2007 plan is 1,500 to 1,700 feet spacing between signalized intersections to "allow progression speeds along Buckwalter Parkway that are in the 30 mph range." The SCDOT Access and Roadside Management Standards (ARMS) Manual (2012) guidelines for intersection spacing is 1,320 feet between signalized intersections in urban areas and 2,640 feet between signalized intersection in rural areas.

Therefore, based on the preferred spacing of the signalized access points, two scenarios for proposed future signalized intersections were found to be feasible:

- Scenario 1: Consistent with existing access management plan - Signalized intersections at Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2, Buckwalter Parkway at Ludlow Street, Buckwalter Parkway at Innovation Drive and Buckwalter Parkway at Buckwalter Place Boulevard
- Scenario 2: Signalized intersections at Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1, Buckwalter Parkway at Parkside Drive/Mott Street, Buckwalter Parkway at Kroger Fuel Center Drive, and Buckwalter Parkway at Buckwalter Place Boulevard

Table 7 shows the signalized intersection spacing for each Scenario.

Table 7:
Signalized Intersection Spacing by Scenario

Segment Start	Segment End	Approximate Distance between Intersections (feet)
Scenario 1		
US 278	Pinellas Drive South/Berkeley Place Driveway #2	2,946
Pinellas Drive South/Berkeley Place Driveway #2	Ludlow Street	1,960
Ludlow Street	Innovation Drive	1,585
Innovation Drive	Buckwalter Place Boulevard	995
Buckwalter Place Boulevard	Bluffton Parkway	1,077
Scenario 2		
US 278	Pinellas Drive North/Berkeley Place Driveway #1	2,026
Pinellas Drive South/Berkeley Place Driveway #1	Mott Street/Parkside Drive	1,788
Mott Street/Parkside Drive	Kroger Fuel Center Drive	2,176
Kroger Fuel Center Drive	Buckwalter Place Boulevard	1,496
Buckwalter Place Boulevard	Bluffton Parkway	1,077

This study area on Buckwalter Parkway extends to just before Bluffton Parkway (north) signalized intersection. The recommended signalized intersection spacing goal of approximately 2,000 feet between signalized intersections should be applied for the remainder of Buckwalter Parkway to SC 46, as appropriate, to maximize the efficiency of the corridor. This spacing should be reviewed, and the exact locations of these signalized intersections should be studied further as projects develop in the remaining section of the Buckwalter Parkway corridor.

6.2 Scenario Advantages

The advantages of the two scenarios are summarized below.

Advantages for Scenario 1:

- Consistent with planning based on 2007 Access Management Plan for corridor
- Existing geometric configuration of the intersection of Buckwalter Parkway at Pinellas Drive South/Berkeley Place Driveway #2 is more conducive for future signalization with fewer improvements required than signalization of the intersection of Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1 in Scenario 2

Advantages for Scenario 2:

- A connection to Woodbridge community across from Ludlow Street as shown in the 2007 access management plan is not feasible based on the current development layout; the plan allows for planned signalization for Washington Square and Parkside Drive at an adjusted location
- Increased minimum traffic signal spacing on corridor
- Remove all unsignalized full access intersections

Both scenarios include:

- Improved connectivity along corridor and to adjacent properties

6.3 Connections and Cross Access Opportunities

Cross access and connectivity allow for travel between the parcels along Buckwalter Parkway. This reduces travel along Buckwalter Parkway and reduces the number of access and egress movements at intersections along the corridor.

The following new roadway connections continue to be recommended along the corridor:

- New roadway between US 278 and Berkeley Place Driveway 1 on the west side of Buckwalter Parkway
- New east-west roadway from Cassidy Drive to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- New north-south roadway between Cassidy Drive and Pinellas Drive North

- New east-west roadway from Pinellas Drive North to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- Realignment and installation of new Berkeley Place Driveway 1, connecting to the Berkeley Place parking area further west and removing the existing curve and parking lot connection
- New east-west roadway from Pinellas Drive South to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- New north-south roadway between Pinellas Drive South and Parkside Drive
- Complete north-south connection between Berkeley Place and Bluffton Commons
- New north-south roadway between Innovation Drive and Bluffton Commons
- Conversion of Kroger Fuel Center Drive to full access intersection and installation of a new east-west roadway connecting to the new north-south access roads parallel to Buckwalter Parkway
- New north-south access roadway on the east side of Buckwalter Parkway, connecting the new Kroger Fuel Center Drive intersection and Buckwalter Towne Boulevard
- New connector between Lord of Life Church Road and new north-south access road
- Relocation of intersection of Bluffton Parkway at Buckwalter Parkway intersection (by others)

As recommended in the 2007 plan, cross access between the Berkeley Place development and Bluffton Commons development is recommended. It is our understanding that the Bluffton Commons' portion of the connection has been constructed.

Additional cross access connectivity is recommended as feasible.

6.4 Summary

Based on a review of the corridor and the associated data, the recommended access management plan is shown in **Figures 3A and 3B (Appendix)** and the access locations are listed below by type of access. Existing intersection types are noted.

- Signalized Intersection Access
  - Buckwalter Place Boulevard/Lord of Life Driveway (existing)
- Signalized Intersection Access (when warranted)
  - Berkeley Place Driveway #1/Pinellas Drive North (roadway improvements will be required)
  - Mott Street/Parkside Drive
  - Kroger Fuel Driveway
- Full Unsignalized Intersection Access
  - Cassidy Drive
- Right-in, right-out Intersection Access
  - Berkeley Place Driveway #2/Pinellas Drive South
  - Ludlow Street

  - Innovation Drive
  - Progressive Street (existing)
- Right-in only Intersection Access
  - Buckwalter Place Driveway (existing)

With the implementation of the access management plan, the intersection of Berkeley Place Driveway #1/Pinellas Drive North will require improvements on both side street approaches prior to redesign and signalization of the intersection. These improvements would include but are not limited to increase in throat distance, installation of turn lanes, and sight distance improvements. All improvements should be based on Beaufort County and SCDOT standards.

In addition, this plan recommends the previously planned and new roadway connection improvements along the corridor. These are shown in **Figures 3A and 3B (Appendix)** as dashed lines. The exact location and design of these connection are conceptual in nature and are expected to be refined in the design process.

- New roadway between US 278 and Berkeley Place Driveway 1 on the west side of Buckwalter Parkway
- New east-west roadway from Cassidy Drive to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- New north-south roadway between Cassidy Drive and Pinellas Drive North
- New east-west roadway from Pinellas Drive North to the future Willow Run development and the planned north/south roadway that will connect future Bluffton Parkway to US 278 near Eagle's Pointe
- Realignment and installation of new Berkeley Place Driveway 1, connecting to the Berkeley Place parking area further west and removing the existing curve and parking lot connection
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- New north-south roadway between Pinellas Drive South and Parkside Drive
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- New connector between Lord of Life Church Road and new north-south access road
- Relocation of intersection of Bluffton Parkway at Buckwalter Parkway intersection (by others)

This study area on Buckwalter Parkway extends to just before Bluffton Parkway (north) signalized intersection. The recommended signalized intersection spacing goal of approximately 2,000 feet between

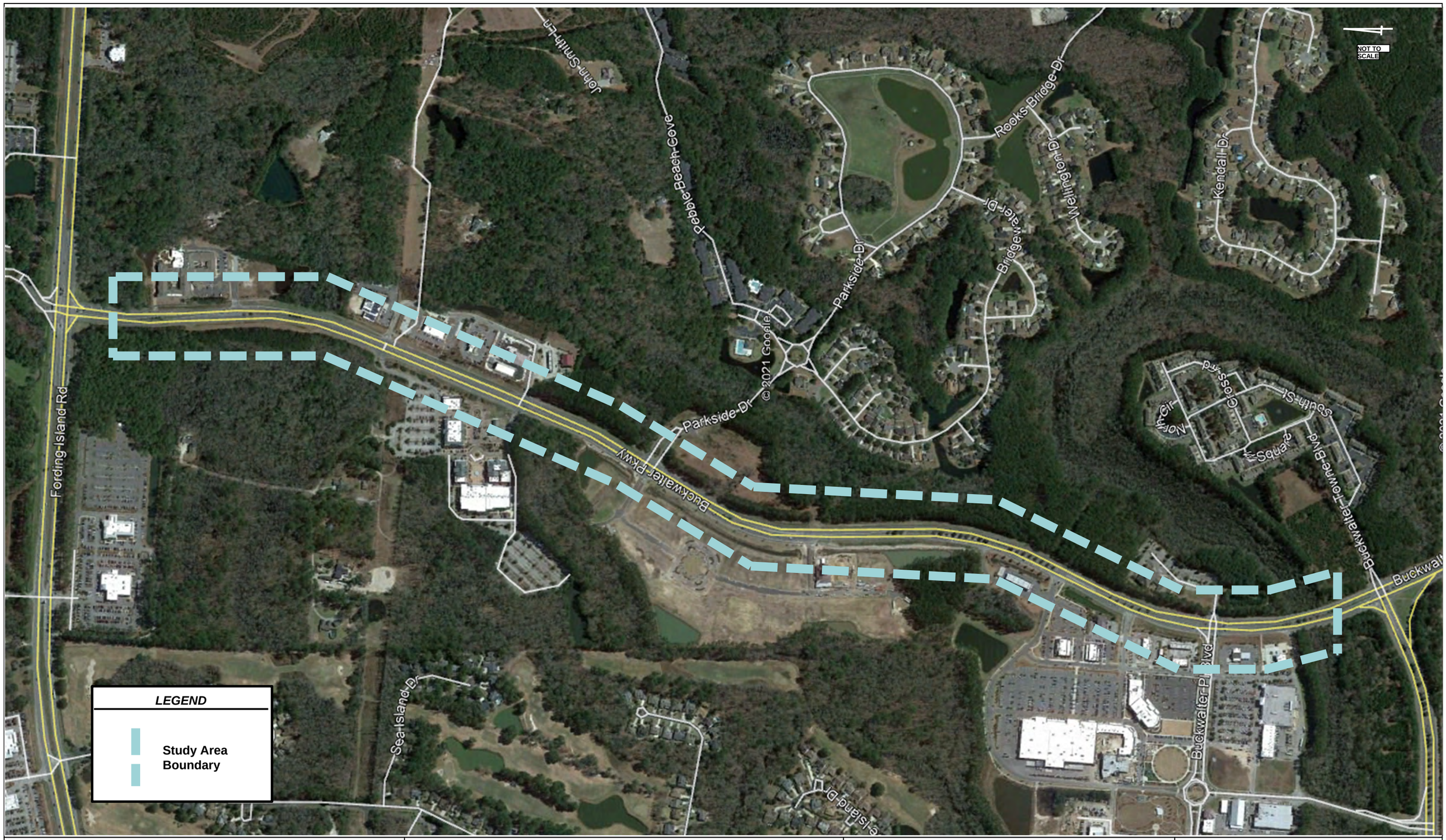
signalized intersections should be applied for the remainder of Buckwalter Parkway to SC 46, as appropriate, to maximize the efficiency of the corridor. This spacing should be reviewed, and the exact locations of these signalized intersections should be studied further as projects develop in the remaining section of the Buckwalter Parkway corridor.

6.5 Next Steps

The following steps should be completed in the near term:

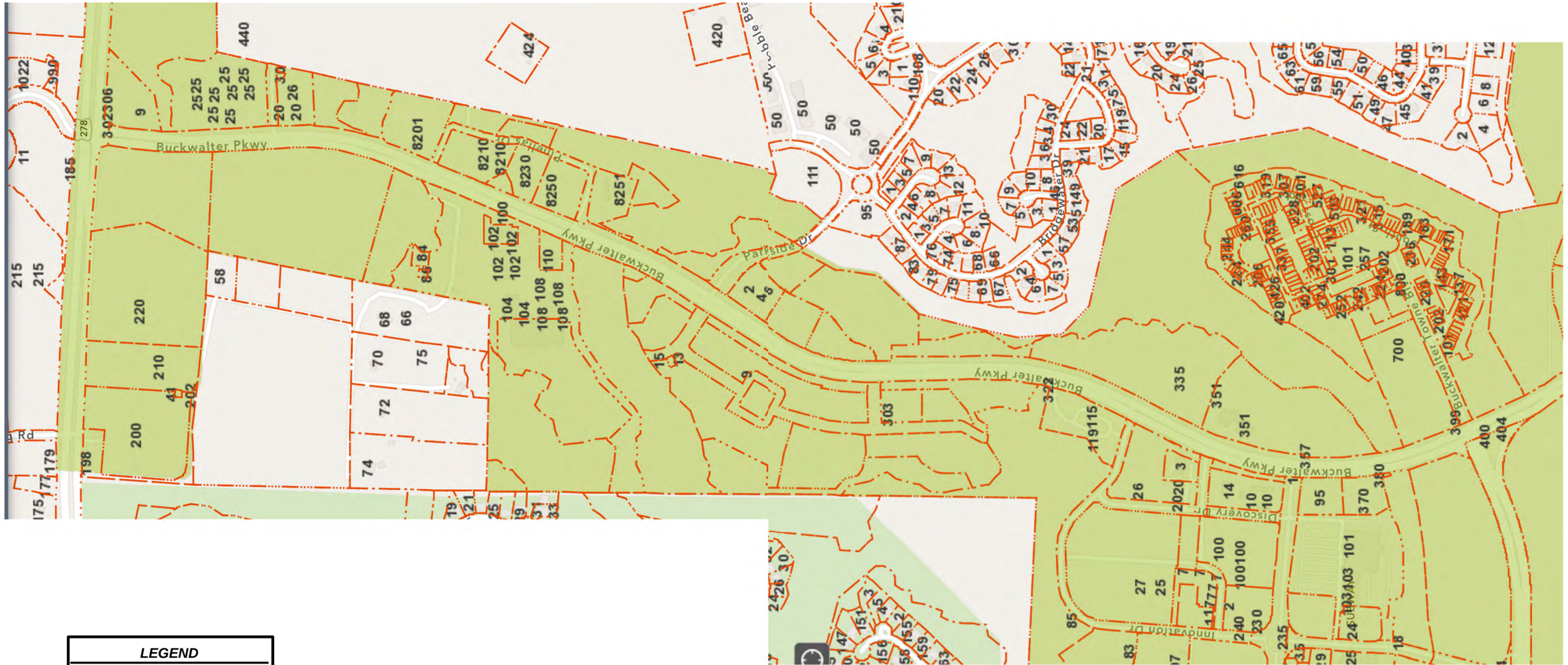
- Installation of a new roadway between Innovation Drive and Bluffton Commons – it is our understanding that an existing wetlands permit will expire in the near term
- Development of conceptual design of the intersection of Buckwalter Parkway at Pinellas Drive North/Berkeley Place Driveway #1
- Coordination and additional planning of the connection roadways with the Town of Bluffton
- Coordination with property owners along the corridor regarding the updated access management plan for the corridor
- Perform traffic signal warrant analysis for planned signalized intersection locations

Appendix



BIHL ENGINEERING	Buckwalter Access Management Plan Update	Corridor Study Area	Figure 1

NOT TO SCALE

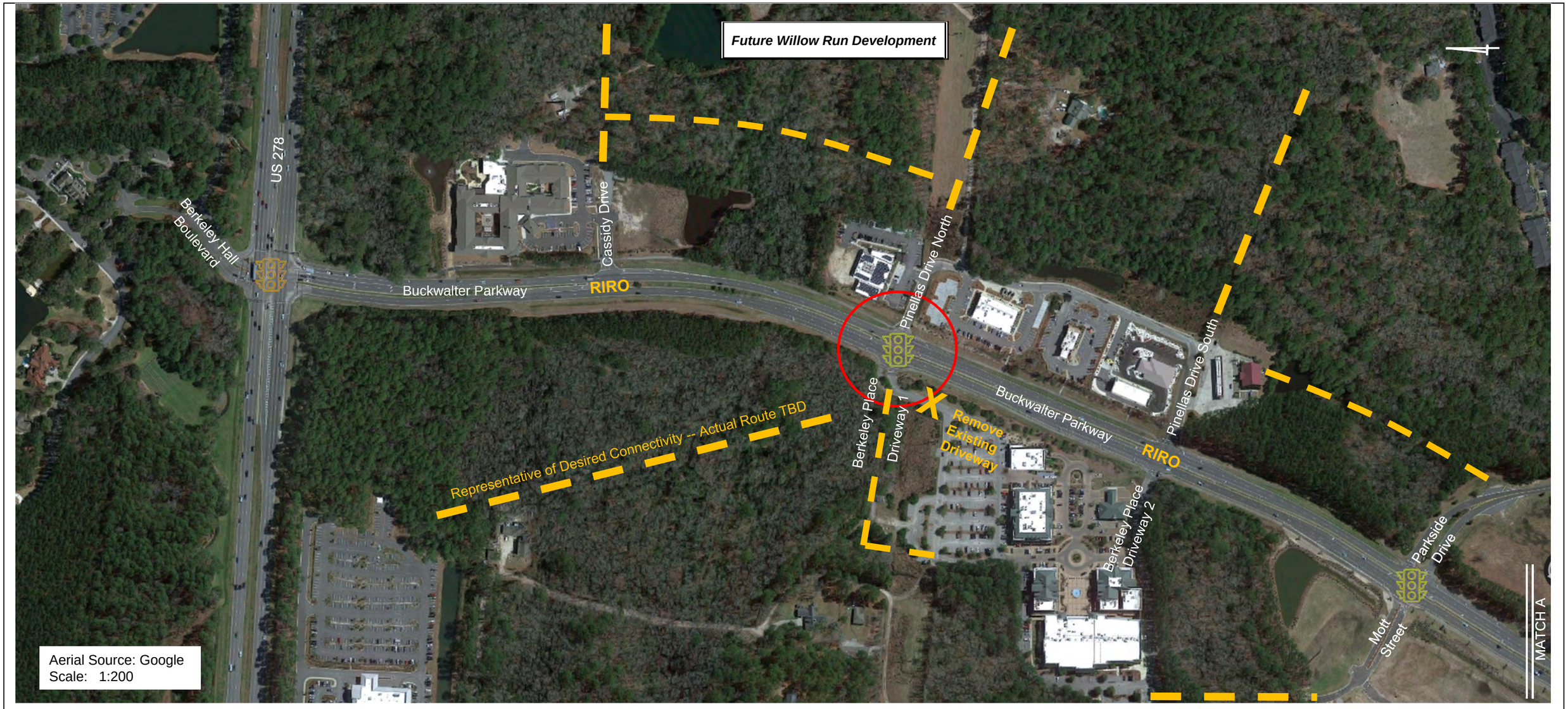


LEGEND

Bluffton Town Limits

Source: Beaufort County GIS

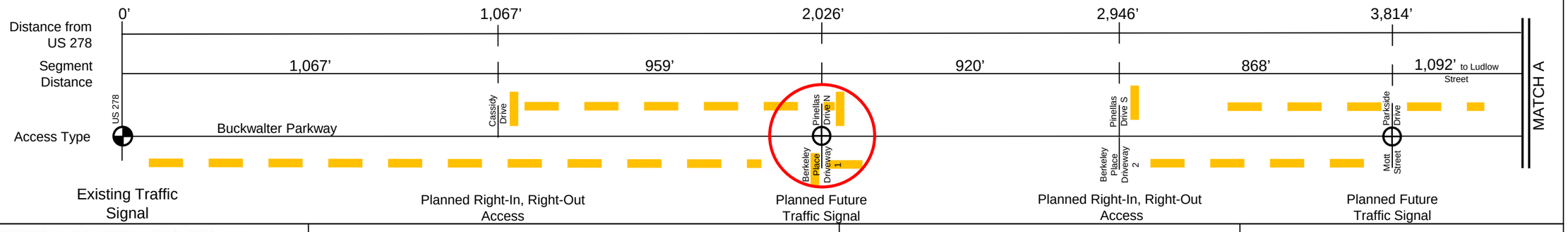
BIHL ENGINEERING	**Buckwalter Access Management Plan Update**	**Bluffton Town Limits**	**Figure 2**



Legend

Cross Access Connection

Improvements Required

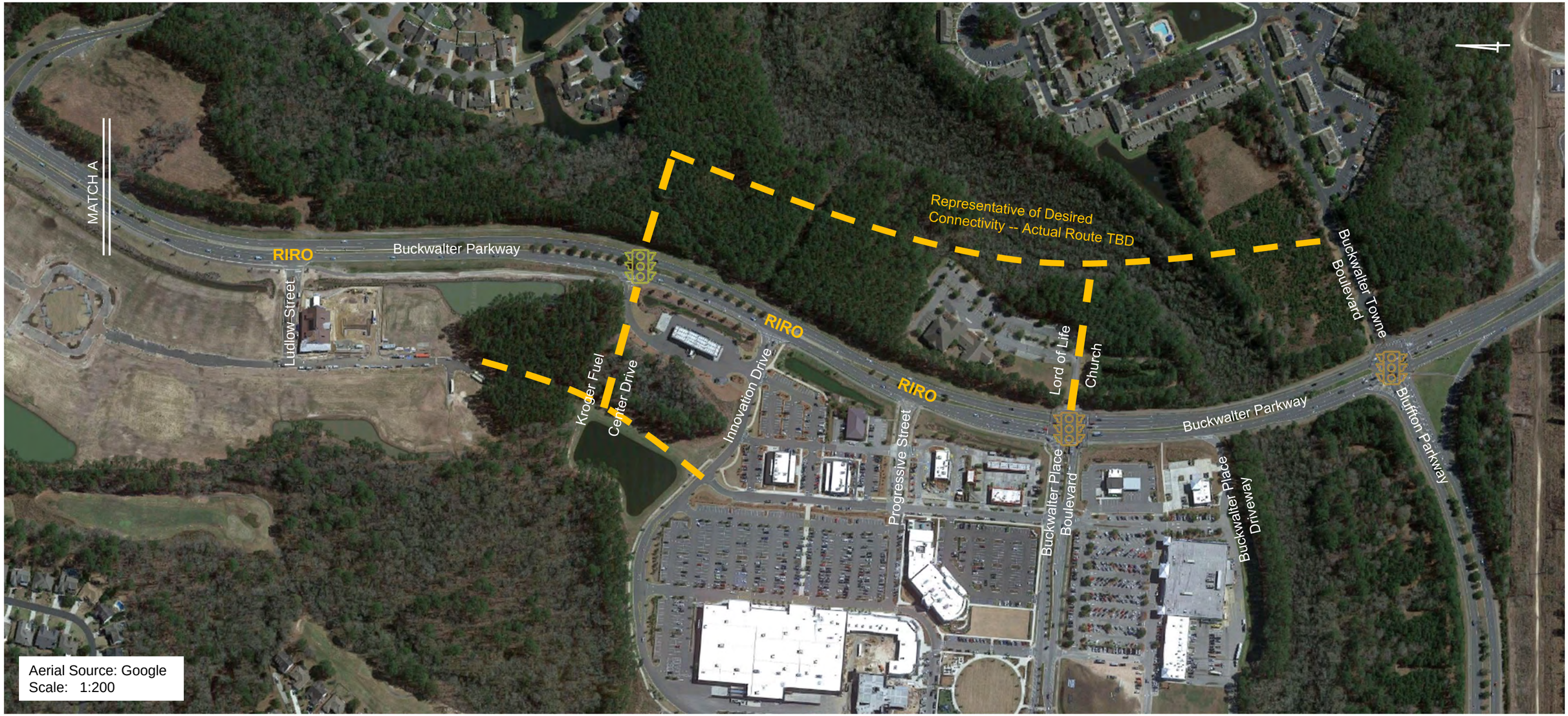


BIHL ENGINEERING

Buckwalter Access Management Plan Update

Access Management Plan

Figure 3A

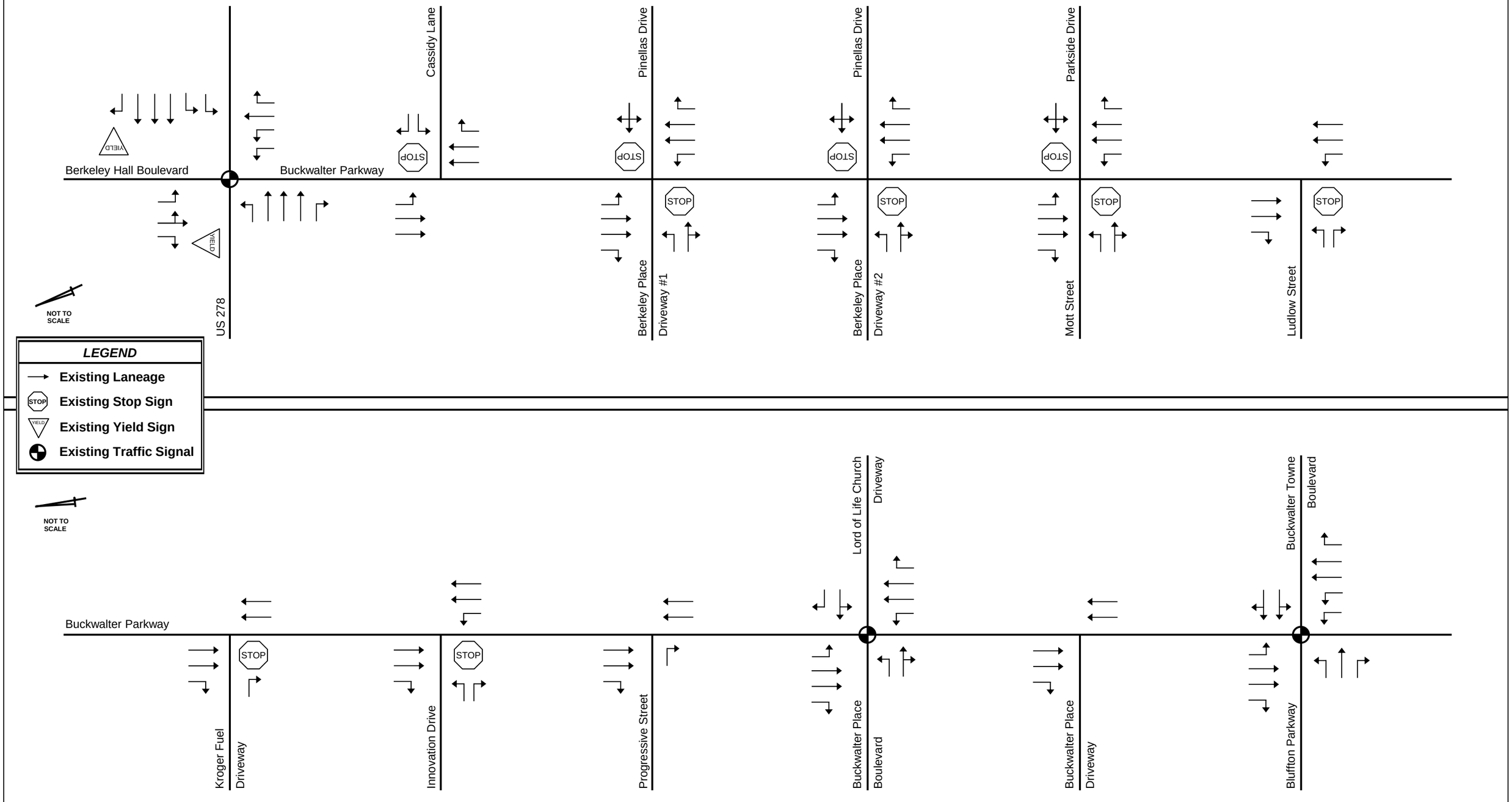


BIHL ENGINEERING

Buckwalter Access Management Plan Update

Access Management Plan

Figure 3B

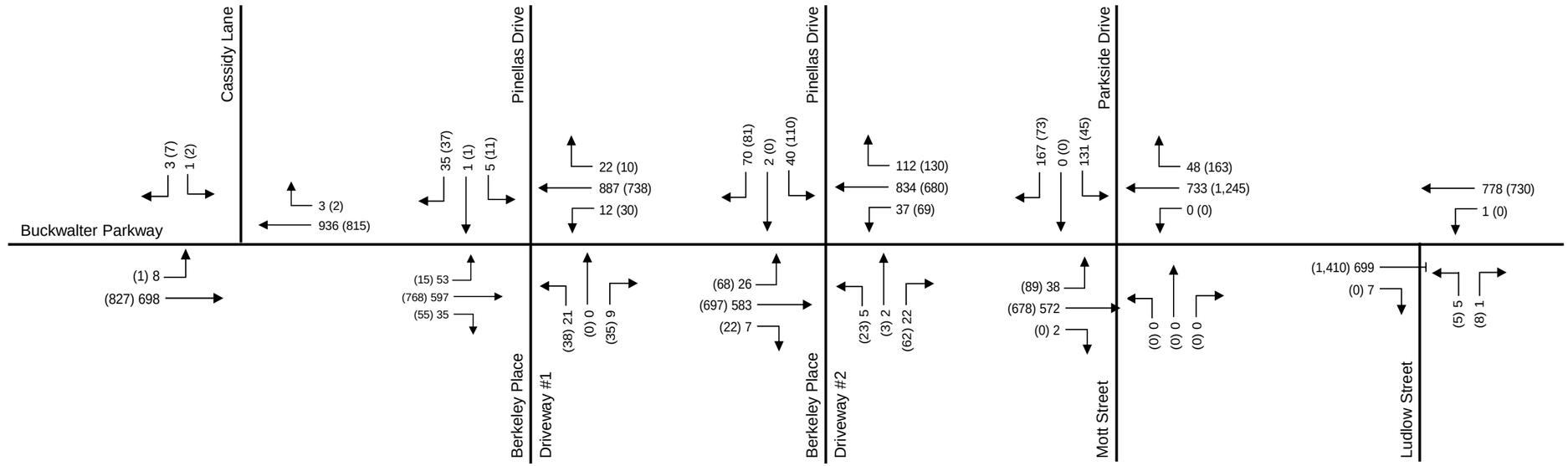


BIHL ENGINEERING

Buckwalter Access Management Plan Update

Existing Laneage

Figure 4

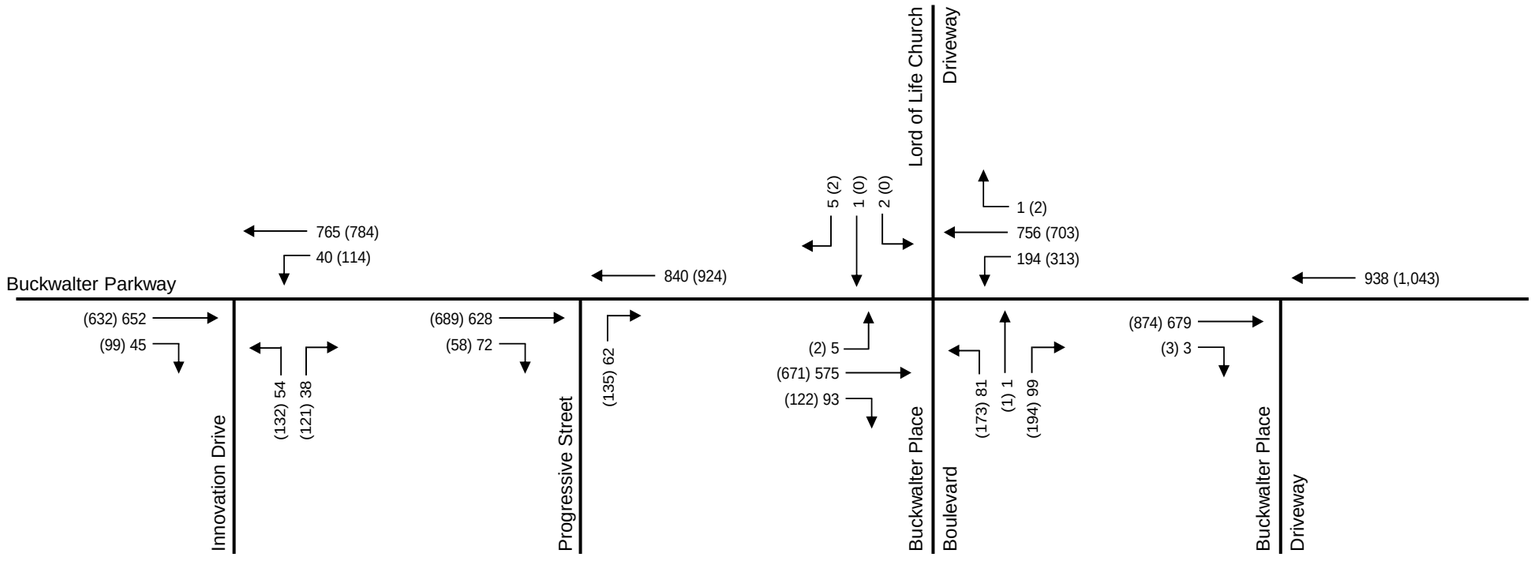


NOT TO SCALE

LEGEND

XX	**AM Peak Hour Traffic**
(XX)	**PM Peak Hour Traffic**

NOT TO SCALE



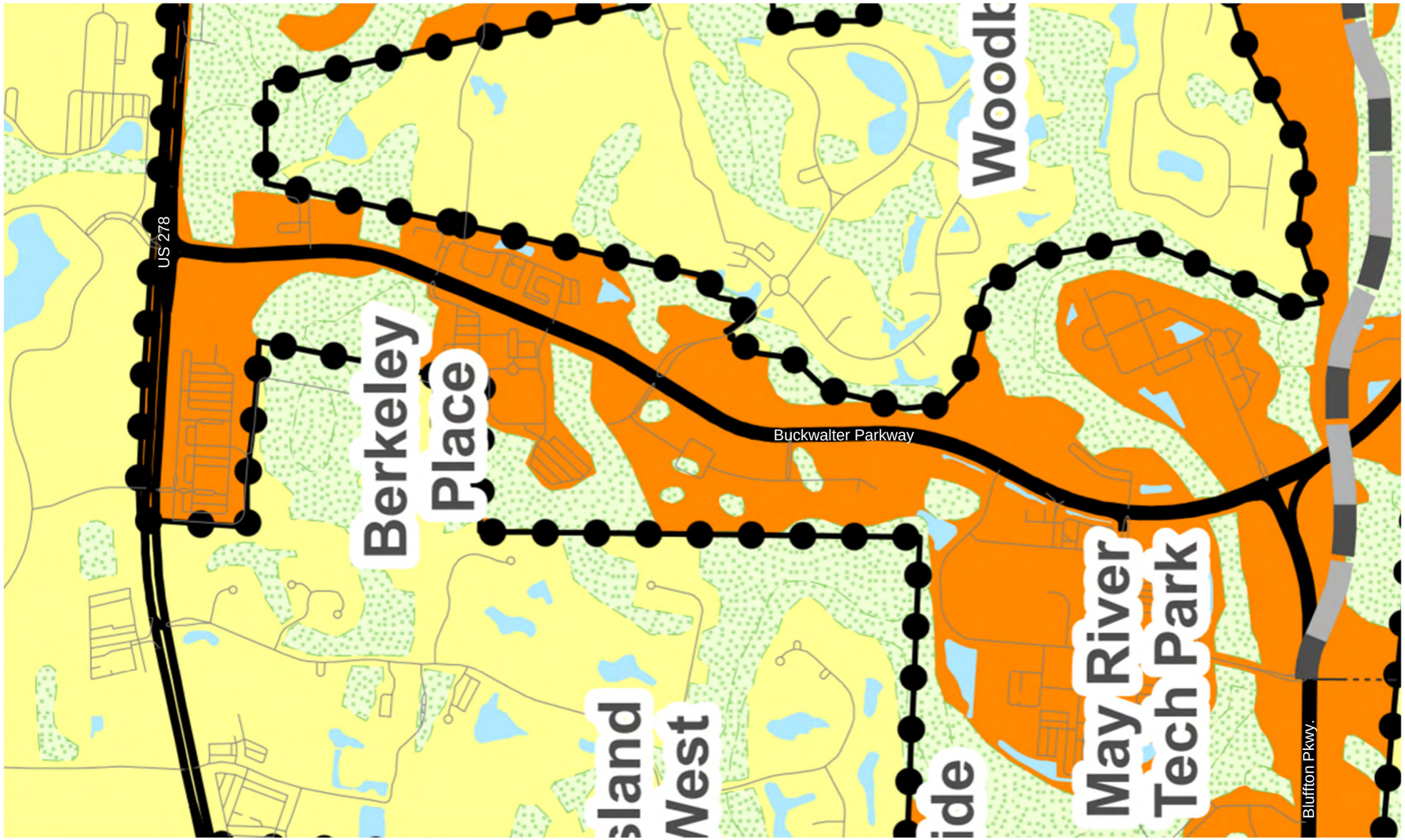
BIHL ENGINEERING

Buckwalter Access Management Plan Update

Existing Traffic Volumes

Figure 5

NOT TO SCALE



Source: Town of Bluffton GIS

Town of Bluffton
Beaufort County, SC

GROWTH MANAGEMENT DEPARTMENT

BLUFFTON WATER RESOURCES

Adopted: 9/04/2007
Revised: 12/09/2014
Updated: 1/13/2021

Legend

JURISDICTIONAL

- Bluffton
- Hilton Head Island
- Hardeeville
- Beaufort County
- Jasper County
- Bluffton Town Limits

TRANSPORTATION

- Roads
- Interstate
- Bluffton Parkway (Proposed)

HYDROLOGY

- Water
- Marsh
- Wetland

BIHL ENGINEERING	**Buckwalter Access Management Plan Update**	**Wetlands along Corridor**	**Figure 6**

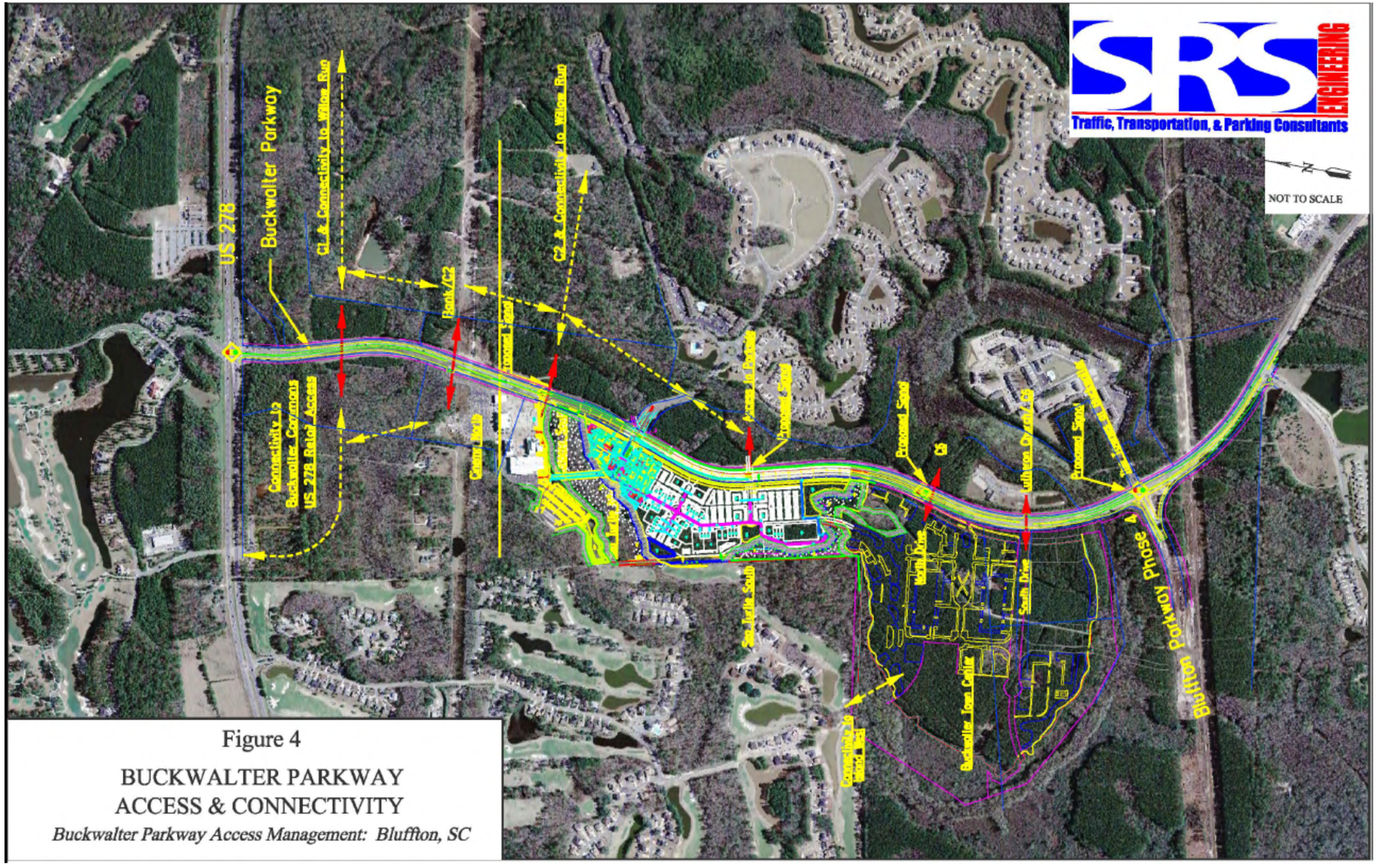
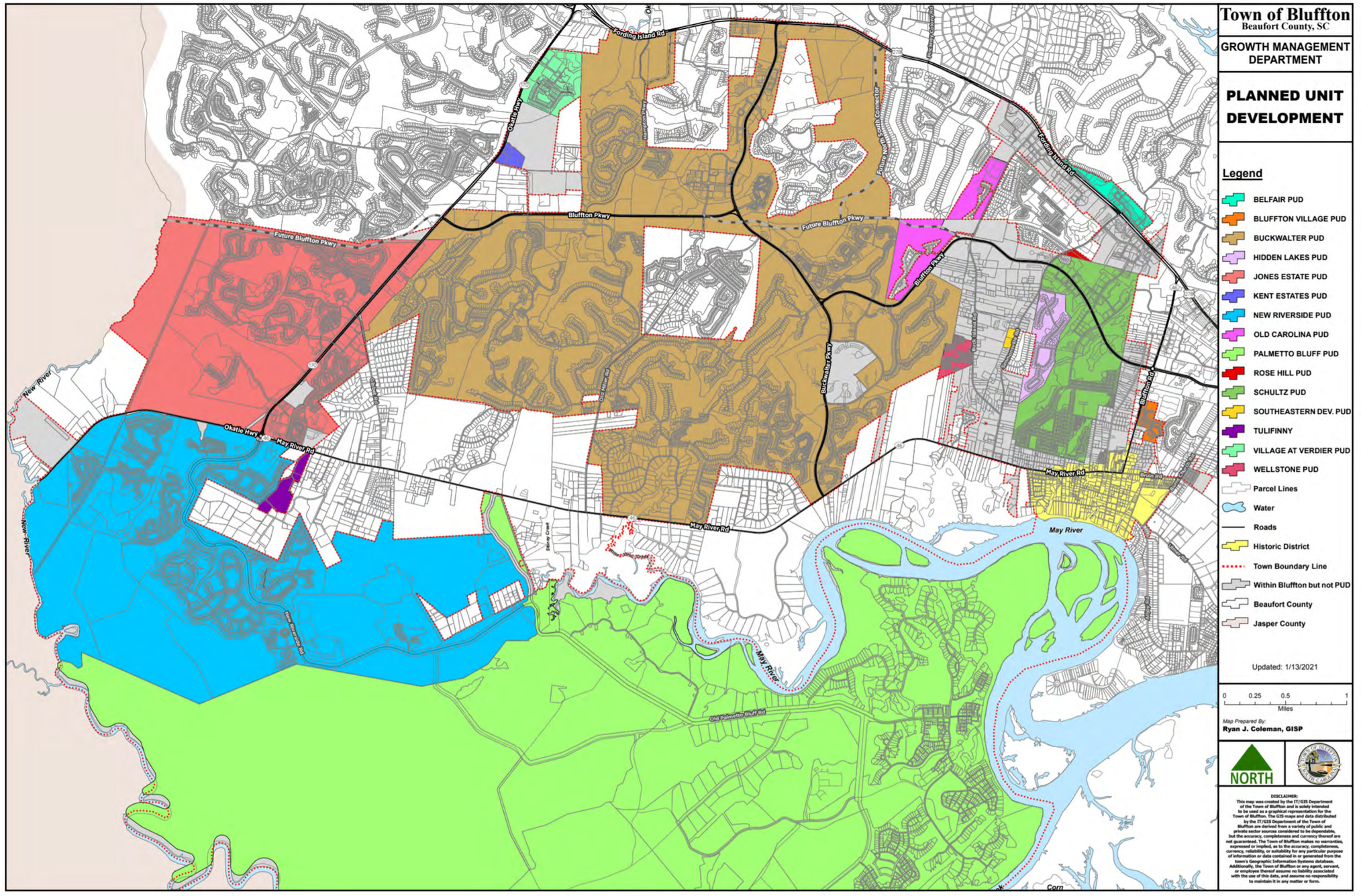


Figure 4

BUCKWALTER PARKWAY
ACCESS & CONNECTIVITY

Buckwalter Parkway Access Management: Bluffton, SC

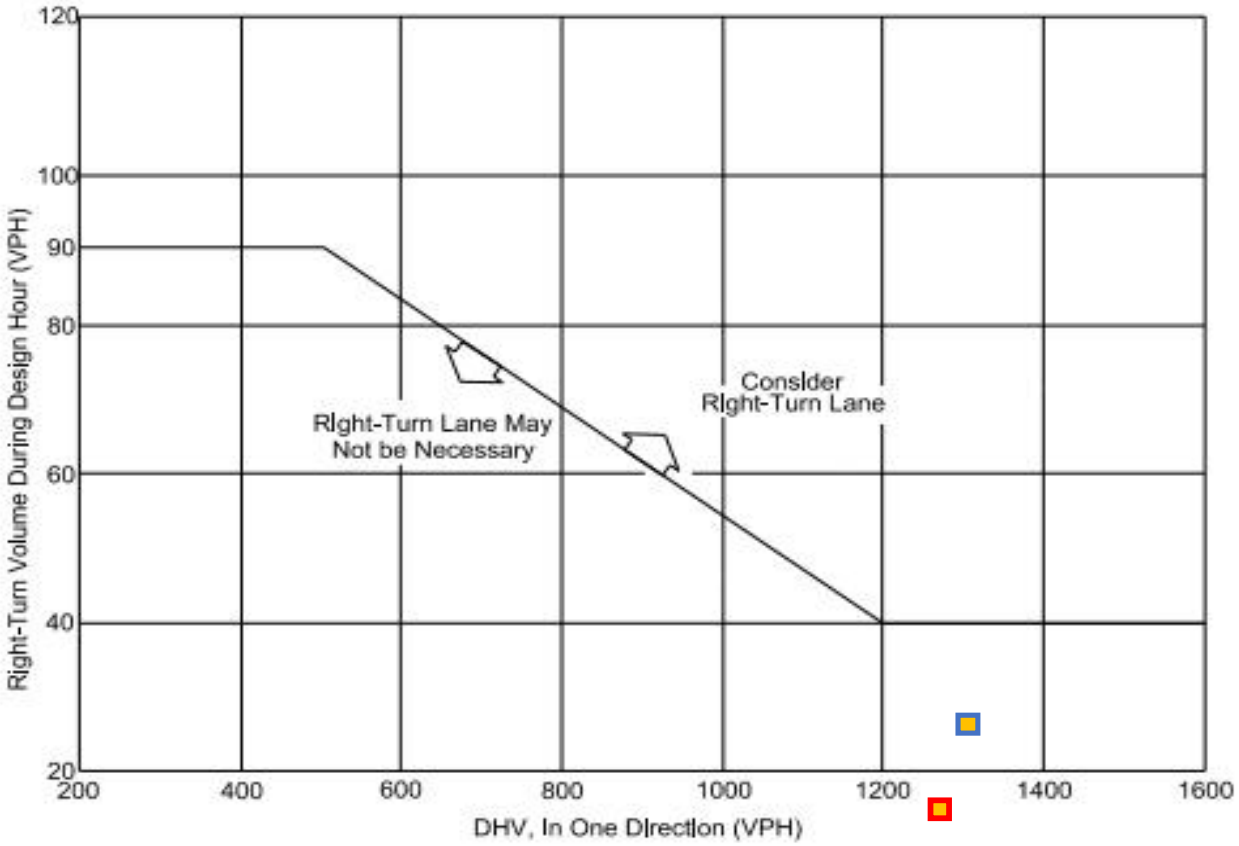
BIHL ENGINEERING	**Buckwalter Access Management Plan Update**	**2007 Access Management Plan (source: SRS)**	**Figure 7**



Source: Town of Bluffton GIS

BIHL ENGINEERING	**Buckwalter Access Management Plan Update**	**Town of Bluffton PUD Boundaries**	**Figure 8**

Appendix I – Turn Lane Warrant Analysis

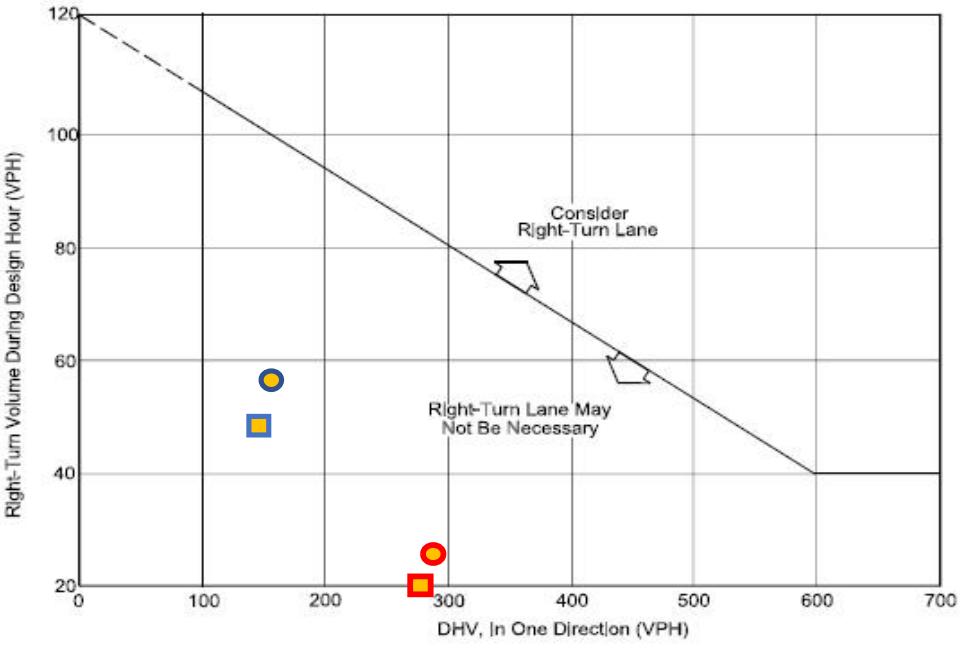


Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS
Figure 9.5-B

Buckwalter Parkway at Ludlow Street/Site Access A

Northbound Right-Turn	DHV	RTs
2029 Build (AM)	1,303	26
2029 Build (PM)	1,257	15



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 miles per hour
	DHV	=	250 vehicles per hour
	Right Turns	=	100 vehicles per hour

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 – 20 = 80 vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
Figure 9.5-A

Parkside Drive at Site Access B

Eastbound	Scenario	DHV	RTs	RT Adjusted
	2029 Build AM Peak	142	67	47
	2029 Build PM Peak	276	40	20
	2029 Build Improved AM Peak*	152	77	57
	2029 Build Improved PM Peak*	282	46	26

*2029 Build Improved considers volume adjusts based on traffic being rerouted due to Site Access A movements being restricted