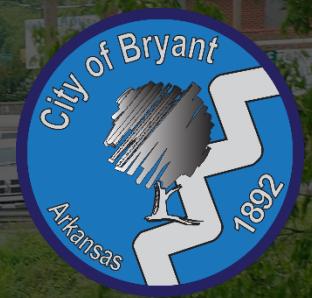


Bryant Parkway Hill Farm Road to Shobe Road

Traffic Study



Prepared For:

City of Bryant

November, 2019

G
GARVER
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- Appendix A - Signal Warrant Analysis Results
- Appendix B - Geometric Analysis
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1.0 Executive Summary

Previously, at the request of the City of Bryant, Garver performed a study for Bryant Parkway for partial, I-30 to Shobe Road, and full build, I-30 to Hwy. 183, conditions. The partial build conditions extended from I-30 to Shobe Road, while the full build extended to Hwy. 183. During this study we evaluated the corridor as well as five options at the intersection of Bryant Parkway and Shobe Road. After finalizing Project 1, we were asked to analyze three additional options at Shobe Road. Now, the City of Bryant has programmed the extension of Bryant Parkway from Hill Farm Road to Shobe Road as Project 2. This extension will connect to the portion of Bryant Parkway constructed in Project 1. The purpose of this traffic study is to evaluate the performance of the Bryant Parkway Project 2 corridor, determine intersection control needs, and ensure that the number and length of turn lanes provided at the intersections within this study area are adequate for future transportation demands. The same three options requested after Project 1 were requested to be analyzed for Project 2. **Figure 1** shows the proposed location for the Bryant Parkway Project 2 corridor.

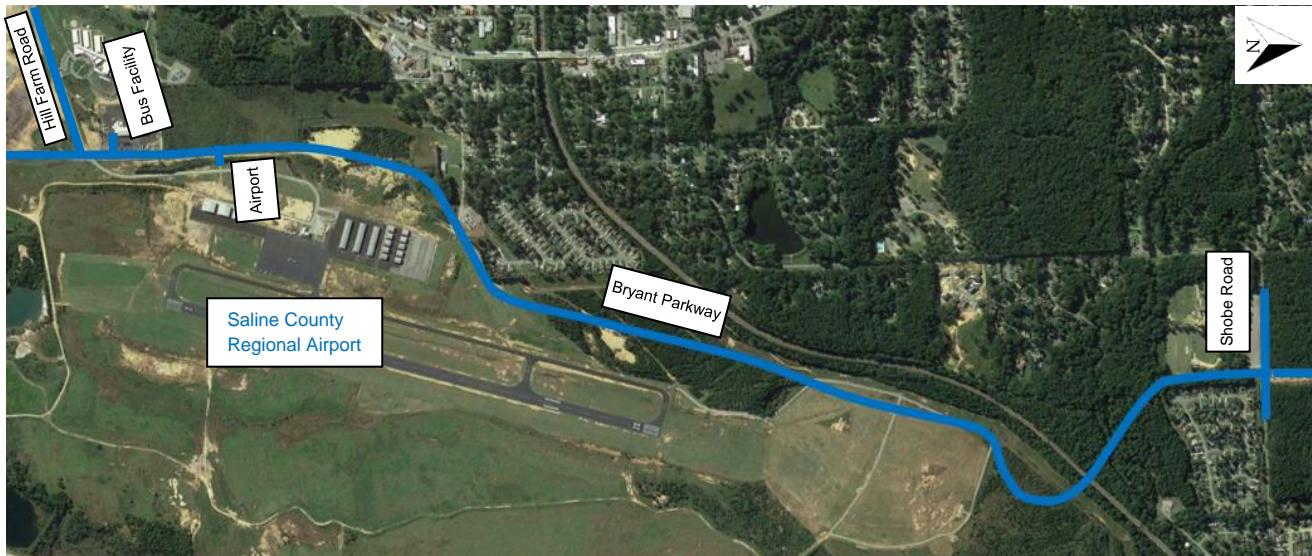


Figure 1: Project 2 Bryant Parkway

For Project 1, Metroplan provided the 2040 Central Arkansas Regional Transportation Study (CARTS) model. Since the completion of Project 1, Metroplan has provided an updated 2050 model. The 2020 and 2040 build volumes for Project 2 were developed using the growth rates determined during Project 1 as well as the 2050 CARTS model. Three options were analyzed using Synchro 10 software to determine the optimum lane configuration.

Based on the results of this analysis, Bryant Parkway will operate adequately as a two-lane undivided road with the following treatments at the intersection of Bryant Parkway with Shobe Road:

- Southbound shared left/through lane, and right turn lane
- Northbound left turn lane, and shared through/right



- Westbound left turn lane, and shared through/right
- Eastbound left turn lane, and shared through/right
- All-way stop control

All other intersections within the study area will operate adequately with stop control on the minor approaches and left turn lanes at the Bus Facility and Hill Farm Road. Left turn lanes at these intersections were not warranted but were included in the operational analysis options. It should be noted that in 2040, the northbound through and right movements at the intersection of Bryant Parkway with Shobe Road show a LOS E and this movement may experience excessive delay in the AM. Signal warrants were not met for this intersection, but if performance issues arise in the future, then signal warrants may be revisited.

2.0 Introduction

At the request of the City of Bryant, Garver performed a study for the proposed construction of Bryant Parkway from Hill Farm Road to Shobe Road. The purpose of this study is to determine the needed intersection control and geometry in order to maintain acceptable levels of service through the 2040 design year for all movements at the intersections created by the extension.

The following elements were included in this study:

- **Traffic Volumes** – Garver utilized previous traffic data from the Bryant Parkway Project 1 report and Metroplan's CARTS Model to project the traffic volumes to future years 2020 and 2040.
- **Traffic Control Analysis** – A signal warrant analysis was performed at the intersection of Bryant Parkway with Shobe Road.
- **Operational/Geometric Analysis** – *Synchro 10* and its companion *SimTraffic* software were used to analyze the LOS along Bryant Parkway and all of the intersecting approaches for build conditions using 2020 and 2040 design year volumes in order to ensure that the proposed geometry will adequately serve the anticipated demand.
- **Recommendations** – Based on operational and geometric analysis, Garver provided recommendations on lane configuration and intersection control at the intersections along the Bryant Parkway Project 2 corridor.



3.0 Traffic Volumes

3.1 Volume Development

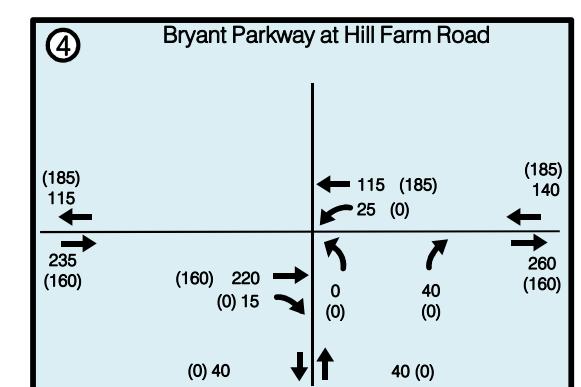
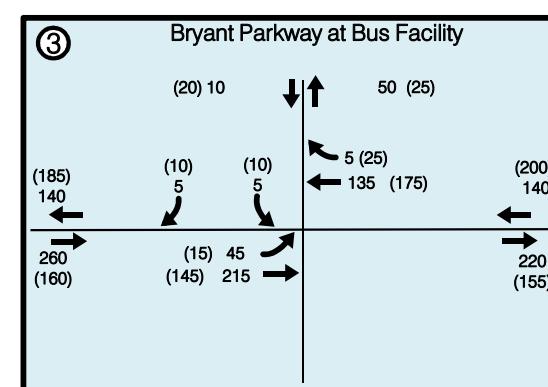
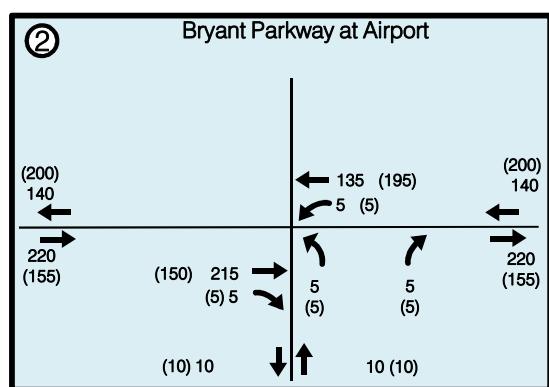
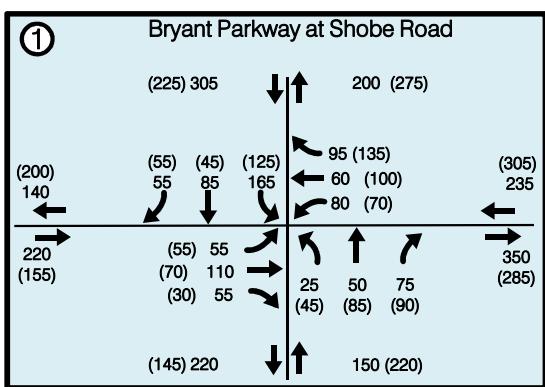
In order to develop the 2020 and 2040 Build traffic volumes, trip diversions were conducted based on Metroplan's CARTS models which provided the anticipated 2050 volumes in the area. The 2050 model included future development along the corridor.

The same growth rates determined in Project 1 were applied to the 2050 CARTS volumes to calculate the 2020 and 2040 Average Daily Traffic (ADT) volumes for each roadway segment as shown in **Table 1**.

Table 1: Projected ADT Based on CARTS Data

Location	Bryant Parkway		Shobe Road	
	North of Shobe	South of Shobe	East of Bryant	West of Bryant
2020	5385	3210	3310	4585
2040	7754	4622	4063	5135

A K-Factor of 0.11 was used to determine design hourly volumes (DHV) for the corridor. Information from the CARTS models, the DHV, and existing turning movement data at nearby intersections were used to determine 2020 and 2040 AM peak hour and PM peak hour volumes. The 2020 and 2040 turning movement volumes are shown in **Figures 2 and 3**.



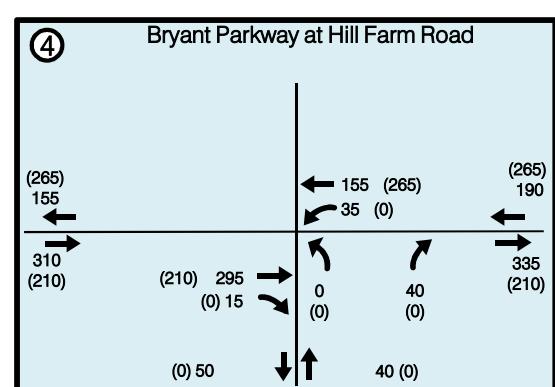
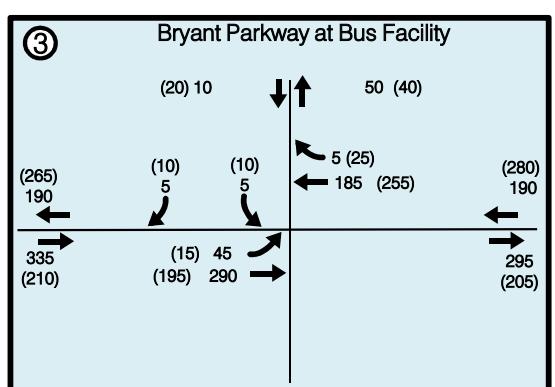
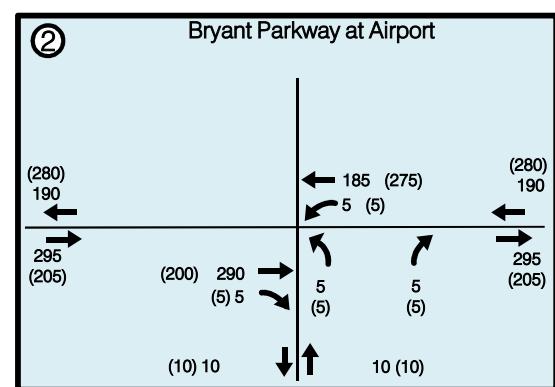
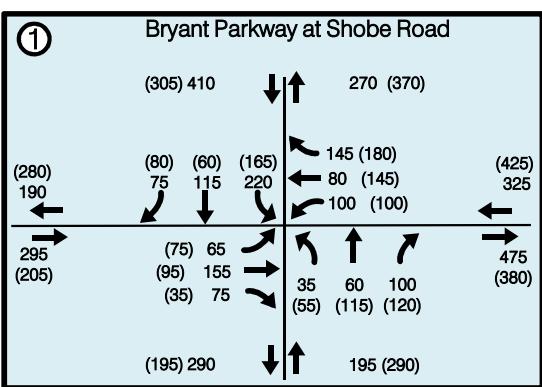
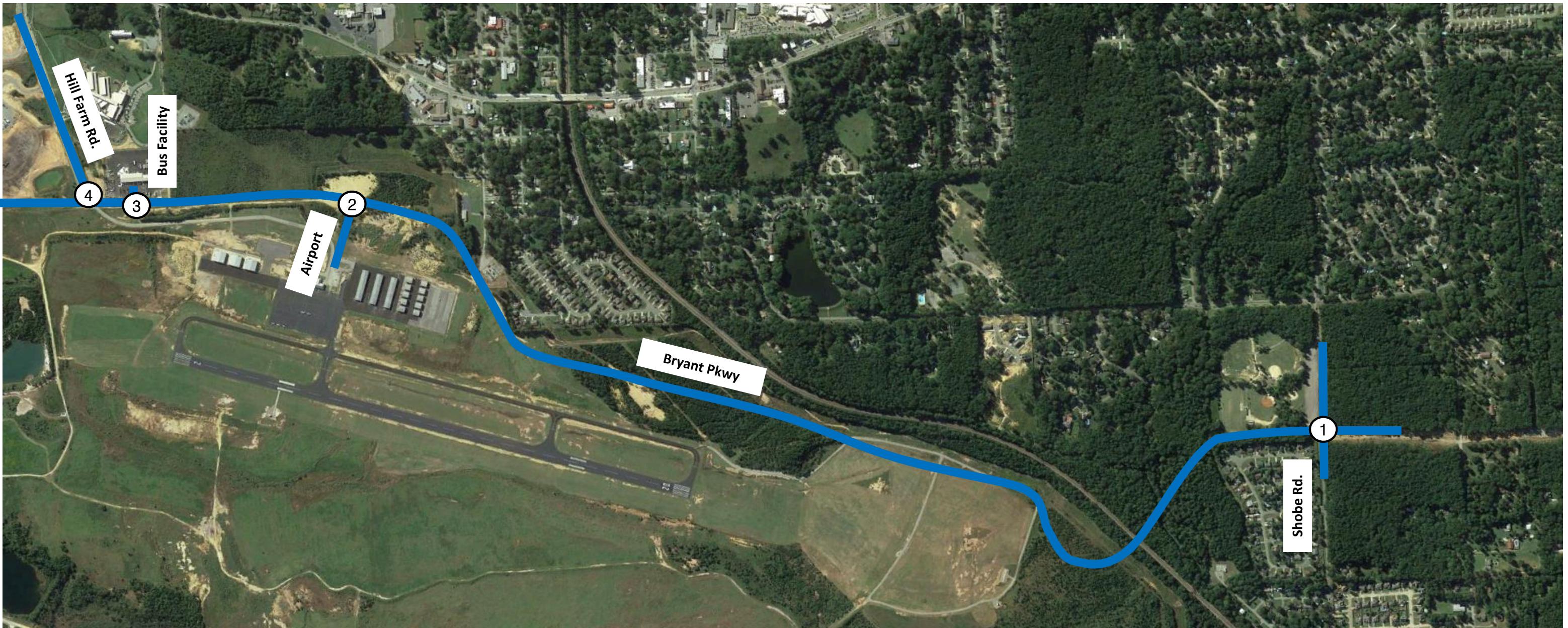
Legend

- 18 AM Turning Movement Count
- (18) PM Turning Movement Count

Bryant Parkway
2020
Traffic Volumes

Figure
2
Nov. 2019





Legend

- 18 AM Turning Movement Count
- (18) PM Turning Movement Count

Bryant Parkway
2040
Traffic Volumes

Figure
3
Nov 2019





4.0 Signal Warrant Analysis

In order to determine if a traffic signal would be a good solution for reducing delay, the warrants for traffic signal installation as stated in the *Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition*, were checked for the 2020 and 2040 design volumes at the intersection of Bryant Parkway and Shobe Road. The other study intersections were not tested for signal warrants due to the low volumes at these intersections. While satisfaction of any of the criteria alone does not mandate signalization, the *MUTCD* requires that at least one of the nine warrants to be met:

The *Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition*, lists the following as signal warrants:

- Warrant 1 – Eight-Hour Vehicular Volume
- Warrant 2 – Four-Hour Vehicular Volume
- Warrant 3 – Peak Hour
- Warrant 4 – Pedestrian Volume
- Warrant 5 – School Crossing
- Warrant 6 – Coordinated Signal System
- Warrant 7 – Crash Experience
- Warrant 8 – Roadway Network
- Warrant 9 – Intersection Near a Grade Crossing

The *Highway Capacity Software (HCS 6th Edition)* was used to compare the total intersection volumes against the criteria for signalization established in these warrants. Warrants 1 through 3 were determined to be applicable for the intersection. The following subsections describe these three warrants and the results of this analysis.

4.1 Warrant 1 – Eight-Hour Vehicular Volume

Warrant 1 typically applies where the volume of intersecting traffic throughout the average day is significant or the intersecting traffic causes excessive delay to the minor street traffic. It is made up of two conditions. Condition A considers the volume of traffic crossing the intersection while Condition B takes into account the delay and number of conflicts for the minor street traffic. Conditions A and B are independent of one another in determining whether or not the warrant is satisfied. However, if neither condition is satisfied for 8 hours of an average day, a combination of the warrants may be considered at 80% of the required vehicles per hour (vph).

4.2 Warrant 2 – Four-Hour Vehicular Volume

Warrant 2 applies where the volume of intersecting traffic, usually during peak times, is the primary reason for considering a traffic signal. If it is found that, for any four hours of an average day, the side street traffic suffers undue delay which would be remedied by a traffic signal, then a signal may be justified.



4.3 Warrant 3 – Peak Hour

Warrant 3 typically applies only to facilities that attract or discharge large numbers of vehicles over a short time. It is made up of two conditions. For Condition A, three criteria must occur for this warrant to be met. First, the total stopped time delay for one side street approach must equal or exceed four vehicle-hours (one-lane approach) or five vehicle-hours (two-lane approach) in a single hour of the day. Second, the volume for this side street approach must exceed 100 vph (one lane approach) or 150 vph (two-lane approach). Finally, the total volume entering the intersection must exceed 650 vph (one-lane approach) or 800 vph (two-lane approach) for the same hour as the first two criteria. For Condition B, the warrant is determined graphically.

4.4 Signal Warrant Results

Based on this analysis, a signal is not warranted at the intersection of Bryant Parkway at Shobe road by 2040. The results of this signal warrant analysis are summarized in **Table 2** below. Refer to **Appendix A – Signal Warrant Analysis Results** for the signal warrant reports developed for this analysis.

Table 2: Signal Warrant Analysis

Intersection	Condition - Year	Warrant 1		Warrant 2		Warrant 3		Recommend Signal?
		Full Volumes	Reduced Volumes	Full Volumes	Reduced Volumes	Full Volumes	Reduced Volumes	
Bryant Parkway at Shobe Road	2020	No	-	No	-	No	-	No
	2040	No	-	No	-	No	-	

5.0 Geometric Analysis

The projected 2040 traffic volumes were used to verify the need for left or right turn lanes at the study intersections. For the geometric analysis, AASHTO's *A Policy on Geometric Design of Highways and Streets* (Green Book), 2011 Edition, the *Highway Capacity Manual*, (HCM), 6th Edition, NCHRP Report 457 – *Evaluating Intersection Improvements: An Engineering Study Guide*, and general “rules of thumb” were used.

5.1 Turn Lane Analysis

Turn lane analyses were conducted at the following intersections along Bryant Parkway:

- Shobe Road
 - Note: lane geometry for the southbound and eastbound approaches were determined during Project 1, are already constructed, and have right of way restrictions; therefore, only northbound and westbound approaches of this intersection were analyzed for Project 2.
- Airport
- Bryant School District Bus Facility



- Hill Farm Road

These intersections were analyzed as unsignalized intersections. The following subsections detail the analyses conducted for left turn lane and for right turn lane needs. The NCHRP calculations are included in **Appendix B-Geometric Analysis**.

5.1.1 Left-Turn Lanes at Unsignalized Intersections

At unsignalized intersections, the NCHRP Report 457 guidelines for adding a left-turn lane on a major road were used. According to these guidelines, a left-turn lane should be considered at the following locations:

- A median crossover on a divided, high-speed road
- An intersection with a high-speed rural highway and other arterials or collectors
- When the combinations of intersection volumes are above trend lines shown in Figure 2-5 of *NCHRP Report 457*

The results of the unsignalized left-turn lane needs are summarized in **Table 3**. As shown, no left-turn lanes are warranted.

Table 3: 2040 Left Turn Lane Recommendations - Unsignalized

Intersection	Approach	Stop Control	2040 Left-Turn Volume		2040 Warranted per NCHRP?	
			AM	PM	AM	PM
Shobe Road	EB	Stop	No Change From Project 1			
	WB	Stop	35	55	No	No
	NB	Free	65	75	No	No
	SB	Free	No Change From Project 1			
Airport	EB	Stop	5	5	No	No
	SB	Free	5	5	No	No
Bus Facility	NB	Free	45	15	No	No
Hill Farm Road	SB	Free	35	0	No	No

5.1.2 Right-Turn Lanes at Unsignalized Intersections

At unsignalized intersections, the *NCHRP Report 457* guidelines for adding a right-turn lane were used. Figure 2-4 of *NCHRP Report 457* was used to determine whether a right-turn lane was needed on the minor road approaches at each unsignalized intersection. Figure 2-6 was used to determine the need for right-turn lanes on the major road approaches. The results of the unsignalized right-turn lane needs are summarized below in **Table 4**. As shown, no right-turn lanes are warranted.



Table 4: 2040 Right Turn Lane Recommendations - Unsignalized

Intersection	Approach	Stop Control	2040 Right-Turn Volume		2040 Warranted per NCHRP?	
			AM	PM	AM	PM
Shobe Road	EB	Stop	No Change From Project 1			
	WB	Stop	100	120	No	No
	NB	Free	75	35	No	No
	SB	Free	No Change From Project 1			
Airport	WB	Stop	5	5	No	No
	SB	Free	5	5	No	No
Bus Facility	SB	Free	5	10	No	No
Hill Farm Road	NB	Free	15	0	No	No

6.0 Operational Analysis

The goals of the operational analysis were to recommend appropriate intersection and roadway improvements to ensure adequate operating conditions for future needs. Options were modeled using 2020 and 2040 design volumes. For the study area, *Synchro 10* software was used to analyze the study intersections using a procedure consistent with the *Highway Capacity Manual (HCM)*.

In addition to the macroscopic simulation models, micro-simulation was used to analyze the intersection operations via *SimTraffic*, the companion software to *Synchro*, to supplement some of the shortcomings of the *HCM* procedure. With this time-based, stochastic simulation model, the user can consider intricate signal timing parameters or the impacts of closely spaced intersections. Micro-simulation software allows the user to gather Measures of Effectiveness (MOEs) both on a system-wide and individual link basis. In addition to the MOEs, the program gives the user a powerful visualization tool to trace the source of vehicle delay and queuing as well as the opportunity to perform multiple runs with varying traffic loading within the peak hour to account for the expected variability within a system. This variation also accounts for the various types of drivers (aggressiveness, gap acceptance tolerance) and vehicles (performance on grades, general acceleration/deceleration). Finally, micro-simulation provides the best means to demonstrate the impacts of queues on nearby intersections. Such analysis is necessary in order to tell the “complete story” of operations from a systems perspective.

6.1 Proposed Options

Three improvement options were requested to be analyzed for level of service and capacity. These options are identical except at the intersection of Bryant Parkway and Shobe Road. All three options utilize two lanes along Bryant Parkway with no turn lanes at any of the intersections except for Bryant Parkway at Shobe Road. All of the intersections utilize stop control on the minor approaches. Two of the improvement options also include stop control along Bryant Parkway at the intersection of Shobe Road.



The layouts of the three options that were analyzed are described below, and the results are detailed in the following subsections.

6.1.1 Option 1

Option 1 was analyzed with two-way stop control on Shobe Road. It consists of a shared through/left lane and right turn only lane for the southbound approach and a shared through/right lane and left turn only lane for the eastbound approach. These turn lanes match the configuration recommended in Project 1. The northbound and westbound approaches were modeled with single, shared left/through/right lanes. The layout of this intersection is shown in Figure 4 below.

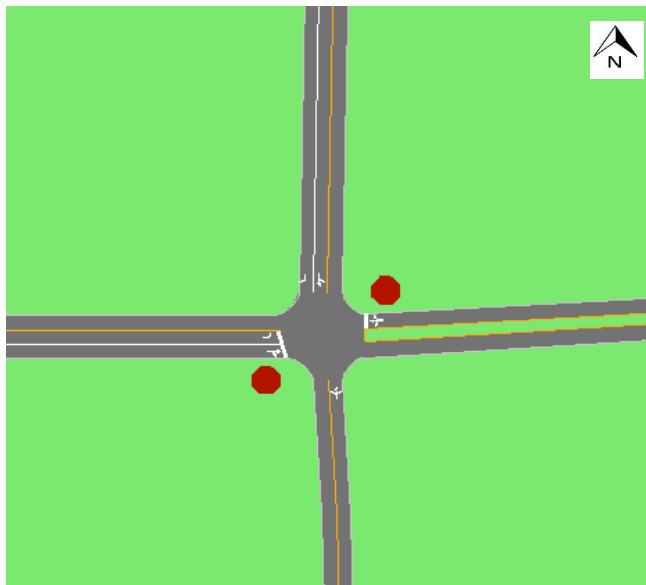


Figure 4: Option 1 – Bryant Parkway at Shobe Road

6.1.2 Option 2

Option 2 was analyzed with all-way stop control. The southbound and eastbound approaches match the lane configuration recommended in Project 1. The westbound approach utilizes a shared though/left lane and a right turn only lane. This layout is shown in Figure 5 below.

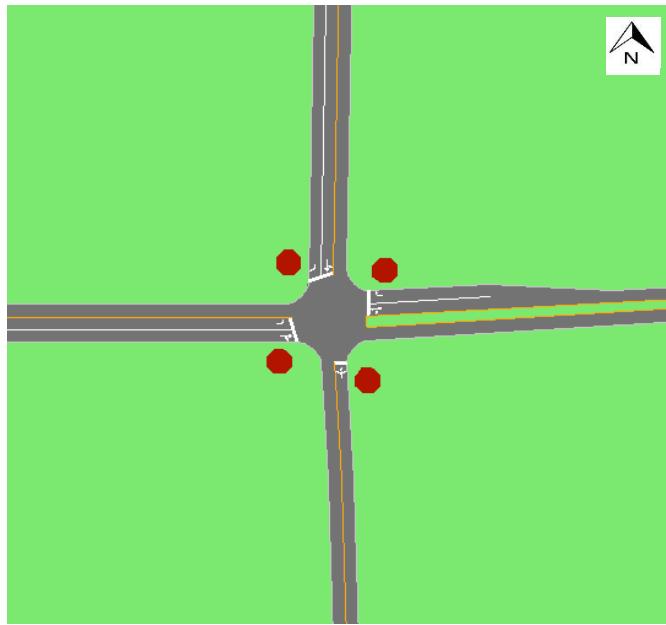


Figure 5: Option 2 – Bryant Parkway at Shobe Road

6.1.3 Option 3

Option 3 was analyzed with all-way stop control. The southbound and eastbound approaches match the lane configuration recommended in Project 1. The northbound and westbound approaches were modeled with a left only lane and a shared through/right lane. This layout is shown in Figure 6.

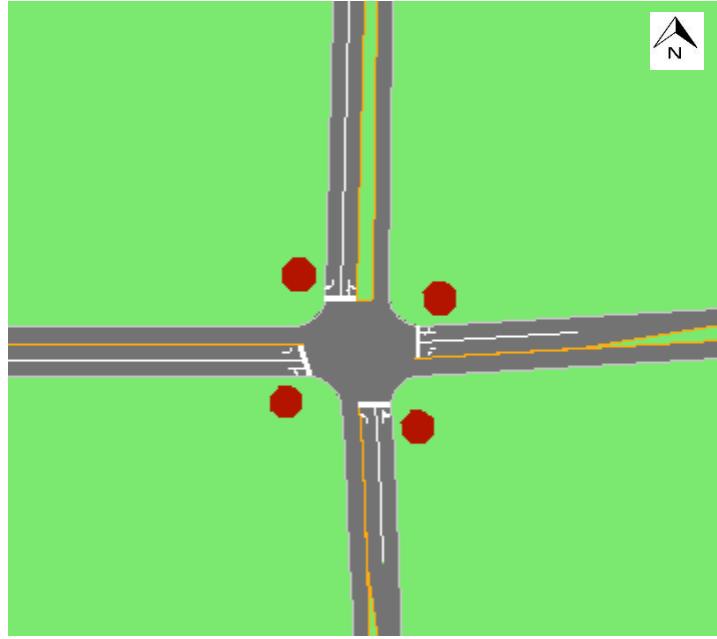


Figure 6: Option 3 – Bryant Parkway at Shobe Road



6.2 Intersection Capacity Analysis

One of the comparison factors used to assess the impact of the various extension layouts is level of service (LOS). LOS is a concept defined by the *Highway Capacity Manual (HCM)* to qualitatively describe operating conditions within a traffic stream. For intersections, the *HCM* uses control delay as the basis for determining LOS. Control delay is the average stopped time per vehicle traveling through the intersection plus the movements at slower speeds due to the vehicles moving up in the queue or slowing upstream of the approach. LOS is typically stratified into six categories (A through F). These range from LOS A indicating free-flow, low density, or nearly negligible delay conditions to LOS F where demand exceeds capacity and large queues are experienced. **Table 5** provides a brief description of each LOS and shows the LOS delay thresholds as stated in *HCM (6th Edition)*, pp. 20-6 and 21-9.

Table 5: LOS Thresholds for Stop Controlled Intersections (Control Delay)

Level of Service		Description	Control Delay Range (sec/veh)
A	Usually no conflicting traffic		0 to 10
B	Occasionally some delay due to conflicting traffic		> 10 to 15
C	Delay noticeable, but not inconveniencing		> 15 to 25
D	Delay noticeable and irritating, increased likelihood of risk taking		> 25 to 35
E	Delay approaches tolerance level, risk-taking behavior likely		> 35 to 50
F	Delay exceeds tolerance level, high likelihood of risk taking		> 50

In order to determine the LOS of all movements through the study intersections under the three proposed configurations, *Synchro 10* and its companion *SimTraffic* software were utilized. The results for all options are shown in **Tables 6 through 21**. Under 2020 conditions, all options operate at an acceptable LOS during the AM and PM according to both *HCM* and *SimTraffic* methodologies. Under 2040 conditions, Option 1 produces unacceptable LOS E and LOS F conditions for multiple stop-controlled movements on the eastbound and westbound approaches at the intersection of Bryant Parkway at Shobe Road according to both methodologies. Option 2 provides adequate LOS for all approaches with the *HCM* methodology; however, the *SimTraffic* methodology shows failure for all northbound movements at this intersection during the AM peak which results in unacceptable overall LOS at the intersection. Option 3 provides acceptable LOS during the AM and PM peaks according to both methodologies for all but two movement: the northbound through and right movements show LOS E conditions during the AM peak according to the *SimTraffic* methodology.



**Bryant Parkway
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Traffic Study**

Table 6: Shobe Road – 2020 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Shobe Rd.	AM	Option 1	LOS	D	B		C		A		A		n/a ¹	B			
			Delay	30.5	14.8		16.3		7.7		7.8		n/a ¹	11.6			
	PM		LOS	D	B		C		A		A		n/a ¹	B			
			Delay	28.2	12.1		20.3		7.9		7.6		n/a ¹	11.2			
Bryant Pkwy at Shobe Rd.	AM	Option 2	LOS	B	B	B	A		B		B		A	B			
			Delay	13.1	10.9	10.8	9.6		14.0		12.1		9.6	12.0			
	PM		LOS	B	B	B	A		B		B		A	B			
			Delay	12.1	10.1	11.7	9.5		12.4		12.4		10.0	11.3			
Bryant Pkwy at Shobe Rd.	AM	Option 3	LOS	B	B	B	B		B		B		B	A	B		
			Delay	13.0	10.8	10.2	10.7		10.6		11.7		12.1	9.6	11.4		
	PM		LOS	B	B	B	B		B		B		B	A	B		
			Delay	12.0	10.1	10.4	11.6		10.7		10.6		12.5	10.0	11.2		

Table 7: Shobe Road – 2020 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right											
Bryant Pkwy at Shobe Rd.	AM	Option 1	LOS	A	B	A	A	B	A	A	A	A	A	A	A	A	
			Delay	9.2	10.9	4.3	8.4	12.0	6.0	6.6	7.3	4.9	2.8	1.5	0.6	6.2	
	PM		LOS	B	B	A	B	C	A	A	A	A	A	A	A	A	
			Delay	12.1	11.6	3.8	14.8	16.5	9.7	5.1	4.2	2.6	2.9	1.6	0.7	6.5	
Bryant Pkwy at Shobe Rd.	AM	Option 2	LOS	A	A	A	A	A	A	C	C	B	A	A	A	B	
			Delay	7.1	9.9	4.2	6.6	9.7	4.7	16.1	18.0	13.2	7.7	9.0	3.5	10.6	
	PM		LOS	A	A	A	A	A	A	B	B	A	A	A	A	A	
			Delay	6.7	9.0	3.6	7.4	9.7	4.2	11.2	13.5	8.4	7.2	9.6	3.9	8.2	
Bryant Pkwy at Shobe Rd.	AM	Option 3	LOS	A	A	A	A	A	A	B	B	B	A	A	A	A	
			Delay	6.2	8.5	3.4	5.5	9.3	5.0	11.3	14.8	10.1	6.2	8.8	3.3	7.8	
	PM		LOS	A	A	A	A	B	A	A	B	A	A	A	A	A	
			Delay	6.2	8.4	3.2	6.4	10.2	5.8	8.1	11.5	7.1	7.3	9.4	4.4	7.5	



Table 8: Airport – 2020 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Airport	AM	Option 1	LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.3		n/a ¹	n/a ¹		7.7			0.4	
	PM		LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.1		n/a ¹	n/a ¹		7.6			0.4	
Bryant Pkwy at Airport	AM	Option 2	LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.3		n/a ¹	n/a ¹		7.7			0.4	
	PM		LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.1		n/a ¹	n/a ¹		7.6			0.4	
Bryant Pkwy at Airport	AM	Option 3	LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.3		n/a ¹	n/a ¹		7.7			0.4	
	PM		LOS				B		n/a ¹	n/a ¹		A			A	
			Delay				10.3		n/a ¹	n/a ¹		7.7			0.4	

Table 9: Airport – 2020 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right											
Bryant Pkwy at Airport	AM	Option 1	LOS				A		A				A			A	
			Delay				3.9		2.4				0.3	0.0	2.9	1.0	0.7
	PM		LOS				A		A				A			A	
			Delay				4.7		2.5				0.6	0.8	2.4	0.9	0.9
Bryant Pkwy at Airport	AM	Option 2	LOS				A		A				A			A	
			Delay				5.4		2.9				0.3	0.1	2.0	0.6	0.6
	PM		LOS				A		A				A			A	
			Delay				6.8		2.9				0.6	0.7	2.1	0.9	0.9
Bryant Pkwy at Airport	AM	Option 3	LOS				A		A				A			A	
			Delay				3.8		2.8				0.2	0.0	3.1	0.9	0.6
	PM		LOS				A		A				A			A	
			Delay				7.0		2.8				0.6	0.7	2.3	0.9	0.9

Table 10: Bus Facility – 2020 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Bus Facility	AM	Option 1	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.5						1.3	n/a ¹				n/a ¹	1.1	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.3						7.7	n/a ¹				n/a ¹	0.8	
Bryant Pkwy at Bus Facility	AM	Option 2	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.5						7.6	n/a ¹				n/a ¹	1.1	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.3						7.7	n/a ¹				n/a ¹	0.8	
Bryant Pkwy at Bus Facility	AM	Option 3	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.5						7.6	n/a ¹				n/a ¹	1.1	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	10.3						7.7	n/a ¹				n/a ¹	0.8	



Bryant Parkway
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Table 11: Bus Facility – 2020 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall		
				Left	Thru	Right												
Bryant Pkwy at Bus Facility	AM	Option 1	LOS	A		A				A	A				A	A	A	
			Delay	5.5		3.1				2.3	0.3				1.8	1.3	1.1	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	7.4		3.9				2.4	0.2				2.7	2.0	2.1	
Bryant Pkwy at Bus Facility	AM	Option 2	LOS	A		A				A	A				A	A	A	
			Delay	6.7		4.0				2.5	0.4				1.3	0.9	1.1	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	7.4		4.8				4.2	0.2				2.9	1.7	2.3	
Bryant Pkwy at Bus Facility	AM	Option 3	LOS	A		A				A	A				A	A	A	
			Delay	4.1		2.4				2.1	0.3				1.7	1.3	1.1	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	7.0		4.3				3.0	0.2				2.7	2.1	2.1	

Table 12: Hill Farm Rd – 2020 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Right	Left	Thru	Right	Left	Thru	Right			
Bryant Pkwy at Hill Farm Rd	AM	Option 1	LOS				A			n/a ¹		A	n/a ¹		A	A	
			Delay				9.8			n/a ¹		7.8	n/a ¹			1.4	
	PM		LOS				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	
			Delay				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	
Bryant Pkwy at Hill Farm Rd	AM	Option 2	LOS				A			n/a ¹		A	n/a ¹		A	A	
			Delay				9.8			n/a ¹		7.8	n/a ¹			1.4	
	PM		LOS				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	
			Delay				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	
Bryant Pkwy at Hill Farm Rd	AM	Option 3	LOS				A			n/a ¹		A	n/a ¹		A	A	
			Delay				9.8			n/a ¹		7.8	n/a ¹			1.4	
	PM		LOS				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	
			Delay				n/a ²			n/a ¹		n/a ²	n/a ¹		n/a	n/a	

Table 13: Hill Farm Rd – 2020 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Hill Farm Rd	AM	Option 1	LOS				n/a ³		A			A	A	A	A	A	
			Delay				n/a ³		2.9			0.5	0.3	2.0	1.4	1.0	
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.2	n/a ²	n/a ²	2.1			1.5	
Bryant Pkwy at Hill Farm Rd	AM	Option 2	LOS				n/a ²		A			A	A	A	A	A	
			Delay				n/a ²		3.4			0.6	0.3	2.2	0.2		1.3
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.2	n/a ²	n/a ²	2.3			1.6	
Bryant Pkwy at Hill Farm Rd	AM	Option 3	LOS				n/a ²		A			A	A	A	A	A	
			Delay				n/a ²		2.8			0.5	0.1	1.9	1.2		1.0
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.2	n/a ²	n/a ²	2.1			1.5	



**Bryant Parkway
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Table 14: Shobe Road – 2040 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Shobe Rd.	AM	Option 1	LOS	F	C		D			A			A	n/a ¹	E		
			Delay	160.8	21.4		31.1			7.9			8.0	n/a ¹	38.2		
	PM		LOS	F	C	F			A			A	n/a ¹	F			
			Delay	231.1	15.5	77.5			8.2			7.7	n/a ¹	52.4			
Bryant Pkwy at Shobe Rd.	AM	Option 2	LOS	C	B	B	B		C	C		B	C				
			Delay	18.8	14.5	13.2	11.8		23.0			16.0	12.3	16.9			
	PM		LOS	C	B	C	B		C	C		B	C				
			Delay	16.0	12.8	15.4	11.8		17.3			18.9	12.8	15.5			
Bryant Pkwy at Shobe Rd.	AM	Option 3	LOS	C	B	B	B		B	C		C	B	C			
			Delay	18.3	14.1	11.7	13.8		12.2	17.0		15.8	12.2	15.2			
	PM		LOS	C	B	B	C		B	B		C	B	C			
			Delay	15.7	12.7	11.9	16.7		12.8	13.3		18.8	12.7	15.1			

Table 15: Shobe Road – 2040 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right											
Bryant Pkwy at Shobe Rd.	AM	Option 1	LOS	F	D	C	F	E	D	A	A	A	A	A	A	C	
			Delay	73.6	33.8	20.4	50.1	46.9	34.1	6.8	6.4	4.2	6.3	3.0	0.9	22.5	
	PM		LOS	E	C	A	F	F	F	A	A	A	A	A	A	C	
			Delay	37.1	17.2	7.0	69.2	65.9	57.5	6.2	5.3	3.0	3.8	2.3	1.0	20.9	
Bryant Pkwy at Shobe Rd.	AM	Option 2	LOS	B	B	A	A	B	A	F	F	F	B	B	A	E	
			Delay	10.9	12.1	5.7	9.1	11.2	6.8	90.0	92.2	85.7	10.1	11.8	4.7	40.3	
	PM		LOS	A	B	A	B	B	A	C	D	C	B	B	A	B	
			Delay	9.9	10.7	5.0	10.8	14.1	6.6	24.2	26.3	20.9	11.5	14.4	5.9	14.0	
Bryant Pkwy at Shobe Rd.	AM	Option 3	LOS	B	B	A	A	B	A	C	E	D	B	B	A	C	
			Delay	11.2	12.3	5.4	8.1	13.4	8.9	19.6	37.7	31.8	11.2	12.6	5.7	18.7	
	PM		LOS	B	B	A	A	C	A	B	C	A	B	B	A	B	
			Delay	10.6	10.4	5.5	8.1	15.9	10.0	11.5	15.3	10.0	12.0	14.3	6.6	11.4	

Table 16: Airport – 2040 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Right	Left	Thru	Right	Left	Thru	Right			
Bryant Pkwy at Airport	AM	Option 1	LOS				B			n/a ¹		A			A		
			Delay				11.2			n/a ¹		7.9			0.3		
	PM		LOS				B			n/a ¹		A			A		
			Delay				10.9			n/a ¹		7.7			0.3		
Bryant Pkwy at Airport	AM	Option 2	LOS				B			n/a ¹		A			A		
			Delay				11.2			n/a ¹		7.9			0.3		
	PM		LOS				B			n/a ¹		A			A		
			Delay				10.9			n/a ¹		7.7			0.3		
Bryant Pkwy at Airport	AM	Option 3	LOS				B			n/a ¹		A			A		
			Delay				11.2			n/a ¹		7.9			0.3		
	PM		LOS				B			n/a ¹		A			A		
			Delay				10.9			n/a ¹		7.7			0.3		



Table 17: Airport – 2040 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right											
Bryant Pkwy at Airport	AM	Option 1	LOS				A		A				A	A	A	A	
			Delay				5.7		4.2				1.2	0.8	2.8	0.8	1.1
	PM		LOS				A		A				A	A	A	A	
			Delay				9.2		2.7				1.1	1.1	2.7	1.2	1.2
Bryant Pkwy at Airport	AM	Option 2	LOS				A		A				A	A	A	A	
			Delay				7.0		2.5				1.1	0.8	3.1	1.0	1.1
	PM		LOS				A		A				A	A	A	A	
			Delay				6.4		3.1				1.0	1.0	3.2	1.1	1.2
Bryant Pkwy at Airport	AM	Option 3	LOS				A		A				A	A	A	A	
			Delay				5.9		2.9				1.1	1.0	2.5	0.8	1.0
	PM		LOS				A		A				A	A	A	A	
			Delay				8.0		2.7				1.0	0.4	2.5	1.2	1.2

Table 18: Bus Facility – 2040 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Bus Facility	AM	Option 1	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.4						7.7	n/a ¹				n/a ¹	0.8	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.3						7.9	n/a ¹				n/a ¹	0.7	
Bryant Pkwy at Bus Facility	AM	Option 2	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.4						7.7	n/a ¹				n/a ¹	0.8	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.3						7.9	n/a ¹				n/a ¹	0.7	
Bryant Pkwy at Bus Facility	AM	Option 3	LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.4						7.7	n/a ¹				n/a ¹	0.8	
	PM		LOS	B						A	n/a ¹				n/a ¹	A	
			Delay	11.3						7.9	n/a ¹				n/a ¹	0.7	

Table 19: Bus Facility – 2040 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall		
				Left	Thru	Right												
Bryant Pkwy at Bus Facility	AM	Option 1	LOS	A		A				A	A				A	A		
			Delay	6.9		3.0				3.3	0.5				2.0	2.0	1.5	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	9.7		4.6				4.1	0.3				3.5	2.4	2.7	
Bryant Pkwy at Bus Facility	AM	Option 2	LOS	A		A				A	A				A	A	A	
			Delay	7.1		3.8				3.0	0.4				2.1	2.0	1.5	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	8.1		4.3				4.8	0.3				3.3	2.5	2.6	
Bryant Pkwy at Bus Facility	AM	Option 3	LOS	A		A				A	A				A	A	A	
			Delay	4.7		3.7				2.9	0.5				2.1	2.1	1.5	
	PM		LOS	A		A				A	A				A	A	A	
			Delay	8.3		5.4				4.7	0.3				3.4	2.7	2.7	



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Table 20: Hill Farm Rd – 2040 Conditions – HCM 6 Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Hill Farm Rd	AM	Option 1	LOS				B		n/a ¹	A	n/a ¹				A	
			Delay				10.4		n/a ¹	8.1	n/a ¹				1.3	
	PM		LOS				n/a ²		n/a ¹	n/a ²	n/a ¹				A	
			Delay				n/a ²		n/a ¹	n/a ²	n/a ¹				0.0	
Bryant Pkwy at Hill Farm Rd	AM	Option 2	LOS				B		n/a ¹	A	n/a ¹				A	
			Delay				10.4		n/a ¹	8.1	n/a ¹				1.3	
	PM		LOS				n/a ²		n/a ¹	n/a ²	n/a ¹				A	
			Delay				n/a ²		n/a ¹	n/a ²	n/a ¹				0.0	
Bryant Pkwy at Hill Farm Rd	AM	Option 3	LOS				B		n/a ¹	A	n/a ¹				A	
			Delay				10.4		n/a ¹	8.1	n/a ¹				1.3	
	PM		LOS				n/a ²		n/a ¹	n/a ²	n/a ¹				A	
			Delay				n/a ²		n/a ¹	n/a ²	n/a ¹				0.0	

Table 21: Hill Farm Rd – 2040 Conditions – SimTraffic Results

Intersection	Time Period	Option	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall	
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bryant Pkwy at Hill Farm Rd	AM	Option 1	LOS				n/a ²		A		A	A	A		A		
			Delay				n/a ²		3.2		0.5	0.1	3.5	0.9		1.1	
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.2	n/a ²	n/a ²	1.3			1.0	
Bryant Pkwy at Hill Farm Rd	AM	Option 2	LOS				n/a ²		A		A	A	A		A		
			Delay				n/a ²		3.4		0.4	0.2	3.7	1.0		1.1	
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.2	n/a ²	n/a ²	1.2			0.9	
Bryant Pkwy at Hill Farm Rd	AM	Option 3	LOS				n/a ²		A		A	A	A		A		
			Delay				n/a ²		3.5		0.8	0.5	2.7	0.7		1.6	
	PM		LOS				n/a ²			A	n/a ²	n/a ²	A			A	
			Delay				n/a ²			0.1	n/a ²	n/a ²	1.2			0.9	



6.3 Corridor Analysis

SimTraffic software and the HCM were used to evaluate the performance along the Bryant Parkway corridor. The results of the corridor analysis is shown in **Table 22** below. The complete results are shown in **Appendix C-Operational Analysis Results**. As the results in **Table 22** demonstrate, Bryant Parkway from Shobe Road to Hill Farm Road will operate at a LOS B or better through the 2040 design year as a two-lane facility for all options.

Table 22: SimTraffic/HCM 6 Arterial LOS Analysis for 2040 Conditions

Model	Time Period	Measure of Effectiveness	NORTHBOUND			SOUTHBOUND		
			Crossing Hill Farm Road	Crossing Bus Facility	Crossing Airport	Crossing Hill Farm Road	Crossing Bus Facility	Crossing Airport
Option 1	2040	AM	Arterial Speed (mph)	25	26	34	25	33
			PFFS	81%	85%	111%	81%	107%
			LOS	B	B	A	B	A
	2040	PM	Arterial Speed (mph)	-	35	33	23	32
			PFFS	-	114%	107%	75%	104%
			LOS	-	A	A	B	A
Option 2	2040	AM	Arterial Speed (mph)	26	27	34	25	33
			PFFS	85%	88%	111%	81%	107%
			LOS	B	A	A	B	A
	2040	PM	Arterial Speed (mph)	-	34	33	32	32
			PFFS	-	111%	107%	104%	104%
			LOS	-	A	A	A	A
Option 3	2040	AM	Arterial Speed (mph)	22	27	34	25	33
			PFFS	72%	88%	111%	81%	107%
			LOS	B	A	A	B	A
	2040	PM	Arterial Speed (mph)	-	35	34	22	32
			PFFS	-	114%	111%	72%	104%
			LOS	-	A	A	B	A



7.0 Recommendations

The 2020 and 2040 traffic operations of the study intersections along Bryant Parkway were analyzed for the proposed two-lane corridor beginning at Hill Farm Road and terminating north at Shobe Road. Intersection control analysis, lane criteria, and capacity analyses were performed at the study intersections to determine the lane requirements needed to satisfy design year traffic demand.

As demonstrated in the operational analysis, Option 3 is the recommended alternative for the corridor. The following is a summary of the recommended lane geometry at the study intersections as well as the recommended intersection control based on the analysis results.

- Bryant Parkway at Shobe Road
 - All-way stop control.
 - No geometric changes from Project 1 to the Southbound and Eastbound approaches.
 - Northbound left-turn only lane with a shared through/right lane.
 - Westbound left-turn only lane with a shared through/right lane.
- Airport
 - Stop control on the east approach.
 - Single lanes for all approaches.
- Bus Facility
 - Stop control on the west approach.
 - Single lanes for all approaches.
- Hill Farm Road
 - Stop control on east approach.
 - Single lanes for all approaches.

With this proposed layout, all movements will perform adequately in 2020. By 2040, some excessive delay may occur for the northbound through movement at the intersection of Bryant Parkway with Shobe Road. However, due to right of way constraints, additional modifications to the approaches are not feasible. This intersection did not meet signal warrants with the anticipated 2040 volumes. However, if delay becomes a problem in the future, the signal warrants may be revisited.



Appendix A-

Signal Warrant Analysis Results

Warrants Summary												
Information												
Analyst	CEM		Intersection		Bryant Pkwy and Shobe Rd							
Agency/Co	Garver		Jurisdiction		City of Bryant							
Date Performed	6/5/2019		Units		U.S. Customary							
Project ID	Bryant Parkway		Time Period Analyzed									
East/West Street	Shobe Road		North/South Street		Bryant Parkway							
File Name	Bryant_Shobe_2020.xhy		Major Street		North-South							
Project Description <i>Bryant Parkway</i>												
General			Roadway Network									
Major Street Speed (mph)	40	<input type="checkbox"/>	Population < 10,000			Two Major Routes			<input type="checkbox"/>			
Nearest Signal (ft)	6000	<input type="checkbox"/>	Coordinated Signal System			Weekend Count			<input type="checkbox"/>			
Crashes (per year)	0	<input type="checkbox"/>	Adequate Trials of Alternatives			5-yr Growth Factor			0			
Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	1	1	0	0	1	0	0	1	0	0	1	1
Lane usage	L	TR			LTR			LTR			LT	R
Vehicle Volume Averages (vph)	51	22	19	13	26	32	24	38	18	33	34	50
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Warrant 1: Eight-Hour Vehicular Volume												
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--												
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--												
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)												
Warrant 2: Four-Hour Vehicular Volume												
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)												
Warrant 3: Peak Hour												
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--												
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)												
Warrant 4: Pedestrian Volume												
4 A. Four Hour Volumes --or--												
4 B. One-Hour Volumes												
Warrant 5: School Crossing												
5. Student Volumes --and--												
5. Gaps Same Period												
Warrant 6: Coordinated Signal System												
6. Degree of Platooning (Predominant direction or both directions)												
Warrant 7: Crash Experience												
7 A. Adequate trials of alternatives, observance and enforcement failed --and--												
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--												
7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied												

<i>Warrant 8: Roadway Network</i>	
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	<input type="checkbox"/>
8 B. Weekend Volume (Five hours total)	<input type="checkbox"/>
<i>Warrant 9: Grade Crossing</i>	
9 A. Grade Crossing within 140 ft --and--	<input type="checkbox"/>
9 B. Peak-Hour Vehicular Volumes	<input type="checkbox"/>

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HCS7™ Warrants Version 7.2.1

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Warrants Volume															
Information															
Analyst	CEM					Intersection	Bryant Pkwy and Shobe Rd								
Agency/Co	Garver					Jurisdiction	City of Bryant								
Date Performed	6/5/2019					Units	U.S. Customary								
Project ID	Bryant Parkway					Time Period Analyzed									
East/West Street	Shobe Road					North/South Street	Bryant Parkway								
File Name	Bryant_Shobe_2020.xhy					Major Street	North-South								
Project Description <i>Bryant Parkway</i>															
Warrant 1															
Condition A—Minimum Vehicular Volume						Condition B—Interruption of Continuous Traffic									
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor-street approach (one direction only)										
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%						
1	1	500	400	350	280	150	120	105	84						
2 or more	1	600	480	420	336	150	120	105	84						
2 or more	2 or more	600	480	420	336	200	160	140	112						
1	2 or more	500	400	350	280	200	160	140	112						
Warrant 2															
Warrant 3															
Volume Summary															
Major Street Lanes 2+			Minor Street Lanes 2+			Speed	40	Population		10000+					
Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)					
07-08	455	305	910	No	No	No	No	No	No	No					
08-09	246	100	430	No	No	No	No	No	No	No					
09-10	246	100	430	No	No	No	No	No	No	No					
10-11	246	100	430	No	No	No	No	No	No	No					
11-12	0	0	0	No	No	No	No	No	No	No					
12-13	0	0	0	No	No	No	No	No	No	No					
13-14	0	0	0	No	No	No	No	No	No	No					
14-15	0	0	0	No	No	No	No	No	No	No					
15-16	460	225	905	No	No	No	No	No	No	No					
16-17	245	101	430	No	No	No	No	No	No	No					
17-18	245	101	430	No	No	No	No	No	No	No					
18-19	245	101	430	No	No	No	No	No	No	No					
Totals	2388	1133	4395	0	0	0	0	0	0	0					

Warrants Summary												
Information												
Analyst	CEM		Intersection		Bryant Pkwy and Shobe Rd							
Agency/Co	Garver		Jurisdiction		City of Bryant							
Date Performed	6/5/2019		Units		U.S. Customary							
Project ID	Bryant Parkway		Time Period Analyzed									
East/West Street	Shobe Road		North/South Street		Bryant Parkway							
File Name	Bryant_Shobe_2040.xhy		Major Street		North-South							
Project Description <i>Bryant Parkway</i>												
General			Roadway Network									
Major Street Speed (mph)	40	<input type="checkbox"/>	Population < 10,000			Two Major Routes			<input type="checkbox"/>			
Nearest Signal (ft)	6000	<input type="checkbox"/>	Coordinated Signal System			Weekend Count			<input type="checkbox"/>			
Crashes (per year)	0	<input type="checkbox"/>	Adequate Trials of Alternatives			5-yr Growth Factor			0			
Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	1	1	0	0	1	0	0	1	0	0	1	1
Lane usage	L	TR			LTR			LTR			LT	R
Vehicle Volume Averages (vph)	71	31	28	18	35	46	32	56	24	45	49	72
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Warrant 1: Eight-Hour Vehicular Volume												
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--												
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--												
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)												
Warrant 2: Four-Hour Vehicular Volume												
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)												
Warrant 3: Peak Hour												
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--												
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)												
Warrant 4: Pedestrian Volume												
4 A. Four Hour Volumes --or--												
4 B. One-Hour Volumes												
Warrant 5: School Crossing												
5. Student Volumes --and--												
5. Gaps Same Period												
Warrant 6: Coordinated Signal System												
6. Degree of Platooning (Predominant direction or both directions)												
Warrant 7: Crash Experience												
7 A. Adequate trials of alternatives, observance and enforcement failed --and--												
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--												
7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied												

Warrant 8: Roadway Network	<input type="checkbox"/>
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	<input type="checkbox"/>
8 B. Weekend Volume (Five hours total)	<input type="checkbox"/>
Warrant 9: Grade Crossing	<input type="checkbox"/>
9 A. Grade Crossing within 140 ft --and--	<input type="checkbox"/>
9 B. Peak-Hour Vehicular Volumes	<input type="checkbox"/>

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Warrants Volume																			
Information																			
Analyst	CEM					Intersection	Bryant Pkwy and Shobe Rd												
Agency/Co	Garver					Jurisdiction	City of Bryant												
Date Performed	6/5/2019					Units	U.S. Customary												
Project ID	Bryant Parkway					Time Period Analyzed													
East/West Street	Shobe Road					North/South Street	Bryant Parkway												
File Name	Bryant_Shobe_2040.xhy					Major Street	North-South												
Project Description <i>Bryant Parkway</i>																			
Warrant 1																			
Condition A—Minimum Vehicular Volume						Condition B—Interruption of Continuous Traffic													
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor-street approach (one direction only)			Number of lanes for moving traffic on each approach											
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%	100%	80%	70%	56%						
1	1	500	400	350	280	150	120	105	84	750	600	525	420						
2 or more	1	600	480	420	336	150	120	105	84	900	720	630	504						
2 or more	2 or more	600	480	420	336	200	160	140	112	900	720	630	504						
1	2 or more	500	400	350	280	200	160	140	112	750	600	525	420						
Warrant 2						Warrant 3													
Volume Summary																			
Major Street Lanes 2+			Minor Street Lanes 2+			Speed	40	Population			10000+								
Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)									
07-08	620	410	1225	Yes	Yes	No	No	Yes	No	No									
08-09	356	145	622	No	No	No	No	No	No	No									
09-10	356	145	622	No	No	No	No	No	No	No									
10-11	356	145	622	No	No	No	No	No	No	No									
11-12	0	0	0	No	No	No	No	No	No	No									
12-13	0	0	0	No	No	No	No	No	No	No									
13-14	0	0	0	No	No	No	No	No	No	No									
14-15	0	0	0	No	No	No	No	No	No	No									
15-16	630	305	1225	Yes	Yes	No	No	No	No	No									
16-17	355	144	620	No	No	No	No	No	No	No									
17-18	355	144	620	No	No	No	No	No	No	No									
18-19	355	144	620	No	No	No	No	No	No	No									
Totals	3383	1582	6176	2	2	0	0	1	0	0									



Appendix B-

Geometric Analysis

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

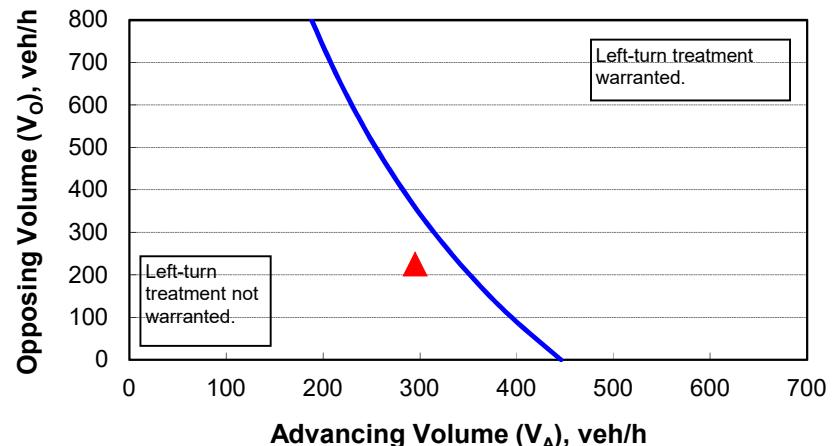
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	22%
Advancing volume (V_A), veh/h:	295
Opposing volume (V_O), veh/h:	225

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	342
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

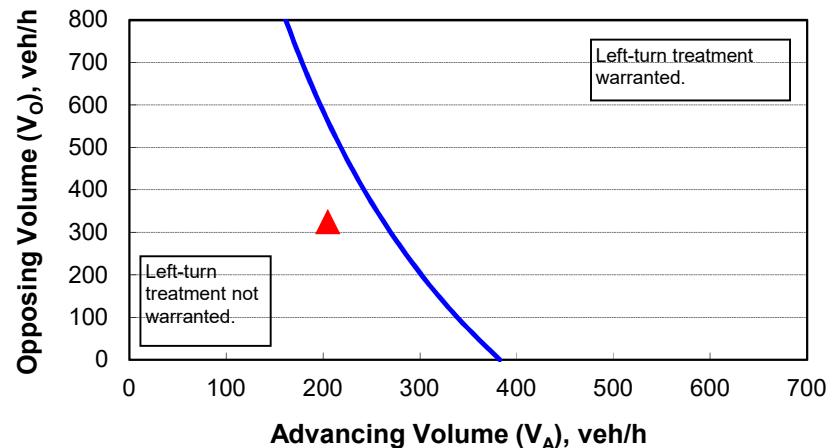
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	37%
Advancing volume (V_A), veh/h:	205
Opposing volume (V_O), veh/h:	325

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	263
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	295
Right-turn volume, veh/h:	75

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1400
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

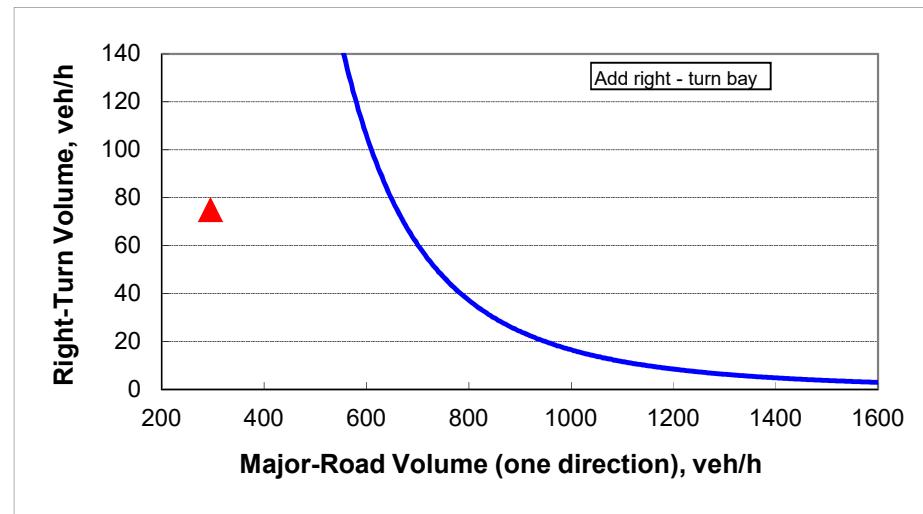


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	205
Right-turn volume, veh/h:	35

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	5259
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

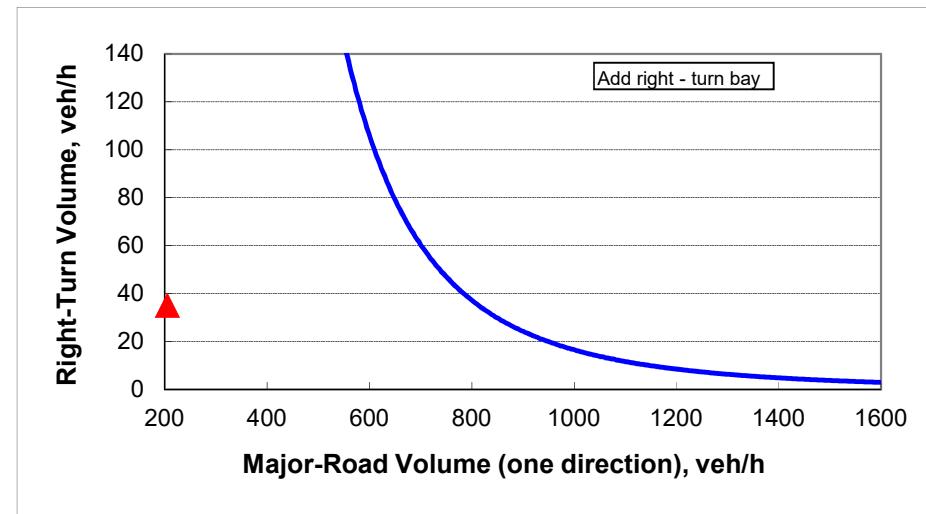


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	325
Right-turn volume, veh/h:	145

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	984
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

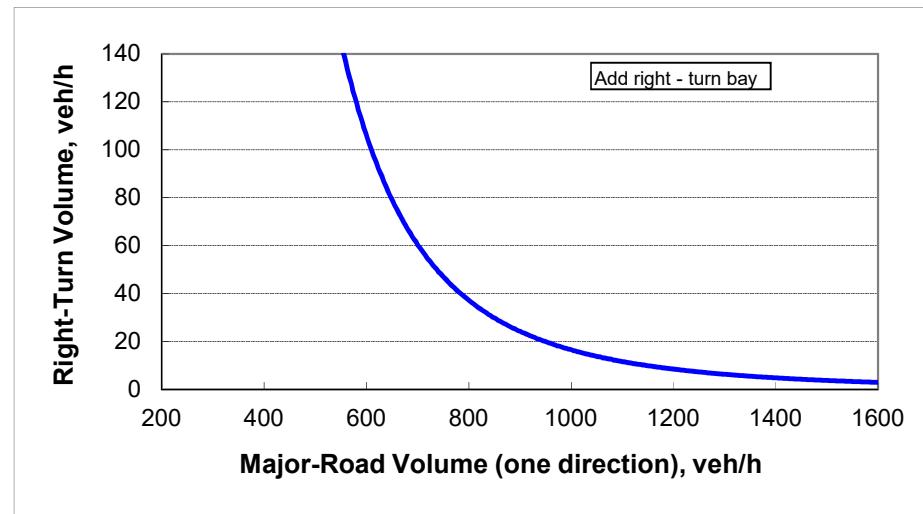


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	425
Right-turn volume, veh/h:	180

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	371
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

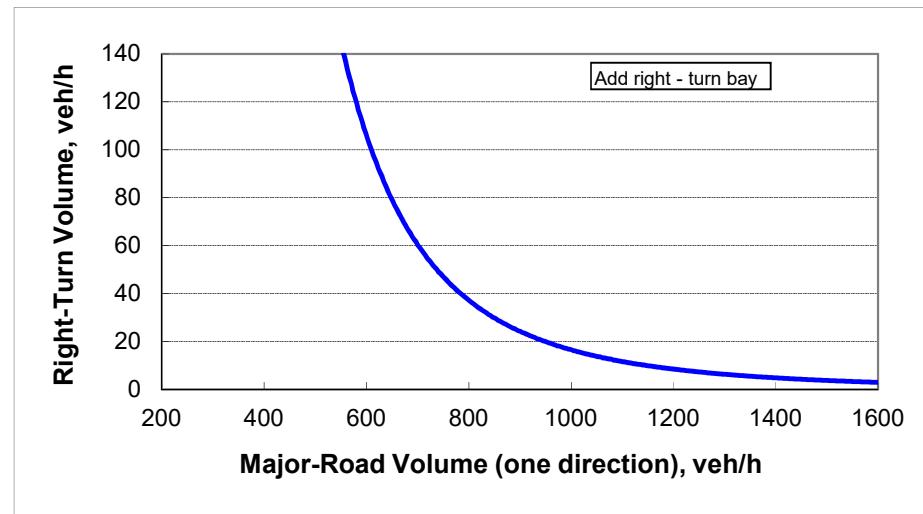


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	620
Percentage of right-turns on minor road, %:	18%
Minor-road volume (one direction), veh/h:	410

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	253
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

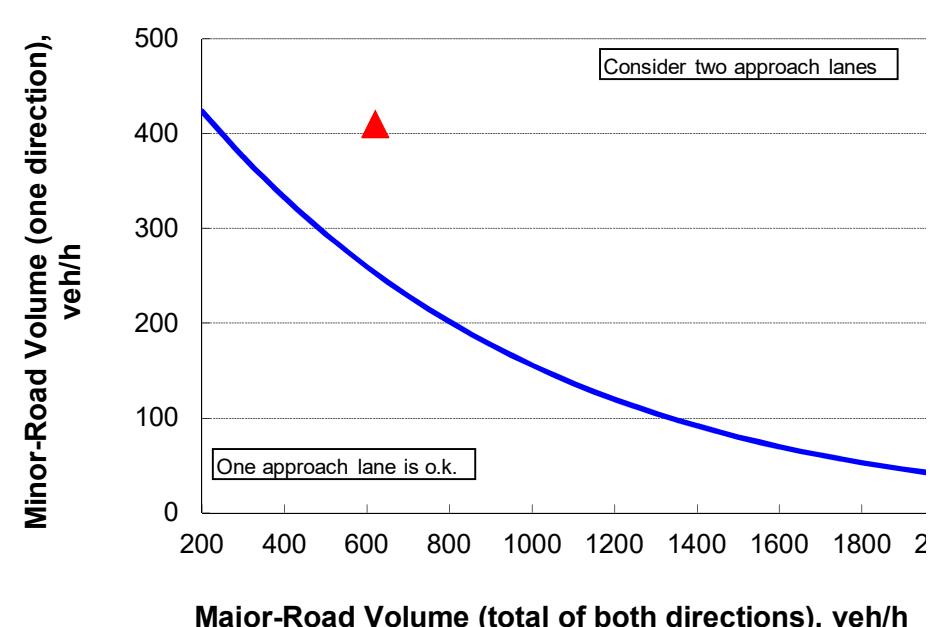


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	620
Percentage of right-turns on minor road, %:	51%
Minor-road volume (one direction), veh/h:	195

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	318
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

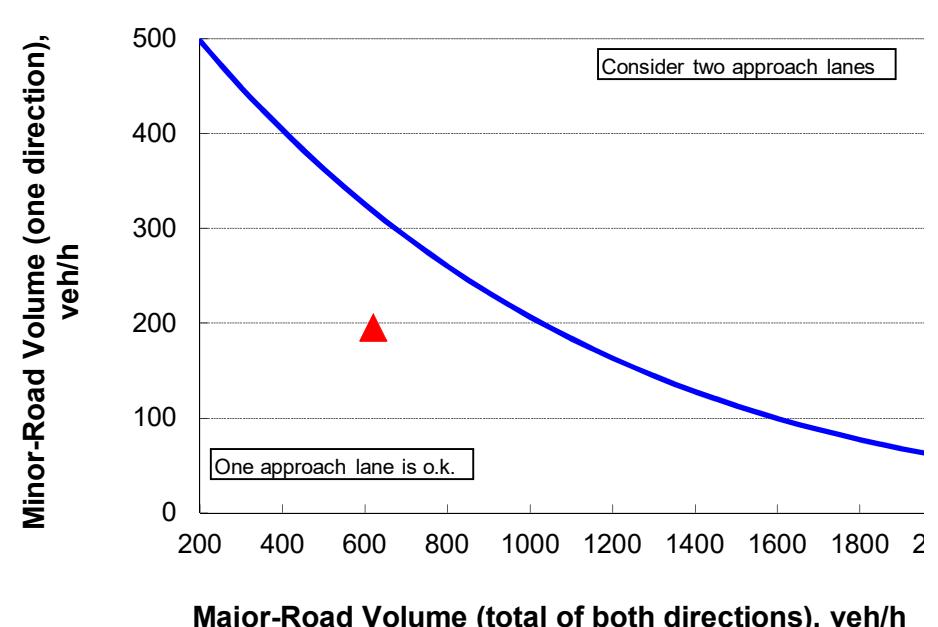


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	630
Percentage of right-turns on minor road, %:	26%
Minor-road volume (one direction), veh/h:	305

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	263
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

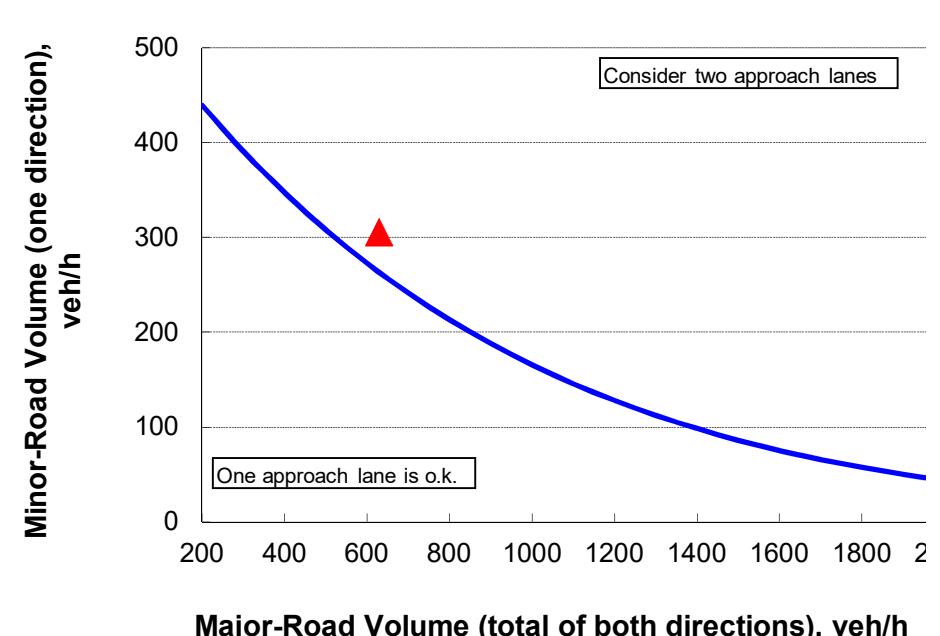


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	630
Percentage of right-turns on minor road, %:	41%
Minor-road volume (one direction), veh/h:	290

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	292
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

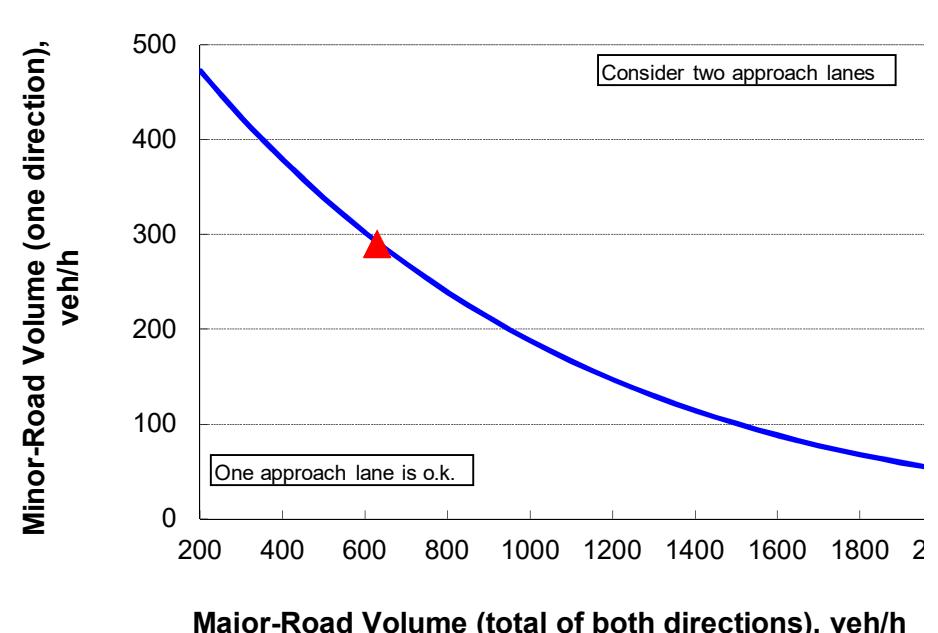


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Left
Variable	Value
Turn movement volume, veh/h:	220
Conflicting volume, veh/h:	160
Operating speed, mph:	35
Total length of bay, ft:	265

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	51
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	51
Guidance for bay length:	
Bay length is adequate.	

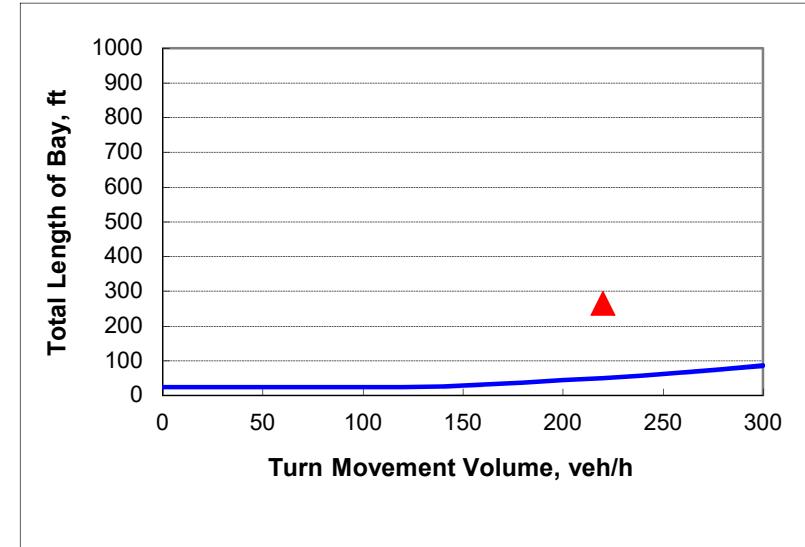


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Left
Variable	Value
Turn movement volume, veh/h:	160
Conflicting volume, veh/h:	630
Operating speed, mph:	35
Total length of bay, ft:	265

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	83
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	83
Guidance for bay length:	
Bay length is adequate.	

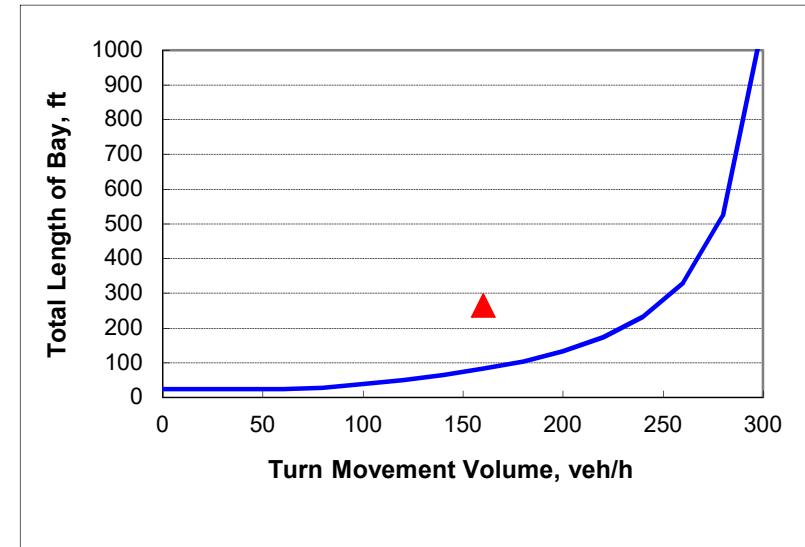


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Unstopped
Turn direction:	Left
Variable	Value
Turn movement volume, veh/h:	280
Conflicting volume, veh/h:	420
Operating speed, mph:	35
Total length of bay, ft:	165

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	69
Length of bay needed for deceleration, ft:	93
Total length of bay needed, ft:	162

Guidance for bay length:

Bay length is adequate.

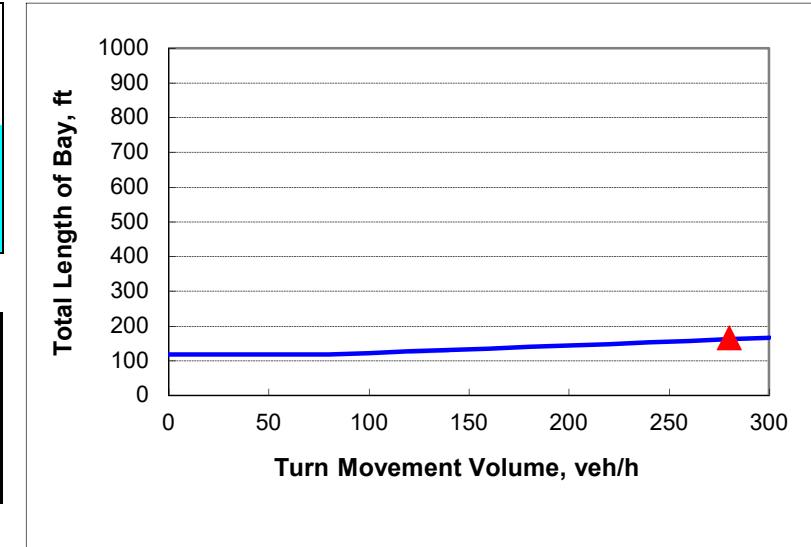


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Unstopped
Turn direction:	Left
Variable	Value
Turn movement volume, veh/h:	280
Conflicting volume, veh/h:	420
Operating speed, mph:	35
Total length of bay, ft:	165

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	69
Length of bay needed for deceleration, ft:	93
Total length of bay needed, ft:	162

Guidance for bay length:

Bay length is adequate.

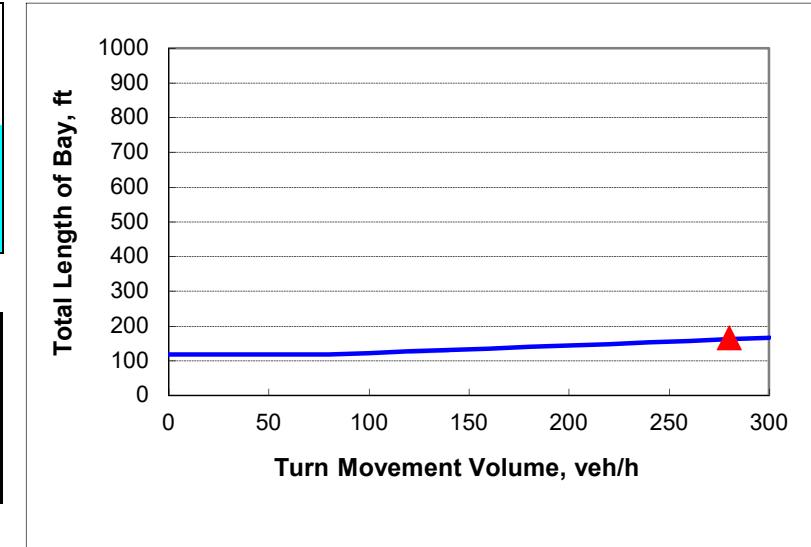


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	75
Conflicting volume, veh/h:	225
Operating speed, mph:	35
Total length of bay, ft:	100

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	25
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	25
Guidance for bay length:	
Bay length is adequate.	

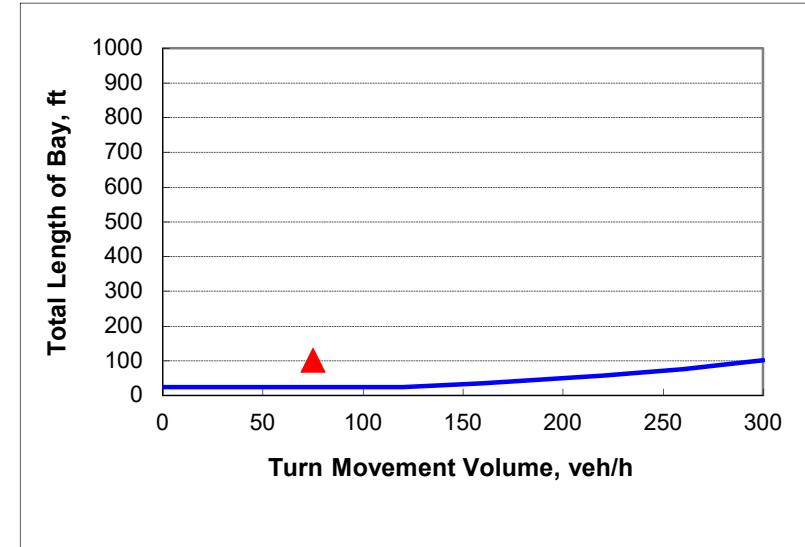


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	80
Conflicting volume, veh/h:	325
Operating speed, mph:	35
Total length of bay, ft:	100

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	25
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	25

Guidance for bay length:

Bay length is adequate.

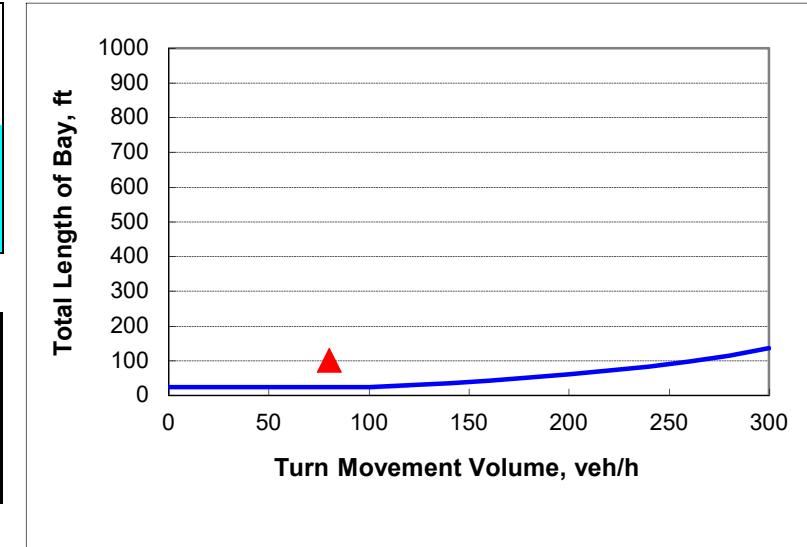


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Unstopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	145
Conflicting volume, veh/h:	160
Operating speed, mph:	35
Total length of bay, ft:	275

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	0
Length of bay needed for deceleration, ft:	93
Total length of bay needed, ft:	93
Guidance for bay length:	
Bay length is adequate.	

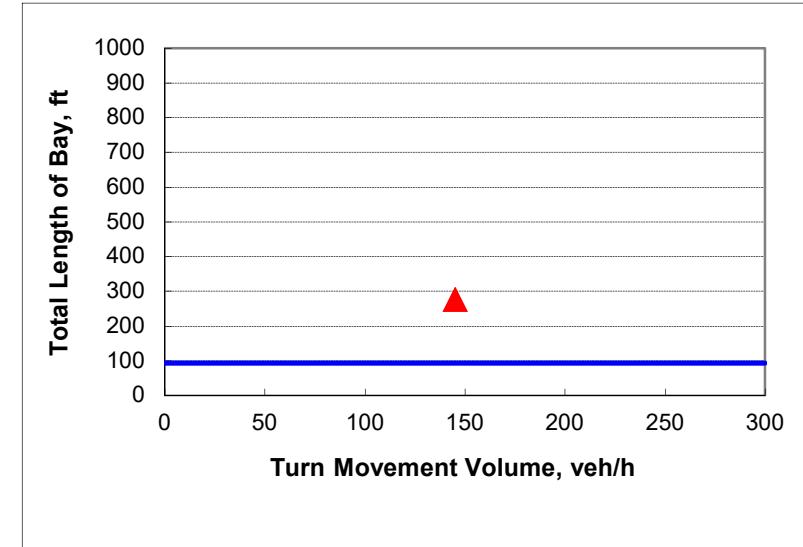


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Unstopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	180
Conflicting volume, veh/h:	235
Operating speed, mph:	35
Total length of bay, ft:	275

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	0
Length of bay needed for deceleration, ft:	93
Total length of bay needed, ft:	93
Guidance for bay length:	
Bay length is adequate.	

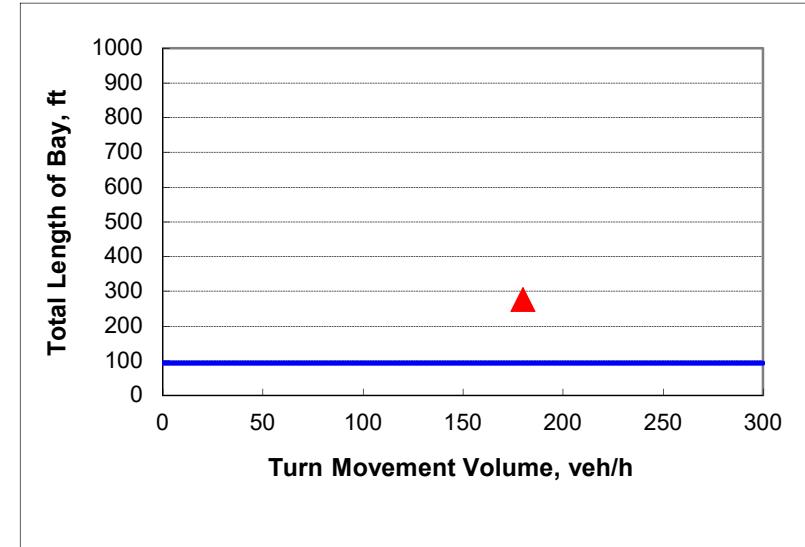


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	120
Conflicting volume, veh/h:	295
Operating speed, mph:	35
Total length of bay, ft:	100

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	28
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	28

Guidance for bay length:

Bay length is adequate.

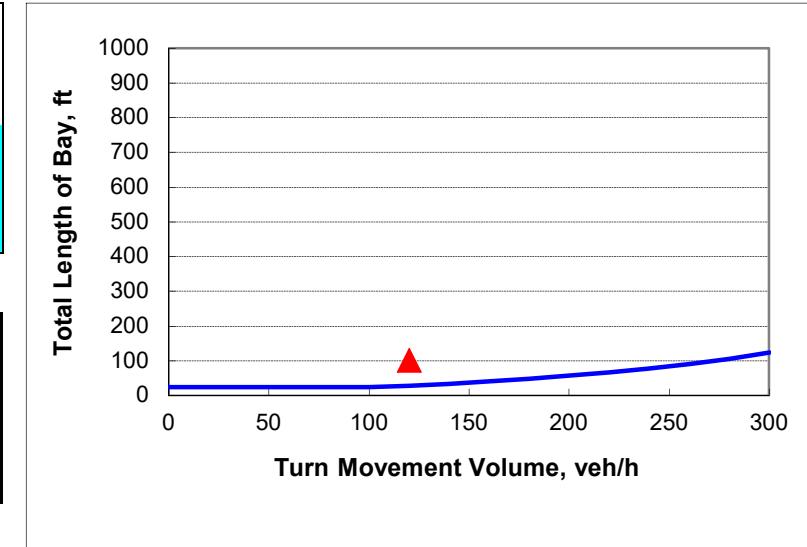


Table 2-13 and Figures 2-7, 2-8, & 2-9. Guideline for determining if the bay length is adequate.

INPUT

Approach control:	Stopped
Turn direction:	Right
Variable	Value
Turn movement volume, veh/h:	100
Conflicting volume, veh/h:	450
Operating speed, mph:	35
Total length of bay, ft:	100

OUTPUT

Variable	Value
Length of bay needed for storage, ft:	28
Length of bay needed for deceleration, ft:	0
Total length of bay needed, ft:	28
Guidance for bay length:	
Bay length is adequate.	

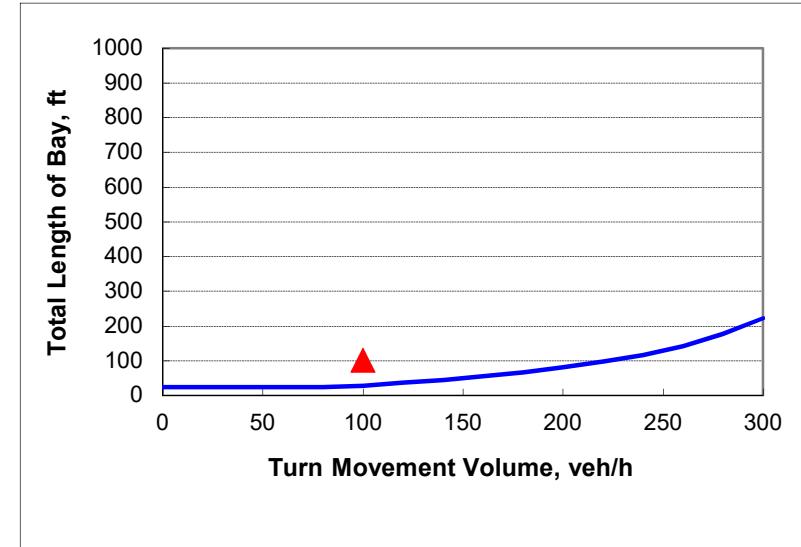


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	190
Opposing volume (V_O), veh/h:	295

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	768
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

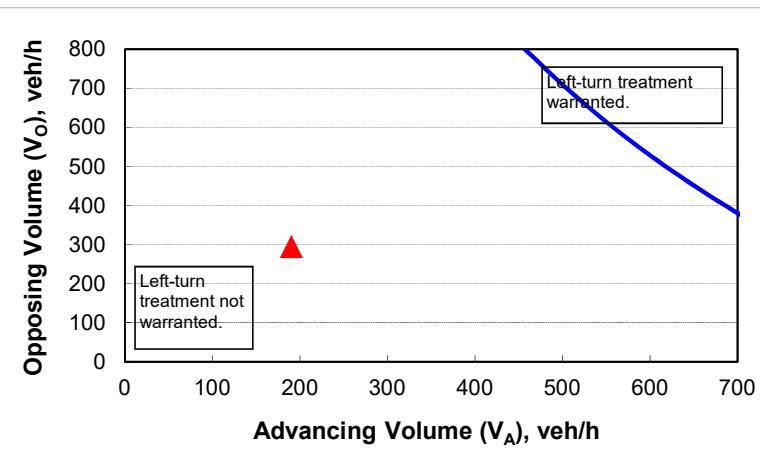


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	280
Opposing volume (V_O), veh/h:	205

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1034
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

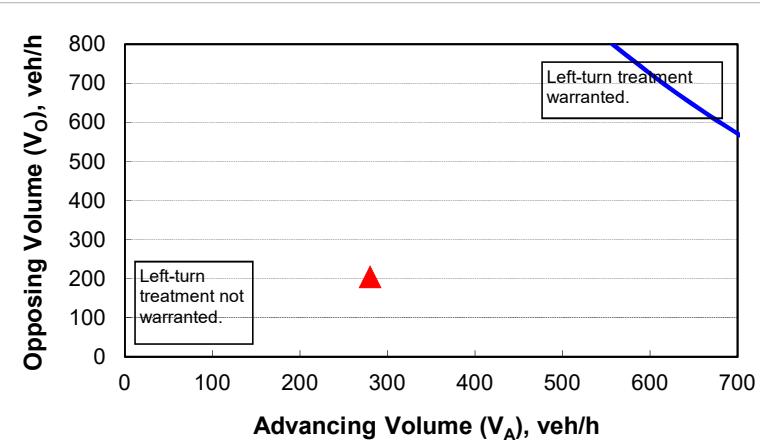


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	205
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	5259
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

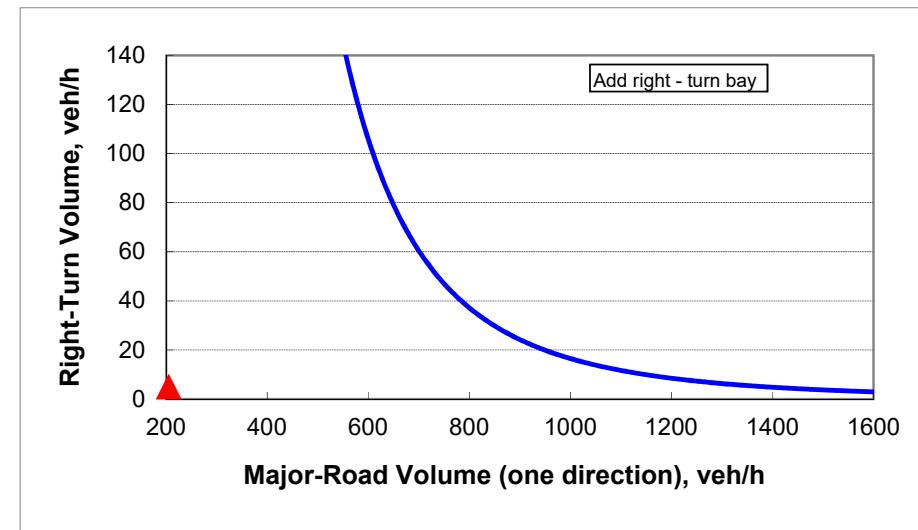


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	485
Percentage of right-turns on minor road, %:	51%
Minor-road volume (one direction), veh/h:	10

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	369
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

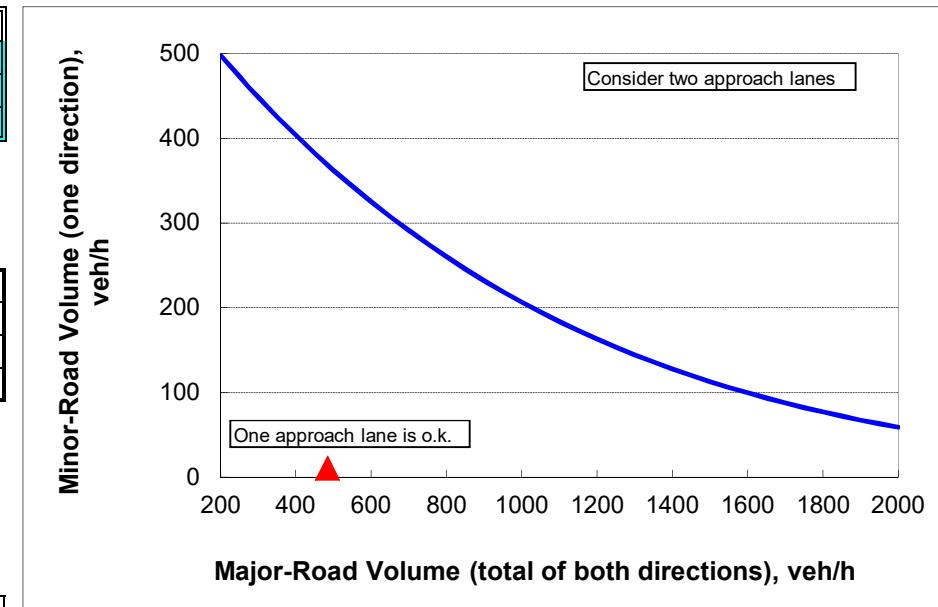


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	485
Percentage of right-turns on minor road, %:	41%
Minor-road volume (one direction), veh/h:	10

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	344
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

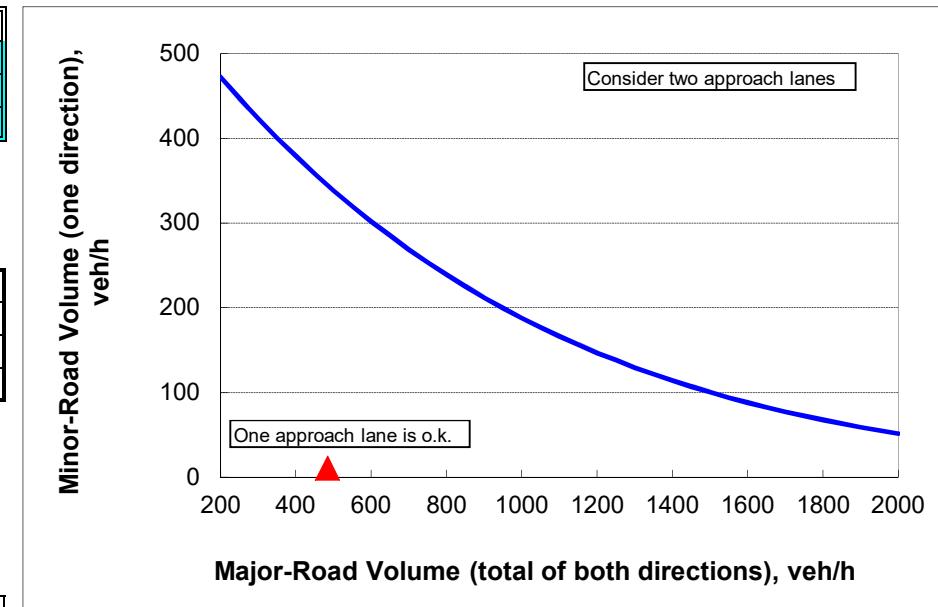


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

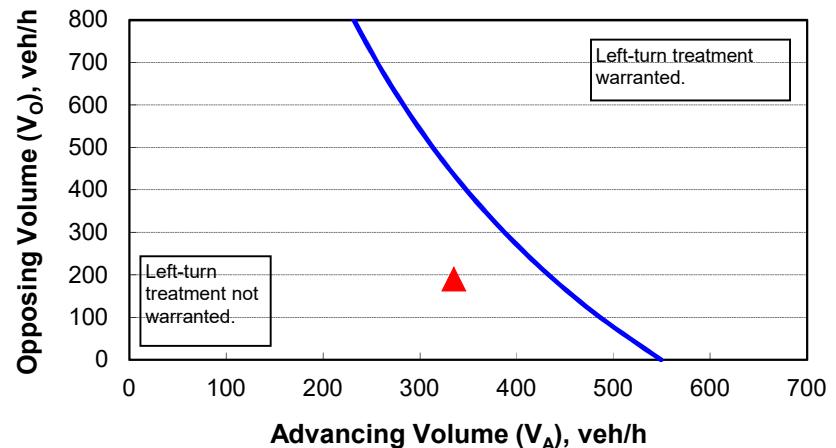
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	335
Opposing volume (V_O), veh/h:	190

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	438
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

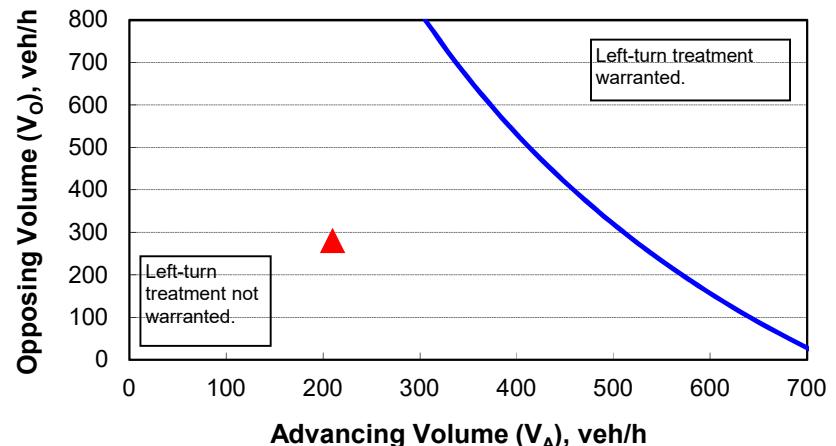
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	7%
Advancing volume (V_A), veh/h:	210
Opposing volume (V_O), veh/h:	280

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	522
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	190
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	6932
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

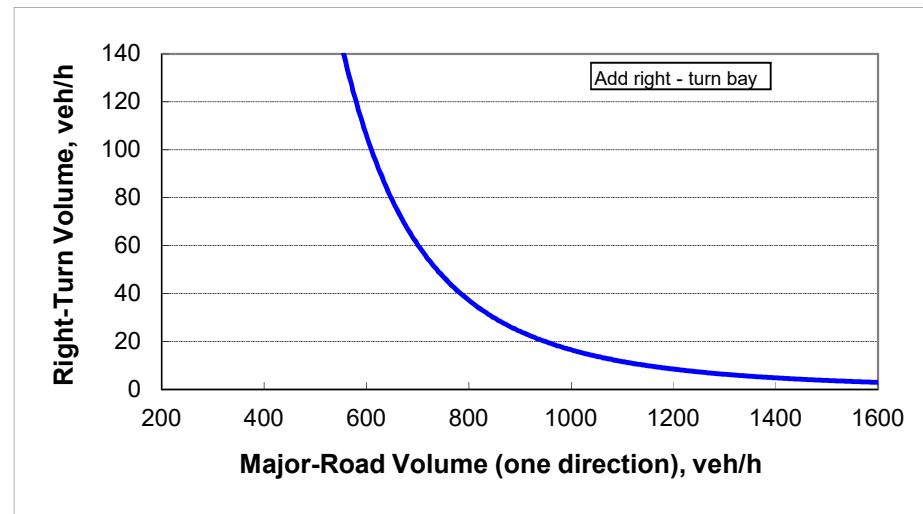


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	280
Right-turn volume, veh/h:	25

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1692
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

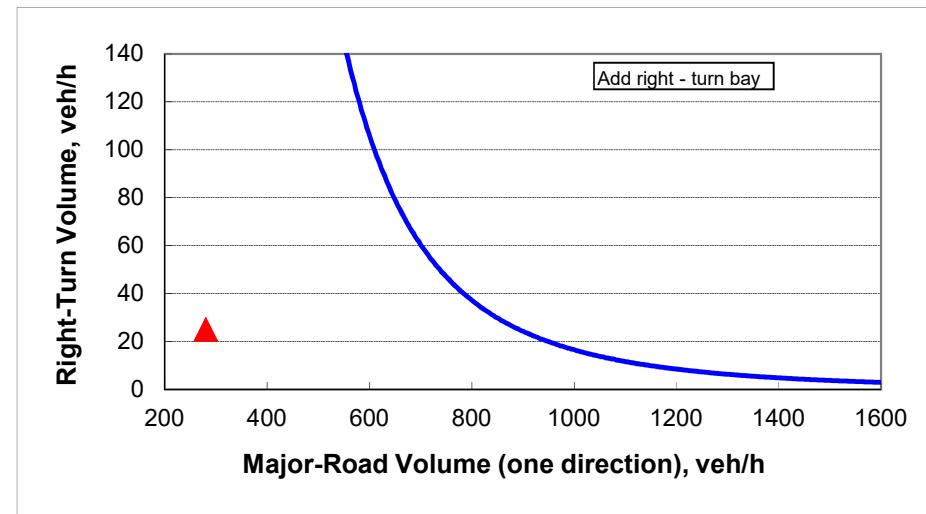


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

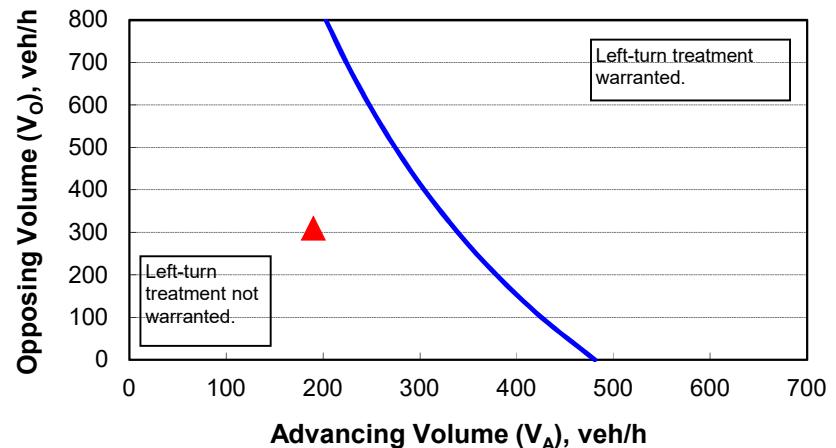
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	18%
Advancing volume (V_A), veh/h:	190
Opposing volume (V_O), veh/h:	310

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	336
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

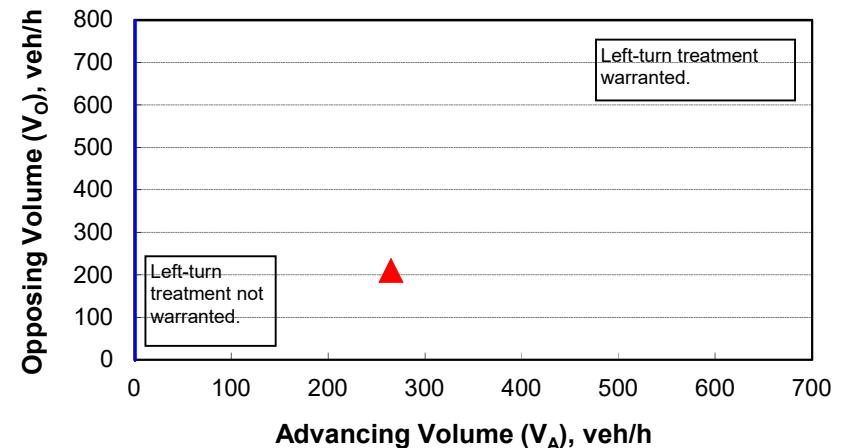
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	265
Opposing volume (V_O), veh/h:	210

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	#DIV/0!
Guidance for determining the need for a major-road left-turn bay:	#DIV/0!



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	295
Right-turn volume, veh/h:	15

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1400
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

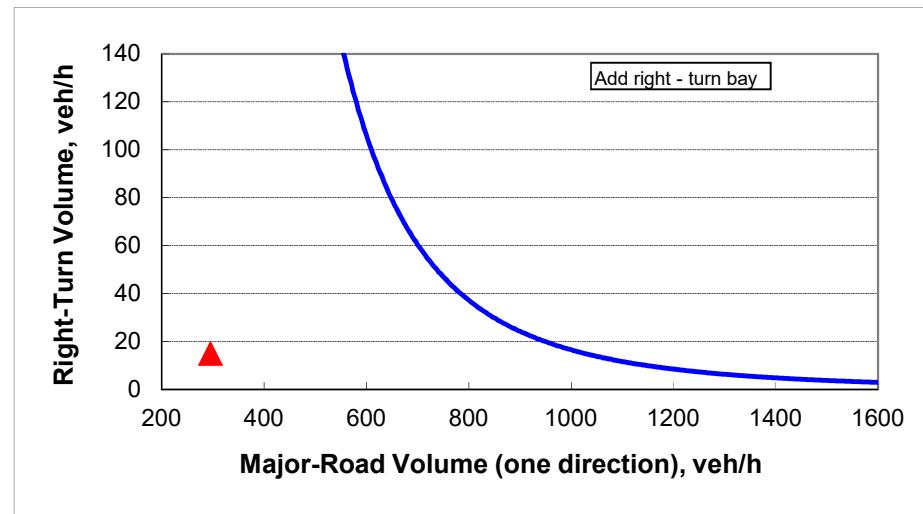


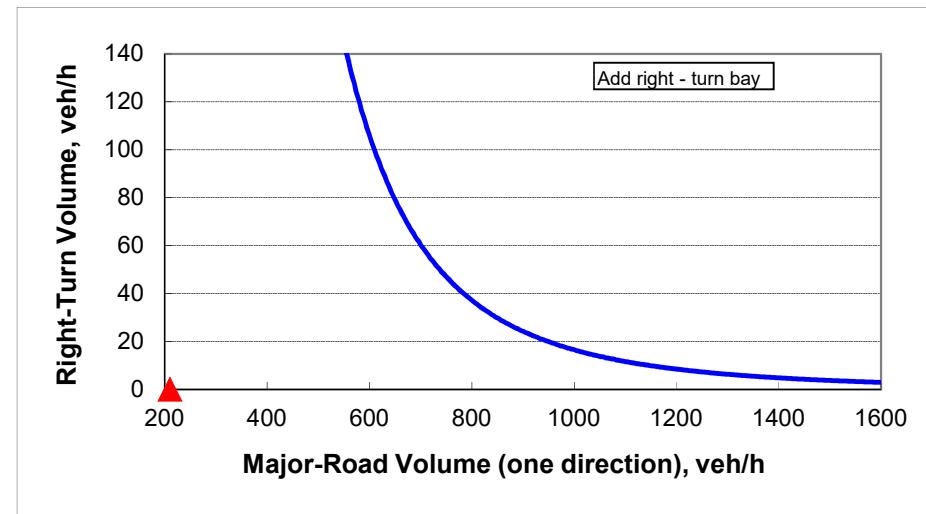
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	210
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	4817
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	





Appendix C-

Operational Analysis Results

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	215	5	5	135
Future Vol, veh/h	5	5	215	5	5	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	234	5	5	147

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	394	237	0	0	239
Stage 1	237	-	-	-	-
Stage 2	157	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	609	800	-	-	1322
Stage 1	800	-	-	-	-
Stage 2	869	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	607	800	-	-	1322
Mov Cap-2 Maneuver	607	-	-	-	-
Stage 1	797	-	-	-	-
Stage 2	869	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	690	1322	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	10.3	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection													
Int Delay, s/veh	11.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↔	↔		↔	↔		↖	↗		
Traffic Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95	
Future Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95	
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	260	-	-	-	-	-	-	-	-	-	-	275	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3	
Mvmt Flow	179	92	60	27	54	82	60	120	60	87	65	103	
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	577	539	65	637	612	150	168	0	0	180	0	0	
Stage 1	239	239	-	270	270	-	-	-	-	-	-	-	
Stage 2	338	300	-	367	342	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.13	-	-	4.13	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.227	-	-	2.227	-	-	
Pot Cap-1 Maneuver	428	449	999	390	408	896	1404	-	-	1389	-	-	
Stage 1	764	708	-	736	686	-	-	-	-	-	-	-	
Stage 2	676	666	-	653	638	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	315	397	999	275	361	896	1404	-	-	1389	-	-	
Mov Cap-2 Maneuver	315	397	-	275	361	-	-	-	-	-	-	-	
Stage 1	727	658	-	701	653	-	-	-	-	-	-	-	
Stage 2	536	634	-	491	593	-	-	-	-	-	-	-	
Approach	EB		WB		NB		SB						
HCM Control Delay, s	23.3		16.3		1.9		2.6						
HCM LOS	C		C										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1404	-	-	315	520	479	1389	-	-				
HCM Lane V/C Ratio	0.043	-	-	0.569	0.293	0.34	0.063	-	-				
HCM Control Delay (s)	7.7	0	-	30.5	14.8	16.3	7.8	0	-				
HCM Lane LOS	A	A	-	D	B	C	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	3.3	1.2	1.5	0.2	-	-				

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	215	135	5
Future Vol, veh/h	5	5	45	215	135	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	234	147	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	482	150	152	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	541	894	1423	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	523	894	1423	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.5	1.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1423	-	660	-	-	
HCM Lane V/C Ratio	0.034	-	0.016	-	-	
HCM Control Delay (s)	7.6	-	10.5	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1027	1031	994	975	964	997
Vehs Exited	1022	1024	1002	985	973	1001
Starting Vehs	34	38	48	43	40	41
Ending Vehs	39	45	40	33	31	37
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	1278	1254	1288	1243	1184	1249
Travel Time (hr)	42.3	42.0	42.6	41.2	39.3	41.5
Total Delay (hr)	3.7	3.8	3.5	3.4	3.3	3.5
Total Stops	599	552	552	549	550	560
Fuel Used (gal)	39.5	38.4	39.1	37.2	36.1	38.1

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	250	247	250	225	208	235
Vehs Exited	239	231	247	222	220	232
Starting Vehs	34	38	48	43	40	41
Ending Vehs	45	54	51	46	28	44
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	0	0	0	0	2	0
Travel Distance (mi)	312	298	338	277	261	297
Travel Time (hr)	10.5	9.9	11.1	9.2	8.6	9.9
Total Delay (hr)	1.0	0.7	0.9	0.8	0.6	0.8
Total Stops	148	122	135	120	114	129
Fuel Used (gal)	9.7	8.9	10.1	8.6	7.7	9.0

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	279	241	228	246	241	247
Vehs Exited	271	258	243	248	244	254
Starting Vehs	45	54	51	46	28	44
Ending Vehs	53	37	36	44	25	39
Denied Entry Before	0	0	0	0	2	0
Denied Entry After	1	0	0	0	0	0
Travel Distance (mi)	347	326	291	320	285	314
Travel Time (hr)	11.5	10.8	9.7	10.7	9.5	10.4
Total Delay (hr)	1.0	0.9	0.8	0.9	0.9	0.9
Total Stops	161	140	119	142	145	141
Fuel Used (gal)	10.7	9.8	8.9	9.3	9.0	9.5

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	257	268	298	272	256	270
Vehs Exited	264	263	282	276	227	262
Starting Vehs	53	37	36	44	25	39
Ending Vehs	46	42	52	40	54	47
Denied Entry Before	1	0	0	0	0	0
Denied Entry After	0	0	0	0	2	0
Travel Distance (mi)	333	305	371	362	296	333
Travel Time (hr)	10.9	10.2	12.2	11.9	9.7	11.0
Total Delay (hr)	1.0	0.9	1.1	0.9	0.8	0.9
Total Stops	148	133	169	157	131	148
Fuel Used (gal)	10.2	9.5	11.3	10.9	9.1	10.2

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	241	275	218	232	259	244
Vehs Exited	248	272	230	239	282	253
Starting Vehs	46	42	52	40	54	47
Ending Vehs	39	45	40	33	31	37
Denied Entry Before	0	0	0	0	2	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	286	325	289	284	342	305
Travel Time (hr)	9.4	11.1	9.5	9.4	11.5	10.2
Total Delay (hr)	0.8	1.2	0.7	0.8	1.0	0.9
Total Stops	142	157	129	130	160	144
Fuel Used (gal)	8.9	10.2	8.8	8.5	10.3	9.3

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBL	SBT	SBR	NWR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0		0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.0		1.4	2.9	0.5	0.3	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.4		0.0	3.0	0.0	0.0	0.3
Total Stops	4	0	0	39	0	0	43
Stop/Veh	0.15		0.00	1.00	0.00	0.00	0.10
Travel Dist (mi)	3.2	0.0	14.7	3.4	10.1	0.8	32.2
Travel Time (hr)	0.1	0.0	0.6	0.2	0.4	0.0	1.4
Avg Speed (mph)	26	31	25	20	23	20	24
Vehicles Entered	26	0	122	39	223	17	427
Vehicles Exited	26	0	122	39	222	17	426
Hourly Exit Rate	26	0	122	39	222	17	426
Input Volume	25	0	115	40	220	15	416
% of Volume	105	0	106	98	101	111	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1402
Occupancy (veh)	0	0	1	0	0	0	1

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.9	2.4	0.3	0.0	2.9	1.0	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.8	2.5	0.0	0.0	0.5	0.0	0.1
Total Stops	6	5	0	0	1	0	12
Stop/Veh	1.00	1.00	0.00	0.00	0.20	0.00	0.03
Travel Dist (mi)	0.1	0.1	13.0	0.3	0.6	19.6	33.9
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.6	1.1
Avg Speed (mph)	11	11	33	23	25	32	32
Vehicles Entered	6	5	213	5	5	146	380
Vehicles Exited	6	5	213	5	5	145	379
Hourly Exit Rate	6	5	213	5	5	145	379
Input Volume	5	5	215	5	5	135	370
% of Volume	120	100	99	100	100	107	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1104
Occupancy (veh)	0	0	0	0	0	1	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.7	0.6	0.7	0.2	0.2	0.2	0.0	0.0	0.0	0.4	0.5	3.7
Total Delay (hr)	0.4	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0
Total Del/Veh (s)	9.2	10.9	4.3	8.4	12.0	6.0	6.6	7.3	4.9	2.8	1.5	0.6
Stop Delay (hr)	0.3	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	6.8	5.9	3.5	5.7	7.1	4.7	0.8	0.2	0.1	0.9	0.1	0.0
Total Stops	153	82	59	28	55	77	10	5	2	16	1	2
Stop/Veh	0.99	0.99	1.00	1.00	0.98	0.99	0.19	0.05	0.03	0.19	0.02	0.02
Travel Dist (mi)	29.5	15.9	11.3	7.1	14.1	19.7	23.4	48.0	26.5	11.5	8.1	13.4
Travel Time (hr)	1.5	0.7	0.5	0.3	0.6	0.8	0.8	1.6	0.9	0.5	0.3	0.6
Avg Speed (mph)	22	22	25	25	24	25	29	30	29	26	32	27
Vehicles Entered	153	82	58	28	55	77	52	109	60	85	60	99
Vehicles Exited	154	82	59	28	55	77	53	108	60	85	60	100
Hourly Exit Rate	154	82	59	28	55	77	53	108	60	85	60	100
Input Volume	165	85	55	25	50	75	55	112	55	80	60	95
% of Volume	93	96	108	113	109	102	97	97	110	106	100	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	1	1	0	0	1	1	1	2	1	0	0	0

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.2
Total Delay (hr)	1.6
Total Del/Veh (s)	6.2
Stop Delay (hr)	0.8
Stop Del/Veh (s)	3.0
Total Stops	490
Stop/Veh	0.53
Travel Dist (mi)	228.5
Travel Time (hr)	9.0
Avg Speed (mph)	26
Vehicles Entered	918
Vehicles Exited	921
Hourly Exit Rate	921
Input Volume	911
% of Volume	101
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	823
Occupancy (veh)	9

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	5.5	3.1	2.3	0.3	1.8	1.3	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	4.6	3.3	0.5	0.1	0.0	0.0	0.2
Total Stops	3	5	7	0	0	0	15
Stop/Veh	1.00	1.00	0.15	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.0	0.1	5.5	25.9	37.6	1.4	70.5
Travel Time (hr)	0.0	0.0	0.3	0.9	1.2	0.0	2.4
Avg Speed (mph)	7	8	22	27	32	30	29
Vehicles Entered	3	5	46	215	145	5	419
Vehicles Exited	3	5	46	215	144	5	418
Hourly Exit Rate	3	5	46	215	144	5	418
Input Volume	5	5	45	215	135	5	410
% of Volume	60	100	102	100	107	100	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1102
Occupancy (veh)	0	0	0	1	1	0	2

Total Network Performance

Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.2
Total Delay (hr)	3.2
Total Del/Veh (s)	11.2
Stop Delay (hr)	0.9
Stop Del/Veh (s)	3.2
Total Stops	560
Stop/Veh	0.54
Travel Dist (mi)	1249.3
Travel Time (hr)	41.5
Avg Speed (mph)	30
Vehicles Entered	997
Vehicles Exited	1001
Hourly Exit Rate	1001
Input Volume	5602
% of Volume	18
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	825
Occupancy (veh)	41

Queueing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	SB	NW	NE
Directions Served	L	R	LR
Maximum Queue (ft)	31	50	15
Average Queue (ft)	3	21	0
95th Queue (ft)	18	44	0
Link Distance (ft)	457	185	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	27
Average Queue (ft)	10	1
95th Queue (ft)	33	13
Link Distance (ft)	137	657
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	LTR	LT	R
Maximum Queue (ft)	102	78	93	92	61	21
Average Queue (ft)	42	36	47	15	15	1
95th Queue (ft)	75	63	77	58	46	10
Link Distance (ft)	1010	1345	2291	711		
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	260				275	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	34	31
Average Queue (ft)	8	5
95th Queue (ft)	29	24
Link Distance (ft)	77	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	150	5	5	195
Future Vol, veh/h	5	5	150	5	5	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	163	5	5	212

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	388	166	0	0	168
Stage 1	166	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	614	876	-	-	1404
Stage 1	861	-	-	-	-
Stage 2	813	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	612	876	-	-	1404
Mov Cap-2 Maneuver	612	-	-	-	-
Stage 1	858	-	-	-	-
Stage 2	813	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1404	-
HCM Lane V/C Ratio	-	-	0.015	0.004	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection													
Int Delay, s/veh	11.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗												
Traffic Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135	
Future Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135	
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	260	-	-	-	-	-	-	-	-	-	-	275	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3	
Mvmt Flow	136	49	60	49	92	98	60	76	33	76	109	147	
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	569	490	109	602	621	93	256	0	0	109	0	0	
Stage 1	261	261	-	213	213	-	-	-	-	-	-	-	
Stage 2	308	229	-	389	408	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.13	-	-	4.13	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.227	-	-	2.227	-	-	
Pot Cap-1 Maneuver	433	479	945	412	403	964	1303	-	-	1475	-	-	
Stage 1	744	692	-	789	726	-	-	-	-	-	-	-	
Stage 2	702	715	-	635	597	-	-	-	-	-	-	-	
Platoon blocked, %								-	-	-	-	-	
Mov Cap-1 Maneuver	288	428	945	324	360	964	1303	-	-	1475	-	-	
Mov Cap-2 Maneuver	288	428	-	324	360	-	-	-	-	-	-	-	
Stage 1	708	650	-	750	690	-	-	-	-	-	-	-	
Stage 2	520	680	-	517	561	-	-	-	-	-	-	-	
Approach	EB		WB		NB		SB						
HCM Control Delay, s	21		20.3		2.8		1.7						
HCM LOS	C		C										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1303	-	-	288	612	470	1475	-	-				
HCM Lane V/C Ratio	0.046	-	-	0.472	0.178	0.509	0.052	-	-				
HCM Control Delay (s)	7.9	0	-	28.2	12.1	20.3	7.6	0	-				
HCM Lane LOS	A	A	-	D	B	C	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	2.4	0.6	2.8	0.2	-	-				

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	145	175	25
Future Vol, veh/h	10	10	15	145	175	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	158	190	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	394	204	217	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	609	834	1347	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	602	834	1347	-	-	-
Mov Cap-2 Maneuver	602	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.3	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1347	-	699	-	-	
HCM Lane V/C Ratio	0.012	-	0.031	-	-	
HCM Control Delay (s)	7.7	-	10.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1287	1321	1356	1269	1203	1285
Vehs Exited	1286	1313	1350	1273	1211	1286
Starting Vehs	37	37	45	52	46	41
Ending Vehs	38	45	51	48	38	43
Denied Entry Before	1	1	1	0	0	0
Denied Entry After	1	0	0	1	1	0
Travel Distance (mi)	1315	1387	1392	1417	1280	1358
Travel Time (hr)	43.8	47.4	46.9	47.1	42.9	45.6
Total Delay (hr)	3.7	5.0	4.4	3.9	3.8	4.2
Total Stops	510	541	568	506	480	521
Fuel Used (gal)	40.6	42.9	42.9	43.4	40.0	41.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	291	325	362	324	254	311
Vehs Exited	294	313	360	324	273	313
Starting Vehs	37	37	45	52	46	41
Ending Vehs	34	49	47	52	27	40
Denied Entry Before	1	1	1	0	0	0
Denied Entry After	0	1	2	0	0	0
Travel Distance (mi)	283	325	369	358	283	324
Travel Time (hr)	9.4	10.9	12.4	11.9	9.5	10.8
Total Delay (hr)	0.7	0.9	1.2	1.0	0.8	0.9
Total Stops	113	142	159	134	108	133
Fuel Used (gal)	8.9	10.1	11.6	11.1	8.9	10.1

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	337	310	315	276	305	310
Vehs Exited	327	310	320	288	304	310
Starting Vehs	34	49	47	52	27	40
Ending Vehs	44	49	42	40	28	40
Denied Entry Before	0	1	2	0	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	338	324	337	320	332	330
Travel Time (hr)	11.2	10.9	11.3	10.4	11.2	11.0
Total Delay (hr)	1.0	1.0	1.0	0.8	1.1	1.0
Total Stops	132	113	138	111	122	125
Fuel Used (gal)	10.4	10.0	10.1	9.6	10.5	10.1

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	348	355	360	357	341	353
Vehs Exited	342	345	354	350	323	343
Starting Vehs	44	49	42	40	28	40
Ending Vehs	50	59	48	47	46	54
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	2	1	0	0	0	0
Travel Distance (mi)	369	384	355	388	354	370
Travel Time (hr)	12.4	13.3	12.0	13.1	11.8	12.5
Total Delay (hr)	1.1	1.6	1.2	1.2	1.0	1.2
Total Stops	134	145	145	138	123	138
Fuel Used (gal)	11.4	11.7	11.1	11.8	11.0	11.4

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	311	331	319	312	303	314
Vehs Exited	323	345	316	311	311	320
Starting Vehs	50	59	48	47	46	54
Ending Vehs	38	45	51	48	38	43
Denied Entry Before	2	1	0	0	0	0
Denied Entry After	1	0	0	1	1	0
Travel Distance (mi)	325	355	331	351	311	335
Travel Time (hr)	10.7	12.2	11.1	11.6	10.4	11.2
Total Delay (hr)	0.9	1.4	1.0	0.9	0.9	1.0
Total Stops	131	141	126	123	127	129
Fuel Used (gal)	9.9	11.1	10.1	10.8	9.6	10.3

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBR	NEL	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.2
Total Del/Veh (s)	2.1	0.2	1.5
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	39.3	5.9	45.2
Travel Time (hr)	1.7	0.3	2.0
Avg Speed (mph)	23	22	23
Vehicles Entered	354	159	513
Vehicles Exited	354	160	514
Hourly Exit Rate	354	160	514
Input Volume	185	160	345
% of Volume	191	100	149
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			908
Occupancy (veh)	2	0	2

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.3	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	4.7	2.5	0.6	0.8	2.4	0.9	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.4	2.3	0.0	0.1	0.3	0.0	0.1
Total Stops	5	5	0	0	1	0	11
Stop/Veh	1.00	1.00	0.00	0.00	0.11	0.00	0.02
Travel Dist (mi)	0.1	0.1	48.3	1.7	0.9	38.6	89.7
Travel Time (hr)	0.0	0.0	1.4	0.1	0.0	1.2	2.8
Avg Speed (mph)	10	12	34	30	24	32	33
Vehicles Entered	5	5	151	5	9	396	571
Vehicles Exited	5	5	151	5	9	395	570
Hourly Exit Rate	5	5	151	5	9	395	570
Input Volume	5	5	150	5	5	195	365
% of Volume	100	100	100	100	180	203	156
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							922
Occupancy (veh)	0	0	1	0	0	1	3

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.8	0.4	0.5	0.2	0.3	0.3	0.2	0.2	0.2	0.5	0.6	3.6
Total Delay (hr)	0.4	0.1	0.1	0.2	0.4	0.2	0.2	0.2	0.0	0.1	0.0	0.0
Total Del/Veh (s)	12.1	11.6	3.8	14.8	16.5	9.7	5.1	4.2	2.6	2.9	1.6	0.7
Stop Delay (hr)	0.3	0.1	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	9.9	6.8	3.3	11.8	11.0	8.1	1.2	0.2	0.1	0.8	0.0	0.0
Total Stops	119	44	49	44	88	84	31	6	2	15	1	4
Stop/Veh	0.99	1.00	1.00	1.00	0.99	0.99	0.28	0.04	0.04	0.21	0.01	0.03
Travel Dist (mi)	22.9	8.4	9.4	11.0	22.3	21.6	25.6	33.0	12.6	9.5	14.1	18.5
Travel Time (hr)	1.3	0.4	0.4	0.5	1.1	0.9	1.0	1.1	0.5	0.4	0.5	0.8
Avg Speed (mph)	20	22	25	21	21	23	27	29	28	26	31	27
Vehicles Entered	119	43	49	43	88	85	111	142	54	71	104	137
Vehicles Exited	119	44	49	44	88	84	110	142	54	71	104	137
Hourly Exit Rate	119	44	49	44	88	84	110	142	54	71	104	137
Input Volume	125	45	55	45	85	90	55	70	30	70	100	135
% of Volume	95	97	89	97	103	94	201	203	180	101	104	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	1	0	0	1	1	1	1	1	0	0	0	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.2
Total Delay (hr)	1.9
Total Del/Veh (s)	6.5
Stop Delay (hr)	1.1
Stop Del/Veh (s)	3.9
Total Stops	487
Stop/Veh	0.46
Travel Dist (mi)	208.9
Travel Time (hr)	8.8
Avg Speed (mph)	25
Vehicles Entered	1046
Vehicles Exited	1046
Hourly Exit Rate	1046
Input Volume	905
% of Volume	116
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	762
Occupancy (veh)	8

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Total Del/Veh (s)	7.4	3.9	2.4	0.2	2.7	2.0	2.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.7	3.7	0.8	0.0	0.0	0.0	0.2
Total Stops	11	9	3	0	0	0	23
Stop/Veh	1.00	1.00	0.21	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.4	0.3	1.6	16.3	111.0	16.8	146.3
Travel Time (hr)	0.0	0.0	0.1	0.6	3.5	0.6	4.7
Avg Speed (mph)	10	12	21	28	32	30	31
Vehicles Entered	11	9	14	146	347	53	580
Vehicles Exited	11	9	14	146	346	53	579
Hourly Exit Rate	11	9	14	146	346	53	579
Input Volume	10	10	15	146	175	25	382
% of Volume	107	88	92	100	197	214	152
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							631
Occupancy (veh)	0	0	0	1	3	1	5

Total Network Performance

Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.1
Total Delay (hr)	3.8
Total Del/Veh (s)	10.2
Stop Delay (hr)	1.3
Stop Del/Veh (s)	3.4
Total Stops	521
Stop/Veh	0.39
Travel Dist (mi)	1358.3
Travel Time (hr)	45.6
Avg Speed (mph)	30
Vehicles Entered	1285
Vehicles Exited	1286
Hourly Exit Rate	1286
Input Volume	6124
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	750
Occupancy (veh)	45

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement

WB

SB

Directions Served

LR

LT

Maximum Queue (ft)

30

29

Average Queue (ft)

8

1

95th Queue (ft)

29

12

Link Distance (ft)

137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement

EB

EB

WB

NB

SB

SB

Directions Served

L

TR

LTR

LTR

LT

R

Maximum Queue (ft)

96

74

140

94

56

21

Average Queue (ft)

42

27

67

28

14

3

95th Queue (ft)

78

52

122

75

45

14

Link Distance (ft)

1010

1345

711

Upstream Blk Time (%)

Queuing Penalty (veh)

260

275

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	40	30
Average Queue (ft)	15	3
95th Queue (ft)	41	18
Link Distance (ft)	183	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations						
Traffic Vol, veh/h	0	40	295	15	35	155
Future Vol, veh/h	0	40	295	15	35	155
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	43	321	16	38	168

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	329	0	0	337	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	710	-	-	1217	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	710	-	-	1217	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	10.4	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	710	1217	-
HCM Lane V/C Ratio	-	-	0.061	0.031	-
HCM Control Delay (s)	-	-	10.4	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	290	5	5	185
Future Vol, veh/h	5	5	290	5	5	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	315	5	5	201

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	318	0	0	320
Stage 1	318	-	-	-	-
Stage 2	211	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	720	-	-	1234
Stage 1	735	-	-	-	-
Stage 2	822	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	505	720	-	-	1234
Mov Cap-2 Maneuver	505	-	-	-	-
Stage 1	731	-	-	-	-
Stage 2	822	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1234	-
HCM Lane V/C Ratio	-	-	0.018	0.004	-
HCM Control Delay (s)	-	-	11.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection														
Int Delay, s/veh	38.2													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗		
Traffic Vol, veh/h	220	115	75	35	60	100	65	155	75	100	80	145		
Future Vol, veh/h	220	115	75	35	60	100	65	155	75	100	80	145		
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	260	-	-	-	-	-	-	-	-	-	-	275		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-		
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-		
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92		
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3		
Mvmt Flow	239	125	82	38	65	109	71	168	82	109	87	158		
Major/Minor		Minor2		Minor1		Major1		Major2						
Conflicting Flow All	743	697	87	839	814	209	245	0	0	250	0	0		
Stage 1	305	305	-	351	351	-	-	-	-	-	-	-		
Stage 2	438	392	-	488	463	-	-	-	-	-	-	-		
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.13	-	-	4.13	-	-		
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-		
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.227	-	-	2.227	-	-		
Pot Cap-1 Maneuver	331	365	971	285	312	831	1315	-	-	1310	-	-		
Stage 1	705	662	-	666	632	-	-	-	-	-	-	-		
Stage 2	597	606	-	561	564	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	~ 206	308	971	159	264	831	1315	-	-	1310	-	-		
Mov Cap-2 Maneuver	~ 206	308	-	159	264	-	-	-	-	-	-	-		
Stage 1	661	597	-	624	592	-	-	-	-	-	-	-		
Stage 2	433	568	-	366	509	-	-	-	-	-	-	-		
Approach		EB		WB		NB		SB						
HCM Control Delay, s	96.2			31.1			1.7			2.5				
HCM LOS	F			D										
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1315	-	-	206	422	343	1310	-	-	-				
HCM Lane V/C Ratio	0.054	-	-	1.161	0.489	0.618	0.083	-	-	-				
HCM Control Delay (s)	7.9	0	-	160.8	21.4	31.1	8	0	-	-				
HCM Lane LOS	A	A	-	F	C	D	A	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	11.8	2.6	3.9	0.3	-	-	-				
Notes														
~: Volume exceeds capacity		\$: Delay exceeds 300s	+:	Computation Not Defined				*: All major volume in platoon						

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	290	185	5
Future Vol, veh/h	5	5	45	290	185	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	315	201	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	617	204	206	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	452	834	1359	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	436	834	1359	-	-	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.4	1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1359	-	573	-	-	
HCM Lane V/C Ratio	0.036	-	0.019	-	-	
HCM Control Delay (s)	7.7	-	11.4	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1818	1822	1798	1780	1742	1791
Vehs Exited	1814	1822	1789	1777	1723	1785
Starting Vehs	63	63	63	58	42	58
Ending Vehs	67	63	72	61	61	64
Denied Entry Before	0	0	1	0	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	1882	1903	1930	1895	1786	1879
Travel Time (hr)	70.3	69.3	68.4	66.4	66.2	68.1
Total Delay (hr)	13.9	12.3	10.9	10.0	12.8	12.0
Total Stops	907	891	871	841	815	866
Fuel Used (gal)	59.0	59.4	59.2	58.6	56.4	58.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	441	428	472	414	383	428
Vehs Exited	451	427	469	401	365	422
Starting Vehs	63	63	63	58	42	58
Ending Vehs	53	64	66	71	60	63
Denied Entry Before	0	0	1	0	0	0
Denied Entry After	1	0	1	0	1	0
Travel Distance (mi)	521	438	504	467	383	463
Travel Time (hr)	18.0	15.4	18.6	15.7	12.9	16.1
Total Delay (hr)	2.5	2.2	3.7	1.9	1.2	2.3
Total Stops	220	220	225	199	161	206
Fuel Used (gal)	16.1	13.7	15.7	14.3	11.6	14.3

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	430	443	409	423	448	429
Vehs Exited	417	448	416	430	434	430
Starting Vehs	53	64	66	71	60	63
Ending Vehs	66	59	59	64	74	64
Denied Entry Before	1	0	1	0	1	0
Denied Entry After	0	2	0	0	0	0
Travel Distance (mi)	419	469	430	463	462	449
Travel Time (hr)	15.0	16.1	14.7	16.3	16.1	15.6
Total Delay (hr)	2.4	2.1	1.9	2.5	2.3	2.2
Total Stops	222	206	188	192	212	204
Fuel Used (gal)	12.9	14.4	12.8	14.2	14.2	13.7

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	494	485	480	483	483	487
Vehs Exited	481	472	457	475	469	470
Starting Vehs	66	59	59	64	74	64
Ending Vehs	79	72	82	72	88	77
Denied Entry Before	0	2	0	0	0	0
Denied Entry After	0	0	0	4	0	1
Travel Distance (mi)	501	483	517	468	485	491
Travel Time (hr)	19.8	17.2	17.9	16.7	20.6	18.4
Total Delay (hr)	4.6	2.8	2.5	2.7	6.3	3.8
Total Stops	252	218	230	227	250	234
Fuel Used (gal)	15.9	15.0	15.7	14.6	16.1	15.5

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	453	466	437	460	428	447
Vehs Exited	465	475	447	471	455	462
Starting Vehs	79	72	82	72	88	77
Ending Vehs	67	63	72	61	61	64
Denied Entry Before	0	0	0	4	0	1
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	440	512	478	498	456	477
Travel Time (hr)	17.5	20.6	17.1	17.7	16.7	17.9
Total Delay (hr)	4.4	5.2	2.9	2.8	3.0	3.7
Total Stops	213	247	228	223	192	223
Fuel Used (gal)	14.0	16.3	14.9	15.6	14.5	15.1

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	3.2	0.5	0.1	3.5	0.9	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	3.2	0.0	0.0	1.0	0.0	0.3
Total Stops	44	0	0	19	0	63
Stop/Veh	1.00	0.00	0.00	0.30	0.00	0.09
Travel Dist (mi)	5.8	23.3	1.1	8.0	39.4	77.6
Travel Time (hr)	0.2	0.7	0.0	0.3	1.2	2.6
Avg Speed (mph)	23	33	25	24	32	30
Vehicles Entered	44	286	14	64	316	724
Vehicles Exited	44	285	14	64	315	722
Hourly Exit Rate	44	285	14	64	315	722
Input Volume	40	295	15	35	156	541
% of Volume	110	97	92	183	202	133
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Density (ft/veh)						935

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.4	0.2	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1	0.2
Total Del/Veh (s)	5.7	4.2	1.2	0.8	2.8	0.8	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	4.2	4.1	0.0	0.0	0.7	0.0	0.1
Total Stops	3	6	0	0	2	0	11
Stop/Veh	1.00	1.00	0.00	0.00	0.22	0.00	0.02
Travel Dist (mi)	0.1	0.2	90.7	1.3	0.9	37.5	130.7
Travel Time (hr)	0.0	0.0	2.7	0.0	0.0	1.2	4.0
Avg Speed (mph)	10	9	33	30	24	32	33
Vehicles Entered	3	6	284	4	9	378	684
Vehicles Exited	3	6	282	4	9	377	681
Hourly Exit Rate	3	6	282	4	9	377	681
Input Volume	5	5	290	5	5	185	496
% of Volume	60	120	97	80	180	204	137
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							639

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.5	0.8	0.8	0.2	0.2	0.2	0.4	0.5	0.4	0.7	0.6	3.6
Total Delay (hr)	3.6	1.1	0.5	0.4	0.7	0.9	0.3	0.6	0.2	0.1	0.1	0.0
Total Del/Veh (s)	57.4	34.1	25.0	38.1	43.4	32.9	7.1	6.8	4.5	5.6	2.7	0.9
Stop Delay (hr)	3.5	1.0	0.5	0.4	0.7	0.9	0.1	0.0	0.0	0.1	0.0	0.0
Stop Del/Veh (s)	55.8	29.1	24.0	35.7	38.8	31.9	1.7	0.5	0.6	3.2	0.5	0.1
Total Stops	221	121	72	39	60	98	45	25	20	50	8	7
Stop/Veh	0.99	1.00	1.01	0.98	0.97	0.99	0.34	0.08	0.13	0.53	0.09	0.05
Travel Dist (mi)	42.4	23.0	13.6	10.1	15.2	24.8	24.7	58.4	28.5	12.6	11.9	19.6
Travel Time (hr)	5.1	1.8	1.0	0.7	1.2	1.7	1.1	2.3	1.2	0.6	0.4	0.9
Avg Speed (mph)	9	13	14	14	13	14	24	26	24	22	29	27
Vehicles Entered	220	119	70	40	60	98	130	307	153	93	88	146
Vehicles Exited	218	120	70	39	61	97	131	307	155	94	88	145
Hourly Exit Rate	218	120	70	39	61	97	131	307	155	94	88	145
Input Volume	220	115	75	35	60	100	65	155	75	100	80	145
% of Volume	99	104	93	111	102	97	202	198	206	94	110	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.2
Total Delay (hr)	8.6
Total Del/Veh (s)	20.0
Stop Delay (hr)	7.1
Stop Del/Veh (s)	16.6
Total Stops	766
Stop/Veh	0.50
Travel Dist (mi)	284.9
Travel Time (hr)	18.1
Avg Speed (mph)	16
Vehicles Entered	1524
Vehicles Exited	1525
Hourly Exit Rate	1525
Input Volume	1226
% of Volume	124
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	350

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Total Del/Veh (s)	6.9	3.0	3.3	0.5	2.0	2.0	1.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	6.0	3.1	1.4	0.1	0.0	0.0	0.2
Total Stops	4	7	15	0	0	0	26
Stop/Veh	1.00	1.00	0.33	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.1	0.1	5.5	35.5	119.9	2.4	163.5
Travel Time (hr)	0.0	0.0	0.2	1.1	3.7	0.1	5.1
Avg Speed (mph)	6	8	24	32	33	30	32
Vehicles Entered	4	7	44	286	373	7	721
Vehicles Exited	4	7	44	286	373	7	721
Hourly Exit Rate	4	7	44	286	373	7	721
Input Volume	5	5	45	291	185	5	537
% of Volume	80	140	97	98	201	140	134
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							596

Total Network Performance

Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.1
Total Delay (hr)	11.4
Total Del/Veh (s)	22.2
Stop Delay (hr)	7.3
Stop Del/Veh (s)	14.3
Total Stops	866
Stop/Veh	0.47
Travel Dist (mi)	1879.3
Travel Time (hr)	68.1
Avg Speed (mph)	28
Vehicles Entered	1791
Vehicles Exited	1785
Hourly Exit Rate	1785
Input Volume	8453
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	512

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	WB	NB	SB
Directions Served	R	TR	L
Maximum Queue (ft)	58	4	45
Average Queue (ft)	20	0	15
95th Queue (ft)	44	3	42
Link Distance (ft)	697	375	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	39	30
Average Queue (ft)	9	3
95th Queue (ft)	31	17
Link Distance (ft)	137	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	LTR	LT	R
Maximum Queue (ft)	319	302	233	189	94	27
Average Queue (ft)	132	97	100	60	34	4
95th Queue (ft)	294	226	196	145	75	19
Link Distance (ft)		1010	1345		711	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260			275	
Storage Blk Time (%)		8	0			
Queuing Penalty (veh)		17	0			

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	30	35
Average Queue (ft)	9	12
95th Queue (ft)	31	37
Link Distance (ft)	79	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 17

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	0	210	0	0	265
Future Vol, veh/h	0	0	210	0	0	265
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	228	0	0	288

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	228	0	0	228	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	809	-	-	1334	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	809	-	-	1334	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s 0 0 0

HCM LOS A

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1334	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	200	5	5	275
Future Vol, veh/h	5	5	200	5	5	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	217	5	5	299

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	220	0	0	222
Stage 1	220	-	-	-	-
Stage 2	309	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	817	-	-	1341
Stage 1	814	-	-	-	-
Stage 2	742	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	506	817	-	-	1341
Mov Cap-2 Maneuver	506	-	-	-	-
Stage 1	811	-	-	-	-
Stage 2	742	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1341	-
HCM Lane V/C Ratio	-	-	0.017	0.004	-
HCM Control Delay (s)	-	-	10.9	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection														
Int Delay, s/veh	52.4													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗		
Traffic Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180		
Future Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180		
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	260	-	-	-	-	-	-	-	-	-	-	275		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-		
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-		
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92		
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3		
Mvmt Flow	179	65	87	60	125	130	82	103	38	109	158	196		
Major/Minor		Minor2		Minor1		Major1		Major2						
Conflicting Flow All	790	681	158	836	858	122	354	0	0	141	0	0		
Stage 1	376	376	-	286	286	-	-	-	-	-	-	-		
Stage 2	414	305	-	550	572	-	-	-	-	-	-	-		
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.13	-	-	4.13	-	-		
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-		
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.227	-	-	2.227	-	-		
Pot Cap-1 Maneuver	308	373	887	287	294	929	1199	-	-	1436	-	-		
Stage 1	645	616	-	721	675	-	-	-	-	-	-	-		
Stage 2	616	662	-	519	504	-	-	-	-	-	-	-		
Platoon blocked, %								-	-	-	-	-		
Mov Cap-1 Maneuver	~ 140	311	887	191	245	929	1199	-	-	1436	-	-		
Mov Cap-2 Maneuver	~ 140	311	-	191	245	-	-	-	-	-	-	-		
Stage 1	597	556	-	667	624	-	-	-	-	-	-	-		
Stage 2	392	612	-	373	455	-	-	-	-	-	-	-		
Approach		EB		WB		NB		SB						
HCM Control Delay, s	132.1			77.5			3			1.8				
HCM LOS	F			F										
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1199	-	-	140	494	327	1436	-	-	-				
HCM Lane V/C Ratio	0.068	-	-	1.281	0.308	0.964	0.076	-	-	-				
HCM Control Delay (s)	8.2	0	-	231.1	15.5	77.5	7.7	0	-	-				
HCM Lane LOS	A	A	-	F	C	F	A	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	11	1.3	10.2	0.2	-	-	-				
Notes														
~: Volume exceeds capacity		\$: Delay exceeds 300s	+:	Computation Not Defined				*: All major volume in platoon						

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	195	255	25
Future Vol, veh/h	10	10	15	195	255	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	212	277	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	535	291	304	0	-	0
Stage 1	291	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	504	746	1251	-	-	-
Stage 1	756	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	497	746	1251	-	-	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1251	-	597	-	-	
HCM Lane V/C Ratio	0.013	-	0.036	-	-	
HCM Control Delay (s)	7.9	-	11.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1772	1787	1824	1735	1672	1757
Vehs Exited	1769	1779	1823	1709	1694	1754
Starting Vehs	60	61	62	64	70	60
Ending Vehs	63	69	63	90	48	67
Denied Entry Before	1	1	0	1	2	1
Denied Entry After	0	1	0	0	1	0
Travel Distance (mi)	1945	1901	1975	1816	1813	1890
Travel Time (hr)	70.6	67.0	69.2	68.7	63.4	67.8
Total Delay (hr)	12.4	10.5	10.6	14.6	9.6	11.5
Total Stops	781	778	809	802	739	780
Fuel Used (gal)	59.4	58.1	60.5	57.1	55.0	58.0

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	439	446	447	399	362	417
Vehs Exited	437	439	443	402	377	419
Starting Vehs	60	61	62	64	70	60
Ending Vehs	62	68	66	61	55	63
Denied Entry Before	1	1	0	1	2	1
Denied Entry After	0	0	0	0	1	0
Travel Distance (mi)	476	457	488	427	422	454
Travel Time (hr)	16.8	15.8	16.4	14.9	14.3	15.6
Total Delay (hr)	2.5	2.2	2.0	2.3	1.8	2.1
Total Stops	190	182	203	197	167	188
Fuel Used (gal)	14.6	14.1	14.7	13.2	12.7	13.9

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	437	435	434	411	425	429
Vehs Exited	422	440	427	418	434	428
Starting Vehs	62	68	66	61	55	63
Ending Vehs	77	63	73	54	46	64
Denied Entry Before	0	0	0	0	1	0
Denied Entry After	1	0	1	0	1	0
Travel Distance (mi)	489	489	471	408	435	458
Travel Time (hr)	16.6	16.9	16.9	14.1	15.0	15.9
Total Delay (hr)	2.0	2.4	2.9	2.1	2.1	2.3
Total Stops	186	185	193	176	190	187
Fuel Used (gal)	14.3	14.8	14.6	12.4	13.2	13.9

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	467	460	523	470	469	479
Vehs Exited	465	450	501	416	432	451
Starting Vehs	77	63	73	54	46	64
Ending Vehs	79	73	95	108	83	90
Denied Entry Before	1	0	1	0	1	0
Denied Entry After	1	0	1	1	2	0
Travel Distance (mi)	482	484	553	475	489	497
Travel Time (hr)	19.1	16.6	18.9	17.9	17.6	18.0
Total Delay (hr)	4.7	2.2	2.5	3.7	3.1	3.3
Total Stops	218	198	226	220	222	217
Fuel Used (gal)	15.2	14.6	16.7	14.8	14.9	15.2

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	429	446	420	455	416	435
Vehs Exited	445	450	452	473	451	454
Starting Vehs	79	73	95	108	83	90
Ending Vehs	63	69	63	90	48	67
Denied Entry Before	1	0	1	1	2	0
Denied Entry After	0	1	0	0	1	0
Travel Distance (mi)	498	472	463	506	467	481
Travel Time (hr)	18.0	17.8	17.0	21.8	16.5	18.2
Total Delay (hr)	3.2	3.7	3.2	6.5	2.6	3.8
Total Stops	187	213	187	209	160	193
Fuel Used (gal)	15.3	14.6	14.4	16.7	14.2	15.1

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.2	0.2
Total Del/Veh (s)	0.2	1.3	1.0
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	19.2	65.3	84.5
Travel Time (hr)	0.6	2.1	2.6
Avg Speed (mph)	34	31	32
Vehicles Entered	206	523	729
Vehicles Exited	206	523	729
Hourly Exit Rate	206	523	729
Input Volume	210	266	476
% of Volume	98	196	153
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)	925		

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.4	0.4	0.3
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.2	0.3
Total Del/Veh (s)	9.2	2.7	1.1	1.1	2.7	1.2	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	7.8	2.5	0.0	0.0	0.7	0.0	0.1
Total Stops	4	3	0	0	1	1	9
Stop/Veh	1.00	1.00	0.00	0.00	0.12	0.00	0.01
Travel Dist (mi)	0.1	0.1	61.6	2.4	0.7	55.6	120.6
Travel Time (hr)	0.0	0.0	1.8	0.1	0.0	1.8	3.8
Avg Speed (mph)	7	12	33	31	22	31	32
Vehicles Entered	4	3	194	8	8	560	777
Vehicles Exited	4	3	193	7	8	560	775
Hourly Exit Rate	4	3	193	7	8	560	775
Input Volume	5	5	200	5	5	275	495
% of Volume	80	60	96	140	160	204	156
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)	675						

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	3.6	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.7	0.8	3.5
Total Delay (hr)	1.7	0.3	0.2	0.9	2.1	1.7	0.3	0.3	0.1	0.1	0.1	0.1
Total Del/Veh (s)	36.0	19.4	7.9	59.2	64.0	51.5	6.8	5.6	4.0	3.6	2.4	1.0
Stop Delay (hr)	1.6	0.3	0.2	0.8	2.0	1.7	0.1	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	34.0	14.5	7.1	57.0	59.8	50.8	2.2	0.7	0.7	1.2	0.2	0.1
Total Stops	167	62	82	53	119	119	64	20	10	31	6	12
Stop/Veh	0.99	0.98	0.99	1.00	0.99	0.99	0.44	0.11	0.14	0.31	0.04	0.07
Travel Dist (mi)	32.0	12.0	15.9	13.5	30.1	30.0	27.5	36.1	13.3	13.5	20.8	24.4
Travel Time (hr)	2.9	0.7	0.7	1.3	3.0	2.7	1.2	1.4	0.5	0.6	0.7	1.1
Avg Speed (mph)	12	17	22	10	10	11	24	27	25	25	30	26
Vehicles Entered	167	62	83	53	118	118	144	190	73	100	154	181
Vehicles Exited	166	63	82	51	116	115	144	189	72	100	153	181
Hourly Exit Rate	166	63	82	51	116	115	144	189	72	100	153	181
Input Volume	165	60	80	55	115	120	75	95	35	100	145	180
% of Volume	101	105	102	93	101	96	191	199	206	100	105	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	1	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.2
Total Delay (hr)	7.8
Total Del/Veh (s)	19.4
Stop Delay (hr)	6.7
Stop Del/Veh (s)	16.6
Total Stops	745
Stop/Veh	0.51
Travel Dist (mi)	269.1
Travel Time (hr)	16.8
Avg Speed (mph)	16
Vehicles Entered	1443
Vehicles Exited	1432
Hourly Exit Rate	1432
Input Volume	1226
% of Volume	117
Denied Entry Before	1
Denied Entry After	0
Density (ft/veh)	376

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.5	0.0	0.6
Total Del/Veh (s)	9.7	4.6	4.1	0.3	3.5	2.4	2.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	8.9	4.6	2.5	0.0	0.0	0.0	0.2
Total Stops	9	10	7	0	0	0	26
Stop/Veh	1.00	1.00	0.47	0.00	0.00	0.00	0.03
Travel Dist (mi)	0.1	0.1	1.8	24.0	164.3	17.0	207.4
Travel Time (hr)	0.0	0.0	0.1	0.7	5.2	0.6	6.6
Avg Speed (mph)	4	6	23	34	31	30	31
Vehicles Entered	9	10	14	192	511	53	789
Vehicles Exited	9	10	15	192	512	53	791
Hourly Exit Rate	9	10	15	192	512	53	791
Input Volume	10	10	15	195	255	25	511
% of Volume	88	98	98	98	201	214	155
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							457

Total Network Performance

Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.1
Total Delay (hr)	11.0
Total Del/Veh (s)	21.7
Stop Delay (hr)	6.9
Stop Del/Veh (s)	13.7
Total Stops	780
Stop/Veh	0.43
Travel Dist (mi)	1890.1
Travel Time (hr)	67.8
Avg Speed (mph)	28
Vehicles Entered	1757
Vehicles Exited	1754
Hourly Exit Rate	1754
Input Volume	8323
% of Volume	21
Denied Entry Before	1
Denied Entry After	0
Density (ft/veh)	514

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement

WB

SB

Directions Served

LR

LT

Maximum Queue (ft)

29

44

Average Queue (ft)

6

2

95th Queue (ft)

26

23

Link Distance (ft)

137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement

EB

EB

WB

NB

SB

SB

Directions Served

L

TR

LTR

LTR

LT

R

Maximum Queue (ft)

230

144

464

139

95

35

Average Queue (ft)

83

47

175

50

25

7

95th Queue (ft)

172

102

371

108

58

27

Link Distance (ft)

1010

1345

711

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

260

275

Storage Blk Time (%)

1

1

Queuing Penalty (veh)

1

1

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	46	35	4
Average Queue (ft)	14	7	0
95th Queue (ft)	40	27	3
Link Distance (ft)	79		1640
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

Intersection

Int Delay, s/veh 0.4

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	215	5	5	135
Future Vol, veh/h	5	5	215	5	5	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	234	5	5	147

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	394	237	0	0	239	0
Stage 1	237	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	609	800	-	-	1322	-
Stage 1	800	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	607	800	-	-	1322	-
Mov Cap-2 Maneuver	607	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s 10.3 0 0.3

HCM LOS B

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	690	1322	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	10.3	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 12

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↑	↑	↓	↓			↑	↑
Traffic Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95
Future Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	179	92	60	27	54	82	60	120	60	87	65	103
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			2			2		
HCM Control Delay	12.1			10.2			14			11.1		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	25%	100%	0%	33%	0%	57%	0%
Vol Thru, %	50%	0%	61%	67%	0%	43%	0%
Vol Right, %	25%	0%	39%	0%	100%	0%	100%
Sign Control	Stop						
Traffic Vol by Lane	220	165	140	75	75	140	95
LT Vol	55	165	0	25	0	80	0
Through Vol	110	0	85	50	0	60	0
RT Vol	55	0	55	0	75	0	95
Lane Flow Rate	239	179	152	82	82	152	103
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.421	0.34	0.255	0.154	0.134	0.284	0.164
Departure Headway (Hd)	6.331	6.828	6.039	6.795	5.91	6.716	5.715
Convergence, Y/N	Yes						
Cap	567	525	592	526	603	534	625
Service Time	4.39	4.589	3.8	4.567	3.681	4.477	3.476
HCM Lane V/C Ratio	0.422	0.341	0.257	0.156	0.136	0.285	0.165
HCM Control Delay	14	13.1	10.9	10.8	9.6	12.1	9.6
HCM Lane LOS	B	B	B	B	A	B	A
HCM 95th-tile Q	2.1	1.5	1	0.5	0.5	1.2	0.6

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	215	135	5
Future Vol, veh/h	5	5	45	215	135	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	234	147	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	482	150	152	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	541	894	1423	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	523	894	1423	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.5	1.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1423	-	660	-	-	
HCM Lane V/C Ratio	0.034	-	0.016	-	-	
HCM Control Delay (s)	7.6	-	10.5	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1343	1400	1341	1327	1277	1338
Vehs Exited	1347	1395	1323	1332	1272	1335
Starting Vehs	46	40	39	56	44	45
Ending Vehs	42	45	57	51	49	48
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	0	0	1	2	1	1
Travel Distance (mi)	1392	1449	1456	1372	1329	1399
Travel Time (hr)	48.3	50.6	50.2	47.5	45.5	48.4
Total Delay (hr)	5.7	6.4	5.9	5.8	4.9	5.7
Total Stops	1221	1260	1208	1191	1153	1207
Fuel Used (gal)	43.6	45.6	45.2	43.2	41.3	43.8

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	326	344	325	296	279	315
Vehs Exited	329	320	317	311	287	312
Starting Vehs	46	40	39	56	44	45
Ending Vehs	43	64	47	41	36	46
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	337	300	326	311	316	318
Travel Time (hr)	11.6	10.4	11.2	10.9	10.8	11.0
Total Delay (hr)	1.3	1.2	1.3	1.4	1.0	1.3
Total Stops	307	285	283	273	260	281
Fuel Used (gal)	10.7	9.6	10.1	9.9	9.9	10.0

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	339	321	317	303	312	318
Vehs Exited	338	341	318	300	309	321
Starting Vehs	43	64	47	41	36	46
Ending Vehs	44	44	46	44	39	38
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	1	1	0	0	0	0
Travel Distance (mi)	369	344	342	311	322	338
Travel Time (hr)	12.7	11.9	11.6	10.6	10.9	11.6
Total Delay (hr)	1.4	1.4	1.2	1.1	1.2	1.3
Total Stops	303	293	283	269	274	285
Fuel Used (gal)	11.4	10.8	10.6	9.7	9.9	10.5

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	362	375	368	372	364	368
Vehs Exited	345	363	348	353	344	351
Starting Vehs	44	44	46	44	39	38
Ending Vehs	61	56	66	63	59	62
Denied Entry Before	1	1	0	0	0	0
Denied Entry After	0	1	1	1	1	0
Travel Distance (mi)	353	393	398	367	362	375
Travel Time (hr)	12.5	13.6	13.8	12.7	12.5	13.0
Total Delay (hr)	1.7	1.7	1.7	1.6	1.4	1.6
Total Stops	321	329	331	321	323	324
Fuel Used (gal)	11.1	12.4	12.3	11.5	11.3	11.7

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	316	360	331	356	322	339
Vehs Exited	335	371	340	368	332	348
Starting Vehs	61	56	66	63	59	62
Ending Vehs	42	45	57	51	49	48
Denied Entry Before	0	1	1	1	1	0
Denied Entry After	0	0	1	2	1	1
Travel Distance (mi)	333	411	390	383	330	369
Travel Time (hr)	11.4	14.7	13.6	13.3	11.3	12.9
Total Delay (hr)	1.2	2.1	1.7	1.7	1.3	1.6
Total Stops	290	353	311	328	296	316
Fuel Used (gal)	10.3	12.8	12.1	12.1	10.2	11.5

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBL	SBT	SBR	NWR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	2.2	0.2	1.4	3.4	0.6	0.3	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.6	0.0	0.0	3.3	0.0	0.0	0.3
Total Stops	6	0	0	39	2	0	47
Stop/Veh	0.15	0.00	0.00	0.98	0.01	0.00	0.09
Travel Dist (mi)	5.3	0.1	28.1	1.9	14.3	1.0	50.6
Travel Time (hr)	0.2	0.0	1.1	0.1	0.6	0.0	2.1
Avg Speed (mph)	26	34	25	15	25	22	24
Vehicles Entered	41	1	219	40	227	15	543
Vehicles Exited	41	1	219	39	227	15	542
Hourly Exit Rate	41	1	219	39	227	15	542
Input Volume	25	0	115	40	220	15	416
% of Volume	166	400	190	98	103	98	130
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							910
Occupancy (veh)	0	0	1	0	1	0	2

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.4	2.9	0.3	0.1	2.0	0.6	0.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	4.3	3.0	0.0	0.0	0.2	0.0	0.1
Total Stops	4	5	0	0	0	0	9
Stop/Veh	1.00	1.00	0.00	0.00	0.00	0.00	0.02
Travel Dist (mi)	0.1	0.1	13.6	0.4	0.6	25.9	40.7
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.8	1.3
Avg Speed (mph)	9	11	33	23	25	33	32
Vehicles Entered	4	5	223	7	6	262	507
Vehicles Exited	4	5	223	7	6	260	505
Hourly Exit Rate	4	5	223	7	6	260	505
Input Volume	5	5	215	5	5	135	370
% of Volume	80	100	104	140	120	193	136
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							926
Occupancy (veh)	0	0	0	0	0	1	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.7	0.6	0.7	0.3	0.3	3.3	0.3	0.3	0.2	0.4	0.5	3.7
Total Delay (hr)	0.3	0.2	0.1	0.0	0.2	0.1	0.5	1.1	0.4	0.2	0.1	0.1
Total Del/Veh (s)	7.1	9.9	4.2	6.6	9.7	4.7	16.1	18.0	13.2	7.7	9.0	3.5
Stop Delay (hr)	0.2	0.1	0.1	0.0	0.1	0.1	0.3	0.6	0.3	0.1	0.1	0.1
Stop Del/Veh (s)	4.7	4.8	3.5	4.4	5.0	4.0	10.1	10.1	9.0	5.1	4.1	3.1
Total Stops	159	84	55	26	56	81	109	225	111	80	53	92
Stop/Veh	1.00	0.99	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	1.00
Travel Dist (mi)	30.4	16.2	10.6	6.6	14.2	20.5	35.1	70.9	36.0	10.7	7.1	12.3
Travel Time (hr)	1.5	0.7	0.4	0.3	0.6	0.8	1.6	3.2	1.6	0.5	0.3	0.6
Avg Speed (mph)	24	23	25	26	25	26	22	22	23	20	21	23
Vehicles Entered	157	84	55	26	56	80	109	224	111	80	53	92
Vehicles Exited	159	84	55	26	56	80	108	224	110	80	53	92
Hourly Exit Rate	159	84	55	26	56	80	108	224	110	80	53	92
Input Volume	165	85	55	25	50	75	55	110	55	80	60	95
% of Volume	97	99	100	105	111	106	197	203	201	100	89	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	1
Density (ft/veh)												
Occupancy (veh)	1	1	0	0	1	1	2	3	2	1	0	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.3
Total Del/Veh (s)	10.6
Stop Delay (hr)	2.1
Stop Del/Veh (s)	6.5
Total Stops	1131
Stop/Veh	0.99
Travel Dist (mi)	270.6
Travel Time (hr)	12.1
Avg Speed (mph)	23
Vehicles Entered	1127
Vehicles Exited	1127
Hourly Exit Rate	1127
Input Volume	910
% of Volume	124
Denied Entry Before	0
Denied Entry After	1
Density (ft/veh)	714
Occupancy (veh)	12

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	6.7	4.0	2.5	0.4	1.3	0.9	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.9	4.2	0.7	0.1	0.0	0.0	0.2
Total Stops	5	6	9	0	0	0	20
Stop/Veh	1.00	1.00	0.21	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.1	0.1	5.4	28.7	66.0	2.8	103.0
Travel Time (hr)	0.0	0.0	0.2	1.0	2.0	0.1	3.4
Avg Speed (mph)	6	7	22	28	33	30	30
Vehicles Entered	5	6	42	225	253	11	542
Vehicles Exited	5	6	42	224	255	11	543
Hourly Exit Rate	5	6	42	224	255	11	543
Input Volume	5	5	45	215	135	5	410
% of Volume	100	120	93	104	189	220	132
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							810
Occupancy (veh)	0	0	0	1	2	0	3

Total Network Performance

Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.2
Total Delay (hr)	5.3
Total Del/Veh (s)	13.8
Stop Delay (hr)	2.3
Stop Del/Veh (s)	6.0
Total Stops	1207
Stop/Veh	0.87
Travel Dist (mi)	1399.4
Travel Time (hr)	48.4
Avg Speed (mph)	29
Vehicles Entered	1338
Vehicles Exited	1335
Hourly Exit Rate	1335
Input Volume	6679
% of Volume	20
Denied Entry Before	0
Denied Entry After	1
Density (ft/veh)	725
Occupancy (veh)	48

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	SB	NW	NE
Directions Served	L	R	LR
Maximum Queue (ft)	38	52	22
Average Queue (ft)	6	21	1
95th Queue (ft)	28	45	11
Link Distance (ft)		255	278
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	16
Average Queue (ft)	8	1
95th Queue (ft)	30	9
Link Distance (ft)	137	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	LT	R	LTR	LT	R
Maximum Queue (ft)	84	77	61	62	215	82	51
Average Queue (ft)	36	36	32	31	111	36	22
95th Queue (ft)	61	60	54	53	185	63	38
Link Distance (ft)		1010	1345			700	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	260			100			275
Storage Blk Time (%)							
Queuing Penalty (veh)							

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	36	31
Average Queue (ft)	10	8
95th Queue (ft)	34	30
Link Distance (ft)	79	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	150	5	5	195
Future Vol, veh/h	5	5	150	5	5	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	163	5	5	212

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	388	166	0	0	168
Stage 1	166	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	614	876	-	-	1404
Stage 1	861	-	-	-	-
Stage 2	813	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	612	876	-	-	1404
Mov Cap-2 Maneuver	612	-	-	-	-
Stage 1	858	-	-	-	-
Stage 2	813	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1404	-
HCM Lane V/C Ratio	-	-	0.015	0.004	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 11.3

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↑	↑		↔			↑	↑
Traffic Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135
Future Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	136	49	60	49	92	98	60	76	33	76	109	147
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			2			2		
HCM Control Delay	11.2			10.8			12.4			11.3		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	35%	100%	0%	35%	0%	41%	0%
Vol Thru, %	45%	0%	45%	65%	0%	59%	0%
Vol Right, %	19%	0%	55%	0%	100%	0%	100%
Sign Control	Stop						
Traffic Vol by Lane	155	125	100	130	90	170	135
LT Vol	55	125	0	45	0	70	0
Through Vol	70	0	45	85	0	100	0
RT Vol	30	0	55	0	90	0	135
Lane Flow Rate	168	136	109	141	98	185	147
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.303	0.261	0.182	0.259	0.155	0.332	0.227
Departure Headway (Hd)	6.475	6.914	6.013	6.608	5.719	6.476	5.559
Convergence, Y/N	Yes						
Cap	553	518	595	543	624	554	643
Service Time	4.538	4.674	3.772	4.369	3.48	4.233	3.315
HCM Lane V/C Ratio	0.304	0.263	0.183	0.26	0.157	0.334	0.229
HCM Control Delay	12.4	12.1	10.1	11.7	9.5	12.4	10
HCM Lane LOS	B	B	B	B	A	B	A
HCM 95th-tile Q	1.3	1	0.7	1	0.5	1.4	0.9

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	145	175	25
Future Vol, veh/h	10	10	15	145	175	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	158	190	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	394	204	217	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	609	834	1347	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	602	834	1347	-	-	-
Mov Cap-2 Maneuver	602	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.3	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1347	-	699	-	-	
HCM Lane V/C Ratio	0.012	-	0.031	-	-	
HCM Control Delay (s)	7.7	-	10.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1337	1366	1294	1270	1251	1306
Vehs Exited	1329	1350	1292	1261	1275	1301
Starting Vehs	50	36	50	46	60	45
Ending Vehs	58	52	52	55	36	48
Denied Entry Before	0	2	1	1	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	1433	1498	1399	1388	1268	1398
Travel Time (hr)	49.1	51.9	47.6	47.5	43.4	47.9
Total Delay (hr)	5.1	6.0	5.0	4.9	4.6	5.1
Total Stops	1129	1175	1091	1061	1055	1103
Fuel Used (gal)	45.1	47.1	44.0	43.2	40.3	43.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	324	339	332	329	286	323
Vehs Exited	337	323	334	335	298	326
Starting Vehs	50	36	50	46	60	45
Ending Vehs	37	52	48	40	48	45
Denied Entry Before	0	2	1	1	0	0
Denied Entry After	1	0	1	1	1	0
Travel Distance (mi)	363	339	352	339	329	344
Travel Time (hr)	12.3	11.8	11.7	11.7	11.2	11.7
Total Delay (hr)	1.2	1.4	1.2	1.2	1.1	1.2
Total Stops	275	299	276	279	246	275
Fuel Used (gal)	11.5	10.8	11.0	10.9	10.2	10.9

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	338	303	297	288	306	308
Vehs Exited	328	307	307	291	323	311
Starting Vehs	37	52	48	40	48	45
Ending Vehs	47	48	38	37	31	39
Denied Entry Before	1	0	1	1	1	0
Denied Entry After	0	1	0	1	0	0
Travel Distance (mi)	350	358	327	328	306	334
Travel Time (hr)	11.9	12.3	11.1	11.3	10.5	11.4
Total Delay (hr)	1.2	1.3	1.1	1.2	1.2	1.2
Total Stops	267	253	256	244	266	256
Fuel Used (gal)	10.9	11.2	10.3	9.9	9.9	10.4

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	347	351	340	338	355	347
Vehs Exited	350	345	329	319	343	337
Starting Vehs	47	48	38	37	31	39
Ending Vehs	44	54	49	56	43	46
Denied Entry Before	0	1	0	1	0	0
Denied Entry After	1	2	0	0	1	0
Travel Distance (mi)	380	375	330	349	333	353
Travel Time (hr)	13.2	13.1	11.3	12.0	11.4	12.2
Total Delay (hr)	1.5	1.5	1.3	1.2	1.3	1.4
Total Stops	307	296	288	273	286	288
Fuel Used (gal)	12.1	11.8	10.5	11.0	10.6	11.2

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	328	373	325	315	304	328
Vehs Exited	314	375	322	316	311	328
Starting Vehs	44	54	49	56	43	46
Ending Vehs	58	52	52	55	36	48
Denied Entry Before	1	2	0	0	1	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	341	426	390	373	300	366
Travel Time (hr)	11.6	14.7	13.4	12.6	10.3	12.5
Total Delay (hr)	1.2	1.8	1.5	1.3	1.0	1.4
Total Stops	280	327	271	265	257	279
Fuel Used (gal)	10.6	13.2	12.2	11.4	9.7	11.4

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBR	NEL	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.2
Total Del/Veh (s)	2.3	0.2	1.6
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	40.2	6.2	46.4
Travel Time (hr)	1.8	0.3	2.0
Avg Speed (mph)	23	22	23
Vehicles Entered	362	166	528
Vehicles Exited	362	166	528
Hourly Exit Rate	362	166	528
Input Volume	185	160	345
% of Volume	195	104	153
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			878
Occupancy (veh)	2	0	2

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	6.8	2.9	0.6	0.7	2.1	0.9	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.4	2.8	0.0	0.0	0.1	0.0	0.1
Total Stops	4	5	0	0	1	0	10
Stop/Veh	1.00	1.00	0.00	0.00	0.11	0.00	0.02
Travel Dist (mi)	0.1	0.1	49.6	2.0	0.8	39.5	92.1
Travel Time (hr)	0.0	0.0	1.5	0.1	0.0	1.3	2.9
Avg Speed (mph)	8	11	34	31	24	32	33
Vehicles Entered	4	5	155	6	9	396	575
Vehicles Exited	4	5	155	6	9	396	575
Hourly Exit Rate	4	5	155	6	9	396	575
Input Volume	5	5	150	5	5	195	365
% of Volume	80	100	103	120	180	203	157
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							898
Occupancy (veh)	0	0	1	0	0	1	3

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.8	0.5	0.5	0.4	0.4	3.2	0.2	0.2	0.2	0.6	0.6	3.6
Total Delay (hr)	0.2	0.1	0.1	0.1	0.2	0.1	0.4	0.5	0.1	0.1	0.3	0.1
Total Del/Veh (s)	6.7	9.0	3.6	7.4	9.7	4.2	11.2	13.5	8.4	7.2	9.6	3.9
Stop Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1
Stop Del/Veh (s)	4.3	4.2	3.1	4.6	4.6	3.3	6.6	6.8	5.3	4.4	4.3	3.2
Total Stops	124	45	60	44	89	79	119	138	59	70	104	131
Stop/Veh	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.99	0.97	1.00	0.99	0.98
Travel Dist (mi)	23.7	8.6	11.6	11.2	22.6	20.2	27.0	31.6	14.4	9.3	14.0	17.8
Travel Time (hr)	1.1	0.4	0.5	0.4	0.9	0.8	1.2	1.4	0.6	0.5	0.7	0.9
Avg Speed (mph)	24	24	25	25	25	27	22	22	23	21	20	22
Vehicles Entered	123	45	60	44	89	80	120	139	60	70	105	132
Vehicles Exited	124	45	60	44	89	79	120	139	59	70	104	131
Hourly Exit Rate	124	45	60	44	89	79	120	139	59	70	104	131
Input Volume	125	45	55	45	85	90	55	70	30	70	100	135
% of Volume	99	99	110	97	104	88	219	199	197	100	104	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	1	0	0	0	1	1	1	1	1	0	1	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.4
Total Delay (hr)	2.4
Total Del/Veh (s)	8.2
Stop Delay (hr)	1.4
Stop Del/Veh (s)	4.7
Total Stops	1062
Stop/Veh	0.99
Travel Dist (mi)	212.1
Travel Time (hr)	9.5
Avg Speed (mph)	23
Vehicles Entered	1067
Vehicles Exited	1064
Hourly Exit Rate	1064
Input Volume	905
% of Volume	118
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	849
Occupancy (veh)	9

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.3	0.0	0.4
Total Del/Veh (s)	7.4	4.8	4.2	0.2	2.9	1.7	2.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.7	4.5	2.6	0.0	0.0	0.0	0.3
Total Stops	11	12	8	0	0	0	31
Stop/Veh	1.00	1.00	0.47	0.00	0.00	0.00	0.05
Travel Dist (mi)	0.4	0.4	1.9	16.8	112.2	16.2	147.9
Travel Time (hr)	0.0	0.0	0.1	0.6	3.5	0.5	4.8
Avg Speed (mph)	10	11	19	28	32	30	31
Vehicles Entered	11	12	17	151	349	50	590
Vehicles Exited	11	12	17	151	351	51	593
Hourly Exit Rate	11	12	17	151	351	51	593
Input Volume	10	10	15	146	175	25	382
% of Volume	107	117	111	103	200	206	155
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							619
Occupancy (veh)	0	0	0	1	4	1	5

Total Network Performance

Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.2
Total Delay (hr)	4.7
Total Del/Veh (s)	12.5
Stop Delay (hr)	1.6
Stop Del/Veh (s)	4.3
Total Stops	1103
Stop/Veh	0.82
Travel Dist (mi)	1397.6
Travel Time (hr)	47.9
Avg Speed (mph)	29
Vehicles Entered	1306
Vehicles Exited	1301
Hourly Exit Rate	1301
Input Volume	6124
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	743
Occupancy (veh)	47

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement WB SB

Directions Served LR LT

Maximum Queue (ft) 30 16

Average Queue (ft) 7 0

95th Queue (ft) 27 6

Link Distance (ft) 137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement EB EB WB WB NB SB SB

Directions Served L TR LT R LTR LT R

Maximum Queue (ft) 78 75 82 70 169 90 72

Average Queue (ft) 32 30 43 31 78 41 31

95th Queue (ft) 54 54 70 52 129 70 56

Link Distance (ft) 1010 1345 700

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft) 260 100 275

Storage Blk Time (%) 0 0

Queuing Penalty (veh) 0 0

Queueing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	49	36
Average Queue (ft)	18	7
95th Queue (ft)	45	29
Link Distance (ft)	183	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	40	295	15	35	155
Future Vol, veh/h	0	40	295	15	35	155
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	43	321	16	38	168

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	329	0	0	337	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	710	-	-	1217	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	710	-	-	1217	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	10.4	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	710	1217	-
HCM Lane V/C Ratio	-	-	0.061	0.031	-
HCM Control Delay (s)	-	-	10.4	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	290	5	5	185
Future Vol, veh/h	5	5	290	5	5	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	315	5	5	201

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	318	0	0	320
Stage 1	318	-	-	-	-
Stage 2	211	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	720	-	-	1234
Stage 1	735	-	-	-	-
Stage 2	822	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	505	720	-	-	1234
Mov Cap-2 Maneuver	505	-	-	-	-
Stage 1	731	-	-	-	-
Stage 2	822	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1234	-
HCM Lane V/C Ratio	-	-	0.018	0.004	-
HCM Control Delay (s)	-	-	11.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Intersection Delay, s/veh 16.9

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		75	35	60	100	65	155	75	100	80
Traffic Vol, veh/h	220	115		75	35	60	100	65	155	75	100	80
Future Vol, veh/h	220	115		75	35	60	100	65	155	75	100	80
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2		2	2	2	3	3	3	3	3	3
Mvmt Flow	239	125		82	38	65	109	71	168	82	109	87
Number of Lanes	1	1		0	0	1	1	0	1	0	0	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	2				2			2			1	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	2				1			2			2	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	1				2			2			2	
HCM Control Delay	16.8				12.5			23			14.3	
HCM LOS	C				B			C			B	

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	22%	100%	0%	37%	0%	56%	0%
Vol Thru, %	53%	0%	61%	63%	0%	44%	0%
Vol Right, %	25%	0%	39%	0%	100%	0%	100%
Sign Control	Stop						
Traffic Vol by Lane	295	220	190	95	100	180	145
LT Vol	65	220	0	35	0	100	0
Through Vol	155	0	115	60	0	80	0
RT Vol	75	0	75	0	100	0	145
Lane Flow Rate	321	239	207	103	109	196	158
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.65	0.52	0.403	0.23	0.215	0.42	0.295
Departure Headway (Hd)	7.3	7.826	7.028	8.024	7.11	7.735	6.733
Convergence, Y/N	Yes						
Cap	494	459	512	446	503	466	533
Service Time	5.355	5.583	4.785	5.789	4.874	5.494	4.491
HCM Lane V/C Ratio	0.65	0.521	0.404	0.231	0.217	0.421	0.296
HCM Control Delay	23	18.8	14.5	13.2	11.8	16	12.3
HCM Lane LOS	C	C	B	B	B	C	B
HCM 95th-tile Q	4.6	2.9	1.9	0.9	0.8	2	1.2

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	290	185	5
Future Vol, veh/h	5	5	45	290	185	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	315	201	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	617	204	206	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	452	834	1359	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	436	834	1359	-	-	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.4	1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1359	-	573	-	-	
HCM Lane V/C Ratio	0.036	-	0.019	-	-	
HCM Control Delay (s)	7.7	-	11.4	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1798	1827	1855	1773	1754	1801
Vehs Exited	1779	1811	1815	1750	1744	1780
Starting Vehs	60	64	56	65	64	59
Ending Vehs	79	80	96	88	74	84
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	14	7	20	23	19	16
Travel Distance (mi)	1949	1843	1984	1882	1818	1895
Travel Time (hr)	90.7	77.6	83.5	77.2	87.5	83.3
Total Delay (hr)	32.6	22.3	24.4	20.7	33.1	26.6
Total Stops	1493	1549	1631	1555	1504	1546
Fuel Used (gal)	65.3	59.7	64.3	60.3	61.9	62.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	444	461	455	424	417	440
Vehs Exited	426	451	433	419	408	426
Starting Vehs	60	64	56	65	64	59
Ending Vehs	78	74	78	70	73	72
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	464	474	478	428	437	456
Travel Time (hr)	18.1	17.8	19.2	15.6	19.1	18.0
Total Delay (hr)	4.3	3.6	5.0	2.6	5.9	4.3
Total Stops	413	396	416	381	398	402
Fuel Used (gal)	14.9	15.0	15.3	13.3	14.4	14.6

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	448	432	434	424	466	442
Vehs Exited	442	451	448	429	456	443
Starting Vehs	78	74	78	70	73	72
Ending Vehs	84	55	64	65	83	70
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	2	0
Travel Distance (mi)	482	422	477	453	472	461
Travel Time (hr)	22.0	16.8	18.6	16.5	19.7	18.7
Total Delay (hr)	7.7	4.2	4.3	2.7	5.7	4.9
Total Stops	358	390	385	391	403	386
Fuel Used (gal)	15.9	13.4	15.2	13.7	15.5	14.8

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	479	483	508	481	464	484
Vehs Exited	466	445	470	453	457	458
Starting Vehs	84	55	64	65	83	70
Ending Vehs	97	93	102	93	90	93
Denied Entry Before	0	0	0	0	2	0
Denied Entry After	12	5	0	0	14	6
Travel Distance (mi)	516	478	548	494	488	505
Travel Time (hr)	24.2	18.8	21.3	18.3	23.9	21.3
Total Delay (hr)	8.7	4.5	5.1	3.5	9.4	6.2
Total Stops	383	432	461	432	384	420
Fuel Used (gal)	17.4	15.3	17.3	15.4	16.6	16.4

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	427	451	458	444	407	437
Vehs Exited	445	464	464	449	423	448
Starting Vehs	97	93	102	93	90	93
Ending Vehs	79	80	96	88	74	84
Denied Entry Before	12	5	0	0	14	6
Denied Entry After	14	7	20	23	19	16
Travel Distance (mi)	487	470	481	506	422	473
Travel Time (hr)	26.3	24.2	24.4	26.9	24.7	25.3
Total Delay (hr)	11.9	10.1	10.1	11.8	12.1	11.2
Total Stops	339	331	369	351	319	344
Fuel Used (gal)	17.2	15.9	16.5	17.8	15.4	16.6

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	3.4	0.4	0.2	3.7	1.0	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	3.2	0.0	0.0	1.2	0.0	0.3
Total Stops	43	0	0	20	0	63
Stop/Veh	1.00	0.00	0.00	0.31	0.00	0.09
Travel Dist (mi)	6.9	24.3	1.1	8.0	38.5	78.7
Travel Time (hr)	0.3	0.7	0.0	0.3	1.2	2.6
Avg Speed (mph)	25	33	25	24	32	30
Vehicles Entered	43	292	14	64	309	722
Vehicles Exited	43	291	14	64	309	721
Hourly Exit Rate	43	291	14	64	309	721
Input Volume	40	295	15	35	156	541
% of Volume	108	99	92	183	198	133
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Density (ft/veh)						986

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.4	0.2	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1	0.2
Total Del/Veh (s)	7.0	2.5	1.1	0.8	3.1	1.0	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.6	2.3	0.0	0.1	0.8	0.0	0.1
Total Stops	6	4	0	0	3	1	14
Stop/Veh	1.00	1.00	0.00	0.00	0.30	0.00	0.02
Travel Dist (mi)	0.2	0.1	94.0	2.1	1.0	36.8	134.3
Travel Time (hr)	0.0	0.0	2.8	0.1	0.0	1.2	4.1
Avg Speed (mph)	8	11	33	31	23	32	33
Vehicles Entered	6	4	295	7	10	372	694
Vehicles Exited	6	4	294	7	10	372	693
Hourly Exit Rate	6	4	294	7	10	372	693
Input Volume	5	5	290	5	5	185	496
% of Volume	120	80	101	140	200	201	140
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							619

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.1	0.7	1.9	1.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.5	0.8	0.9	0.4	0.3	3.0	20.9	22.1	22.5	0.6	0.7	3.6
Total Delay (hr)	0.7	0.4	0.1	0.1	0.2	0.2	3.6	8.6	4.4	0.3	0.3	0.2
Total Del/Veh (s)	11.5	12.4	6.1	9.2	12.6	6.8	100.9	101.6	97.7	11.0	12.7	4.9
Stop Delay (hr)	0.6	0.2	0.1	0.1	0.1	0.2	3.7	8.7	4.6	0.2	0.2	0.2
Stop Del/Veh (s)	8.7	7.1	5.0	6.5	7.6	5.8	104.1	102.6	102.2	8.1	7.5	4.0
Total Stops	228	119	78	37	62	108	104	254	134	102	80	141
Stop/Veh	0.99	0.99	0.99	1.00	0.98	1.00	0.81	0.83	0.83	1.00	0.99	0.99
Travel Dist (mi)	43.8	22.9	15.0	9.5	15.9	27.5	23.7	56.8	29.6	13.6	10.8	19.0
Travel Time (hr)	2.4	1.1	0.7	0.4	0.7	1.2	5.1	12.1	6.4	0.8	0.6	1.0
Avg Speed (mph)	20	21	23	24	23	25	5	6	6	18	18	21
Vehicles Entered	228	118	78	37	62	108	125	301	158	101	81	141
Vehicles Exited	228	119	78	37	63	107	122	289	153	102	80	141
Hourly Exit Rate	228	119	78	37	63	107	122	289	153	102	80	141
Input Volume	220	115	75	35	60	100	65	155	75	100	80	145
% of Volume	104	103	104	106	105	107	188	186	203	102	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	3	7	6	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	4.2
Denied Del/Veh (s)	9.7
Total Delay (hr)	19.2
Total Del/Veh (s)	44.4
Stop Delay (hr)	18.8
Stop Del/Veh (s)	43.5
Total Stops	1447
Stop/Veh	0.93
Travel Dist (mi)	288.0
Travel Time (hr)	32.5
Avg Speed (mph)	10
Vehicles Entered	1538
Vehicles Exited	1519
Hourly Exit Rate	1519
Input Volume	1226
% of Volume	124
Denied Entry Before	0
Denied Entry After	16
Density (ft/veh)	264

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Total Del/Veh (s)	7.1	3.8	3.0	0.4	2.1	2.0	1.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	6.2	3.9	1.2	0.1	0.0	0.0	0.2
Total Stops	6	5	11	0	0	0	22
Stop/Veh	1.00	1.00	0.28	0.00	0.00	0.00	0.03
Travel Dist (mi)	0.1	0.1	5.0	36.6	117.6	3.9	163.3
Travel Time (hr)	0.0	0.0	0.2	1.1	3.6	0.1	5.1
Avg Speed (mph)	6	7	24	32	33	30	32
Vehicles Entered	6	5	40	296	366	12	725
Vehicles Exited	6	5	40	296	367	12	726
Hourly Exit Rate	6	5	40	296	367	12	726
Input Volume	5	5	45	291	185	5	537
% of Volume	120	100	88	102	198	240	135
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							594

Total Network Performance

Denied Delay (hr)	4.3
Denied Del/Veh (s)	8.4
Total Delay (hr)	22.4
Total Del/Veh (s)	43.2
Stop Delay (hr)	19.2
Stop Del/Veh (s)	37.1
Total Stops	1546
Stop/Veh	0.83
Travel Dist (mi)	1895.1
Travel Time (hr)	83.3
Avg Speed (mph)	24
Vehicles Entered	1801
Vehicles Exited	1780
Hourly Exit Rate	1780
Input Volume	8453
% of Volume	21
Denied Entry Before	0
Denied Entry After	16
Density (ft/veh)	456

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bryant Parkway	1	3.4	23.3	0.2	26
Driveway	35	0.5	16.7	0.1	27
Airport Entrance	14	1.1	34.0	0.3	34
	5	0.6	14.5	0.1	33
Total		5.6	88.5	0.7	30

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	1.0	11.4	0.1	43
Driveway	35	2.2	35.2	0.3	33
Bryant Parkway	1	3.7	18.6	0.1	24
Total		6.8	65.2	0.6	32

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	WB	NB	SB
Directions Served	R	TR	L
Maximum Queue (ft)	59	4	50
Average Queue (ft)	25	0	15
95th Queue (ft)	48	3	43
Link Distance (ft)	850	383	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	35	53
Average Queue (ft)	9	4
95th Queue (ft)	32	23
Link Distance (ft)	137	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	LT	R	LTR	LT	R
Maximum Queue (ft)	140	114	90	82	806	108	79
Average Queue (ft)	55	48	39	41	509	50	32
95th Queue (ft)	100	86	68	67	887	88	60
Link Distance (ft)		1010	1345			700	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		260		100		275	
Storage Blk Time (%)				0	0		
Queuing Penalty (veh)				0	0		

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	34	49
Average Queue (ft)	10	8
95th Queue (ft)	33	34
Link Distance (ft)	79	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	0	210	0	0	265
Future Vol, veh/h	0	0	210	0	0	265
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	228	0	0	288

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	228	0	0	228	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	809	-	-	1334	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	809	-	-	1334	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1334	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	200	5	5	275
Future Vol, veh/h	5	5	200	5	5	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	217	5	5	299

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	220	0	0	222
Stage 1	220	-	-	-	-
Stage 2	309	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	817	-	-	1341
Stage 1	814	-	-	-	-
Stage 2	742	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	506	817	-	-	1341
Mov Cap-2 Maneuver	506	-	-	-	-
Stage 1	811	-	-	-	-
Stage 2	742	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1341	-
HCM Lane V/C Ratio	-	-	0.017	0.004	-
HCM Control Delay (s)	-	-	10.9	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Intersection Delay, s/veh 15.5

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↑	↓		↑			↑	↓
Traffic Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180
Future Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	179	65	87	60	125	130	82	103	38	109	158	196
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			2			2		
HCM Control Delay	14.5			13.9			17.3			16.3		
HCM LOS	B			B			C			C		

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	37%	100%	0%	32%	0%	41%	0%
Vol Thru, %	46%	0%	43%	68%	0%	59%	0%
Vol Right, %	17%	0%	57%	0%	100%	0%	100%
Sign Control	Stop						
Traffic Vol by Lane	205	165	140	170	120	245	180
LT Vol	75	165	0	55	0	100	0
Through Vol	95	0	60	115	0	145	0
RT Vol	35	0	80	0	120	0	180
Lane Flow Rate	223	179	152	185	130	266	196
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.47	0.398	0.298	0.395	0.246	0.549	0.353
Departure Headway (Hd)	7.595	7.981	7.055	7.688	6.801	7.416	6.492
Convergence, Y/N	Yes						
Cap	475	450	508	467	527	485	554
Service Time	5.654	5.739	4.812	5.447	4.559	5.169	4.244
HCM Lane V/C Ratio	0.469	0.398	0.299	0.396	0.247	0.548	0.354
HCM Control Delay	17.3	16	12.8	15.4	11.8	18.9	12.8
HCM Lane LOS	C	C	B	C	B	C	B
HCM 95th-tile Q	2.5	1.9	1.2	1.9	1	3.3	1.6

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	195	255	25
Future Vol, veh/h	10	10	15	195	255	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	212	277	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	535	291	304	0	-	0
Stage 1	291	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	504	746	1251	-	-	-
Stage 1	756	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	497	746	1251	-	-	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1251	-	597	-	-	
HCM Lane V/C Ratio	0.013	-	0.036	-	-	
HCM Control Delay (s)	7.9	-	11.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1808	1816	1826	1667	1673	1756
Vehs Exited	1808	1820	1805	1674	1681	1756
Starting Vehs	68	68	56	76	65	66
Ending Vehs	68	64	77	69	57	67
Denied Entry Before	0	0	1	1	0	0
Denied Entry After	0	0	3	2	0	0
Travel Distance (mi)	1990	1901	1934	1803	1812	1888
Travel Time (hr)	68.9	67.2	68.8	62.4	62.0	65.9
Total Delay (hr)	9.6	10.2	11.6	8.5	8.2	9.6
Total Stops	1514	1515	1538	1397	1405	1472
Fuel Used (gal)	61.7	59.1	60.4	55.5	56.1	58.6

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	435	461	456	409	396	431
Vehs Exited	441	458	441	435	409	438
Starting Vehs	68	68	56	76	65	66
Ending Vehs	62	71	71	50	52	60
Denied Entry Before	0	0	1	1	0	0
Denied Entry After	2	1	0	2	0	1
Travel Distance (mi)	496	482	490	426	434	466
Travel Time (hr)	17.1	17.0	17.1	14.9	14.9	16.2
Total Delay (hr)	2.2	2.6	2.6	2.3	2.0	2.3
Total Stops	364	391	386	331	329	359
Fuel Used (gal)	15.6	15.1	15.1	13.2	13.6	14.5

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	473	408	428	403	392	422
Vehs Exited	462	423	450	395	397	425
Starting Vehs	62	71	71	50	52	60
Ending Vehs	73	56	49	58	47	55
Denied Entry Before	2	1	0	2	0	1
Denied Entry After	1	0	1	0	0	0
Travel Distance (mi)	492	421	459	436	439	449
Travel Time (hr)	17.2	14.5	15.7	15.0	14.9	15.5
Total Delay (hr)	2.6	1.9	2.1	1.9	1.9	2.1
Total Stops	388	334	369	343	334	355
Fuel Used (gal)	15.2	13.1	14.2	13.4	13.5	13.9

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	478	471	481	432	481	467
Vehs Exited	474	467	438	427	457	453
Starting Vehs	73	56	49	58	47	55
Ending Vehs	77	60	92	63	71	73
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	1	2	0	1	1	0
Travel Distance (mi)	531	487	512	485	526	508
Travel Time (hr)	18.6	17.4	17.7	16.7	18.2	17.7
Total Delay (hr)	2.8	2.7	2.6	2.2	2.6	2.6
Total Stops	398	397	385	358	408	387
Fuel Used (gal)	16.4	15.2	15.8	14.9	16.2	15.7

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	422	476	461	423	404	437
Vehs Exited	431	472	476	417	418	442
Starting Vehs	77	60	92	63	71	73
Ending Vehs	68	64	77	69	57	67
Denied Entry Before	1	2	0	1	1	0
Denied Entry After	0	0	3	2	0	0
Travel Distance (mi)	471	511	474	456	413	465
Travel Time (hr)	16.0	18.2	18.4	15.8	14.0	16.5
Total Delay (hr)	2.0	3.0	4.3	2.1	1.6	2.6
Total Stops	364	393	398	365	334	372
Fuel Used (gal)	14.5	15.7	15.3	14.0	12.7	14.4

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.2	0.2
Total Del/Veh (s)	0.2	1.2	0.9
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	20.5	63.9	84.4
Travel Time (hr)	0.6	2.0	2.6
Avg Speed (mph)	34	32	32
Vehicles Entered	222	513	735
Vehicles Exited	221	512	733
Hourly Exit Rate	221	512	733
Input Volume	210	266	476
% of Volume	105	192	154
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			979

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.4	0.3
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.2	0.3
Total Del/Veh (s)	6.4	3.1	1.0	1.0	3.2	1.1	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.1	3.0	0.0	0.0	0.5	0.0	0.1
Total Stops	5	5	0	0	2	1	13
Stop/Veh	1.00	1.00	0.00	0.00	0.22	0.00	0.02
Travel Dist (mi)	0.1	0.1	65.6	1.7	0.9	53.9	122.2
Travel Time (hr)	0.0	0.0	2.0	0.1	0.0	1.8	3.9
Avg Speed (mph)	9	11	33	31	23	31	32
Vehicles Entered	5	5	206	5	9	545	775
Vehicles Exited	5	5	205	5	9	546	775
Hourly Exit Rate	5	5	205	5	9	546	775
Input Volume	5	5	200	5	5	275	495
% of Volume	100	100	102	100	180	199	156
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							670

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	3.7	0.6	0.6	0.5	0.5	2.9	0.3	0.2	0.3	0.8	0.8	3.5
Total Delay (hr)	0.5	0.2	0.1	0.2	0.5	0.2	1.0	1.4	0.4	0.3	0.6	0.3
Total Del/Veh (s)	9.9	10.7	5.0	10.8	14.1	6.6	24.2	26.3	20.9	11.5	14.4	5.9
Stop Delay (hr)	0.4	0.1	0.1	0.1	0.3	0.2	0.8	1.0	0.4	0.2	0.4	0.2
Stop Del/Veh (s)	7.5	5.7	4.2	7.8	8.7	5.1	19.5	19.9	17.8	8.4	8.9	4.8
Total Stops	167	64	79	53	124	120	147	184	72	100	143	178
Stop/Veh	0.98	0.98	0.99	0.98	0.99	0.99	0.99	0.99	1.00	0.99	0.99	0.99
Travel Dist (mi)	32.1	12.3	15.4	13.6	31.7	30.6	28.4	35.2	13.8	13.3	19.2	23.9
Travel Time (hr)	1.7	0.6	0.6	0.6	1.4	1.3	1.9	2.4	0.9	0.8	1.2	1.4
Avg Speed (mph)	21	23	24	23	23	25	15	15	16	17	17	20
Vehicles Entered	167	64	80	53	124	121	147	185	72	99	144	178
Vehicles Exited	168	64	79	53	125	120	146	184	72	101	143	178
Hourly Exit Rate	168	64	79	53	125	120	146	184	72	101	143	178
Input Volume	165	60	80	55	115	120	75	95	35	100	145	180
% of Volume	102	107	98	97	108	100	194	194	206	101	98	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.4
Total Delay (hr)	5.6
Total Del/Veh (s)	14.0
Stop Delay (hr)	4.2
Stop Del/Veh (s)	10.4
Total Stops	1431
Stop/Veh	0.99
Travel Dist (mi)	269.4
Travel Time (hr)	14.7
Avg Speed (mph)	19
Vehicles Entered	1434
Vehicles Exited	1433
Hourly Exit Rate	1433
Input Volume	1226
% of Volume	117
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	528

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.5	0.0	0.6
Total Del/Veh (s)	8.1	4.3	4.8	0.3	3.3	2.5	2.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	7.2	4.5	3.0	0.0	0.0	0.0	0.2
Total Stops	9	12	7	0	0	0	28
Stop/Veh	1.00	1.00	0.41	0.00	0.00	0.00	0.03
Travel Dist (mi)	0.1	0.2	2.1	25.2	159.8	17.2	204.7
Travel Time (hr)	0.0	0.0	0.1	0.7	5.1	0.6	6.5
Avg Speed (mph)	5	7	22	34	32	29	31
Vehicles Entered	9	12	17	204	497	54	793
Vehicles Exited	9	12	17	202	500	54	794
Hourly Exit Rate	9	12	17	202	500	54	794
Input Volume	10	10	15	195	255	25	511
% of Volume	88	117	111	104	196	218	155
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							463

Total Network Performance

Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.3
Total Delay (hr)	9.0
Total Del/Veh (s)	17.7
Stop Delay (hr)	4.5
Stop Del/Veh (s)	8.9
Total Stops	1472
Stop/Veh	0.81
Travel Dist (mi)	1888.2
Travel Time (hr)	65.9
Avg Speed (mph)	29
Vehicles Entered	1756
Vehicles Exited	1756
Hourly Exit Rate	1756
Input Volume	8323
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	552

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Driveway	35	-	-	0.1	-
Airport Entrance	14	1.0	33.9	0.3	34
	5	0.5	14.5	0.1	33
Total		1.6	48.4	0.6	43

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	1.1	11.6	0.1	43
Driveway	35	3.3	36.1	0.3	32
Bryant Parkway	1	1.2	14.1	0.1	32
Total		5.6	61.8	0.6	34

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement WB SB

Directions Served LR LT

Maximum Queue (ft) 30 40

Average Queue (ft) 8 1

95th Queue (ft) 29 13

Link Distance (ft) 137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement EB EB WB WB NB SB SB

Directions Served L TR LT R LTR LT R

Maximum Queue (ft) 95 76 119 83 308 124 85

Average Queue (ft) 42 36 53 42 137 62 38

95th Queue (ft) 78 63 91 69 262 109 69

Link Distance (ft) 1010 1345 700

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft) 260 100 275

Storage Blk Time (%) 1 0

Queuing Penalty (veh) 1 0

Queueing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	50	35	4
Average Queue (ft)	17	8	0
95th Queue (ft)	44	29	3
Link Distance (ft)	79		1640
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	215	5	5	135
Future Vol, veh/h	5	5	215	5	5	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	234	5	5	147

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	394	237	0	0	239
Stage 1	237	-	-	-	-
Stage 2	157	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	609	800	-	-	1322
Stage 1	800	-	-	-	-
Stage 2	869	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	607	800	-	-	1322
Mov Cap-2 Maneuver	607	-	-	-	-
Stage 1	797	-	-	-	-
Stage 2	869	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	690	1322	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	10.3	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 11.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↓		↑	↓		↑	↓	
Traffic Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95
Future Vol, veh/h	165	85	55	25	50	75	55	110	55	80	60	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	179	92	60	27	54	82	60	120	60	87	65	103
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			2			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			2			2			2		
HCM Control Delay	12			10.6			11.4			11.1		
HCM LOS	B			B			B			B		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	57%	0%
Vol Thru, %	0%	67%	0%	61%	0%	40%	43%	0%
Vol Right, %	0%	33%	0%	39%	0%	60%	0%	100%
Sign Control	Stop							
Traffic Vol by Lane	55	165	165	140	25	125	140	95
LT Vol	55	0	165	0	25	0	80	0
Through Vol	0	110	0	85	0	50	60	0
RT Vol	0	55	0	55	0	75	0	95
Lane Flow Rate	60	179	179	152	27	136	152	103
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.115	0.309	0.337	0.253	0.053	0.231	0.283	0.164
Departure Headway (Hd)	6.942	6.197	6.77	5.984	7.066	6.13	6.705	5.704
Convergence, Y/N	Yes							
Cap	515	578	531	598	505	583	534	627
Service Time	4.699	3.954	4.524	3.737	4.83	3.893	4.461	3.459
HCM Lane V/C Ratio	0.117	0.31	0.337	0.254	0.053	0.233	0.285	0.164
HCM Control Delay	10.6	11.7	13	10.8	10.2	10.7	12.1	9.6
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.4	1.3	1.5	1	0.2	0.9	1.2	0.6

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	215	135	5
Future Vol, veh/h	5	5	45	215	135	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	234	147	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	482	150	152	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	541	894	1423	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	523	894	1423	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.5	1.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1423	-	660	-	-	
HCM Lane V/C Ratio	0.034	-	0.016	-	-	
HCM Control Delay (s)	7.6	-	10.5	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1003	986	1001	866	958	961
Vehs Exited	1009	996	1005	862	949	964
Starting Vehs	41	50	37	39	30	36
Ending Vehs	35	40	33	43	39	37
Denied Entry Before	0	1	0	0	1	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	1232	1211	1204	1108	1121	1175
Travel Time (hr)	41.5	40.8	40.2	37.2	37.7	39.5
Total Delay (hr)	3.9	3.9	3.7	3.5	3.6	3.7
Total Stops	1007	986	991	876	926	958
Fuel Used (gal)	37.8	37.6	37.0	34.0	34.5	36.2

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	260	239	280	196	232	242
Vehs Exited	260	245	259	199	228	238
Starting Vehs	41	50	37	39	30	36
Ending Vehs	41	44	58	36	34	42
Denied Entry Before	0	1	0	0	1	0
Denied Entry After	1	1	0	0	1	0
Travel Distance (mi)	318	295	328	250	262	291
Travel Time (hr)	10.7	10.0	10.9	8.5	8.8	9.8
Total Delay (hr)	1.1	1.0	1.0	0.8	0.8	0.9
Total Stops	269	239	255	209	229	240
Fuel Used (gal)	10.2	9.0	10.0	7.9	8.0	9.0

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	247	236	221	196	276	235
Vehs Exited	252	241	247	195	273	242
Starting Vehs	41	44	58	36	34	42
Ending Vehs	36	39	32	37	37	36
Denied Entry Before	1	1	0	0	1	0
Denied Entry After	0	0	1	0	1	0
Travel Distance (mi)	311	300	280	264	309	293
Travel Time (hr)	10.5	10.0	9.5	8.8	10.4	9.8
Total Delay (hr)	1.0	1.0	1.0	0.8	1.0	0.9
Total Stops	248	243	241	184	261	236
Fuel Used (gal)	9.2	9.2	8.7	8.0	9.6	8.9

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	272	260	262	245	238	256
Vehs Exited	261	257	247	245	236	249
Starting Vehs	36	39	32	37	37	36
Ending Vehs	47	42	47	37	39	42
Denied Entry Before	0	0	1	0	1	0
Denied Entry After	0	0	0	0	1	0
Travel Distance (mi)	330	303	306	292	262	299
Travel Time (hr)	11.1	10.2	10.1	9.8	8.9	10.0
Total Delay (hr)	1.0	1.0	0.8	0.9	0.9	0.9
Total Stops	265	252	246	245	230	247
Fuel Used (gal)	10.1	9.5	9.5	8.9	8.2	9.2

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	224	251	238	229	212	227
Vehs Exited	236	253	252	223	212	236
Starting Vehs	47	42	47	37	39	42
Ending Vehs	35	40	33	43	39	37
Denied Entry Before	0	0	0	0	1	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	273	313	291	302	288	293
Travel Time (hr)	9.2	10.5	9.7	10.1	9.6	9.8
Total Delay (hr)	0.9	0.9	0.9	1.0	0.8	0.9
Total Stops	225	252	249	238	206	234
Fuel Used (gal)	8.3	9.8	8.8	9.3	8.8	9.0

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBL	SBT	SBR	NWR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0		0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.9		1.2	2.8	0.5	0.1	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.3		0.0	2.8	0.0	0.0	0.3
Total Stops	2	0	0	39	1	0	42
Stop/Veh	0.09		0.00	0.98	0.00	0.00	0.10
Travel Dist (mi)	2.9	0.0	14.3	3.5	12.0	0.9	33.7
Travel Time (hr)	0.1	0.0	0.6	0.2	0.5	0.0	1.4
Avg Speed (mph)	27	30	25	21	24	22	24
Vehicles Entered	22	0	113	39	210	16	400
Vehicles Exited	22	0	113	39	211	16	401
Hourly Exit Rate	22	0	113	39	211	16	401
Input Volume	25	0	115	40	220	15	416
% of Volume	89	0	98	98	96	105	96
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1487
Occupancy (veh)	0	0	1	0	0	0	1

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.8	2.8	0.2	0.0	3.1	0.9	0.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.6	2.8	0.0	0.0	0.4	0.0	0.1
Total Stops	5	6	0	0	1	0	12
Stop/Veh	1.00	1.00	0.00	0.00	0.25	0.00	0.03
Travel Dist (mi)	0.1	0.2	12.5	0.2	0.6	18.2	31.8
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.6	1.0
Avg Speed (mph)	11	11	33	23	26	33	32
Vehicles Entered	5	6	204	4	4	135	358
Vehicles Exited	5	6	204	4	4	135	358
Hourly Exit Rate	5	6	204	4	4	135	358
Input Volume	5	5	215	5	5	135	370
% of Volume	100	120	95	80	80	100	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1184
Occupancy (veh)	0	0	0	0	0	1	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.7	0.6	0.6	3.3	0.3	0.2	0.0	0.0	0.0	0.5	0.4	3.7
Total Delay (hr)	0.3	0.2	0.1	0.0	0.1	0.1	0.2	0.5	0.2	0.1	0.1	0.1
Total Del/Veh (s)	6.2	8.5	3.4	5.5	9.3	5.0	11.3	14.8	10.1	6.2	8.8	3.3
Stop Delay (hr)	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Stop Del/Veh (s)	3.7	3.4	2.6	3.1	4.2	4.0	3.7	5.1	4.5	3.6	3.7	2.7
Total Stops	155	85	58	25	54	71	51	108	54	78	57	93
Stop/Veh	0.99	1.00	1.00	0.96	1.00	1.00	1.00	0.96	0.98	0.99	1.00	1.00
Travel Dist (mi)	29.7	16.2	11.0	6.5	13.6	18.0	31.8	68.2	33.7	10.5	7.7	12.6
Travel Time (hr)	1.4	0.7	0.4	0.3	0.5	0.7	1.1	2.4	1.2	0.5	0.4	0.6
Avg Speed (mph)	24	24	25	27	26	26	29	28	29	22	21	23
Vehicles Entered	155	84	57	26	54	71	50	109	54	79	57	93
Vehicles Exited	155	85	58	25	54	71	51	110	54	78	57	93
Hourly Exit Rate	155	85	58	25	54	71	51	110	54	78	57	93
Input Volume	165	85	55	25	50	75	55	112	55	80	60	95
% of Volume	94	100	106	101	107	94	93	98	99	97	95	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	1	1	0	0	1	1	1	2	1	0	0	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.3
Total Delay (hr)	1.9
Total Del/Veh (s)	7.8
Stop Delay (hr)	0.9
Stop Del/Veh (s)	3.8
Total Stops	889
Stop/Veh	0.99
Travel Dist (mi)	259.5
Travel Time (hr)	10.2
Avg Speed (mph)	26
Vehicles Entered	889
Vehicles Exited	891
Hourly Exit Rate	891
Input Volume	911
% of Volume	98
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1282
Occupancy (veh)	10

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	4.1	2.4	2.1	0.3	1.7	1.3	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.3	2.6	0.4	0.1	0.0	0.0	0.2
Total Stops	4	5	6	0	0	0	15
Stop/Veh	1.00	1.00	0.13	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.1	0.1	5.8	26.2	34.0	1.9	68.1
Travel Time (hr)	0.0	0.0	0.3	0.9	1.0	0.1	2.3
Avg Speed (mph)	8	9	22	28	32	29	29
Vehicles Entered	4	5	45	205	132	7	398
Vehicles Exited	4	5	45	206	130	7	397
Hourly Exit Rate	4	5	45	206	130	7	397
Input Volume	5	5	45	215	135	5	410
% of Volume	80	100	99	96	96	140	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1174
Occupancy (veh)	0	0	0	1	1	0	2

Total Network Performance

Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.4
Total Del/Veh (s)	12.1
Stop Delay (hr)	1.1
Stop Del/Veh (s)	4.0
Total Stops	958
Stop/Veh	0.96
Travel Dist (mi)	1175.4
Travel Time (hr)	39.5
Avg Speed (mph)	30
Vehicles Entered	961
Vehicles Exited	964
Hourly Exit Rate	964
Input Volume	5961
% of Volume	16
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	971
Occupancy (veh)	39

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	SB	NW	NE
Directions Served	L	LR	LR
Maximum Queue (ft)	22	45	14
Average Queue (ft)	2	20	0
95th Queue (ft)	14	42	6
Link Distance (ft)	474	244	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	17
Average Queue (ft)	9	1
95th Queue (ft)	32	8
Link Distance (ft)	137	657
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	LT	R
Maximum Queue (ft)	79	72	42	89	59	115	86	67
Average Queue (ft)	37	33	16	41	30	60	40	31
95th Queue (ft)	64	56	41	71	56	94	68	51
Link Distance (ft)	1006		1340		3258		711	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	260		100		100		275	
Storage Blk Time (%)			0		0			
Queuing Penalty (veh)			0		0			

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	36	36
Average Queue (ft)	8	6
95th Queue (ft)	31	27
Link Distance (ft)	79	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	150	5	5	195
Future Vol, veh/h	5	5	150	5	5	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	163	5	5	212

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	388	166	0	0	168
Stage 1	166	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	614	876	-	-	1404
Stage 1	861	-	-	-	-
Stage 2	813	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	612	876	-	-	1404
Mov Cap-2 Maneuver	612	-	-	-	-
Stage 1	858	-	-	-	-
Stage 2	813	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1404	-
HCM Lane V/C Ratio	-	-	0.015	0.004	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 11.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135
Future Vol, veh/h	125	45	55	45	85	90	55	70	30	70	100	135
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	136	49	60	49	92	98	60	76	33	76	109	147
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			2			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			2			2			2		
HCM Control Delay	11.2			11.4			10.6			11.4		
HCM LOS	B			B			B			B		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	41%	0%
Vol Thru, %	0%	70%	0%	45%	0%	49%	59%	0%
Vol Right, %	0%	30%	0%	55%	0%	51%	0%	100%
Sign Control	Stop							
Traffic Vol by Lane	55	100	125	100	45	175	170	135
LT Vol	55	0	125	0	45	0	70	0
Through Vol	0	70	0	45	0	85	100	0
RT Vol	0	30	0	55	0	90	0	135
Lane Flow Rate	60	109	136	109	49	190	185	147
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.117	0.19	0.259	0.18	0.094	0.318	0.333	0.227
Departure Headway (Hd)	7.025	6.303	6.875	5.976	6.898	6.024	6.481	5.563
Convergence, Y/N	Yes							
Cap	509	567	522	598	518	595	554	644
Service Time	4.786	4.064	4.634	3.735	4.655	3.782	4.233	3.314
HCM Lane V/C Ratio	0.118	0.192	0.261	0.182	0.095	0.319	0.334	0.228
HCM Control Delay	10.7	10.6	12	10.1	10.4	11.6	12.5	10
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.4	0.7	1	0.7	0.3	1.4	1.5	0.9

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	145	175	25
Future Vol, veh/h	10	10	15	145	175	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	158	190	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	394	204	217	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	609	834	1347	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	602	834	1347	-	-	-
Mov Cap-2 Maneuver	602	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.3	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1347	-	699	-	-	
HCM Lane V/C Ratio	0.012	-	0.031	-	-	
HCM Control Delay (s)	7.7	-	10.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1329	1359	1290	1279	1193	1291
Vehs Exited	1326	1360	1290	1288	1198	1293
Starting Vehs	50	46	48	54	50	49
Ending Vehs	53	45	48	45	45	49
Denied Entry Before	0	3	0	1	1	0
Denied Entry After	0	0	0	2	1	0
Travel Distance (mi)	1432	1400	1332	1291	1288	1349
Travel Time (hr)	48.8	48.0	45.2	44.1	43.8	46.0
Total Delay (hr)	4.9	5.1	4.7	4.5	4.5	4.7
Total Stops	1126	1140	1070	1077	1020	1087
Fuel Used (gal)	44.7	44.1	41.7	40.4	40.3	42.2

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	312	334	349	312	274	316
Vehs Exited	319	324	346	331	278	320
Starting Vehs	50	46	48	54	50	49
Ending Vehs	43	56	51	35	46	45
Denied Entry Before	0	3	0	1	1	0
Denied Entry After	1	0	1	0	1	0
Travel Distance (mi)	334	363	319	334	321	334
Travel Time (hr)	11.2	12.4	11.0	11.3	10.8	11.3
Total Delay (hr)	1.0	1.4	1.2	1.1	1.0	1.1
Total Stops	260	288	283	263	235	265
Fuel Used (gal)	10.5	11.4	10.1	10.6	10.0	10.5

Interval #2 Information Recording

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	339	325	277	297	293	305
Vehs Exited	330	331	291	289	316	311
Starting Vehs	43	56	51	35	46	45
Ending Vehs	52	50	37	43	23	40
Denied Entry Before	1	0	1	0	1	0
Denied Entry After	1	2	0	0	0	0
Travel Distance (mi)	357	320	297	305	311	318
Travel Time (hr)	12.3	11.0	9.9	10.3	10.6	10.8
Total Delay (hr)	1.2	1.2	0.9	1.0	1.1	1.1
Total Stops	295	270	244	254	271	267
Fuel Used (gal)	11.0	10.1	9.2	9.2	9.9	9.9

Interval #3 Information Recording

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	361	341	356	343	329	346
Vehs Exited	360	346	347	334	301	337
Starting Vehs	52	50	37	43	23	40
Ending Vehs	53	45	46	52	51	51
Denied Entry Before	1	2	0	0	0	0
Denied Entry After	0	0	0	0	2	0
Travel Distance (mi)	386	353	384	325	335	357
Travel Time (hr)	13.2	12.1	13.0	11.2	11.4	12.2
Total Delay (hr)	1.4	1.2	1.4	1.2	1.2	1.3
Total Stops	304	270	301	285	266	286
Fuel Used (gal)	12.0	11.0	12.0	10.2	10.4	11.1

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	317	359	308	327	297	319
Vehs Exited	317	359	306	334	303	325
Starting Vehs	53	45	46	52	51	51
Ending Vehs	53	45	48	45	45	49
Denied Entry Before	0	0	0	0	2	0
Denied Entry After	0	0	0	2	1	0
Travel Distance (mi)	355	364	332	327	321	340
Travel Time (hr)	12.0	12.5	11.2	11.3	11.0	11.6
Total Delay (hr)	1.2	1.4	1.1	1.2	1.1	1.2
Total Stops	267	312	242	275	248	270
Fuel Used (gal)	11.3	11.6	10.4	10.2	9.9	10.7

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	SBR	NEL	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.2
Total Del/Veh (s)	2.1	0.2	1.5
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	38.3	6.2	44.4
Travel Time (hr)	1.7	0.3	1.9
Avg Speed (mph)	23	22	23
Vehicles Entered	345	166	511
Vehicles Exited	345	166	511
Hourly Exit Rate	345	166	511
Input Volume	185	160	345
% of Volume	186	104	148
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			923
Occupancy (veh)	2	0	2

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.3	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	7.0	2.8	0.6	0.7	2.3	0.9	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.5	2.7	0.0	0.0	0.3	0.0	0.1
Total Stops	3	5	0	0	1	0	9
Stop/Veh	1.00	1.00	0.00	0.00	0.10	0.00	0.02
Travel Dist (mi)	0.1	0.1	50.5	2.0	0.9	37.0	90.7
Travel Time (hr)	0.0	0.0	1.5	0.1	0.0	1.2	2.8
Avg Speed (mph)	9	11	34	31	24	32	33
Vehicles Entered	3	5	158	6	10	380	562
Vehicles Exited	3	5	158	6	10	380	562
Hourly Exit Rate	3	5	158	6	10	380	562
Input Volume	5	5	150	5	5	195	365
% of Volume	60	100	105	120	200	195	154
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							918
Occupancy (veh)	0	0	1	0	0	1	3

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.8	0.5	0.4	3.1	0.4	0.3	2.1	0.2	0.3	0.6	0.6	3.7
Total Delay (hr)	0.2	0.1	0.0	0.1	0.3	0.1	0.2	0.5	0.1	0.1	0.2	0.2
Total Del/Veh (s)	6.2	8.4	3.2	6.4	10.2	5.8	8.1	11.5	7.1	7.3	9.4	4.4
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Stop Del/Veh (s)	4.1	3.8	2.8	3.6	4.8	4.4	4.2	5.1	4.3	4.3	4.2	3.3
Total Stops	116	43	51	41	89	91	109	144	62	71	93	143
Stop/Veh	0.99	0.98	1.00	1.00	0.99	0.99	0.99	0.99	1.00	0.99	1.00	1.00
Travel Dist (mi)	22.3	8.3	9.7	10.4	22.6	23.0	24.8	33.8	14.4	9.6	12.5	19.3
Travel Time (hr)	1.0	0.3	0.4	0.4	0.9	0.9	1.1	1.4	0.6	0.5	0.6	1.0
Avg Speed (mph)	24	24	26	26	25	26	24	24	24	21	21	22
Vehicles Entered	116	43	51	41	89	91	109	144	61	71	93	143
Vehicles Exited	117	43	51	41	89	91	109	144	62	71	93	143
Hourly Exit Rate	117	43	51	41	89	91	109	144	62	71	93	143
Input Volume	125	45	55	45	85	90	55	70	30	70	100	135
% of Volume	94	95	93	91	104	101	199	206	207	101	93	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	1	0	0	0	1	1	1	1	1	0	1	1

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.5
Total Delay (hr)	2.2
Total Del/Veh (s)	7.5
Stop Delay (hr)	1.2
Stop Del/Veh (s)	4.2
Total Stops	1053
Stop/Veh	0.99
Travel Dist (mi)	210.7
Travel Time (hr)	9.3
Avg Speed (mph)	24
Vehicles Entered	1052
Vehicles Exited	1054
Hourly Exit Rate	1054
Input Volume	905
% of Volume	116
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1055
Occupancy (veh)	9

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Total Del/Veh (s)	7.0	4.3	3.0	0.2	2.7	2.1	2.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.4	4.0	1.4	0.0	0.0	0.0	0.2
Total Stops	10	12	3	0	0	0	25
Stop/Veh	1.00	1.00	0.25	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.3	0.4	1.3	17.3	106.6	16.6	142.6
Travel Time (hr)	0.0	0.0	0.1	0.6	3.3	0.6	4.6
Avg Speed (mph)	10	11	20	28	32	30	31
Vehicles Entered	10	12	12	155	332	51	572
Vehicles Exited	10	12	12	155	333	51	573
Hourly Exit Rate	10	12	12	155	333	51	573
Input Volume	10	10	15	146	175	25	382
% of Volume	98	117	79	106	190	206	150
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							645
Occupancy (veh)	0	0	0	1	3	1	5

Total Network Performance

Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.3
Total Delay (hr)	4.2
Total Del/Veh (s)	11.4
Stop Delay (hr)	1.4
Stop Del/Veh (s)	3.8
Total Stops	1087
Stop/Veh	0.81
Travel Dist (mi)	1348.7
Travel Time (hr)	46.0
Avg Speed (mph)	30
Vehicles Entered	1291
Vehicles Exited	1293
Hourly Exit Rate	1293
Input Volume	6124
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	810
Occupancy (veh)	45

Queuing and Blocking Report

Baseline

10/24/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement

WB

SB

Directions Served

LR

LT

Maximum Queue (ft)

29

24

Average Queue (ft)

7

1

95th Queue (ft)

27

12

Link Distance (ft)

137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement

EB

EB

WB

WB

NB

NB

SB

SB

Directions Served

L

TR

L

TR

L

TR

R

Maximum Queue (ft)

66

57

48

99

78

134

82

75

Average Queue (ft)

31

27

21

47

39

58

43

37

95th Queue (ft)

52

49

45

80

66

101

70

60

Link Distance (ft)

1005

1341

711

Upstream Blk Time (%)

Queuing Penalty (veh)

260

100

100

275

Storage Bay Dist (ft)

0

0

1

Storage Blk Time (%)

0

0

0

Queuing Penalty (veh)

Queueing and Blocking Report

Baseline

10/24/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	43	31
Average Queue (ft)	16	3
95th Queue (ft)	43	18
Link Distance (ft)	183	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

Intersection

Int Delay, s/veh 1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	40	295	15	35	155
Future Vol, veh/h	0	40	295	15	35	155
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	43	321	16	38	168

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	329	0	0	337	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	710	-	-	1217	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	710	-	-	1217	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	10.4	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
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Capacity (veh/h)	-	-	710	1217	-
HCM Lane V/C Ratio	-	-	0.061	0.031	-
HCM Control Delay (s)	-	-	10.4	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	290	5	5	185
Future Vol, veh/h	5	5	290	5	5	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	315	5	5	201

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	318	0	0	320
Stage 1	318	-	-	-	-
Stage 2	211	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	720	-	-	1234
Stage 1	735	-	-	-	-
Stage 2	822	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	505	720	-	-	1234
Mov Cap-2 Maneuver	505	-	-	-	-
Stage 1	731	-	-	-	-
Stage 2	822	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1234	-
HCM Lane V/C Ratio	-	-	0.018	0.004	-
HCM Control Delay (s)	-	-	11.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Intersection Delay, s/veh 15.2

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↓		↑	↓		↑	↓	↑
Traffic Vol, veh/h	220	115	75	35	60	100	65	155	75	100	80	145
Future Vol, veh/h	220	115	75	35	60	100	65	155	75	100	80	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	239	125	82	38	65	109	71	168	82	109	87	158
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			2			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			2			2			2		
HCM Control Delay	16.4			13.4			15.9			14.2		
HCM LOS	C			B			C			B		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	56%	0%
Vol Thru, %	0%	67%	0%	61%	0%	38%	44%	0%
Vol Right, %	0%	33%	0%	39%	0%	62%	0%	100%
Sign Control	Stop							
Traffic Vol by Lane	65	230	220	190	35	160	180	145
LT Vol	65	0	220	0	35	0	100	0
Through Vol	0	155	0	115	0	60	80	0
RT Vol	0	75	0	75	0	100	0	145
Lane Flow Rate	71	250	239	207	38	174	196	158
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.156	0.5	0.512	0.397	0.087	0.349	0.417	0.292
Departure Headway (Hd)	7.942	7.195	7.708	6.914	8.197	7.232	7.679	6.676
Convergence, Y/N	Yes							
Cap	451	500	469	520	437	497	470	537
Service Time	5.693	4.946	5.457	4.662	5.953	4.988	5.431	4.428
HCM Lane V/C Ratio	0.157	0.5	0.51	0.398	0.087	0.35	0.417	0.294
HCM Control Delay	12.2	17	18.3	14.2	11.7	13.8	15.8	12.2
HCM Lane LOS	B	C	C	B	B	B	C	B
HCM 95th-tile Q	0.5	2.8	2.9	1.9	0.3	1.5	2	1.2

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	5	5	45	290	185	5
Future Vol, veh/h	5	5	45	290	185	5
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	49	315	201	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	617	204	206	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	452	834	1359	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	436	834	1359	-	-	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.4	1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1359	-	573	-	-	
HCM Lane V/C Ratio	0.036	-	0.019	-	-	
HCM Control Delay (s)	7.7	-	11.4	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1841	1810	1792	1782	1793	1803
Vehs Exited	1846	1808	1767	1777	1800	1798
Starting Vehs	65	63	62	68	66	64
Ending Vehs	60	65	87	73	59	69
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	0	1	5	0	1	0
Travel Distance (mi)	1886	1936	1941	1846	1835	1889
Travel Time (hr)	68.8	69.9	67.6	70.3	67.9	68.9
Total Delay (hr)	12.3	12.0	9.9	15.0	13.0	12.4
Total Stops	1674	1649	1626	1662	1667	1657
Fuel Used (gal)	60.4	60.2	59.3	58.3	57.8	59.2

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	458	447	438	444	398	438
Vehs Exited	453	455	441	442	402	438
Starting Vehs	65	63	62	68	66	64
Ending Vehs	70	55	59	70	62	63
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	0	0	0	0	1	0
Travel Distance (mi)	480	429	471	469	414	453
Travel Time (hr)	18.0	16.5	16.2	16.2	14.9	16.4
Total Delay (hr)	3.5	3.6	2.2	2.1	2.4	2.8
Total Stops	436	413	397	393	376	404
Fuel Used (gal)	15.3	13.7	14.5	14.3	12.7	14.1

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	455	435	402	396	458	427
Vehs Exited	453	427	395	405	454	427
Starting Vehs	70	55	59	70	62	63
Ending Vehs	72	63	66	61	66	63
Denied Entry Before	0	0	0	0	1	0
Denied Entry After	0	0	0	1	1	0
Travel Distance (mi)	457	452	412	427	452	440
Travel Time (hr)	16.4	15.6	14.3	15.0	16.6	15.6
Total Delay (hr)	2.8	2.1	2.0	2.2	2.9	2.4
Total Stops	395	389	354	382	427	388
Fuel Used (gal)	14.4	14.0	12.6	13.2	14.3	13.7

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	479	483	490	487	518	490
Vehs Exited	481	470	475	456	490	473
Starting Vehs	72	63	66	61	66	63
Ending Vehs	70	76	81	92	94	83
Denied Entry Before	0	0	0	1	1	0
Denied Entry After	0	2	0	0	1	0
Travel Distance (mi)	475	502	524	475	488	493
Travel Time (hr)	17.6	17.7	18.1	19.2	17.9	18.1
Total Delay (hr)	3.4	2.6	2.5	5.1	3.4	3.4
Total Stops	441	424	442	444	453	440
Fuel Used (gal)	15.5	15.6	15.9	15.0	15.5	15.5

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	449	445	462	455	419	445
Vehs Exited	459	456	456	474	454	460
Starting Vehs	70	76	81	92	94	83
Ending Vehs	60	65	87	73	59	69
Denied Entry Before	0	2	0	0	1	0
Denied Entry After	0	1	5	0	1	0
Travel Distance (mi)	474	552	534	476	481	503
Travel Time (hr)	16.8	20.0	19.0	19.8	18.5	18.8
Total Delay (hr)	2.6	3.6	3.2	5.5	4.2	3.8
Total Stops	402	423	433	443	411	420
Fuel Used (gal)	15.2	16.9	16.3	15.8	15.3	15.9

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	2.9	0.5	0.2	3.2	1.0	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	2.9	0.0	0.0	0.8	0.0	0.2
Total Stops	43	0	0	17	0	60
Stop/Veh	1.00	0.00	0.00	0.26	0.00	0.08
Travel Dist (mi)	4.2	25.4	1.2	8.1	38.4	77.3
Travel Time (hr)	0.2	0.8	0.0	0.3	1.2	2.5
Avg Speed (mph)	22	33	25	24	32	30
Vehicles Entered	43	301	14	65	307	730
Vehicles Exited	43	302	14	64	307	730
Hourly Exit Rate	43	302	14	64	307	730
Input Volume	40	295	15	35	156	541
% of Volume	108	102	92	183	197	135
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Density (ft/veh)						873

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.2	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1	0.2
Total Del/Veh (s)	5.5	3.4	1.2	1.3	2.9	0.9	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	4.3	3.3	0.0	0.0	0.9	0.0	0.1
Total Stops	5	5	0	0	2	1	13
Stop/Veh	1.00	1.00	0.00	0.00	0.25	0.00	0.02
Travel Dist (mi)	0.1	0.1	94.5	2.0	0.7	37.1	134.5
Travel Time (hr)	0.0	0.0	2.8	0.1	0.0	1.2	4.1
Avg Speed (mph)	9	10	34	31	22	32	33
Vehicles Entered	5	5	294	6	8	375	693
Vehicles Exited	5	5	295	6	8	375	694
Hourly Exit Rate	5	5	295	6	8	375	694
Input Volume	5	5	290	5	5	185	496
% of Volume	100	100	102	120	160	202	140
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							619

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.5	0.7	0.8	3.0	0.3	0.3	2.3	0.7	0.6	0.6	0.6	3.7
Total Delay (hr)	0.7	0.4	0.1	0.1	0.3	0.3	0.7	3.8	1.5	0.3	0.3	0.2
Total Del/Veh (s)	11.2	12.2	5.8	8.5	14.4	9.4	19.5	41.7	35.2	11.3	12.6	5.3
Stop Delay (hr)	0.5	0.2	0.1	0.1	0.2	0.2	0.4	3.2	1.3	0.2	0.2	0.2
Stop Del/Veh (s)	8.5	6.9	4.6	5.7	9.2	8.1	11.9	35.1	32.2	8.2	7.4	4.0
Total Stops	214	117	79	34	65	99	155	322	148	102	80	147
Stop/Veh	1.00	1.00	0.99	1.00	0.98	0.99	1.23	0.99	0.99	1.00	1.00	0.99
Travel Dist (mi)	40.9	22.4	15.2	8.6	16.5	25.1	23.3	61.6	28.1	13.8	10.7	19.8
Travel Time (hr)	2.2	1.1	0.7	0.4	0.7	1.1	1.5	5.6	2.4	0.8	0.6	1.1
Avg Speed (mph)	21	22	23	25	22	23	16	11	12	18	18	21
Vehicles Entered	213	117	79	34	65	98	125	322	147	102	79	147
Vehicles Exited	214	116	78	34	65	99	125	320	148	102	80	147
Hourly Exit Rate	214	116	78	34	65	99	125	320	148	102	80	147
Input Volume	220	115	75	35	60	100	65	155	75	100	80	145
% of Volume	97	101	104	97	109	99	192	206	197	102	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.5
Total Delay (hr)	8.5
Total Del/Veh (s)	19.9
Stop Delay (hr)	6.8
Stop Del/Veh (s)	15.8
Total Stops	1562
Stop/Veh	1.01
Travel Dist (mi)	285.8
Travel Time (hr)	18.2
Avg Speed (mph)	16
Vehicles Entered	1528
Vehicles Exited	1528
Hourly Exit Rate	1528
Input Volume	1226
% of Volume	125
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	500

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Total Del/Veh (s)	4.7	3.7	2.9	0.5	2.1	2.1	1.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.7	3.8	0.9	0.1	0.0	0.0	0.1
Total Stops	4	5	13	0	0	0	22
Stop/Veh	1.00	1.00	0.26	0.00	0.00	0.00	0.03
Travel Dist (mi)	0.1	0.1	6.2	37.0	117.9	3.9	165.0
Travel Time (hr)	0.0	0.0	0.3	1.1	3.6	0.1	5.2
Avg Speed (mph)	7	7	24	32	33	30	32
Vehicles Entered	4	5	49	298	367	12	735
Vehicles Exited	4	5	50	298	366	12	735
Hourly Exit Rate	4	5	50	298	366	12	735
Input Volume	5	5	45	291	185	5	537
% of Volume	80	100	110	102	198	240	137
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							588

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.4
Total Delay (hr)	11.7
Total Del/Veh (s)	22.7
Stop Delay (hr)	7.2
Stop Del/Veh (s)	13.8
Total Stops	1657
Stop/Veh	0.89
Travel Dist (mi)	1888.7
Travel Time (hr)	68.9
Avg Speed (mph)	28
Vehicles Entered	1803
Vehicles Exited	1798
Hourly Exit Rate	1798
Input Volume	8453
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	542

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement	WB	SB
Directions Served	R	L
Maximum Queue (ft)	51	49
Average Queue (ft)	23	13
95th Queue (ft)	45	40
Link Distance (ft)	513	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: Bryant Parkway & Airport Entrance

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	44
Average Queue (ft)	9	3
95th Queue (ft)	30	23
Link Distance (ft)	137	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Bryant Parkway & Shobe Rd

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	LT	R
Maximum Queue (ft)	114	101	58	111	200	484	112	83
Average Queue (ft)	53	44	22	52	99	218	57	40
95th Queue (ft)	91	77	49	93	224	455	92	69
Link Distance (ft)	1005		1341		711			
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	260		100		100		275	
Storage Blk Time (%)					1	0	46	
Queuing Penalty (veh)					0	0	30	

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	35	39
Average Queue (ft)	7	11
95th Queue (ft)	28	35
Link Distance (ft)	79	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 30

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	0	210	0	0	265
Future Vol, veh/h	0	0	210	0	0	265
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	228	0	0	288

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	228	0	0	228	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	0	809	-	-	1334	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	809	-	-	1334	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s 0 0 0

HCM LOS A

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1334	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	A			
Traffic Vol, veh/h	5	5	200	5	5	275
Future Vol, veh/h	5	5	200	5	5	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	5	217	5	5	299

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	529	220	0	0	222
Stage 1	220	-	-	-	-
Stage 2	309	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	508	817	-	-	1341
Stage 1	814	-	-	-	-
Stage 2	742	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	506	817	-	-	1341
Mov Cap-2 Maneuver	506	-	-	-	-
Stage 1	811	-	-	-	-
Stage 2	742	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1341	-
HCM Lane V/C Ratio	-	-	0.017	0.004	-
HCM Control Delay (s)	-	-	10.9	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection

Intersection Delay, s/veh 15.1

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↓		↑	↓		↑	↓	
Traffic Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180
Future Vol, veh/h	165	60	80	55	115	120	75	95	35	100	145	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	179	65	87	60	125	130	82	103	38	109	158	196
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			2			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			2			2			2		
HCM Control Delay	14.3			15.8			13.1			16.2		
HCM LOS	B			C			B			C		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	41%	0%
Vol Thru, %	0%	73%	0%	43%	0%	49%	59%	0%
Vol Right, %	0%	27%	0%	57%	0%	51%	0%	100%
Sign Control	Stop							
Traffic Vol by Lane	75	130	165	140	55	235	245	180
LT Vol	75	0	165	0	55	0	100	0
Through Vol	0	95	0	60	0	115	145	0
RT Vol	0	35	0	80	0	120	0	180
Lane Flow Rate	82	141	179	152	60	255	266	196
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.185	0.292	0.394	0.295	0.132	0.501	0.548	0.352
Departure Headway (Hd)	8.153	7.445	7.909	6.986	7.942	7.062	7.403	6.477
Convergence, Y/N	Yes							
Cap	439	482	456	514	451	511	487	554
Service Time	5.91	5.201	5.661	4.738	5.694	4.813	5.151	4.225
HCM Lane V/C Ratio	0.187	0.293	0.393	0.296	0.133	0.499	0.546	0.354
HCM Control Delay	12.8	13.3	15.7	12.7	11.9	16.7	18.8	12.7
HCM Lane LOS	B	B	C	B	B	C	C	B
HCM 95th-tile Q	0.7	1.2	1.9	1.2	0.5	2.8	3.3	1.6

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	↑	
Traffic Vol, veh/h	10	10	15	195	255	25
Future Vol, veh/h	10	10	15	195	255	25
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	11	16	212	277	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	535	291	304	0	-	0
Stage 1	291	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	504	746	1251	-	-	-
Stage 1	756	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	497	746	1251	-	-	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1251	-	597	-	-	
HCM Lane V/C Ratio	0.013	-	0.036	-	-	
HCM Control Delay (s)	7.9	-	11.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4
Vehs Entered	1824	1778	1793	1741	1679	1763
Vehs Exited	1809	1785	1801	1746	1685	1765
Starting Vehs	58	66	75	71	62	64
Ending Vehs	73	59	67	66	56	63
Denied Entry Before	1	1	1	1	0	0
Denied Entry After	0	0	0	2	1	0
Travel Distance (mi)	2000	1944	1870	1853	1777	1889
Travel Time (hr)	68.3	66.5	64.5	63.5	60.6	64.7
Total Delay (hr)	8.6	8.3	8.9	8.2	7.4	8.3
Total Stops	1520	1477	1498	1479	1413	1476
Fuel Used (gal)	61.5	59.7	57.8	56.7	54.0	57.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	443	420	458	411	400	427
Vehs Exited	444	420	470	407	406	429
Starting Vehs	58	66	75	71	62	64
Ending Vehs	57	66	63	75	56	59
Denied Entry Before	1	1	1	1	0	0
Denied Entry After	0	2	1	0	1	0
Travel Distance (mi)	464	440	515	439	459	463
Travel Time (hr)	15.9	15.1	17.7	15.2	15.7	15.9
Total Delay (hr)	1.9	1.8	2.5	2.1	1.9	2.0
Total Stops	371	357	398	363	341	364
Fuel Used (gal)	14.6	13.8	15.9	13.6	13.9	14.4

Interval #2 Information

Start Time 7:15

End Time 7:30

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	431	418	406	398	430	415
Vehs Exited	421	420	408	423	431	420
Starting Vehs	57	66	63	75	56	59
Ending Vehs	67	64	61	50	55	57
Denied Entry Before	0	2	1	0	1	0
Denied Entry After	2	1	1	3	0	0
Travel Distance (mi)	475	445	411	460	467	452
Travel Time (hr)	16.0	15.1	13.9	15.6	15.9	15.3
Total Delay (hr)	1.8	1.8	1.6	1.9	2.1	1.8
Total Stops	356	338	325	351	365	347
Fuel Used (gal)	14.6	13.6	12.5	13.8	14.4	13.8

Interval #3 Information

Start Time 7:30

End Time 7:45

Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	505	475	473	494	437	479
Vehs Exited	496	467	443	466	428	461
Starting Vehs	67	64	61	50	55	57
Ending Vehs	76	72	91	78	64	77
Denied Entry Before	2	1	1	3	0	0
Denied Entry After	1	0	1	1	1	0
Travel Distance (mi)	527	524	466	496	443	491
Travel Time (hr)	18.2	18.1	16.0	17.1	15.0	16.9
Total Delay (hr)	2.5	2.4	2.2	2.3	1.7	2.2
Total Stops	413	404	385	391	363	391
Fuel Used (gal)	16.2	15.9	14.3	15.2	13.1	14.9

Interval #4 Information Recording

Start Time 7:45

End Time 8:00

Total Time (min) 15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	445	465	456	438	412	444
Vehs Exited	448	478	480	450	420	456
Starting Vehs	76	72	91	78	64	77
Ending Vehs	73	59	67	66	56	63
Denied Entry Before	1	0	1	1	1	0
Denied Entry After	0	0	0	2	1	0
Travel Distance (mi)	534	536	479	459	407	483
Travel Time (hr)	18.2	18.3	16.9	15.7	14.0	16.6
Total Delay (hr)	2.4	2.4	2.6	1.9	1.7	2.2
Total Stops	380	378	390	374	344	373
Fuel Used (gal)	16.2	16.3	15.2	14.0	12.5	14.8

1: Hill Farm Rd & Bryant Parkway Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	0.0	0.2	0.2
Total Del/Veh (s)	0.1	1.2	0.9
Stop Delay (hr)	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0
Total Stops	0	0	0
Stop/Veh	0.00	0.00	0.00
Travel Dist (mi)	16.6	66.1	82.7
Travel Time (hr)	0.5	2.1	2.6
Avg Speed (mph)	34	31	32
Vehicles Entered	203	529	732
Vehicles Exited	203	531	734
Hourly Exit Rate	203	531	734
Input Volume	210	266	476
% of Volume	97	199	154
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			818

14: Bryant Parkway & Airport Entrance Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.4	0.3
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.2	0.3
Total Del/Veh (s)	8.0	2.7	1.0	0.4	2.5	1.2	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	6.5	2.5	0.0	0.1	0.3	0.0	0.1
Total Stops	5	5	0	0	1	1	12
Stop/Veh	1.00	1.00	0.00	0.00	0.09	0.00	0.02
Travel Dist (mi)	0.1	0.1	61.6	1.7	1.0	55.4	119.9
Travel Time (hr)	0.0	0.0	1.8	0.1	0.0	1.9	3.8
Avg Speed (mph)	8	11	34	31	23	31	32
Vehicles Entered	5	4	193	5	11	564	782
Vehicles Exited	5	5	194	5	11	564	784
Hourly Exit Rate	5	5	194	5	11	564	784
Input Volume	5	5	200	5	5	275	495
% of Volume	100	100	97	100	220	205	158
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							678

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	3.7	0.6	0.6	3.1	0.4	0.3	2.0	0.4	0.4	0.8	0.8	3.5
Total Delay (hr)	0.4	0.2	0.1	0.1	0.4	0.3	0.5	0.7	0.2	0.3	0.6	0.3
Total Del/Veh (s)	9.0	10.2	4.7	7.8	13.3	7.6	11.4	14.8	10.0	11.6	14.7	6.3
Stop Delay (hr)	0.3	0.1	0.1	0.1	0.3	0.2	0.3	0.4	0.1	0.2	0.4	0.2
Stop Del/Veh (s)	6.5	5.2	4.0	4.9	7.8	6.0	6.8	8.2	7.0	8.3	9.1	4.8
Total Stops	163	63	78	56	115	121	155	177	73	96	152	185
Stop/Veh	0.99	0.98	0.99	0.98	0.98	0.98	0.99	0.99	0.99	1.00	0.99	0.99
Travel Dist (mi)	31.2	12.2	15.0	14.3	29.4	31.0	29.5	33.7	13.6	13.0	20.4	24.9
Travel Time (hr)	1.6	0.5	0.6	0.6	1.3	1.3	1.5	1.7	0.7	0.8	1.2	1.4
Avg Speed (mph)	22	23	24	25	23	24	20	20	20	17	17	20
Vehicles Entered	163	64	78	56	116	122	154	177	73	96	152	184
Vehicles Exited	162	63	78	57	115	121	154	177	74	96	152	185
Hourly Exit Rate	162	63	78	57	115	121	154	177	74	96	152	185
Input Volume	165	60	80	55	115	120	75	95	35	100	145	180
% of Volume	98	105	97	104	100	101	205	187	211	96	105	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												

17: Bryant Parkway & Shobe Rd Performance by movement

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.5
Total Delay (hr)	4.2
Total Del/Veh (s)	10.5
Stop Delay (hr)	2.7
Stop Del/Veh (s)	6.7
Total Stops	1434
Stop/Veh	0.99
Travel Dist (mi)	268.0
Travel Time (hr)	13.3
Avg Speed (mph)	21
Vehicles Entered	1435
Vehicles Exited	1434
Hourly Exit Rate	1434
Input Volume	1226
% of Volume	117
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	690

35: Bryant Parkway & Driveway Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.5	0.0	0.6
Total Del/Veh (s)	8.3	5.4	4.7	0.3	3.4	2.7	2.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	7.4	5.5	2.9	0.0	0.0	0.0	0.2
Total Stops	10	12	8	0	0	0	30
Stop/Veh	1.00	1.00	0.53	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.2	0.2	1.8	23.5	165.5	17.3	208.4
Travel Time (hr)	0.0	0.0	0.1	0.7	5.3	0.6	6.7
Avg Speed (mph)	5	6	23	34	31	29	31
Vehicles Entered	10	12	15	188	515	54	794
Vehicles Exited	10	12	15	188	517	54	796
Hourly Exit Rate	10	12	15	188	517	54	796
Input Volume	10	10	15	195	255	25	511
% of Volume	98	117	98	96	203	218	156
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							453

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.4
Total Delay (hr)	7.6
Total Del/Veh (s)	15.0
Stop Delay (hr)	3.1
Stop Del/Veh (s)	6.0
Total Stops	1476
Stop/Veh	0.81
Travel Dist (mi)	1888.9
Travel Time (hr)	64.7
Avg Speed (mph)	30
Vehicles Entered	1763
Vehicles Exited	1765
Hourly Exit Rate	1765
Input Volume	8323
% of Volume	21
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	577

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 1: Hill Farm Rd & Bryant Parkway

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 14: Bryant Parkway & Airport Entrance

Movement

WB

SB

Directions Served

LR

LT

Maximum Queue (ft)

34

38

Average Queue (ft)

9

2

95th Queue (ft)

31

17

Link Distance (ft)

137

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 17: Bryant Parkway & Shobe Rd

Movement

EB

EB

WB

WB

NB

NB

SB

SB

Directions Served

L

TR

L

TR

L

TR

LT

R

Maximum Queue (ft)

87

71

57

123

111

188

154

90

Average Queue (ft)

41

34

27

61

51

73

64

46

95th Queue (ft)

69

58

50

100

91

133

116

75

Link Distance (ft)

1005

1341

711

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

260

100

100

275

Storage Blk Time (%)

1

0

3

Queuing Penalty (veh)

1

0

2

Queuing and Blocking Report

Baseline

11/11/2019

Intersection: 35: Bryant Parkway & Driveway

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	44	36
Average Queue (ft)	16	7
95th Queue (ft)	44	29
Link Distance (ft)	80	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bryant Parkway	1	3.2	20.4	0.1	25
Driveway	35	0.6	16.8	0.1	26
Airport Entrance	14	1.1	33.8	0.3	34
	5	0.6	14.6	0.1	33
Total		5.5	85.5	0.7	30

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	0.9	11.4	0.1	43
Driveway	35	2.2	35.1	0.3	33
Hill Farm Rd	1	2.7	17.6	0.1	25
Total		5.8	64.1	0.6	33

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Driveway	35	-	-	0.1	-
Airport Entrance	14	0.8	33.5	0.3	35
	5	0.5	14.5	0.1	33
Total		1.3	48.0	0.6	44

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	1.1	11.7	0.1	43
Driveway	35	3.3	36.3	0.3	32
Hill Farm Rd	1	3.3	19.7	0.1	23
Total		7.7	67.7	0.6	31

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bryant Parkway	1	3.6	23.5	0.2	26
Driveway	35	0.6	16.7	0.1	27
Airport Entrance	14	1.1	34.0	0.3	34
	5	0.6	14.5	0.1	33
Total		5.9	88.7	0.7	30

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	0.9	11.3	0.1	44
Driveway	35	2.0	34.8	0.3	33
Hill Farm Rd	1	2.7	17.5	0.1	25
Total		5.6	63.6	0.6	33

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Driveway	35	-	-	0.1	-
Airport Entrance	14	1.0	33.9	0.3	34
	5	0.5	14.5	0.1	33
Total		1.6	48.4	0.6	43

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	1.1	11.6	0.1	43
Driveway	35	3.3	36.1	0.3	32
Bryant Parkway	1	1.2	14.1	0.1	32
Total		5.6	61.8	0.6	34

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bryant Parkway	1	3.5	17.0	0.1	22
Driveway	35	0.6	16.5	0.1	27
Airport Entrance	14	1.1	33.8	0.3	34
	5	0.6	14.6	0.1	33
Total		5.8	82.0	0.7	30

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	0.8	11.1	0.1	44
Driveway	35	2.0	35.1	0.3	33
Hill Farm Rd	1	2.7	17.8	0.1	25
Total		5.5	64.0	0.6	33

Arterial Level of Service: NB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Driveway	35	-	-	0.1	-
Airport Entrance	14	0.8	33.6	0.3	35
	5	0.4	14.3	0.1	34
Total		1.2	47.9	0.6	44

Arterial Level of Service: SB Bryant Parkway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Airport Entrance	14	1.3	11.8	0.1	42
Driveway	35	3.3	36.3	0.3	32
Hill Farm Rd	1	3.4	19.8	0.1	22
Total		8.0	68.0	0.6	31

