SIGNAL TIMING OPTIMIZATION STUDY

FINAL REPORT

US 70 FROM STATE ROUTE 96 TO BEASLEY DRIVE
BEASLEY DRIVE FROM CENTER AVENUE (SR-48) TO THORNTON DRIVE

DICKSON, TENNESSEE



TN TDOT Department of Transportation

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PREPARED FOR:

THE CITY OF DICKSON, TN



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1. INTRODUCTION

The principal purpose of this project has been to develop optimized traffic signal timings for the US 70 and Beasley Drive corridors within the City of Dickson for immediate implementation. In addition, this study also identifies roadway and traffic control improvements that would improve the safety and efficiency of the study area network.

To develop new signal timings and identify potential improvements, a pre-condition inventory of the transportation infrastructure was compiled followed by analyses of traffic operations and demand. To begin, a significant amount of time was spent evaluating local controller settings, including minimum vehicular green, yellow clearance interval, all-red clearance interval, pedestrian walk time, and pedestrian flashing don't walk time. Calculations for these settings were performed using criteria set forth by the following national, state, and local standards:

- Institute of Transportation Engineers (ITE) *Manual of Traffic Signal Design*,
- *Manual on Uniform Traffic Control Devices* (MUTCD), and
- Tennessee Department of Transportation (TDOT) *Traffic Design Manual*

An Existing Conditions Report was produced in April 2021 detailing the results of these efforts. The Existing Conditions Report is included in Appendix L.

The Existing Conditions Report represented a detailed compilation of the data collected and was the framework from which analyses and recommendations were derived. The Synchro/Sim Traffic model was utilized to develop updated signal timings and offsets for the eleven signalized intersections along the study corridor. The updated timing plans were implemented in May 2021.

This document represents the final report and presents the results of newly optimized signal timings and recommendations for improvements to the study area network.

2. ROADWAY NETWORK

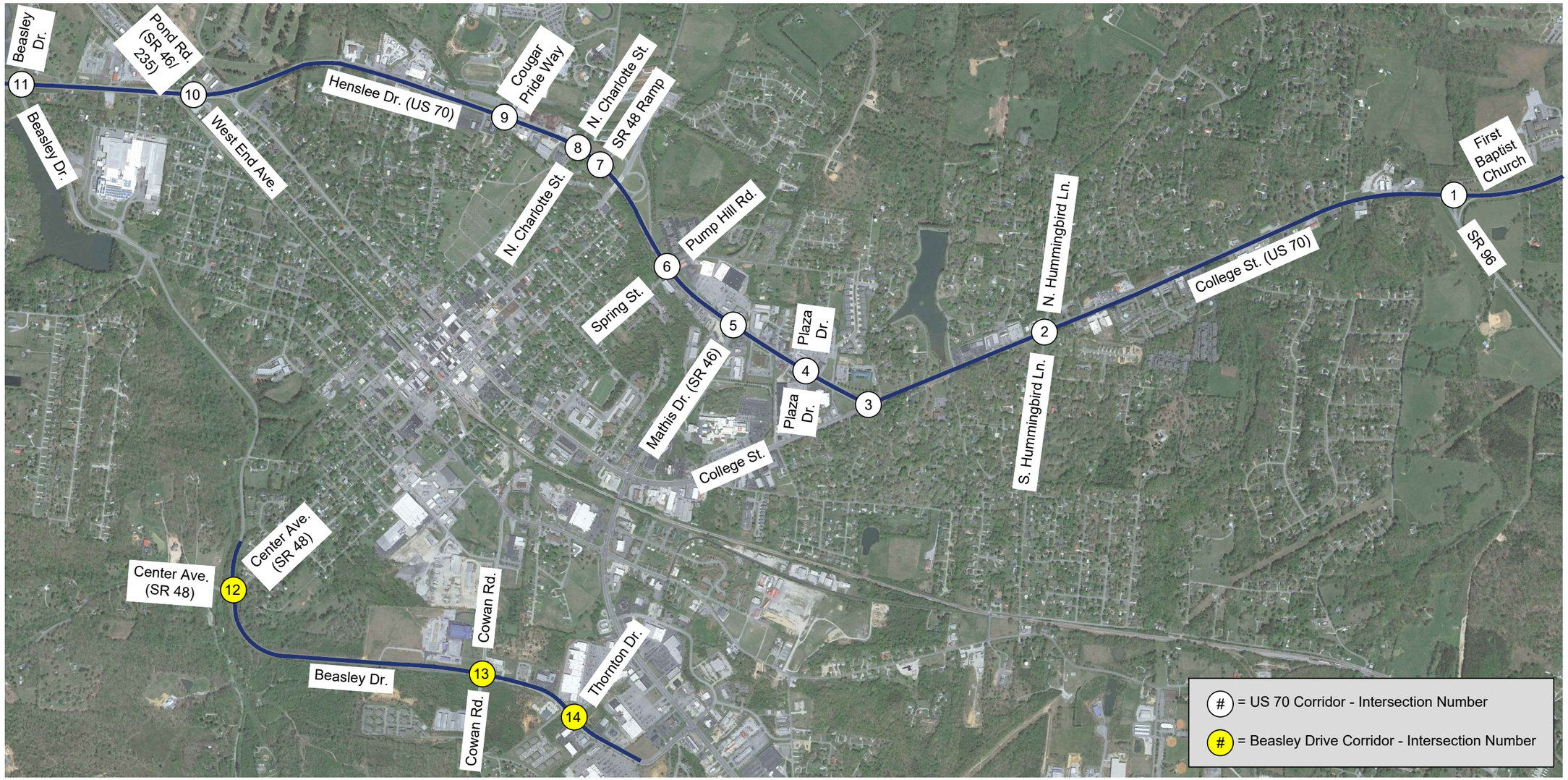
The study area for the project includes two focus corridors, one 4.1-mile principal arterial segment of US 70 extending from State Route 96 on the eastern end to Beasley Drive on the western end and one 1.0-mile major collector segment of Beasley Drive extending from Center Avenue on the western end to Thornton Drive on the eastern end. For the US 70 corridor, the study focuses on the 11 intersections that have existing traffic signals or are planned to be signalized, as illustrated in Figure 1. For the Beasley Drive corridor, the study focuses on the 3 intersections that have existing traffic signals, as illustrated in Figure 1. Auxiliary laneage at each intersection is illustrated in Figure 2A, Figure 2B, and Figure 2C, while the functional classification and speed limit of the study roadways can be found in Table 1A and Table 1B. Two school zones are present on US 70 within the study segment where the speed limit drops to 15 miles per hour. These include a 1,500-foot segment that runs from east of the intersection of College Street and Henslee Drive to north of the intersection of College Street and Henslee Drive and a 1,200-foot segment at Cougar Pride Way.

TABLE 1A. STUDY ROADWAYS – FUNCTIONAL CLASSIFICATION AND SPEEDS – US 70

NO.	INTERSECTING ROADWAY	FUNCTIONAL CLASSIFICATION	SPEED LIMIT (mph)
1	First Baptist Church/SR 96	Local/Principal Arterial	30/55
2	Hummingbird Lane	Local	30
3	College Street	Minor Arterial	40
4	Plaza Drive	Local	30
5	Mathis Drive (SR 46)	Principal Arterial	30
6	Pump Hill Road/Spring Street	Major Collector	30/20
7	SR 48 Ramp	Principal Arterial	30
8	North Charlotte Street	Major Collector	30
9	Cougar Pride Way (Planned Signal)	Local	15
10	Pond Road (SR 46/SR 235)/West End Avenue	Principal Arterial/Local	35/30
11	Beasley Drive (North/South)	Major Collector/Minor Arterial	30/40

TABLE 1B. STUDY ROADWAYS – FUNCTIONAL CLASSIFICATION AND SPEEDS – BEASLEY DRIVE

NO.	INTERSECTING ROADWAY	FUNCTIONAL CLASSIFICATION	SPEED LIMIT (mph)
12	Center Avenue (SR 48) (West/East)	Minor Arterial	45/30
13	Cowan Road (North/South)	Major Collector	30/25
14	Thornton Drive	Local	15



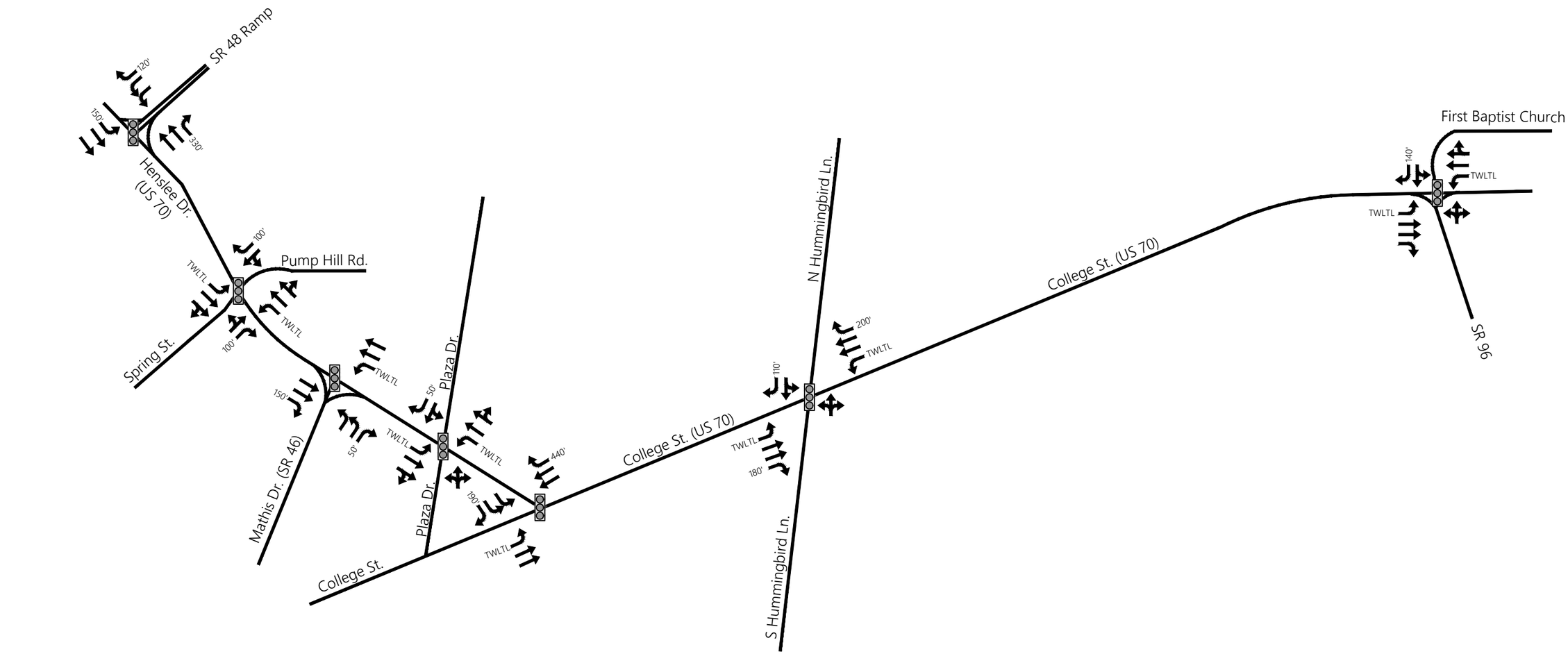
US 70 CORRIDOR

1	College Street (US 70) and First Baptist Church/SR 96	7	Henslee Drive (US 70) and SR 48 Ramp	12	Beasley Drive and Center Avenue (SR 48)
2	College Street (US 70) and Hummingbird Lane	8	Henslee Drive (US 70) and North Charlotte Street	13	Beasley Drive and Cowan Road
3	College Street (US 70) and College Street	9	Henslee Drive (US 70) and Cougar Pride Way	14	Beasley Drive and Thornton Drive
4	Henslee Drive (US 70) and Plaza Drive	10	Henslee Drive (US 70) and Pond Road (SR 46/SR 235)/West End Avenue		
5	Henslee Drive (US 70) and Mathis Drive (SR 46)	11	Henslee Drive (US 70) and Beasley Drive		
6	Henslee Drive (US 70) and Pump Hill Road/Spring Street				

BEASLEY DRIVE CORRIDOR

US 70 and Beasley Drive Study Area
(Not to Scale)

Figure 1.

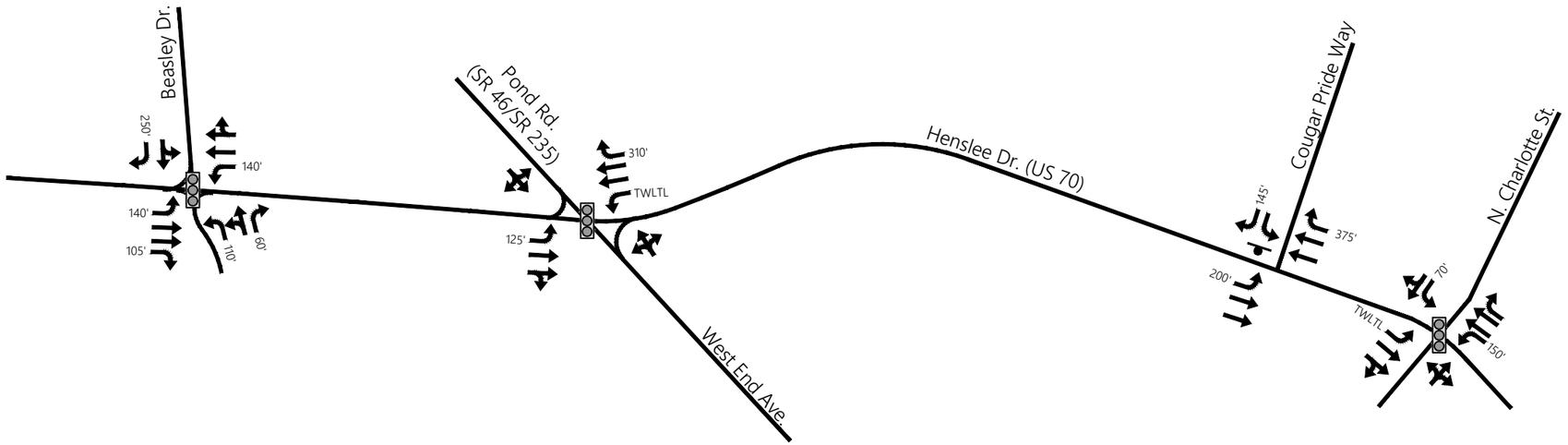


- Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2A.

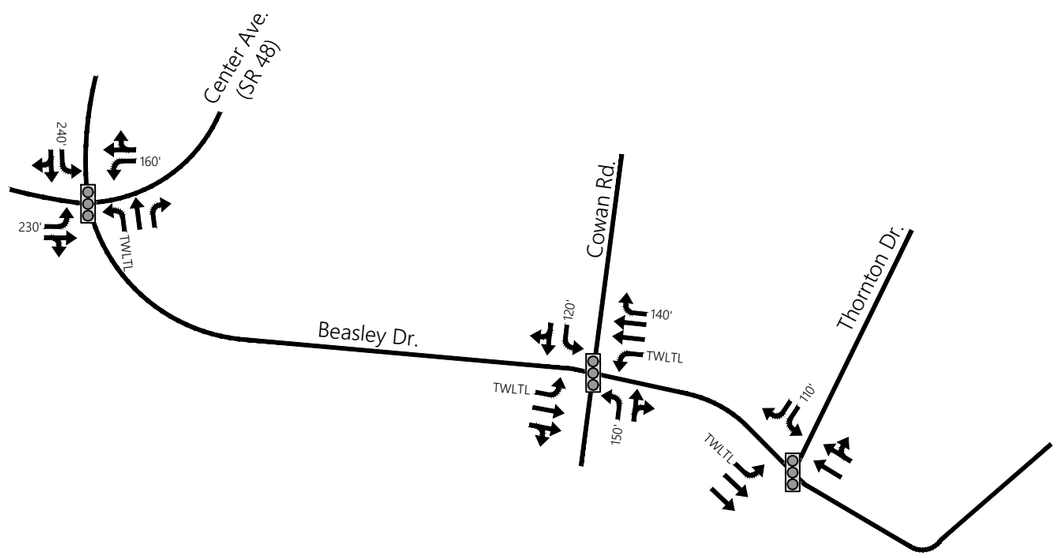


- Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2B.



- Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2C.

3. TRAFFIC

In order to provide data for the project, vehicle count data was collected for the corridors. Both manual and automated count data was collected. Manual turning movement counts were collected at each of the fourteen study area intersections for typical AM, Midday, and PM peak hour conditions. Specifically, manual turning movement counts were collected on a typical weekday in February 2021 while schools were in session from 6-9 AM, 11 AM – 1 PM, and 2-7 PM. Peak hour turning movement counts for each study area intersection on Highway 70 can be found in Figure 3A and Figure 3B, and the peak hour turning movement counts for each study are intersection on Beasley Drive can be found in Figure 3C.

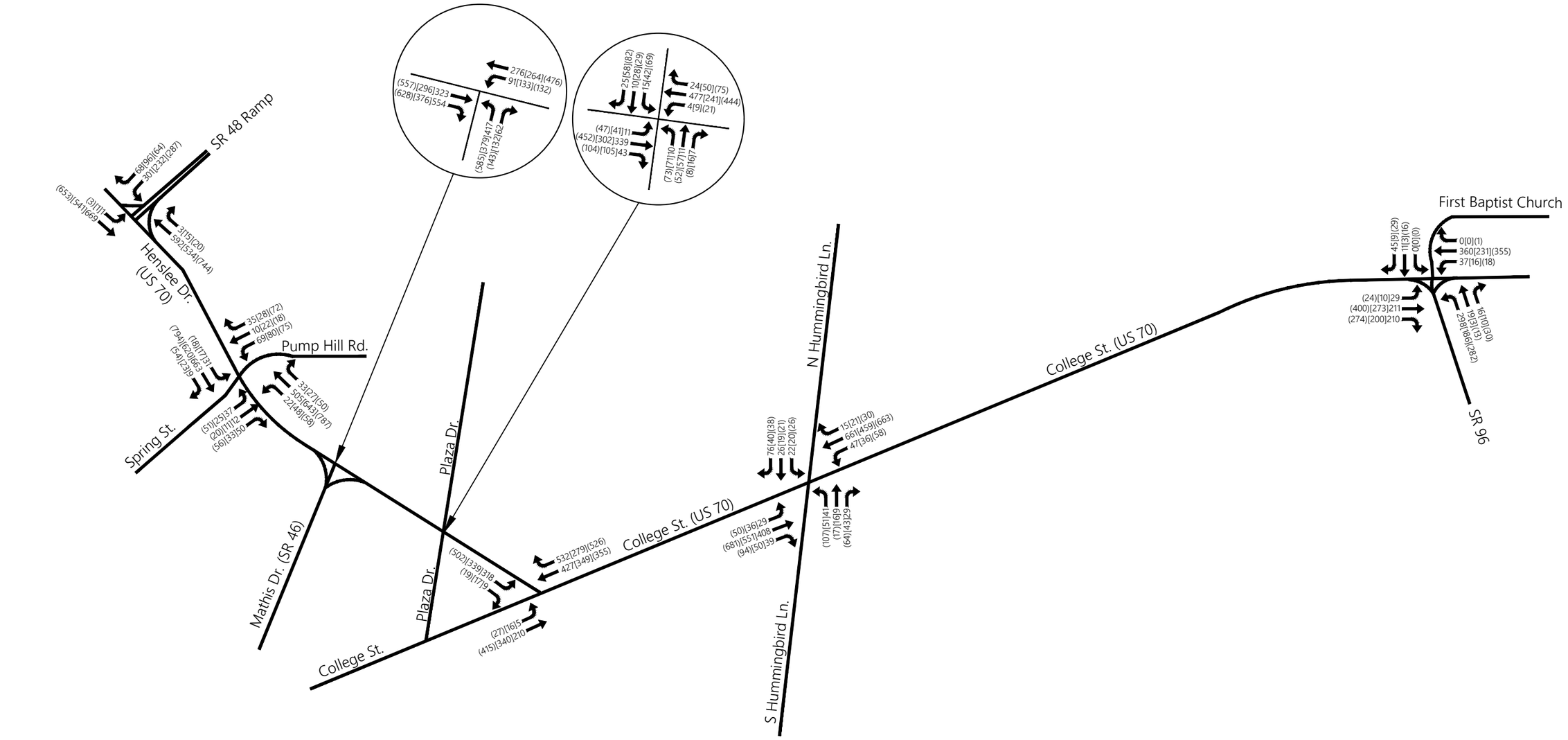
From this data, the peak hour for each intersection under each condition was determined. For each condition, peak hours varied somewhat across intersections. This segregated data is valuable in determining when traffic flows are conducive to coordination. The peak hour volume for each intersection during AM, Midday, and PM periods is presented below in Table 2A and Table 2B along with the time of the start of the peak hour. Detailed turning movement counts are included in Appendix A.

TABLE 2A. PEAK HOUR VOLUME AND START TIME – US 70

HIGHWAY 70 INTERSECTION	AM	Midday	PM
First Baptist Church/SR 96	1,236 (7:00)	941 (12:00)	1,442 (4:15)
Hummingbird Lane	1,402 (7:15)	1,342 (12:00)	1,849 (3:00)
College Street	1,501 (7:15)	1,340 (12:00)	1,844 (3:00)
Plaza Drive	976 (7:00)	1,020 (12:00)	1,456 (3:00)
Mathis Drive (SR 46)	1,723 (7:15)	1,580 (11:00)	2,521 (3:00)
Pump Hill Road/Spring Street	1,476 (7:15)	1,577 (11:45)	2,053 (3:45)
SR 48 Ramp	1,634 (7:00)	1,419 (11:45)	1,771 (3:30)
North Charlotte Street	1,565 (7:00)	1,292 (11:45)	1,742 (3:45)
Cougar Pride Way (Planned Signal)	1,522 (7:00)	1,029 (11:45)	1,641 (3:00)
Pond Road (SR 46/SR 235)/West End Avenue	1,148 (7:00)	954 (11:00)	1,446 (4:15)
Beasley Drive	1,455 (7:00)	1,055 (12:00)	1,659 (3:00)

TABLE 2B. PEAK HOUR VOLUME AND START TIME – BEASLEY DRIVE

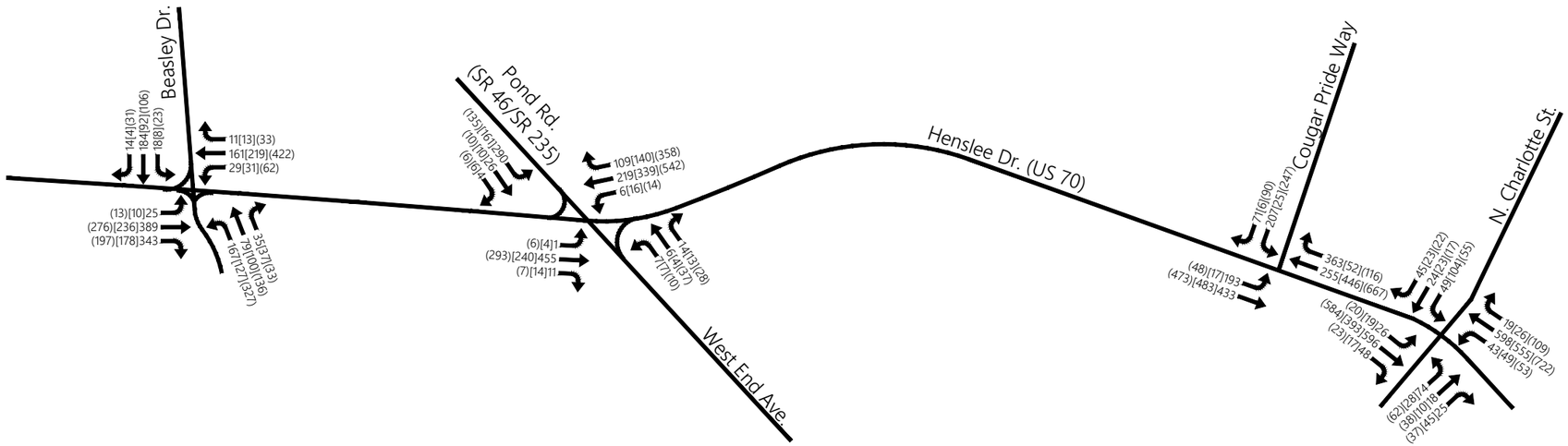
BEASLEY DRIVE INTERSECTION	AM	Midday	PM
Center Avenue (SR 48)	1,397 (7:00)	1,051 (12:00)	1,438 (4:00)
Cowan Road	1,132 (7:00)	1,031 (12:00)	1,455 (3:15)
Thornton Drive	1,051 (7:00)	1,154 (12:00)	1,452 (3:15)



XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

Existing Peak Hour Traffic Volumes on the Eastern Side of US 70
(Not to Scale)

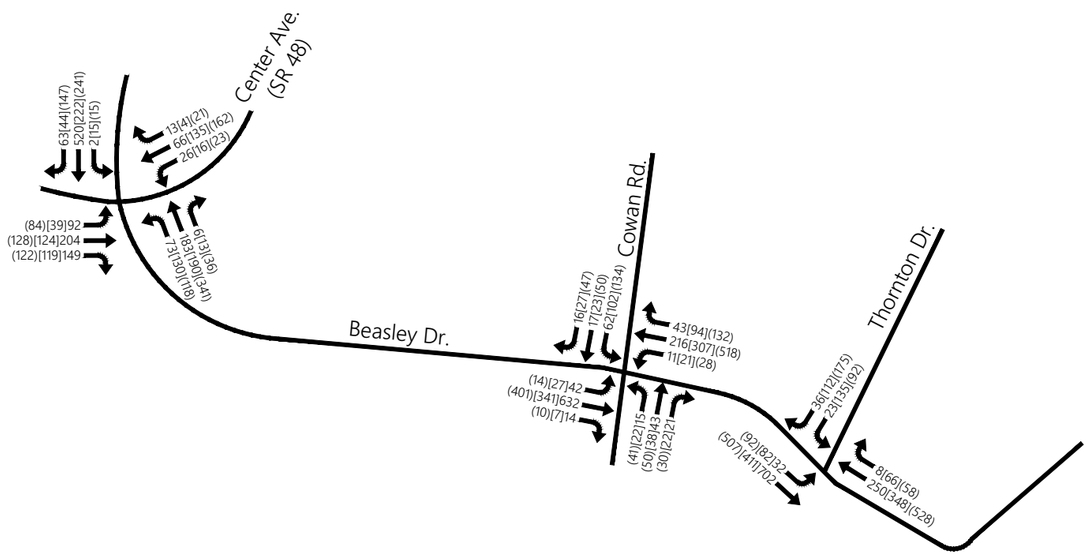
Figure 3A.



XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

Existing Peak Hour Traffic Volumes on the Western Side of US 70
(Not to Scale)

Figure 3B.



XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

N

Existing Peak Hour Traffic Volumes on Beasley Drive
(Not to Scale)

Figure 3C.

Automated counts were collected at four locations along the US 70 corridor and two locations along the Beasley Drive corridor for typical weekday conditions. These locations and the associated annual average daily traffic (AADT) volumes are depicted in Figure 4. Typical conditions included the collection of bi-directional count data for two consecutive 24-hour periods, between February 3rd through February 10th, while schools were in session. Figure 4 illustrates the weekday hourly variation in traffic flow for reference purposes at one of the six automated bi-directional count locations.

In addition to the above information, AADT volumes were obtained from the Tennessee Department of Transportation (TDOT). There are five TDOT count stations on US 70 in or near the study area and three TDOT count stations on Beasley Drive in or near the study area. The TDOT AADT station, location, and counts for the year of 2019 are shown in Table 3A and Table 3B below.

TABLE 3A. TDOT COUNT STATION DATA – US 70

LOCATION	STATION NO.	2019 AADT (vpd)
Between Ridgecrest Drive and Woodmont Drive	86	9,138
Between Forrest Hills Circle and Village Circle	65	16,722
Between Mathis Drive (SR 46) and Villa Circle	83	11,343
Between Oak Drive and Taylor Street	84	12,760
Between Silver Leaf Circle and Oak Leaf Drive	59	14,069

TABLE 3B. TDOT COUNT STATION DATA – BEASLEY DRIVE

LOCATION	STATION NO.	2019 AADT (vpd)
Between W Walnut Street and Patterson Street	159	10,762
Between Center Avenue (SR 48) and Cowan Road	158	13,237
Between Remington Drive and Archway Drive	149	12,736

FIGURE 4. AUTOMATED COUNT LOCATIONS AND ASSOCIATED AADT

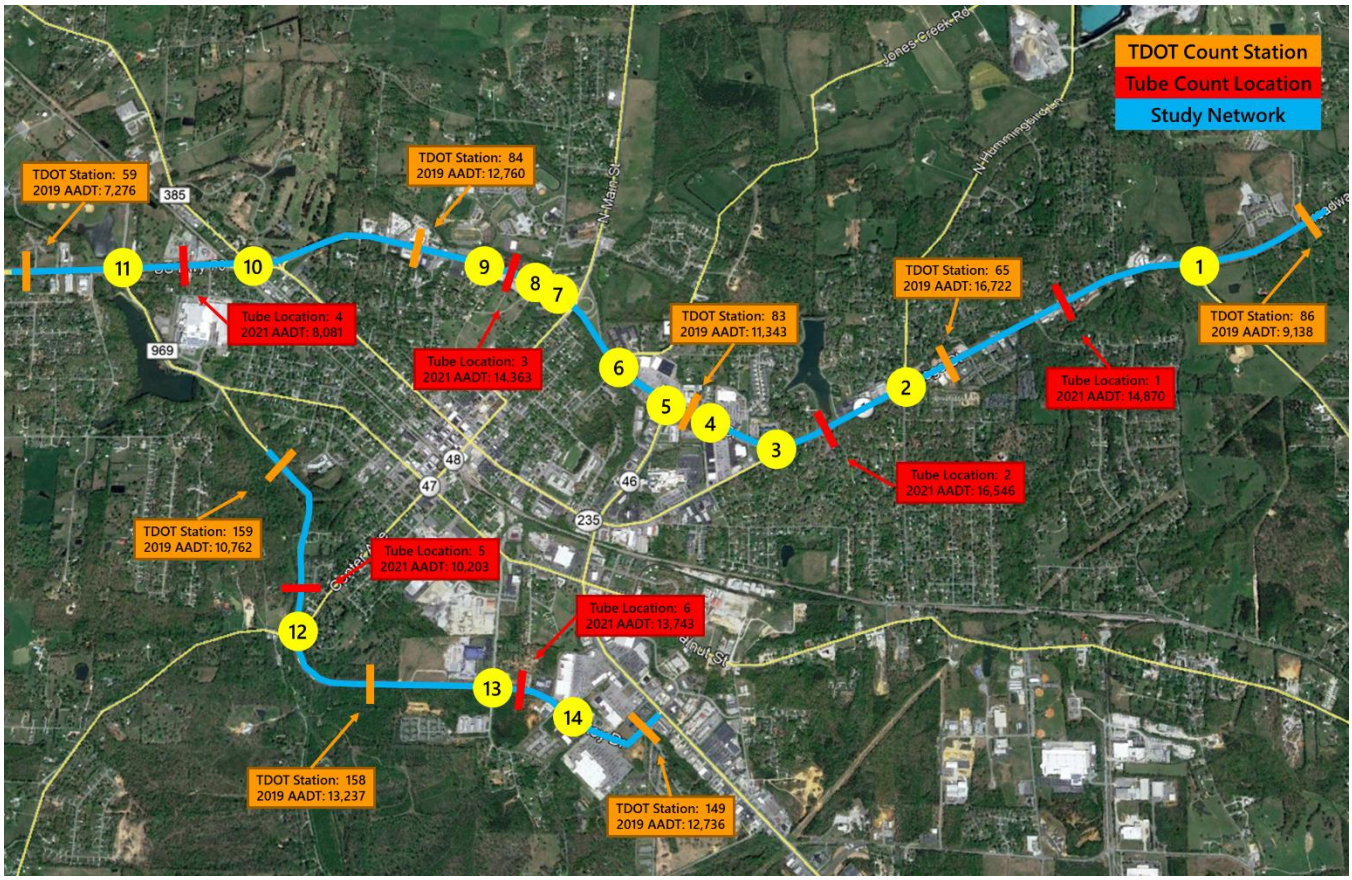
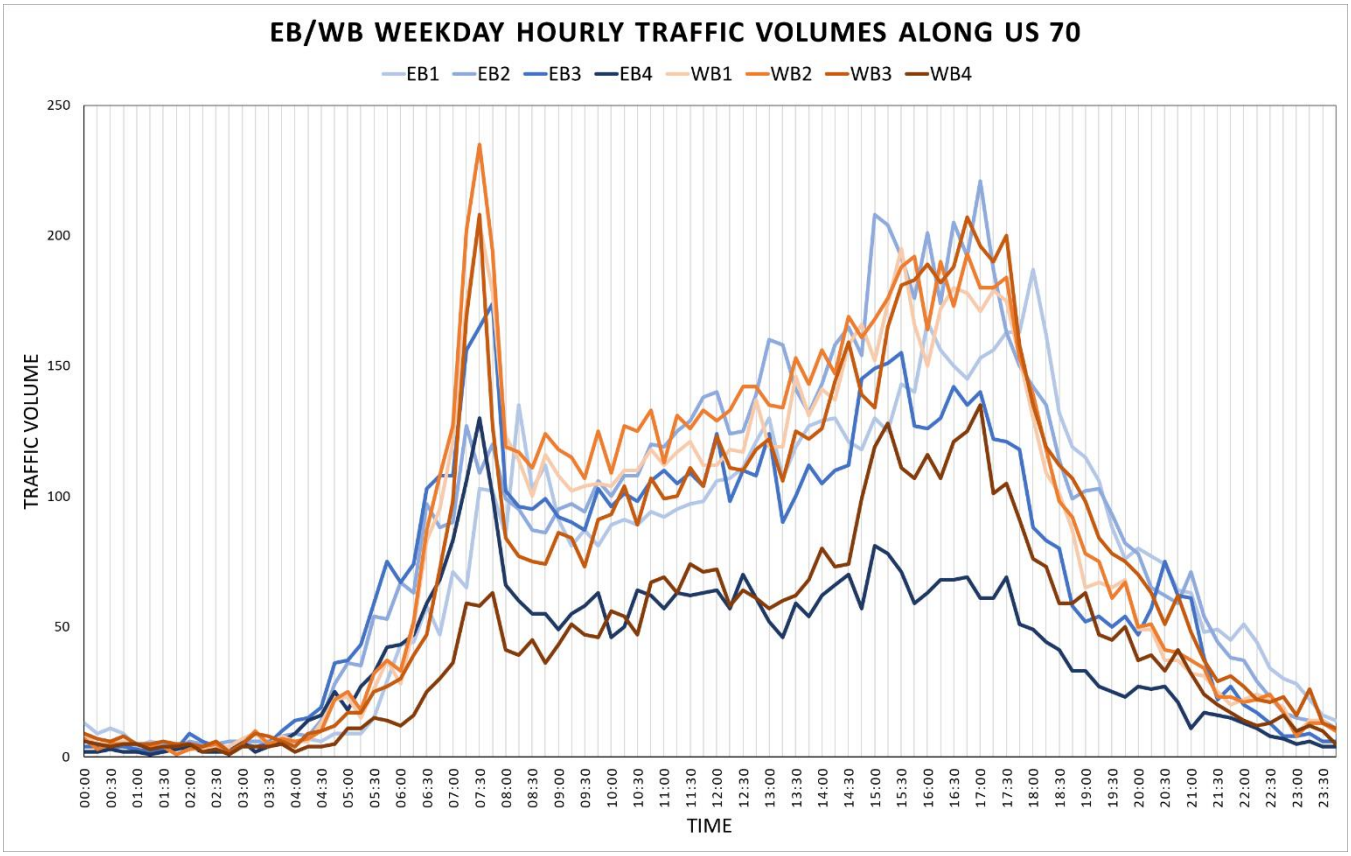


FIGURE 5. HOURLY TRAFFIC VOLUMES (TYPICAL WEEKDAY)



4. SIGNAL SYSTEM – SIGNAL INFRASTRUCTURE

In order to develop calibrated models of the US 70 and Beasley Drive corridors, a detailed inventory of the existing signal system was performed using data obtained from the City of Dickson and field observations performed by KCI. Tables 4A and 4B summarize the equipment type for each intersection. Detailed field inventory sheets for each study intersection are provided in Appendix B. Additionally, field inventory photos are provided in Appendix C.

Existing traffic signals include Peek or McCain local controllers, conflict monitors from Reno A&E or Peek, and Sonem emergency vehicle preemption. Vehicle detection is accomplished by loop or radar detectors with a mix of models from Wavetronix (radar), EDI, Northstar, and Sarasota.

TABLE 4A. SIGNAL CABINET EQUIPMENT – US 70

NO.	INTERSECTION	CONTROLLER MODEL	CONFLICT MONITOR	EVP SYSTEM
1	College Street (US 70) and First Baptist Church/SR 96	PEEK 3000E	RENO A&E MMU-1600G	N/A
2	College Street (US 70) and Hummingbird Lane	PEEK TRANSYT 3000	RENO A&E MMU-1600G	N/A
3	College Street (US 70) and Henslee Drive (US 70)	McCain ATCeX	RENO A&E MMU-1600G	SONEM 2000
4	Henslee Drive (US 70) and Plaza Drive	PEEK TRANSYT 3000	PEEK TRANSYT 12ELRA	N/A
5	Henslee Drive (US 70) and Mathis Drive (SR 46)	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
6	Henslee Drive (US 70) and Pump Hill Road/Spring Street	PEEK TRANSYT 3000	RENO A&E MMU-1600G	N/A
7	Henslee Drive (US 70) and SR 48 Ramp	TRANSYT 1880EL	PEEK DOUBLE DIAMOND	N/A
8	Henslee Drive (US 70) and North Charlotte Street	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
9	Henslee Drive (US 70) and Cougar Pride Way	N/A	N/A	N/A
10	Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
11	Highway 70 West (US 70) and Beasley Drive	PEEK 3000	RENO A&E MMU-1600G	N/A

TABLE 4B. SIGNAL CABINET EQUIPMENT – BEASLEY DRIVE

NO.	INTERSECTION	CONTROLLER MODEL	CONFLICT MONITOR	EVP SYSTEM
12	Beasley Drive and Center Avenue (SR 48)	McCain ATCeX	PEEK DOUBLE DIAMOND	N/A
13	Beasley Drive and Cowan Road	PEEK 3000E	iDC GUARDIAN LCD-12P	N/A
14	Beasley Drive and Thornton Drive	PEEK ATC-1000	EDI SSM-12LE	N/A

During the field inventory, it was noted that certain signal system infrastructure items were not currently provided or were not operating properly. Those findings are summarized below.

4.1 Signal Controller Clock Synchronization

When reviewing the signal control cabinets, it was found that the intersections did not have the capability to synchronize signal controller clocks. The installation of GPS units, at each intersection, that can accurately synchronize clocks would be the quickest and most cost effective way to achieve this capability. Other options could include cellular modems installed at each intersection or the installation of traffic signal interconnect cable with clock synchronization provided by a master controller or central signal control system. In order to maintain consistent time settings within each local controller required for proper traffic signal coordination, the installation of GPS units or another method to synchronize signal controller clocks is recommended. Without the capability to synchronize signal controller clocks, slight variations in seconds can result in poor coordination between adjacent intersections.

5. SIGNAL SYSTEM TIMING

This section details the process used to develop updated signal timing plans for the US 70 and Beasley Drive Corridors. Pre-condition and post-condition detailed phasing and timing plan data from each intersection can be found in Appendix H.

5.1 Local Controller Settings Development

Using the criteria set forth in the ITE *Manual of Traffic Signal Design*, the *Manual on Uniform Traffic Control Devices* (MUTCD), and the TDOT *Traffic Design Manual*, values were calculated for the following local controller settings: minimum vehicular green, yellow clearance interval, all-red clearance interval, pedestrian walk time, and pedestrian flashing don't walk.

5.1.1 Minimum Vehicular Green Time

The minimum green times to satisfy driver expectancy based on the ITE *Manual of Traffic Signal Design*, and the TDOT *Traffic Design Manual* are presented in Table 5. Based on the values presented in Table 5, left-turn phases were chosen to have a minimum green time of 5 seconds, through movements from the minor street were chosen to have minimum green times of 7 seconds, and major street through movements were chosen to have a minimum green time of 10 seconds. Some existing timings have minimum green times that do not meet the values chosen above. These were adjusted for the new timing plans to reflect the recommendations set forth by ITE and TDOT guidelines. The existing minimum vehicular green time for each signalized intersection can be found in the detailed phasing and timing plan data found in Appendix H.

TABLE 5. MINIMUM GREEN TIME TO SATISFY DRIVER EXPECTATIONS

Phase Type	Facility Type	Recommended Minimum Green Values (sec)		Chosen Minimum Green (sec)
		ITE	TDOT	
Through	Major Arterial (speed limit exceeds 40 mph)	10 to 15	10 to 15	10
	Major Arterial (speed limit is 40 mph or less)	7 to 15	7 to 15	10
	Minor Arterial	4 to 10	5 to 10	7
	Collector, Local, Driveway	2 to 10	5 to 10	7
Left-Turn	Any	2 to 5	5	5

Source: *ITE Manual of Traffic Signal Design, 2016; TDOT Traffic Design Manual, 2018*

5.1.2 Yellow and All-Red Clearance Intervals

Yellow and all-red clearance intervals were calculated for all phases at each intersection using the methodology from the ITE and TDOT design manuals. The clearance interval calculation includes reaction time, a deceleration time, and an intersection clearance time. This method is intended to eliminate the "dilemma zone" in which a driver has difficulty deciding to stop or continue through the intersection. The following is the ITE recommended equation used to calculate Yellow Clearance time:

$$Y = t + \frac{1.47V}{2a + 2Gg}$$

Where,

Y = length of the yellow change interval (sec)
V = 85th percentile approach speed (mph)
t = perception-reaction time, generally assumed as 1.0 sec
a = average deceleration rate, generally assumed as 10 ft/sec/sec
G = 32.2 ft/sec/sec
g = approach grade (percent divided by 100, negative for downgrade)

The TDOT *Traffic Signal Design Manual* provides equations that mimic the one presented above. The following is the ITE recommended equation used to calculate the All-Red Clearance Time:

$$R = \frac{W + L}{1.47V}$$

Where,

R = Red Clearance interval (sec)
V = 85th percentile approach speed (mph)
L = vehicle length generally assumed to be 20 ft
W = intersection width (ft)

The TDOT *Traffic Signal Design Manual* provides equations that mimic the one presented above. The pre- and post-condition yellow and all-read clearance intervals are shown in Table 6A and Table 6B.

TABLE 6A. VEHICULAR CLEARANCE INTERVALS – US 70

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	PRE-CONDITION CLEARANCE (s)			POST-CONDITION CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
College Street (US 70) and First Baptist Church/SR 96	1	WBL	45	70	4.0	2.0	6.0	4.0	2.0	6.0
	2	EB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	4	SB	30	90	4.0	1.0	5.0	5.0	1.0	6.0
	5	EBL	45	90	4.0	2.0	6.0	4.0	2.0	6.0
	6	WB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	8	NB	55	90	4.0	1.0	5.0	5.0	1.0	6.0
College Street (US 70) and Hummingbird Lane	1	EBL	45	110	3.5	1.0	4.5	3.5	2.5	6.0
	2	WB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	3	NB	30	90	4.0	1.5	5.5	3.5	1.0	4.5
	4	SB	30	110	4.0	1.5	5.5	3.5	1.5	5.0
	5	WBL	45	110	3.5	1.0	4.5	3.5	2.5	6.0
	6	EB	45	80	4.0	2.0	6.0	5.0	1.0	6.0
College Street (US 70) and Henslee Drive (US 70)	1	EBL	40	110	4.5	2.0	6.5	3.5	2.5	6.0
	2	WB	45	100	4.0	2.0	6.0	5.0	1.0	6.0
	4	SB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
	6	EB	40	100	4.0	2.0	6.0	5.0	1.0	6.0
Henslee Drive (US 70) and Plaza Drive	1	WBL	35	70	3.0	1.0	4.0	3.0	2.0	5.0
	2	EB	35	90	4.0	1.0	5.0	4.0	1.0	5.0
	4	SB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
	5	EBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	WB	35	90	4.0	1.0	5.0	4.0	1.0	5.0
	8	NB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
Henslee Drive (US 70) and Mathis Drive (SR 46)	2	WB	35	80	4.0	1.0	5.0	4.0	1.0	5.0
	4	NB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
	5	WBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	70	4.0	1.0	5.0	4.0	1.0	5.0
Henslee Drive (US 70) and Pump Hill Road/Spring Street	1	EBL	35	90	3.0	1.0	4.0	3.0	2.5	5.5
	2	WB	35	120	4.0	2.0	6.0	4.0	1.5	5.5
	3	NB	30	120	4.0	1.0	5.0	3.5	1.5	5.0
	4	SB	20	110	4.0	1.0	5.0	3.0	2.5	5.5
	5	WBL	35	90	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	120	4.0	2.0	6.0	4.0	1.5	5.5
Henslee Drive (US 70) and SR 48 Ramp	1	EBL	35	70	4.0	2.0	6.0	3.0	2.0	5.0
	2	WB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
	4	SB	30	80	4.0	2.0	6.0	3.5	1.0	4.5
	6	EB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
Henslee Drive (US 70) and North Charlotte Street	1	EBL	35	100	3.0	1.0	4.0	3.0	3.0	6.0
	2	WB	35	70	4.0	1.0	5.0	4.0	1.0	5.0
	3	SB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	4	NB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	5	WBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	80	4.0	1.0	5.0	4.0	1.0	5.0

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	PRE-CONDITION CLEARANCE (s)			POST-CONDITION CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
Henslee Drive (US 70) and Cougar Pride Way	1	EBL	35	100	0.0	0.0	0.0	3.0	3.0	6.0
	2	WB	35	110	0.0	0.0	0.0	4.0	1.0	5.0
	4	SB	15	110	0.0	0.0	0.0	3.0	3.0	6.0
	6	EB	35	100	0.0	0.0	0.0	4.0	1.0	5.0
Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	1	EBL	45	90	4.0	2.0	6.0	4.0	2.0	6.0
	2	WB	45	120	3.5	2.0	5.5	5.0	1.0	6.0
	3	SB	35	160	4.0	3.0	7.0	4.0	2.0	6.0
	4	NB	30	160	4.0	3.0	7.0	3.5	2.5	6.0
	5	WBL	45	90	3.5	2.0	5.5	4.0	2.0	6.0
	6	EB	45	110	4.0	2.0	6.0	5.0	1.0	6.0
Highway 70 West (US 70) and Beasley Drive	1	WBL	45	90	3.5	1.0	4.5	4.0	2.0	6.0
	2	EB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	3	SB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	4	NB	40	120	4.0	1.0	5.0	4.5	1.0	5.5
	5	WBL	45	100	3.5	1.0	4.5	4.0	2.0	6.0
	6	EB	45	110	4.0	2.0	6.0	5.0	1.0	6.0

TABLE 6B. VEHICULAR CLEARANCE INTERVALS – BEASLEY DRIVE

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	PRE-CONDITION CLEARANCE (s)			POST-CONDITION CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
Beasley Drive and Center Avenue (SR 48)	1	EBL	45	90	4.0	1.0	5.0	4.0	2.0	6.0
	2	WB	30	80	4.0	2.0	6.0	5.0	1.0	6.0
	3	NBL	45	70	4.0	1.0	5.0	4.0	2.0	6.0
	4	SB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	5	WBL	30	80	4.0	1.0	5.0	3.0	2.5	5.5
	6	EB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	7	SBL	45	70	4.0	1.0	5.0	4.0	2.0	6.0
	8	NB	45	60	4.0	2.0	6.0	5.0	1.0	6.0
Beasley Drive and Cowan Road	1	WBL	30	80	4.0	1.5	5.5	3.0	2.5	5.5
	2	EB	45	70	4.5	2.0	6.5	5.0	1.0	6.0
	3	SBL	30	80	4.0	1.5	5.5	3.0	2.5	5.5
	4	NB	25	100	4.5	2.0	6.5	3.5	1.5	5.0
	5	EBL	45	80	4.0	1.5	5.5	4.0	2.0	6.0
	6	WB	30	70	4.5	2.0	6.5	5.0	1.0	6.0
	7	NBL	25	100	4.0	1.5	5.5	3.0	3.0	6.0
	8	SB	30	90	4.5	2.0	6.5	3.5	1.5	5.0
Beasley Drive and Thornton Drive	2	SB	30	60	3.5	2.0	5.5	3.5	1.0	4.5
	4	WB	15	80	3.5	2.5	6.0	3.0	2.0	5.0
	5	SBL	30	60	3.5	2.0	5.5	3.0	1.5	4.5
	6	NB	30	70	3.5	2.0	5.5	3.5	1.0	4.5

5.1.3 Pedestrian Clearance Intervals

Pedestrian clearance intervals were calculated at each intersection for all legs of the intersection that had crosswalks or for which pedestrians were likely to cross (Table 7). Where pedestrian signals exist, the Walk interval provides the pedestrian time to leave the curb and begin crossing the street. The MUTCD recommends a Walk Interval of seven seconds followed by a Flashing Don't Walk (FDW) clearance interval long enough to allow a pedestrian to cross the roadway walking at a speed of 3.5 feet per second. According to the MUTCD, a buffer interval of 3 seconds may be used during the Yellow and Red Clearance time of the concurrent vehicular phase resulting in a 3-second reduction to the minimum FDW time. Some signalized intersections without pedestrian signals have pedestrian phasing entered under the current timing plans. During monitoring, where there is no pedestrian signal, the pedestrian phasing was removed from the controller settings. Where the Walk or FDW intervals differed from the duration recommended by the MUTCD, the value was changed in the proposed timing plan.

TABLE 7. PEDESTRIAN CLEARANCE INTERVALS

INTERSECTION	SIDE	WIDTH (ft)	PRE-CONDITION		POST-CONDITION	
			WALK (s)	FDW (s)	WALK (s)	FDW (s)
Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	S	100	5	10	7	26
	E	110	5	21	7	29

5.2 Cycle Length Evaluations

Four intersections were utilized to determine the recommended cycle lengths for each peak period along the US 70 corridor. Two intersections were selected due to the higher amount of traffic experienced during peak hours, and two intersections were selected due to the average amount of traffic experienced during the peak hours. These intersections are as follows:

1. College Street (US 70) and Henslee Drive (US 70)
2. College Street (US 70) and Mathis Drive (SR 46)
3. Henslee Drive (US 70) and North Charlotte Street
4. Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue

Additionally, all three study intersections along the Beasley Drive corridor were utilized to determine the recommended cycle lengths for each peak period.

For each of the above intersections, the following four-step evaluation process was used to determine the recommended cycle lengths for each peak period:

1. Natural Cycle Length
2. Minimum Cycle Length
3. Synchro Recommended Cycle Length
4. Uniform Arrival Cycle Length

The natural cycle length is the shortest cycle at which an intersection can serve the traffic demand. This number was determined using the traffic modeling software Synchro. The minimum cycle length is based on the minimum amount of green, yellow, and red clearance or the minimum amount of Walk, FDW, yellow, and red clearance needed for all eleven of the signalized study intersections along US 70 and all three of the signalized intersections along Beasley Drive. The Synchro recommended cycle length is based on Synchro's performance index. The performance index in Synchro considers a combination of delay, number of stops, fuel consumption, unserved vehicles, average speed, travel time, and more. The lower the performance index, the better the cycle length performs. Cycle lengths between 60 seconds and 160 secs were tested for each of the chosen intersections to determine the Synchro recommended cycle length. The uniform arrival cycle length is the minimum time needed to service the average number of vehicles traversing the intersection during a cycle.

Detailed results for the four-step process are included in Appendix D.

Cycle lengths for each of the four timing plans were then compared for the four chosen intersections on the US 70 corridor to determine the recommended cycle length for each timing plan. Cycle lengths for each of the three timing plans were then compared for the three study intersections on the Beasley Drive corridor to determine the recommended cycle length for each timing plan. Table 8 presents the final recommended cycle lengths and their corresponding cycle length number for the AM, Midday, and PM peak periods. Each timing plan is subsequently assigned a three number "code" (C/S/O) that corresponds to the numerical values used to call each specific cycle length (C), split (S), and offset (O) within the signal controllers. For example, Plan 3/1/1 means that the controller will call cycle length 3, split 1, and offset 1.

TABLE 8A. PROPOSED CYCLE LENGTHS – US 70

TIMING PLAN	RECOMMENDED CYCLE LENGTH	Cycle No.
AM	70 sec.	1
MIDDAY (OFF-PEAK)	80 sec.	2
PM	80 sec.	3

TABLE 8B. PROPOSED CYCLE LENGTHS – BEASLEY DRIVE

TIMING PLAN	RECOMMENDED CYCLE LENGTH	Cycle No.
AM	90 sec.	1
MIDDAY (OFF-PEAK)	70 sec.	2
PM	80 sec.	3

5.3 Phase Split Evaluations

Splits were optimized for each phase during each timing plan using a uniform arrival process. This calculation process assumes vehicles arrive at a signal evenly spaced, factors are used to make adjustments for the number of lanes, permissive only phasing, and realistic lane utilization in order to accurately reflect observed field conditions. Additional consideration was made into maintaining the balance between servicing the side streets while still preserving coordinated phase progression along the US 70 and Beasley Drive corridors.

At intersections where pedestrian signals occurs, splits were calculated with and without pedestrian requirements. Due to low pedestrian activity along the corridor, splits without pedestrian influence were chosen. Controllers were programmed using pedestrian override mode. When pedestrian calls occur, the controller temporarily exits out of coordination so that pedestrians can receive the Walk/Flashing Don't Walk time required before resuming coordinated operation. This approach allows for better progression when pedestrians are not present.

Uniform arrival calculation sheets for each intersection at each peak period are included in Appendix E.

5.4 Offset Evaluations

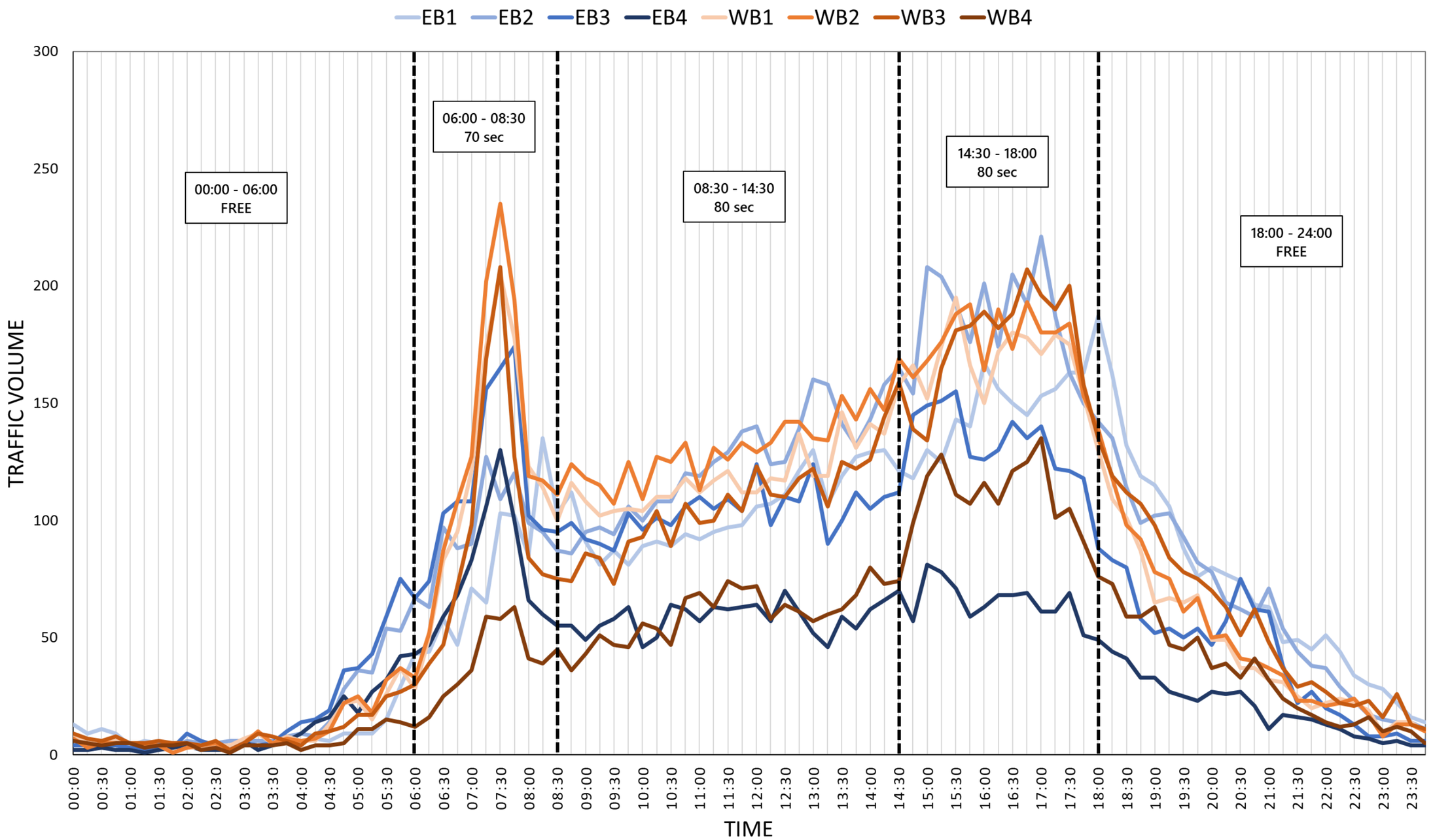
Offset manipulation was utilized to maximize the arterial greenbands and reduce vehicle stops and delay. Synchro was used to analyze and observe coordination options. For AM and Midday progression, offsets were balanced to allow bi-directional progression along both study corridors. For PM progression, offsets were prioritized for westbound progression along the US 70 corridor and bi-directional progression along the Beasley Drive corridor. The time-space diagrams for each timing plan along the study corridor are included in Appendix F.

5.5 Time of Day (TOD) Plan Determination

Transition points for each TOD plan were determined using bi-directional 24-hour count data at four points along the study corridor. Transition points were determined based on changes in traffic patterns across the day. For example, the beginning of the AM and PM peak were determined based on the large increase in the number of vehicle crossing the count locations. Midday was determined based on the drop in vehicle volume between the AM and PM peak. Signals take a few cycles to adjust to new coordination patterns. Therefore, signal coordination plans were set into place approximately 30 minutes before each peak was observed to begin. The weekday bi-directional 24-hour count data with the proposed time of day transition points and corresponding cycle lengths is presented in Figure 7A for the US 70 corridor and Figure 7B for the Beasley Drive corridor. The recommended time of day plans and corresponding cycle lengths are presented in Table 9.

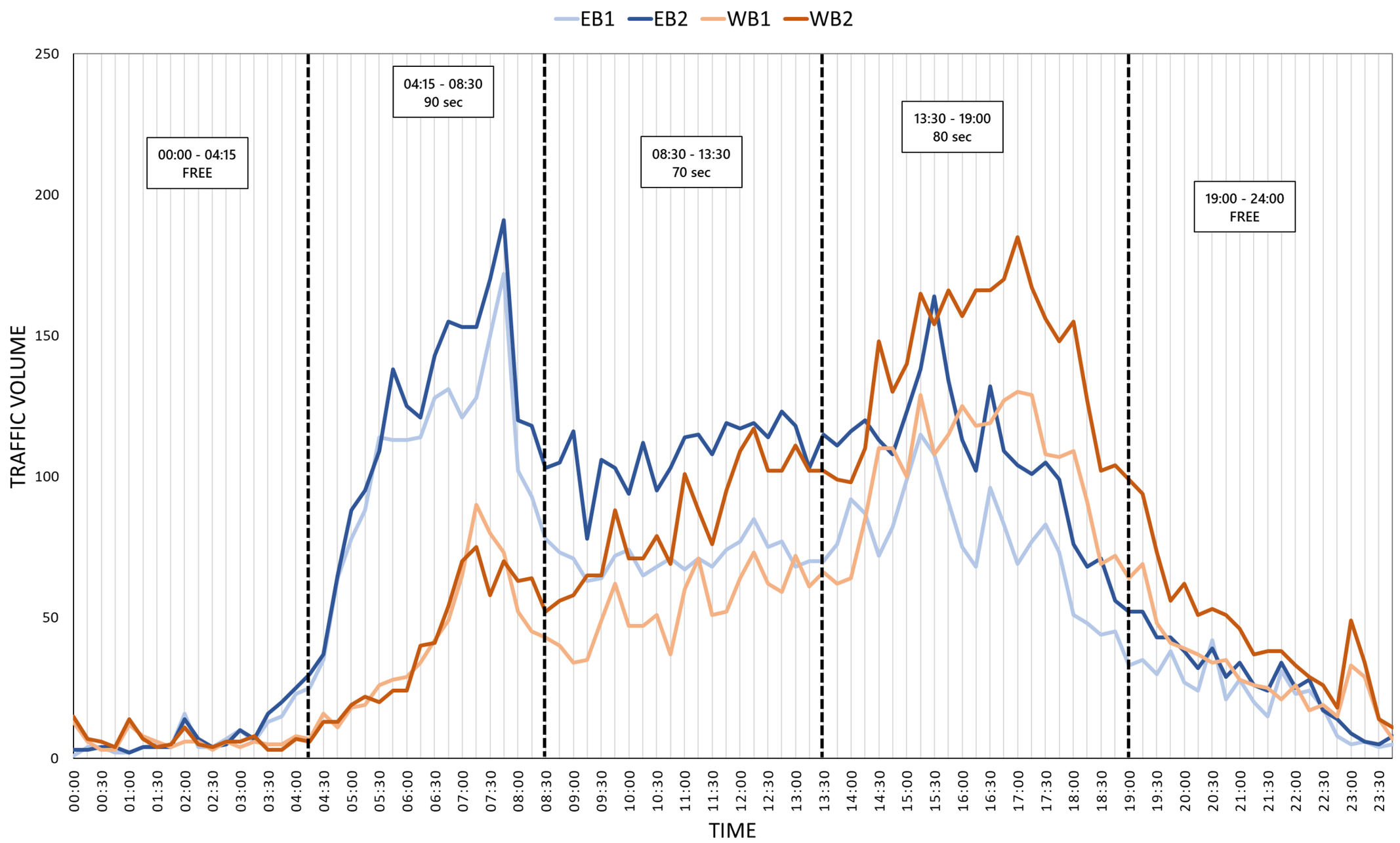
TABLE 9. RECOMMENDED TOD PLANS AND CYCLE LENGTH

PLAN	US 70 CORRIDOR	CYCLE LENGTH (sec)	BEASLEY DRIVE CORRIOR	CYCLE LENGTH (sec)
Free	12:00 AM – 6:00 AM	None	12:00 AM – 4:15 AM	None
AM Peak	6:00 AM – 8:30 AM	70 sec	4:15 AM – 8:30 AM	90 sec
Midday Peak	8:30 AM – 2:30 PM	80 sec	8:30 AM – 1:30 PM	70 sec
PM Peak	2:30 PM – 6:00 PM	80 sec	1:30 PM – 7:00 PM	80 sec
Free	6:00 PM – 12:00 AM	None	7:00 PM – 12:00 AM	None



EB/WB Weekday Hourly Traffic Volumes Along US 70 with Time of Day Transition Points

Figure 6A.



EB/WB Weekday Hourly Traffic Volumes Along Beasley Drive with Time of Day Transition Points

Figure 6B.

5.6 Field Monitoring and Adjustments to Signal Timing

Field monitoring was performed by KCI staff from Tuesday, May 11, 2021 through Thursday, May 20, 2021. Following initial monitoring of the updated traffic signal timings, field observations of each signalized intersection were conducted. Field observations consisted of a combination of individual intersection evaluations (Were side street queues cleared?/Was there too much time on the side street?) and overall corridor progression evaluations (Did the offsets allow for progression?/Did the green indication occur when expected?). During field monitoring, any immediate adjustments recognized were made that day in the field. The traffic signals were monitored over the course of multiple days and varying conditions to make any final adjustments. No adverse conditions that would have significantly altered typical traffic patterns were experienced during monitoring.

The following are the timing adjustments made to the US 70 corridor as a result of field observation, and detailed field monitoring sheets are included in Appendix G:

All Timing Plans

- **All Intersections**
  - Auto Permissive was set to yes.
  - CNA1 was selected for coordinated phases.

- **Intersection 1: College Street (US 70) and Henslee Drive (US 70)**
  Increased the Phase 8 passage time to 5.0 seconds.

- **Intersection 2: College Street (US 70) and Hummingbird Lane**
  Phase 7 and Phase 8 incorporated as "dummy" phases to eliminate error in controller. Split time for Phase 7 and Phase 8 were set to be the same as Phase 3 and Phase 4, respectively.

- **Intersection 3: College Street (US 70) and Henslee Drive (US 70)**
  The McCain controller was showing an error message when Phase 4 coordination was attempted. Therefore, the signal was changed to coordinate Phase 2 and Phase 6, and the offsets were shifted to reflect this change.

- **Intersection 5: Henslee Drive (US 70) and Mathis Drive (SR 46)**
  Phase 8 incorporated as a "dummy" phase to eliminate error in controller. Split time for Phase 8 was set to be the same as Phase 4.

- **Intersection 10: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue**
  Increased the Phase 3 passage time to 4.0 seconds. Additionally, Phase 7 and Phase 8 incorporated as "dummy" phases to eliminate error in controller. Split time for Phase 7 and Phase 8 were set to be the same as Phase 3 and Phase 4, respectively.

- **Intersection 11: Highway 70 West (US 70) and Beasley Drive**
  Phase 3 and Phase 4 were swapped on the original signal timing sheet. Phase 3 is the southbound approach, and Phase 4 is the northbound approach. The split values for Phase 3 and Phase 4 for each time of day plan were swapped to accurately reflect the appropriate split needed for each approach.

AM Peak 70 Second Cycle Plan Cycle 1 / Split 1 / Offset 1

- **Intersection 3: College Street (US 70) and Henslee Drive (US 70)**
  Offset changed from 64 to 67 (+3 sec)

- **Intersection 4: Henslee Drive (US 70) and Plaza Drive**
  Offset changed from 19 to 17 (-2 sec)

- **Intersection 10: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue**
  Phase 2 and 6 (WB/EB) Split changed from 21 to 20 (-1 sec)
  Phase 4 and 8 (NB/SB) Split changed from 13 to 14 (+1 sec)

Midday Peak 80 Second Cycle Plan Cycle 2 / Split 1 / Offset 1

- **Intersection 3: College Street (US 70) and Henslee Drive (US 70)**
  Offset changed from 20 to 50 (+30 sec)

- **Intersection 4: Henslee Drive (US 70) and Plaza Drive**
  Offset changed from 31 to 77 (+46 sec)

- **Intersection 11: Highway 70 West (US 70) and Beasley Drive**
  Phase 3 changed from 20 to 15 (-5 sec)
  Phase 4 changed from 15 to 20 (+5 sec)

PM Peak 80 Second Cycle Plan Cycle 2 / Split 2 / Offset 1

- **Intersection 3: College Street (US 70) and Henslee Drive (US 70)**
  Offset changed from 40 to 59 (+19 sec)

- **Intersection 4: Henslee Drive (US 70) and Plaza Drive**
  Offset changed from 40 to 12 (-28 sec)

- **Intersection 5: Henslee Drive (US 70) and Mathis Drive (SR 46)**
  Offset changed from 75 to 36 (-39 sec)

- **Intersection 6: Henslee Drive (US 70) and Pump Hill Road/Spring Street**
  Offset changed from 67 to 71 (+4 sec)

- **Intersection 10: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue**
  Phase 2 and 6 (WB/EB) Split changed from 27 to 25 (-2 sec)
  Phase 3 and 7 (SB) Split changed from 23 to 25 (+2 sec)

- **Intersection 11: Highway 70 West (US 70) and Beasley Drive**
  Phase 3 changed from 25 to 15 (-10 sec)
  Phase 4 changed from 15 to 25 (+10 sec)

The following are the timing adjustments made to the Beasley Drive corridor as a result of field observation:

AM Peak 90 Second Cycle Plan Cycle 1 / Split 1 / Offset 1

- **Intersection 12: Beasley Drive and Center Avenue (SR 48)**
  Phase 1 and 5 (EBL/WBL) Split changed from 12 to 16 (+4 sec)
  Phase 2 and 6 (EB/WB) Split changed from 26 to 30 (+4 sec)
  Phase 4 and 8 (NB/SB) Split changed from 40 to 32 (-8 sec)

Midday Peak 70 Second Cycle Plan Cycle 2 / Split 1 / Offset 1

- **Intersection 13: Beasley Drive and Cowan Road**
  Changes C/O/S from 2/1/1 to 2/1/2 based on controller specific settings.

PM Peak 80 Second Cycle Plan Cycle 3 / Split 1 / Offset 1

- **Intersection 13: Beasley Drive and Cowan Road**
  Changes C/O/S from 3/1/1 to 3/1/3 based on controller specific settings.

6. TRAVEL TIME

Peak hour travel time and delay data were collected before and after new signal timing implementation for typical weekday conditions using the average vehicle method. The travel time and delay analysis included four routes: 1) eastbound US 70 between Beasley Drive and First Baptist Church/SR 96; 2) westbound US 70 between First Baptist Church/SR 96 and Beasley Drive; 3) eastbound Beasley Drive between Center Avenue (SR 48) and Thornton Drive; and 4) westbound Beasley drive between Thornton Drive and Center Avenue (SR 48). Pre-condition travel time and delay data was collected in February and March 2021 while local schools were in session and used to validate the base condition traffic simulation model. Post-condition travel time and delay data was collected in May 2021, while local public schools were in session. No adverse conditions that would have significantly altered typical traffic patterns were experienced during data collection dates. Summaries of pre and post-condition travel data for each direction can be found in Tables 10, 11, 12A, and 12B. Additionally, summary graphs are presented in Figures 9A and 9B. Detailed travel time data is presented in Appendix I.

TABLE 10. PRE-CONDITION TRAVEL TIME RUNS TOTAL ROUTE SUMMARY

ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound US 70	521	462	503	28	32	29	69	54	72
Westbound US 70	562	452	521	26	33	28	101	54	82
Eastbound Beasley Drive	115	119	109	35	38	32	13	20	17
Westbound Beasley Drive	96	104	120	38	39	32	2	3	21

TABLE 11. POST-CONDITION TRAVEL TIME RUN TOTAL ROUTE SUMMARY

ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound US 70	488	471	497	30	31	30	52	62	64
Westbound US 70	477	412	431	31	36	34	39	29	27
Eastbound Beasley Drive	103	102	101	41	43	39	8	8	7
Westbound Beasley Drive	96	109	123	42	42	29	5	12	15

TABLE 12A. BEFORE AND AFTER TRAVEL TIME COMPARISON – US 70

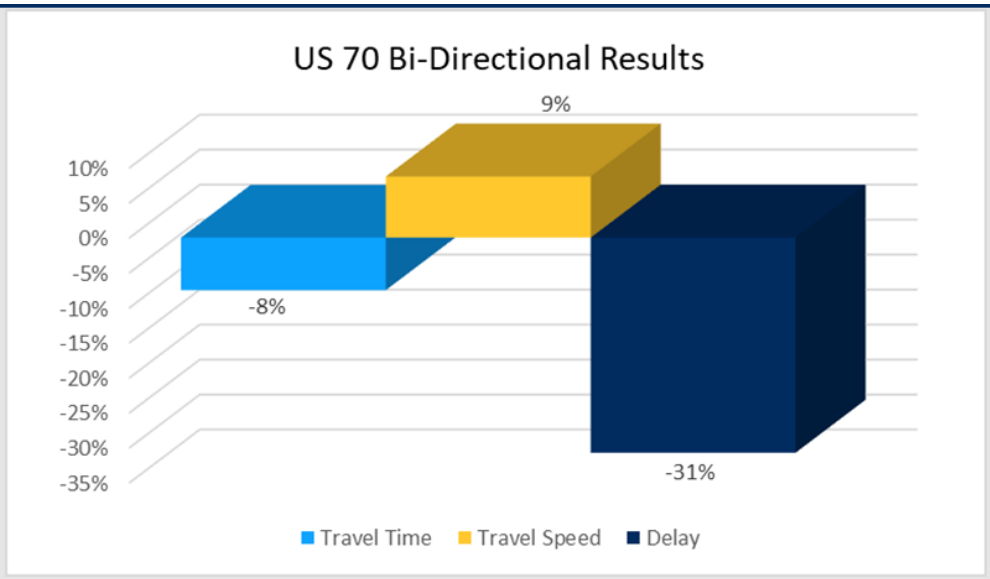
ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound US 70	-6%	2%	-1%	7%	-2%	1%	-25%	16%	-11%
Westbound US 70	-15%	-9%	-17%	18%	10%	21%	-60%	-46%	-67%
US 70	-10%	-3%	-8%	12%	4%	10%	-40%	-13%	-36%
US 70	-8%			9%			-31%		

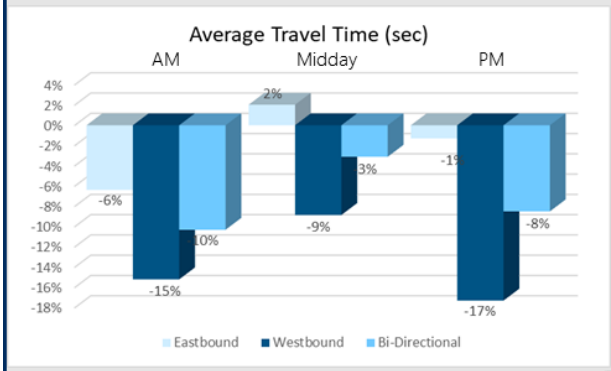
TABLE 12B. BEFORE AND AFTER TRAVEL TIME COMPARISON – BEASLEY DRIVE

ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound Beasley Drive	-11%	-14%	-7%	18%	12%	23%	-38%	-60%	-58%
Westbound Beasley Drive	0%	4%	2%	9%	8%	-11%	127%	338%	-30%
Beasley Drive	-3%	-4%	-3%	12%	10%	7%	75%	150%	-45%
Beasley Drive	-3%			10%			49%		

It should be noted that while there is a very large percent increase in the delay seen in the AM and Midday peak hours for the westbound direction of Beasley Drive, the actual increase in delay is 3 seconds in the AM peak and 9 seconds in the Midday peak. Additionally, the westbound direction carries a lower volume of traffic, and the eastbound direction that carries the heavier volume of traffic saw a reduction in the amount of delay of between 5 seconds and 10 seconds.

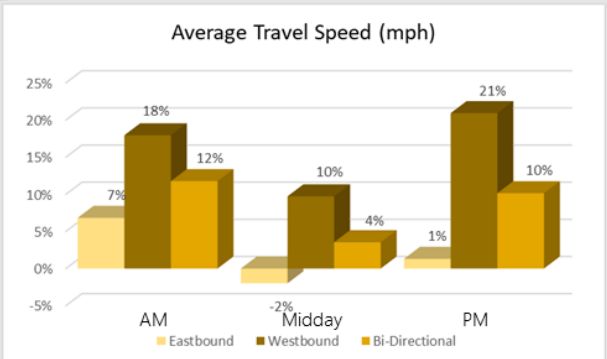
FIGURE 7A. PRE AND POST CONDITION COMPARISONS – US 70

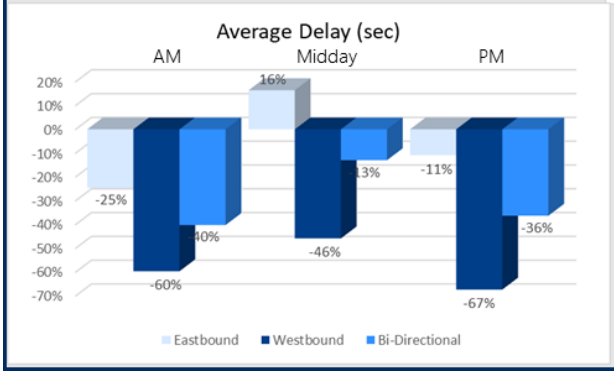




6% decrease in eastbound travel time in the AM.
17% decrease in westbound travel time in the PM.
8% decrease in bi-directional travel time throughout the day.

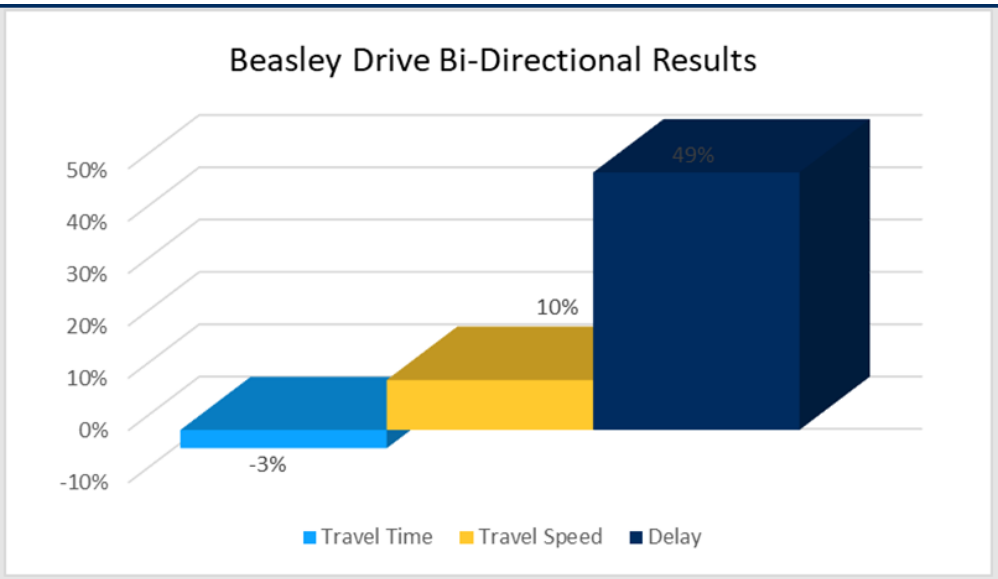
7% increase in eastbound travel speed in the AM.
21% increase in westbound travel speed in the PM.
9% increase in bi-directional travel speed throughout the day.

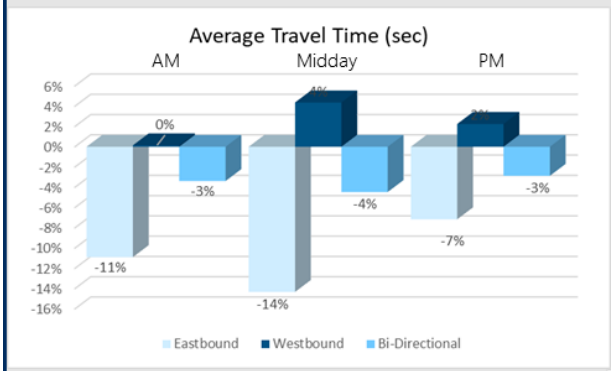




25% decrease in eastbound delay in the AM.
67% decrease in westbound delay in the PM.
31% decrease in bi-directional delay throughout the day.

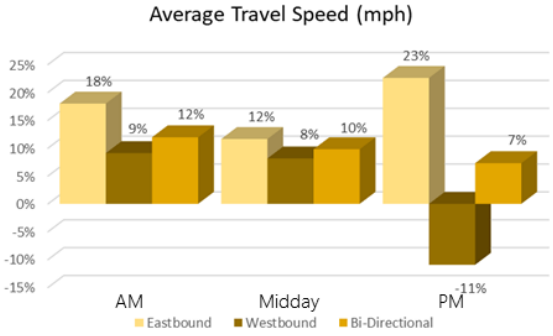
FIGURE 7B. PRE AND POST CONDITION COMPARISONS – BEASLEY DRIVE

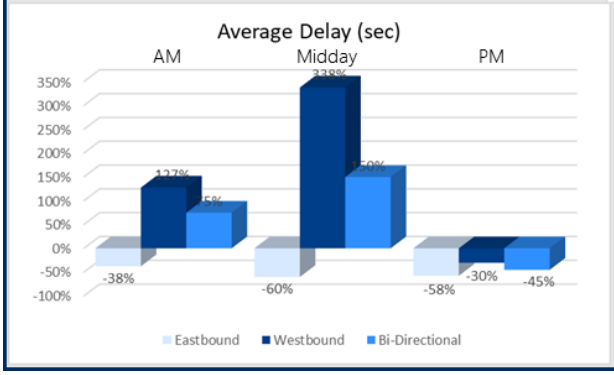




14% decrease in eastbound travel time in the Midday.
11% decrease in eastbound travel time in the AM.
3% decrease in bi-directional travel time throughout the day.

23% increase in eastbound travel speed in the PM.
9% increase in westbound travel speed in the AM.
10% increase in bi-directional travel speed throughout the day.





60% decrease in eastbound delay in the Midday.
30% decrease in westbound delay in the PM.
45% decrease in bi-directional delay in the PM.

7. MODELING THE STUDY CORRIDOR

A base model of the roadway network was constructed using the traffic simulation and modeling software Synchro and SimTraffic. Base model calibration to simulate the pre-condition of the roadway network was based on field observations, pre-condition signal timings, and field-run travel times. The base model was coded with the pre-condition geometric, volume, phasing, and timing information collected as part of the field inventory. The base traffic operations were then calibrated for each time-period studied (AM, Midday, and PM) to establish a point of reference to which future modifications will be compared. The base model was then used to develop updated signal timings.

The Synchro model was used more to develop the base signal timing conditions. Changes made during field monitoring were made to better reflect the actual roadway conditions. The developed model was used more as a guiding tool rather than a rule. Therefore, no formal Synchro model analysis is presented within the main body of the report.

Detailed SimTraffic and Synchro model analysis results are presented in Appendix J and Appendix K.

8. RECOMMENDED IMPROVEMENTS

The principal purpose of this project is to develop optimized traffic signal timings for two corridors within the City of Dickson for immediate implementation, US 70 and Beasley Drive. As described previously, updated signal timings for all thirteen existing signalized intersections in the study corridor were implemented in May 2021.

In addition, this study also identifies improvements that would improve the safety and efficiency of the study area network. The following improvements have been identified and are presented in order of recommended priority:

8.1 Vehicle Detection

During field inventory and traffic signal monitoring, it was discovered that the following intersections had some missing or failed detector loops.

- College Street (US 70) and Hummingbird Lane
  - The eastbound left-turn detector monitor showed that there was a fault in the detector. The left-turn call is on min recall, and the phase is called even when no vehicles are present.
- Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
  - The pedestrian crosswalk was removed from the southbound approach, and the stop bar was moved forward. The detector loop was not moved, however, and this is resulting in vehicles pulling to far forward for the detector to call the southbound phase.

8.2 GPS Units

When reviewing the signal control cabinets, it was found that the intersections did not have the capability to synchronize signal controller clocks. The installation of GPS units, at each intersection, that can accurately synchronize clocks would be the quickest and most cost effective way to achieve this capability. Other options could include cellular modems installed at each intersection or the installation of traffic signal interconnect cable with clock synchronization provided by a master controller or central signal control system. In order to maintain consistent time settings within each local controller required for proper traffic signal coordination, the installation of GPS units or another method to synchronize signal controller clocks is recommended. Without the capability to synchronize signal controller clocks, slight variations in seconds can result in poor coordination between adjacent intersections.

8.3 Signal Controller Type

During the field inventory, the majority of intersections were running PEEK 3000E signal controllers. The following intersections were running different controllers.

- PEEK TRANSYT 3000
    - College Street (US 70) and Hummingbird Lane
    - Henslee Drive (US 70) and Plaza Drive
    - Henslee Drive (US 70) and Pump Hill Road/Spring Street
- PEEK ATC-1000
    - Beasley Drive and Thornton Drive
- McCain ATC ex^2
    - College Street (US 70) and Henslee Drive (US 70)
    - Beasley Drive and Center Avenue (SR 48)

Between field inventory and monitoring, the following intersections were updated to PEEK 3000E signal controllers.

- Henslee Drive (US 70) and SR 48 Ramps

Considerations should be made into updating the controllers at all of the intersections to the same modern controller type in order to maintain consistency between the intersections. This will allow for better communication between controllers should signal interconnect be installed in the future. Consistency between signal controllers will also ease maintenance of hardware and signal timings for signal technicians who would be required to keep spare parts and be familiar with programming one type of controller.

8.4 Introduction of New Traffic Signals

The signal timings and coordination coding sheet for the planned signal at Henslee Drive (US 70) and Cougar Pride Way are included in Appendix H. Upon completion of the new signal, the signal timings and coordination should be fine tuned to allow for progression through the network. The signal timings for this intersection were included in this study.

9. CONCLUSIONS

The principal purpose of this project is to develop optimized traffic signal timings for two corridors within the City of Dickson for immediate implementation, US 70 and Beasley Drive. Additionally, recommendations for improvements were developed.

In order to develop new signal timing plans for the corridor, the existing conditions of the corridor were reviewed. The first step was to complete a field inventory of each of the signalized intersections within the corridor and evaluate the existing conditions using the simulation modeling software Synchro and SimTraffic. The existing conditions report produced in April 2021 detailed the findings of the existing conditions inventory, as well as the base findings from the existing conditions Synchro model.

The updated signal timing plans were implemented in May 2021. Updated signal coding sheets were included within this report.

This document represents the final report for the US 70 and Beasley Drive corridors signal timing study. Results of analyses, new signal timing implementation, and recommendations for improvements to the study area network are presented. Final traffic signal coding sheets have been included in Appendix H.

APPENDICES

APPENDIX A
DETAILED TURNING MOVEMENT COUNTS

APPENDIX B
FIELD INVENTORY SHEETS

APPENDIX C
INTERSECTION INVENTORY PHOTOS

APPENDIX D
CYCLE LENGTH ANALYSIS

APPENDIX E
PHASE SPLIT ANALYSIS

APPENDIX F
OFFSET ANALYSIS

APPENDIX G
FIELD MONITORING SHEETS

APPENDIX H
SIGNAL CODING SHEETS

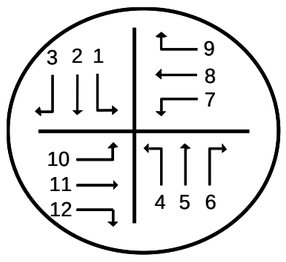
APPENDIX I
TRAVEL TIME DATA COLLECTION SHEETS

APPENDIX J
SIMTRAFFIC TRAVEL TIME ANALYSIS

APPENDIX K
CAPACITY ANALYSIS

APPENDIX L
EXISTING CONDITIONS REPORT

APPENDIX A
DETAILED TURNING MOVEMENT COUNTS

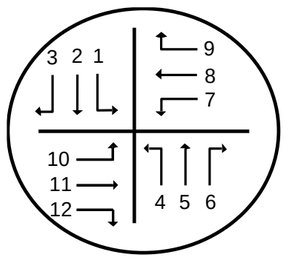


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: 1- Hwy 70 & SR 96
DATE: 2/4/2021
RECORDER: Darryl Glascock
NOTES: 2 cameras

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**Church Access**			**Hwy 96**			**Hwy 70**			**Hwy 70**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM				7			4	19		1	19	42	**656**
6:15-6:30				20	2	1	7	40		4	35	41	**802**
6:30-6:45		2	5	32	2	2	9	58		2	40	44	**981**
6:45-7:00				33	4	3	1	62		2	60	53	**1,136**
7:00-7:15		2	7	61	6	2	9	68		4	39	40	**1,236**
7:15-7:30		2	12	72	5	4	8	78		11	64	73	**1,235**
7:30-7:45		6	20	87	4	1	9	127		6	37	54	**1,086**
7:45-8:00		1	6	78	4	9	11	87		8	71	43	**920**
8:00-8:15		4	5	45	3	5	5	78		5	40	47	**794**
8:15-8:30	1	1		33	1	3	3	61	1	1	44	31	**557**
8:30-8:45			1	39	4	5	4	56		1	42	33	**377**
8:45-9:00		3	4	30	1	3	5	59		5	46	36	**192**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**193**
10:30-10:45													**396**
10:45-11:00													**620**
11:00-11:15			2	40		4	2	58		1	47	39	**854**
11:15-11:30			2	44		1	1	53		2	59	41	**915**
11:30-11:45			2	34		5	3	75			58	47	**931**
11:45-12:00 PM			4	39		4	6	65		2	79	35	**925**
12:00-12:15			2	55		1	3	60		1	80	52	**941**
12:15-12:30		1	2	39	1	2	4	56		3	60	51	**687**
12:30-12:45				45	2	3	5	59		2	57	45	**468**
12:45-1:00		2	5	47		4	4	56		4	76	52	**250**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**361**
2:30-2:45													**708**
2:45-3:00													**1,066**
3:00-3:15		1	2	73		13	6	89		1	95	81	**1,404**
3:15-3:30		3	1	75	1	7	5	90	1	4	99	61	**1,357**
3:30-3:45			3	93		8	9	89		7	89	60	**1,357**
3:45-4:00		3	4	83	2	6	6	74		2	95	63	**1,389**
4:00-4:15	1		3	63	2	6	3	81	1	5	89	60	**1,394**
4:15-4:30		1	4	83	4	8	2	79		3	105	58	**1,442**
4:30-4:45		8	7	77	6	7	7	87	1	6	111	73	**1,424**
4:45-5:00			7	62	3	6	4	99		8	86	68	**1,349**
5:00-5:15		7	11	60		9	5	90		7	98	75	**1,328**
5:15-5:30			6	77		6	3	65		5	100	67	**966**
5:30-5:45		1	1	73		8	7	97		5	72	51	**637**
5:45-6:00			5	83	2	6	3	97		10	69	47	**322**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	2	48	133	1,782	59	152	163	2,312	4	128	2,161	1,663	
AM PK HR		11	45	298	19	16	37	360		29	211	210	7:00 AM - 8:00 AM
MID PK HR		3	9	186	3	10	16	231		10	273	200	12:00 PM - 1:00 PM
PM PK HR		16	29	282	13	30	18	355	1	24	400	274	4:15 PM - 5:15 PM

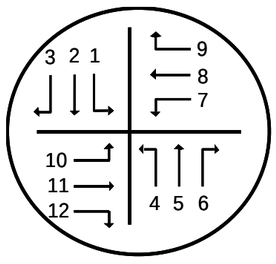


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: 2- US70& Hummingbird Ln
DATE: 2/4/2021
RECORDER: Darryl Glascock
NOTES: 2 cameras

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Hummingbird			Hummingbird			US 70			US 70			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	5	2	2	2	2	5	2	29		5	50	1	**668**
6:15-6:30	3	2	2	3	1	4	2	43	2	2	50	9	**820**
6:30-6:45	5	2	7	6		6	6	91		2	93	8	**1,072**
6:45-7:00	6		9	5	6	10	6	89	2	4	72	5	**1,231**
7:00-7:15	6	3	12	18		7	4	112	4	9	72	10	**1,377**
7:15-7:30	7	5	17	3	2	9	9	182	2	10	120	9	**1,402**
7:30-7:45	4	9	26	17	6	5	18	185	5	5	94	11	**1,258**
7:45-8:00	7	8	19	12	1	7	10	171	4	5	106	10	**1,084**
8:00-8:15	4	4	14	9		8	10	123	4	9	88	9	**966**
8:15-8:30	4	6	10	9	1	2	8	98	1	5	75	12	**684**
8:30-8:45	6	1	9	7	2	8	8	88	3	6	68	5	**453**
8:45-9:00	4	5	9	7	1	5	7	109	4	4	82	5	**242**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**272**
10:30-10:45													**544**
10:45-11:00													**826**
11:00-11:15	4	4	6	11	4	14	5	100	5	9	96	14	**1,155**
11:15-11:30	10	4	8	13	2	6	8	98	2	7	106	8	**1,243**
11:30-11:45	1		13	6	4	7	6	116	3	6	113	7	**1,280**
11:45-12:00 PM	7	6	9	11	2	10	15	111	5	12	132	9	**1,310**
12:00-12:15	6	6	13	14	5	9	12	123	5	8	148	11	**1,342**
12:15-12:30	1	2	10	18	1	12	5	109	4	7	127	13	**982**
12:30-12:45	8	8	6	13	4	6	7	110	4	13	119	14	**673**
12:45-1:00	5	3	11	6	6	16	12	117	8	8	157	12	**361**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**445**
2:30-2:45													**897**
2:45-3:00													**1,394**
3:00-3:15	4	3	8	20		12	6	153	9	16	190	24	**1,849**
3:15-3:30	3	7	6	28	5	24	16	155	9	9	165	25	**1,802**
3:30-3:45	9	4	14	29	6	20	17	192	7	9	166	24	**1,796**
3:45-4:00	10	7	10	30	6	8	19	163	5	16	160	21	**1,719**
4:00-4:15	4	3	12	25	10	8	11	130	8	8	162	17	**1,696**
4:15-4:30	5	6	9	19	5	14	8	175	5	10	171	19	**1,752**
4:30-4:45	7	6	7	22	5	8	12	145	8	8	173	19	**1,624**
4:45-5:00	8	6	13	15	7	21	12	153	6	9	162	20	**1,588**
5:00-5:15	5	5	8	26	8	10	5	157	9	15	180	26	**1,557**
5:15-5:30	6	5	9	20	6	15	13	140	7	12	64	21	**1,103**
5:30-5:45	10	1	14	17	2	12	11	161	2	13	122	19	**785**
5:45-6:00	5	5	8	16	11	10	13	166	4	11	137	15	**401**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
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8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	179	138	330	457	121	318	303	4,094	146	272	3,820	432	
AM PK HR	22	26	76	41	9	29	47	661	15	29	408	39	7:15 AM - 8:15 AM
MID PK HR	20	19	40	51	16	43	36	459	21	36	551	50	12:00 PM - 1:00 PM
PM PK HR	26	21	38	107	17	64	58	663	30	50	681	94	3:00 PM - 4:00 PM

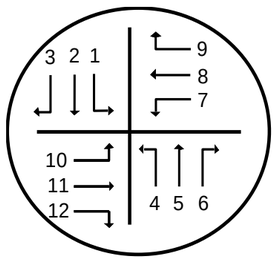


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: US 70 College Street & Henslee Drive
DATE: February 3 - 4, 2021
RECORDER: Robert H. Hill
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Henslee Dr.			NA			College St.			College St.			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	41							14	21		16		**653**
6:15-6:30	46							26	25		20		**803**
6:30-6:45	72		1					52	51		29		**1,071**
6:45-7:00	76		3					53	64	4	39		**1,287**
7:00-7:15	52		1					66	93		30		**1,462**
7:15-7:30	94							90	145	3	53		**1,501**
7:30-7:45	80							122	177	2	40		**1,355**
7:45-8:00	80		5					120	139		70		**1,153**
8:00-8:15	64		4					95	71		47		**964**
8:15-8:30	55		4					75	56		49		**683**
8:30-8:45	56		1					51	65	1	45		**444**
8:45-9:00	45							74	51		55		**225**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**259**
10:30-10:45													**548**
10:45-11:00													**868**
11:00-11:15	58		6					64	60	3	68		**1,188**
11:15-11:30	74		4					68	75	5	63		**1,266**
11:30-11:45	77		2					79	70	2	90		**1,321**
11:45-12:00 PM	80		6					93	61	1	79		**1,310**
12:00-12:15	83		6					94	69	3	82		**1,340**
12:15-12:30	68		4					94	83	9	86		**1,003**
12:30-12:45	93		6					70	54	2	84		**659**
12:45-1:00	95		1					91	73	2	88		**350**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**450**
2:30-2:45													**907**
2:45-3:00													**1,376**
3:00-3:15	142		4					83	123	5	93		**1,844**
3:15-3:30	129		4					79	133	7	105		**1,782**
3:30-3:45	125		7					106	123	9	99		**1,784**
3:45-4:00	106		4					87	147	6	118		**1,739**
4:00-4:15	100		5					75	94	1	113		**1,684**
4:15-4:30	111		7					98	136	5	102		**1,781**
4:30-4:45	115		2					79	112	6	110		**1,727**
4:45-5:00	108		6					85	116	5	93		**1,681**
5:00-5:15	143		1					89	121	5	126		**1,659**
5:15-5:30	112		3					72	116	6	96		**1,174**
5:30-5:45	90		5					81	126	3	73		**769**
5:45-6:00	102		4					92	113	2	78		**391**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	2,772		106					2,517	2,963	97	2,339		
AM PK HR	318		9					427	532	5	210		7:15 AM - 8:15 AM
MID PK HR	339		17					349	279	16	340		12:00 PM - 1:00 PM
PM PK HR	502		19					355	526	27	415		3:00 PM - 4:00 PM

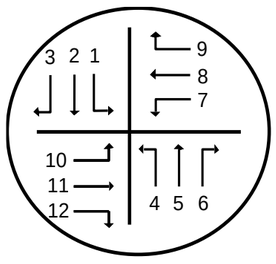


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Henslee Drive & BP Plaza Place Drive
DATE: February 3-4, 2021
RECORDER: Robert H. Hill
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**BP Plaza Place**			**BP Plaza Place**			**Henslee Dr.**			**Henslee Dr.**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	1	1						16	4	1	47	3	**446**
6:15-6:30		1	1	1	1			26	1	1	47	2	**543**
6:30-6:45	1	1	2	1				49	2		77	4	**729**
6:45-7:00	1	2	2	4				59	5	4	72	6	**875**
7:00-7:15	2	2	7	2	1			85	4	4	58	5	**976**
7:15-7:30	2	2	7	1	1	2		132	5	2	103	10	**972**
7:30-7:45	5	1	6	3	7	4	1	149	6	2	89	10	**855**
7:45-8:00	6	5	5	4	2	1	3	111	9	3	89	18	**730**
8:00-8:15	4	6	5	4	5	3	3	55	8	4	57	12	**616**
8:15-8:30	5	4	3	3	5	4	2	48	8	2	51	15	**450**
8:30-8:45	6	4	7	4	5	2	8	59	2	9	47	5	**300**
8:45-9:00	6	5	8	4	5		2	42	8	2	45	15	**142**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**208**
10:30-10:45													**427**
10:45-11:00													**653**
11:00-11:15	11	13	12	11	8	3	6	45	9	8	61	21	**876**
11:15-11:30	15	7	9	13	7	3	3	69	9	3	63	18	**905**
11:30-11:45	12	10	13	12	21	3	4	52	13	8	65	13	**945**
11:45-12:00 PM	6	9	16	10	8	4	5	50	7	6	78	24	**975**
12:00-12:15	14	3	7	17	14	2	2	64	12	8	69	25	**1,020**
12:15-12:30	9	9	16	15	17	3	2	68	18	18	61	23	**783**
12:30-12:45	13	8	20	18	14	7	2	43	9	6	84	32	**524**
12:45-1:00	6	8	15	21	12	4	3	66	11	9	88	25	**268**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**383**
2:30-2:45													**752**
2:45-3:00													**1,101**
3:00-3:15	15	7	23	16	20	2	7	93	19	13	144	24	**1,456**
3:15-3:30	18	7	17	17	7	1	4	127	14	10	114	33	**1,394**
3:30-3:45	16	7	20	19	13	3	4	101	21	13	110	22	**1,357**
3:45-4:00	20	8	22	21	12	2	6	123	21	11	84	25	**1,323**
4:00-4:15	16	6	26	15	14	7	2	98	6	8	92	31	**1,278**
4:15-4:30	14	9	21	14	16	2	3	106	21	13	93	20	**1,335**
4:30-4:45	13	6	28	9	13	4	4	105	12	11	91	19	**1,340**
4:45-5:00	15	10	17	12	10	2	3	100	17	5	96	23	**1,307**
5:00-5:15	23	4	29	22	20	4	7	107	11	4	119	28	**1,300**
5:15-5:30	20	7	32	12	9	1	3	98	22	11	96	26	**922**
5:30-5:45	19	5	10	21	8	3	7	102	13	6	69	19	**585**
5:45-6:00	15	5	26	16	8	4	5	95	9	10	84	26	**303**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	329	182	432	342	283	80	101	2,543	336	215	2,543	582	
AM PK HR	15	10	25	10	11	7	4	477	24	11	339	43	7:00 AM - 8:00 AM
MID PK HR	42	28	58	71	57	16	9	241	50	41	302	105	12:00 PM - 1:00 PM
PM PK HR	69	29	82	73	52	8	21	444	75	47	452	104	3:00 PM - 4:00 PM

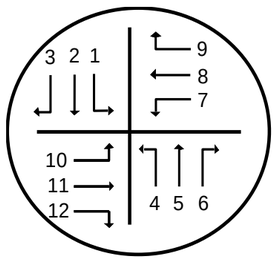


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: US70 BP and SR46 Mathis Drive
DATE: 2/2/2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Mathis (out of parking lot)			Mathis Drive			**US70 BP**			**US 70 BP**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM				25		5	10	21			74	68	**1,061**
6:15-6:30			1	31	2	7	15	15			72	82	**1,204**
6:30-6:45				49		10	23	37			78	93	**1,391**
6:45-7:00				65	1	9	20	50			86	112	**1,571**
7:00-7:15				90		9	17	56			78	96	**1,682**
7:15-7:30				113		13	21	63			81	121	**1,723**
7:30-7:45				129	2	10	19	77			85	148	**1,660**
7:45-8:00				96		17	27	79			83	152	**1,537**
8:00-8:15				77		22	24	56	1		74	133	**1,426**
8:15-8:30				76	1	21	24	42	3		78	104	**1,039**
8:30-8:45				80	2	23	27	50			72	93	**690**
8:45-9:00			2	75	3	27	31	47	2		69	87	**343**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**417**
10:30-10:45													**815**
10:45-11:00													**1,191**
11:00-11:15			2	100	3	33	34	60	3	1	77	104	**1,585**
11:15-11:30				103	2	34	41	57			69	92	**1,563**
11:30-11:45			1	82		31	32	68	1	1	71	89	**1,572**
11:45-12:00 PM				89		34	26	75			79	91	**1,552**
12:00-12:15				93	2	27	31	73		1	82	86	**1,529**
12:15-12:30			2	102	1	41	36	77	1		68	79	**1,134**
12:30-12:45			1	87		33	29	67			74	65	**727**
12:45-1:00			1	94	1	26	36	70	2	1	79	61	**371**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**699**
2:30-2:45													**1,332**
2:45-3:00													**1,916**
3:00-3:15			3	156	6	41	34	108	4	2	160	185	**2,536**
3:15-3:30			1	143	3	37	29	115	2	1	136	166	**2,408**
3:30-3:45			2	134	4	30	32	119	1		127	135	**2,318**
3:45-4:00			4	137	2	35	37	127		2	134	142	**2,308**
4:00-4:15			1	136	4	52	23	129	3		109	114	**2,297**
4:15-4:30			4	157	2	39	28	123	2		95	93	**2,400**
4:30-4:45			2	164	1	36	36	127	1		94	113	**2,433**
4:45-5:00			2	193	3	32	46	120	3		89	121	**2,351**
5:00-5:15				179		43	34	137		3	142	136	**2,219**
5:15-5:30			1	152		33	21	126	2		124	117	**1,545**
5:30-5:45			3	146	2	30	16	113	2		83	97	**969**
5:45-6:00			3	145	1	31	28	86	3		76	104	**477**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL			36	3,498	48	871	887	2,570	36	12	2,898	3,479	
AM PK HR				415	2	62	91	275	1		323	554	7:15 AM - 8:15 AM
MID PK HR			3	374	5	132	133	260	4	2	296	376	11:00 AM - 12:00 PM
PM PK HR			10	570	15	143	132	469	7	5	557	628	3:00 PM - 4:00 PM

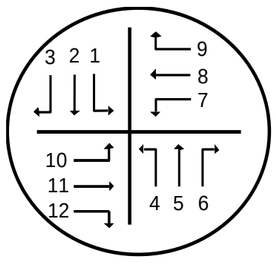


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US 70 BP and Pumphill Road
DATE: Feb-2-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**Pumphill Road**			**Pumphill Road**			**US 70 BP**			**US 70 BP**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	4	1	3	2	3	2	1	45	4	3	128	1	**996**
6:15-6:30	4	2	6	1	2	4	1	51	2	2	136	2	**1,120**
6:30-6:45	9	1	2	1	2	7	2	59	2	4	163	2	**1,274**
6:45-7:00	8	3	9	1	1	8	4	103	10	2	181	2	**1,411**
7:00-7:15	11	3	4	6	2	2	3	111	5	4	167	3	**1,447**
7:15-7:30	19	2	9	13	3	10	5	132	11	5	156	2	**1,476**
7:30-7:45	16	3	13	11	2	15	7	136	9	7	168	4	**1,445**
7:45-8:00	15	3	8	8	3	13	6	123	5	10	172	2	**1,387**
8:00-8:15	19	2	5	5	4	12	4	114	8	9	167	1	**1,313**
8:15-8:30	12	3	5	2	2	8	5	119	11	4	163	2	**963**
8:30-8:45	10	1	6	3		13	8	122	8	3	157	2	**627**
8:45-9:00	12	1	3	2	2	9	9	110	6	3	134	3	**294**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**414**
10:30-10:45													**802**
10:45-11:00													**1,173**
11:00-11:15	22	7	5	2		11	7	177	4	11	158	10	**1,572**
11:15-11:30	23	3	6	6	2	9	7	164	7	6	151	4	**1,561**
11:30-11:45	18	5	3	5	5	9	9	156	6	8	145	2	**1,558**
11:45-12:00 PM	19	5	8	7	3	8	15	162	7	4	154	7	**1,577**
12:00-12:15	23	7	5	5	2	11	13	153	9	3	167	5	**1,566**
12:15-12:30	17	4	7	7	3	5	8	167	5	4	153	5	**1,163**
12:30-12:45	21	6	8	6	3	9	12	161	6	6	146	6	**778**
12:45-1:00	19	3	5	5	4	11	8	159	4	4	157	9	**388**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**519**
2:30-2:45													**1,034**
2:45-3:00													**1,533**
3:00-3:15	21	4	14	15	2	12	10	212	13	2	201	13	**2,042**
3:15-3:30	17	6	19	13	4	8	15	189	16	5	209	14	**2,046**
3:30-3:45	15	3	17	16	1	15	11	197	12	7	189	16	**2,043**
3:45-4:00	19	4	21	14	3	12	14	204	9	4	194	11	**2,053**
4:00-4:15	22	6	23	12	7	17	11	201	10	1	201	12	**2,046**
4:15-4:30	15	5	16	10	6	14	15	189	17	5	203	17	**1,989**
4:30-4:45	19	3	12	15	4	13	18	193	14	8	196	14	**1,981**
4:45-5:00	20	8	14	17	9	10	13	187	12	3	200	9	**1,946**
5:00-5:15	21	6	9	16	4	9	15	178	11	5	180	12	**1,937**
5:15-5:30	13	4	11	18	7	13	17	189	16	7	193	16	**1,471**
5:30-5:45	18	5	14	12	5	7	16	167	14	6	197	13	**967**
5:45-6:00	15	7	12	9	2	9	19	187	13	9	201	10	**493**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	516	126	302	265	102	315	308	4,817	286	164	5,487	231	
AM PK HR	69	10	35	37	12	50	22	505	33	31	663	9	7:15 AM - 8:15 AM
MID PK HR	80	22	28	25	11	33	48	643	27	17	620	23	11:45 AM - 12:45 PM
PM PK HR	75	18	72	51	20	56	58	787	50	18	794	54	3:45 PM - 4:45 PM

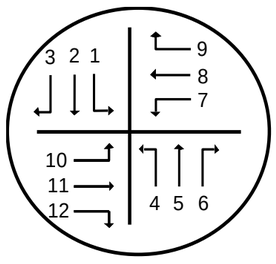


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US70 BP and SR48 West Ramps
DATE: Feb-02-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Ramps			No Road			US 70 BP			US 70 BP			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	35		4					36	1		87		**861**
6:15-6:30	55		4					35	1		68		**1,027**
6:30-6:45	75		8					43			121		**1,300**
6:45-7:00	79		14					84	1		110		**1,480**
7:00-7:15	59		19					118			133		**1,634**
7:15-7:30	74		21					174			167		**1,586**
7:30-7:45	81		17					157	1		171		**1,426**
7:45-8:00	87		11					143	2	1	198		**1,250**
8:00-8:15	79		9					75	4	1	113		**1,053**
8:15-8:30	64		13					81	2		116		**772**
8:30-8:45	51		10					78	4		108		**496**
8:45-9:00	53		13					73	3		103		**245**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**324**
10:30-10:45													**635**
10:45-11:00													**932**
11:00-11:15	72		12					126	4	1	109		**1,283**
11:15-11:30	56		15					117	2		121		**1,325**
11:30-11:45	44		11					110	3	1	128		**1,367**
11:45-12:00 PM	59		25					132	5		130		**1,419**
12:00-12:15	63		23					143	3		134		**1,388**
12:15-12:30	54		26					135	5	1	132		**1,022**
12:30-12:45	56		22					124	2		145		**669**
12:45-1:00	43		19					123	3	1	131		**320**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**467**
2:30-2:45													**887**
2:45-3:00													**1,324**
3:00-3:15	85		16					165	2		199		**1,769**
3:15-3:30	62		9					159	2		188		**1,747**
3:30-3:45	68		18					199	5	1	146		**1,771**
3:45-4:00	72		16					187	4	1	165		**1,760**
4:00-4:15	76		17					177	5		170		**1,718**
4:15-4:30	71		13					181	6	1	172		**1,651**
4:30-4:45	63		14					179	3		167		**1,596**
4:45-5:00	54		17					165	4	1	162		**1,514**
5:00-5:15	43		16					157	2	2	158		**1,451**
5:15-5:30	47		18					155	5	1	163		**1,073**
5:30-5:45	43		12					143	1	1	144		**684**
5:45-6:00	38		9					145	1		147		**340**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	1,961		471					4,119	86	14	4,506		
AM PK HR	301		68					592	3	1	669		7:00 AM - 8:00 AM
MID PK HR	232		96					534	15	1	541		11:45 AM - 12:45 PM
PM PK HR	287		64					744	20	3	653		3:30 PM - 4:30 PM

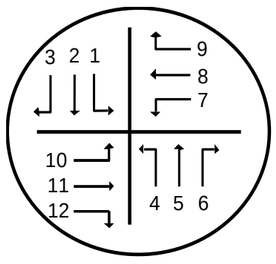


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US 70 BP and N. Charlotte St
DATE: Feb-2-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**Charlotte Street**			**Charlotte Street**			**US 70 BP**			**US 70 BP**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	10		1	3	2	5	2	35	3	2	62	1	**662**
6:15-6:30	12		4	1	1	7	4	34	1	3	49	1	**835**
6:30-6:45	9		3	2	1	4	3	46	2	8	108	1	**1,142**
6:45-7:00	11	1	2	6	2	8	7	86	5	9	91	4	**1,374**
7:00-7:15	13	1	5	12	4	9	11	122	4	5	111	2	**1,565**
7:15-7:30	12	6	12	17	3	5	13	175	7	7	150	17	**1,536**
7:30-7:45	13	9	15	24	7	7	11	158	5	6	151	13	**1,392**
7:45-8:00	11	8	13	21	4	4	8	143	3	8	184	16	**1,249**
8:00-8:15	8	11	18	17	6	7	6	76	2	6	99	14	**1,088**
8:15-8:30	10	7	17	23	3	5	7	83	4	9	101	11	**818**
8:30-8:45	12	11	20	19	4	6	8	75	5	10	90	16	**538**
8:45-9:00	11	14	16	22	3	9	11	67	8	6	83	12	**262**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**269**
10:30-10:45													**554**
10:45-11:00													**837**
11:00-11:15	24	1	2	4	2	13	12	118	8	8	73	4	**1,159**
11:15-11:30	21	4	4	11	5	11	12	115	5	3	91	3	**1,221**
11:30-11:45	15	5	4	10	7	15	8	109	4	3	99	4	**1,257**
11:45-12:00 PM	19	5	7	10	5	12	13	137	7	5	99	3	**1,292**
12:00-12:15	31	8	3	9	2	11	10	148	8	4	92	5	**1,288**
12:15-12:30	25	6	6	5	2	9	15	140	6	5	99	3	**957**
12:30-12:45	29	4	7	4	1	13	11	130	5	5	103	6	**636**
12:45-1:00	18	7	9	13	5	16	13	121	8	5	98	5	**318**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**486**
2:30-2:45													**885**
2:45-3:00													**1,302**
3:00-3:15	23	7	18	25	5	7	14	137	30	16	169	35	**1,721**
3:15-3:30	32	5	3	8	7	10	14	136	18	3	146	17	**1,643**
3:30-3:45	12	6	7	14	9	7	13	181	23	7	128	10	**1,655**
3:45-4:00	11	5	5	19	12	8	11	164	28	4	147	5	**1,742**
4:00-4:15	16	4	6	14	9	10	13	150	31	5	144	6	**1,708**
4:15-4:30	12	2	8	17	5	8	16	154	24	8	153	4	**1,708**
4:30-4:45	16	6	3	12	12	11	13	254	26	3	140	8	**1,693**
4:45-5:00	13	3	4	14	6	15	10	151	21	6	135	7	**1,551**
5:00-5:15	18	2	5	27	17	13	8	157	19	7	128	7	**1,533**
5:15-5:30	16	4	7	24	15	11	7	146	15	8	137	6	**1,125**
5:30-5:45	12	7	5	22	13	14	10	128	17	6	119	9	**729**
5:45-6:00	14	3	6	27	16	10	9	134	11	8	123	6	**367**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	509	162	245	456	195	300	323	4,010	363	198	3,702	261	
AM PK HR	49	24	45	74	18	25	43	598	19	26	596	48	7:00 AM - 8:00 AM
MID PK HR	104	23	23	28	10	45	49	555	26	19	393	17	11:45 AM - 12:45 PM
PM PK HR	55	17	22	62	38	37	53	722	109	20	584	23	3:45 PM - 4:45 PM

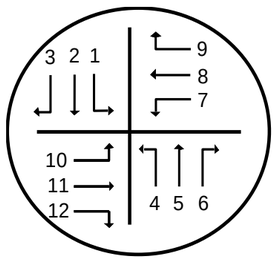


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US70 BP and Cougar Pride Way
DATE: Feb-2-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**Cougar Pride Way**			**No Lane**			**US 70 BP**			**US 70 BP**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	2		1					33	6		65		**583**
6:15-6:30			3					30	9	5	48		**705**
6:30-6:45	3		1					48	8	7	110		**1,050**
6:45-7:00	3							66	10	5	120		**1,371**
7:00-7:15	7		4					44	48	19	107		**1,522**
7:15-7:30	71		17					72	110	56	114		**1,505**
7:30-7:45	75		27					66	151	75	104		**1,257**
7:45-8:00	54		23					73	54	43	108		**948**
8:00-8:15	13		3					74	12	9	101		**768**
8:15-8:30	1		1					77	8	4	101		**556**
8:30-8:45			1					75	6	1	106		**364**
8:45-9:00	5							65	6	1	98		**175**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**264**
10:30-10:45													**502**
10:45-11:00													**745**
11:00-11:15	11		1					130	8	2	112		**1,007**
11:15-11:30	4		3					113	8	1	109		**992**
11:30-11:45	4		1					117	9		112		**1,012**
11:45-12:00 PM	5							116	17	2	122		**1,029**
12:00-12:15	7		3					105	15	3	116		**1,015**
12:15-12:30	6		2					112	9	5	124		**766**
12:30-12:45	7		1					113	11	7	121		**508**
12:45-1:00	5		2					115	10	3	113		**248**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**432**
2:30-2:45													**884**
2:45-3:00													**1,263**
3:00-3:15	113		31					145	39	12	92		**1,641**
3:15-3:30	84		36					164	35	15	118		**1,577**
3:30-3:45	23		10					183	19	9	135		**1,454**
3:45-4:00	27		13					175	23	12	128		**1,417**
4:00-4:15	21		14					183	21	10	119		**1,375**
4:15-4:30	14		8					188	17	6	96		**1,434**
4:30-4:45	18		12					182	19	8	103		**1,485**
4:45-5:00	16		9					184	21	9	97		**1,497**
5:00-5:15	25		10					238	15	4	135		**1,505**
5:15-5:30	20		6					202	18	7	127		**1,078**
5:30-5:45	24		9					185	48	11	77		**698**
5:45-6:00	36		10					144	37	15	102		**344**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	704		262					3,817	827	366	3,440		
AM PK HR	207		71					255	363	193	433		7:00 AM - 8:00 AM
MID PK HR	25		6					446	52	17	483		11:45 AM - 12:45 PM
PM PK HR	247		90					667	116	48	473		3:00 PM - 4:00 PM

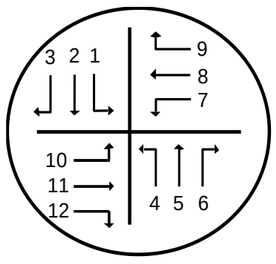


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US70 BP and SR235
DATE: Feb-3-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	West End			West End			US 70 BP			US 70 BP			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	31	3	2			1		14	12	1	40	1	**604**
6:15-6:30	46	1	3	2	1			2	12		37	1	**714**
6:30-6:45	55	3	3	1		2	1	39	11		51	1	**898**
6:45-7:00	84	3	2	1	1	2	2	31	24	1	74	2	**1,034**
7:00-7:15	64	4				3		38	15		91		**1,148**
7:15-7:30	69	4	1	2	1	3	2	55	31		118	3	**1,127**
7:30-7:45	72	7	1	2	2	3	1	57	33	1	121	3	**1,053**
7:45-8:00	85	11	2	3	3	5	3	69	30		125	5	**915**
8:00-8:15	37	1	3		3	4	1	48	25		69	3	**761**
8:15-8:30	50	2	10	1	3	3	9	45	30	2	57	3	**567**
8:30-8:45	30	4	1	1	1	5	2	42	14		64	1	**352**
8:45-9:00	45	2	2	1	2	5		41	30	2	57		**187**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**235**
10:30-10:45													**473**
10:45-11:00													**715**
11:00-11:15	34	1	1	2		5	6	90	32	1	58	5	**954**
11:15-11:30	42	2	2	1	2	2	3	94	33	1	54	2	**950**
11:30-11:45	46	4	2	1	1	2	2	83	36		62	3	**948**
11:45-12:00 PM	39	3	1	3	1	4	5	72	39	2	66	4	**939**
12:00-12:15	44	5	1	2	2	2	8	64	42	2	57	2	**939**
12:15-12:30	46	7	2	1	2	1	9	57	47	2	61	1	**708**
12:30-12:45	41	6	1		1	2	7	69	38	1	64	3	**472**
12:45-1:00	38	7	1		2	2	4	76	43		66		**239**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**351**
2:30-2:45													**697**
2:45-3:00													**1,030**
3:00-3:15	40	4	2	5	4	2	5	134	83	1	68	3	**1,349**
3:15-3:30	34	2	8	3	4	1	2	131	71	1	87	2	**1,331**
3:30-3:45	37	2	1	2	10	5	4	115	76	6	73	2	**1,342**
3:45-4:00	31	1	1	3	2	5	2	119	72	1	81	1	**1,384**
4:00-4:15	33	2	1	1	4	7	2	120	91	2	69	1	**1,434**
4:15-4:30	28	4	2	3	8	11	3	136	84	1	75	2	**1,446**
4:30-4:45	35	3	1	3	12	9	2	142	94	2	71	1	**1,416**
4:45-5:00	37	2	2	2	9	7	4	137	89	2	76	2	**1,348**
5:00-5:15	35	1	1	2	8	1	5	127	91	1	71	2	**1,255**
5:15-5:30	31	1	2	1	3	2	7	131	84		65		**910**
5:30-5:45	30	1	1	1	2	7	6	125	72	2	58	2	**583**
5:45-6:00	34	2		2	2	11	3	104	67	1	49	1	**276**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	1,403	105	63	52	96	124	110	2,607	1,551	36	2,235	62	
AM PK HR	290	26	4	7	6	14	6	219	109	1	455	11	7:00 AM - 8:00 AM
MID PK HR	161	10	6	7	4	13	16	339	140	4	240	14	11:00 AM - 12:00 PM
PM PK HR	135	10	6	10	37	28	14	542	358	6	293	7	4:15 PM - 5:15 PM

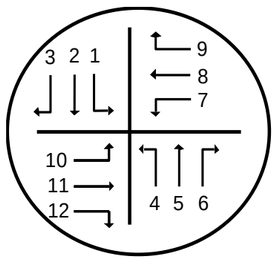


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC US70 BP & Beasley Dr
DATE: Feb-02-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	**Beasley Dr**			**Beasley Dr**			**US70 BP**			**US70 BP**			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM		29	1	21	11	2	1	14	1	2	45	79	**1,043**
6:15-6:30		50	1	21	7	6	2	16		4	47	77	**1,114**
6:30-6:45	3	58	1	26	12	4	4	21	2	5	52	89	**1,236**
6:45-7:00	2	56	2	31	18	6	2	25	1	4	79	103	**1,354**
7:00-7:15	8	33	2	32	13	5	3	27	4	7	78	65	**1,455**
7:15-7:30	5	46	2	43	25	15	6	35	2	5	96	73	**1,430**
7:30-7:45	3	51	4	48	22	7	8	42	3	7	104	96	**1,300**
7:45-8:00	2	54	6	44	19	8	12	57	2	6	111	109	**1,109**
8:00-8:15	3	21		24	12	3	4	43	1	2	68	71	**870**
8:15-8:30	3	23	1	20	10	5	7	36	1	3	60	54	**618**
8:30-8:45	6	23	3	24	14	7	5	36		2	53	31	**395**
8:45-9:00	2	19	3	23	11	2	5	26	2	3	50	45	**191**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**242**
10:30-10:45													**496**
10:45-11:00													**746**
11:00-11:15	2	11	2	28	16	6	10	68	2		58	39	**1,014**
11:15-11:30	4	18	4	32	15	4	10	67	2	2	59	37	**1,022**
11:30-11:45	3	22	3	27	18	5	11	61	3	2	54	41	**1,013**
11:45-12:00 PM	2	26	1	34	25	4	9	63	1	3	55	45	**1,040**
12:00-12:15	1	20	2	21	23	8	7	58	2	3	61	44	**1,055**
12:15-12:30	2	14	1	29	25	11	7	52	4	4	58	38	**805**
12:30-12:45	2	28		37	21	9	9	54	6	3	65	43	**560**
12:45-1:00	3	30	1	40	31	9	8	55	1		52	53	**283**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**448**
2:30-2:45													**859**
2:45-3:00													**1,246**
3:00-3:15	10	39	10	68	25	10	29	104	18	3	71	61	**1,659**
3:15-3:30	6	29	7	84	42	10	14	97	7	3	74	38	**1,601**
3:30-3:45	2	19	6	77	43	6	11	113	3	3	52	52	**1,573**
3:45-4:00	5	19	8	98	26	7	8	108	5	4	79	46	**1,569**
4:00-4:15	1	24	5	83	43	2	8	112	1	5	65	41	**1,539**
4:15-4:30	3	17	6	87	35	4	10	102	4	3	69	43	**1,572**
4:30-4:45	2	22	5	84	31	5	7	109	4	2	64	48	**1,571**
4:45-5:00	2	26	3	82	29	7	11	116	2	3	59	43	**1,518**
5:00-5:15	3	22	1	83	37	4	12	136	3	2	72	48	**1,435**
5:15-5:30	2	18	3	76	39	5	13	119	1	3	61	42	**1,012**
5:30-5:45	2	21	2	62	31	10	8	102	2	2	47	41	**630**
5:45-6:00	1	13	1	64	26	8	10	97	1	4	40	35	**300**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	95	901	97	1,553	755	204	271	2,171	91	104	2,058	1,770	
AM PK HR	18	184	14	167	79	35	29	161	11	25	389	343	7:00 AM - 8:00 AM
MID PK HR	8	92	4	127	100	37	31	219	13	10	236	178	12:00 PM - 1:00 PM
PM PK HR	23	106	31	327	136	33	62	422	33	13	276	197	3:00 PM - 4:00 PM

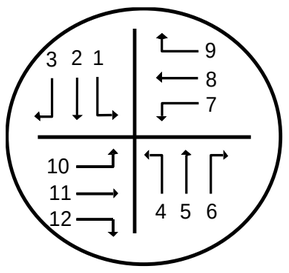


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATIC Beasley Drive and SR 48
DATE: Feb-08-2021
RECORDER:
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Beasley Ave			Beasley Ave			SR 48			SR 48			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM		96	11	2	17	1	1	9		9	17	26	**939**
6:15-6:30		97	11	12	25			6	2	8	23	32	**1,042**
6:30-6:45		118	5	10	25	1	5	15	2	15	45	41	**1,198**
6:45-7:00	1	111	8	11	18	2	3	9	2	12	43	32	**1,281**
7:00-7:15		107	11	9	45	1	1	11	1	17	51	38	**1,397**
7:15-7:30	1	122	10	19	60	1	6	16	6	34	57	40	**1,340**
7:30-7:45		132	17	24	42	2	9	21	4	24	52	38	**1,200**
7:45-8:00	1	159	25	21	36	2	10	18	2	17	44	33	**1,045**
8:00-8:15		81	17	13	34	3	6	13		10	24	34	**872**
8:15-8:30	1	72	11	15	38	2	4	17	2	12	26	32	**637**
8:30-8:45		78	6	16	35	3	1	14	1	10	18	28	**405**
8:45-9:00		71	2	8	36	6	1	13		4	18	36	**195**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**191**
10:30-10:45													**401**
10:45-11:00													**640**
11:00-11:15		52	7	16	38	4	3	14		10	21	26	**888**
11:15-11:30		51	8	18	32	6	4	19	3	12	22	35	**965**
11:30-11:45		63	11	21	34	4	6	17	2	15	24	42	**1,027**
11:45-12:00 PM	3	55	9	23	47	5	3	28	2	5	33	35	**1,027**
12:00-12:15	5	58	11	29	51	4	3	35	1	8	35	28	**1,051**
12:15-12:30	3	69	12	34	46	2	5	33		10	27	31	**783**
12:30-12:45	4	31	9	31	51	3	4	36	2	8	33	27	**511**
12:45-1:00	3	64	12	36	42	4	4	31	1	13	29	33	**272**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**326**
2:30-2:45													**662**
2:45-3:00													**986**
3:00-3:15	2	64	22	33	83	6	6	38	3	17	28	24	**1,321**
3:15-3:30	4	57	25	27	88	7	5	42	4	22	34	21	**1,352**
3:30-3:45	2	61	19	31	78	4	6	47	5	15	29	27	**1,382**
3:45-4:00	3	66	21	25	81	8	8	37	3	21	32	30	**1,418**
4:00-4:15	4	58	37	26	75	7	7	41	7	24	37	34	**1,438**
4:15-4:30	4	62	41	31	82	10	5	45	5	18	32	31	**1,412**
4:30-4:45	3	64	38	28	88	11	7	37	4	25	28	27	**1,348**
4:45-5:00	4	57	31	33	96	8	4	39	5	17	31	30	**1,268**
5:00-5:15	2	52	26	32	104	12	3	34	2	12	26	26	**1,196**
5:15-5:30	3	49	18	35	85	7	2	31	4	8	29	31	**865**
5:30-5:45	2	51	19	31	81	4	3	27	3	10	25	24	**563**
5:45-6:00	2	56	12	40	77	4	1	25	6	10	23	27	**283**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	57	2,384	522	740	1,770	144	136	818	84	452	996	999	
AM PK HR	2	520	63	73	183	6	26	66	13	92	204	149	7:00 AM - 8:00 AM
MID PK HR	15	222	44	130	190	13	16	135	4	39	124	119	12:00 PM - 1:00 PM
PM PK HR	15	241	147	118	341	36	23	162	21	84	128	122	4:00 PM - 5:00 PM

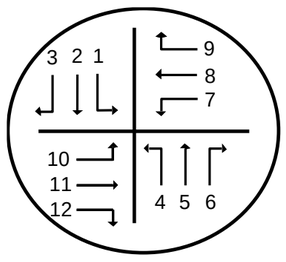


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: 13 -Beasley Dr & Cowan Rd
DATE: 2/9/2012
RECORDER: Darryl Glascock
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Cowan			Cowan			Beasley			Beasley			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	3		1	4	6	4	1	19	4	4	133	1	**809**
6:15-6:30	3	1	2		4			36	3	4	127	2	**892**
6:30-6:45	12	5		7	10			31	5	11	149	2	**984**
6:45-7:00	7		1	2	6	8	2	44	11	10	124		**1,036**
7:00-7:15	9	2		6	9	9	5	67	11	8	135	2	**1,132**
7:15-7:30	16	4	4	4	10	3	2	60	10	9	152		**1,109**
7:30-7:45	15	5	3	3	12	7	3	44	12	14	158	8	**1,039**
7:45-8:00	22	6	9	2	12	2	1	45	10	11	187	4	**943**
8:00-8:15	14	11	6	6	6	4	2	49	14	9	113	6	**816**
8:15-8:30	13	2	2	5	8	5	4	45	15	2	103		**576**
8:30-8:45	13	1	4	4	4	3	3	45	8	7	95	1	**372**
8:45-9:00	15	5	3	2	9	3	2	32	12	2	96	3	**184**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**229**
10:30-10:45													**459**
10:45-11:00													**701**
11:00-11:15	21	3	6	2	7	5	5	67	26	8	79		**917**
11:15-11:30	24	3	10	7	8	6	3	72	15	2	77	3	**965**
11:30-11:45	25	5	10	3	16	6	1	48	23	7	95	3	**1,006**
11:45-12:00 PM	23	5	3	5	2	7	2	63	15	6	82	3	**987**
12:00-12:15	30	7	6	6	11	7	8	88	20	4	89	1	**1,031**
12:15-12:30	32	7	4	6	9	5	7	65	27	11	94	4	**754**
12:30-12:45	17	2	10	4	3	5	1	78	25	7	69	2	**483**
12:45-1:00	23	7	7	6	15	5	5	76	22	5	89		**260**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**332**
2:30-2:45													**692**
2:45-3:00													**1,097**
3:00-3:15	28	13	9	7	5	11	4	125	26	6	92	6	**1,432**
3:15-3:30	25	11	9	8	10	6	4	140	23	2	119	3	**1,455**
3:30-3:45	51	14	12	10	14	6	9	131	30	6	119	3	**1,385**
3:45-4:00	29	13	11	8	12	8	5	120	40	4	85		**1,330**
4:00-4:15	29	12	15	15	14	10	10	127	39	2	78	4	**1,335**
4:15-4:30	24	8	14	10	7	7	5	120	20	6	63	6	**1,321**
4:30-4:45	35	11	15	14	9	4	7	142	26	3	79	5	**1,395**
4:45-5:00	11	9	15	11	11	12	8	146	14	10	87	6	**1,357**
5:00-5:15	26	9	14	14	8	5	6	152	27	8	67	5	**1,324**
5:15-5:30	11	10	13	12	12	10	6	169	12	3	100	6	**983**
5:30-5:45	13	11	8	15	7	5	8	136	20	4	84	1	**619**
5:45-6:00	16	12	8	6	7	4	5	133	16	8	87	5	**307**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	635	214	234	214	283	182	134	2,715	581	203	3,306	95	
AM PK HR	62	17	16	15	43	21	11	216	43	42	632	14	7:00 AM - 8:00 AM
MID PK HR	102	23	27	22	38	22	21	307	94	27	341	7	12:00 PM - 1:00 PM
PM PK HR	134	50	47	41	50	30	28	518	132	14	401	10	3:15 PM - 4:15 PM



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: 14- Beasley Dr & Thornton Dr
DATE: 2/9/2021
RECORDER: Darryl Glascock
NOTES:

	Southbound			Northbound			Westbound			Eastbound			
LOCATION	Thornton			na			Beasley			Beasley			
TIME	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
6:00-6:15 AM	3		2					23		3	135		**745**
6:15-6:30			5					34		5	136		**838**
6:30-6:45	1		6					40		4	151		**908**
6:45-7:00	6		2					47	2	3	137		**961**
7:00-7:15	6		5					86	2	14	146		**1,051**
7:15-7:30	3		9					57	2	5	174		**998**
7:30-7:45	8		9					53	2	5	178		**959**
7:45-8:00	6		13					54	2	8	204		**891**
8:00-8:15	6		11					54	2	8	125		**807**
8:15-8:30	15		12					52	5	8	119		**601**
8:30-8:45	7		9					55	5	3	108		**390**
8:45-9:00	14		10					48	12	22	97		**203**
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00													
10:00-10:15													
10:15-10:30													**251**
10:30-10:45													**499**
10:45-11:00													**769**
11:00-11:15	21		20					75	20	23	92		**1,013**
11:15-11:30	23		19					79	17	21	89		**1,054**
11:30-11:45	21		19					79	16	29	106		**1,092**
11:45-12:00 PM	29		26					60	17	23	89		**1,089**
12:00-12:15	31		35					80	11	31	104		**1,154**
12:15-12:30	26		28					84	22	13	113		**862**
12:30-12:45	37		24					88	15	17	86		**576**
12:45-1:00	41		25					96	18	21	108		**309**
1:00-1:15													
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													**321**
2:30-2:45													**696**
2:45-3:00													**1,073**
3:00-3:15	33		49					112	15	15	97		**1,407**
3:15-3:30	32		41					125	12	24	141		**1,452**
3:30-3:45	17		50					111	20	24	155		**1,363**
3:45-4:00	18		43					135	7	23	108		**1,352**
4:00-4:15	25		41					157	19	21	103		**1,344**
4:15-4:30	24		43					115	12	16	76		**1,314**
4:30-4:45	18		53					138	23	21	113		**1,387**
4:45-5:00	23		43					127	17	27	89		**1,360**
5:00-5:15	24		53					146	15	17	81		**1,346**
5:15-5:30	22		44					155	11	21	106		**1,010**
5:30-5:45	35		53					135	23	14	79		**651**
5:45-6:00	20		38					137	12	16	89		**312**
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
7:00-7:15													
7:15-7:30													
7:30-7:45													
7:45-8:00													
8:00-8:15													
8:15-8:30													
8:30-8:45													
8:45-9:00													
9:00-9:15													
9:15-9:30													
9:30-9:45													
9:45-10:00 PM													
TOTAL	595		840					2,837	356	505	3,734		
AM PK HR	23		36					250	8	32	702		7:00 AM - 8:00 AM
MID PK HR	135		112					348	66	82	411		12:00 PM - 1:00 PM
PM PK HR	92		175					528	58	92	507		3:15 PM - 4:15 PM

APPENDIX B
FIELD INVENTORY SHEETS

KCI TECHNOLOGIES
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892002055.02 – TDOT Dickson TSMO

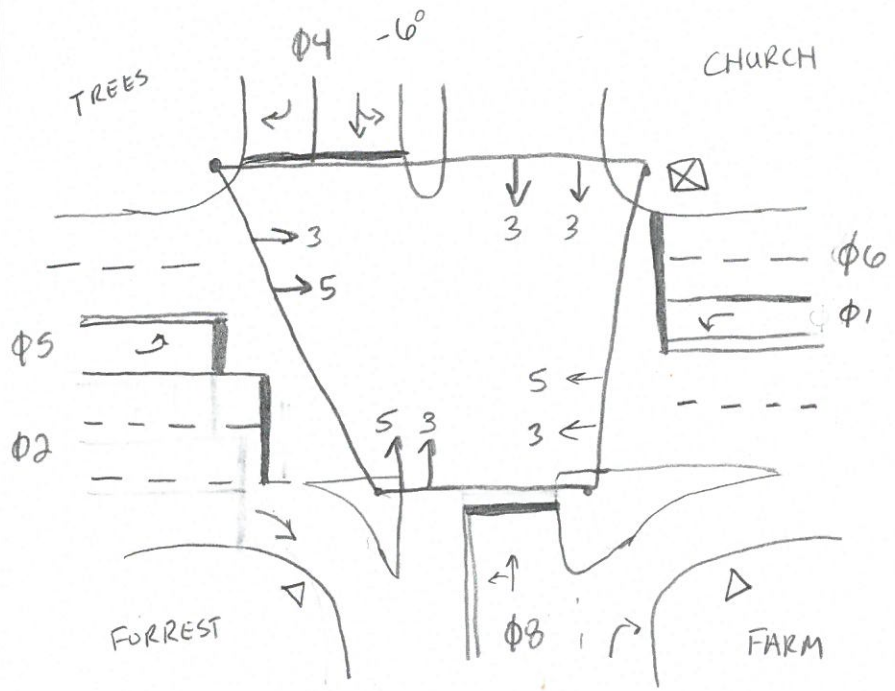
FIELD INVENTORY NOTES

Intersection:	College Street (US 70) and SR 96	Date:	2/9/2021
Intersection Number:	1	Prepared By:	MAS
NB Street:	HWY 96	NB Speed Limit:	55
SB Street:	FIRST BAPTIST CHURCH	SB Speed Limit:	NOT POSTED
EB Street:	COLLEGE STREET (US70)	EB Speed Limit:	45
WB Street:	COLLEGE STREET (US70)	WB Speed Limit:	45

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

NORTH: ↑



What to Include in Sketch:

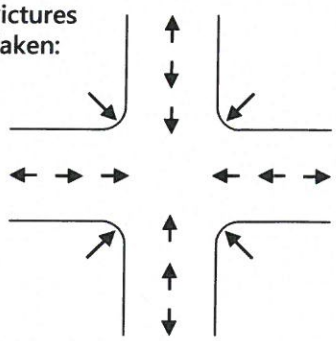
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☐ Restricted Movements
- ☑ On-Street Parking NONE
- ☐ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or ~~Span Wire~~
- ☐ ~~Loop~~ or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing: ↑N



Signal Controller Type: PEEK 3000E
Conflict Monitor: RENO A&E MMU-1600G
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- SB Right-Turn Overlap
- Church Access needs fresh paint (stop bar and arrows)
- HWY 96 needs fresh paint (stop bar and arrows)

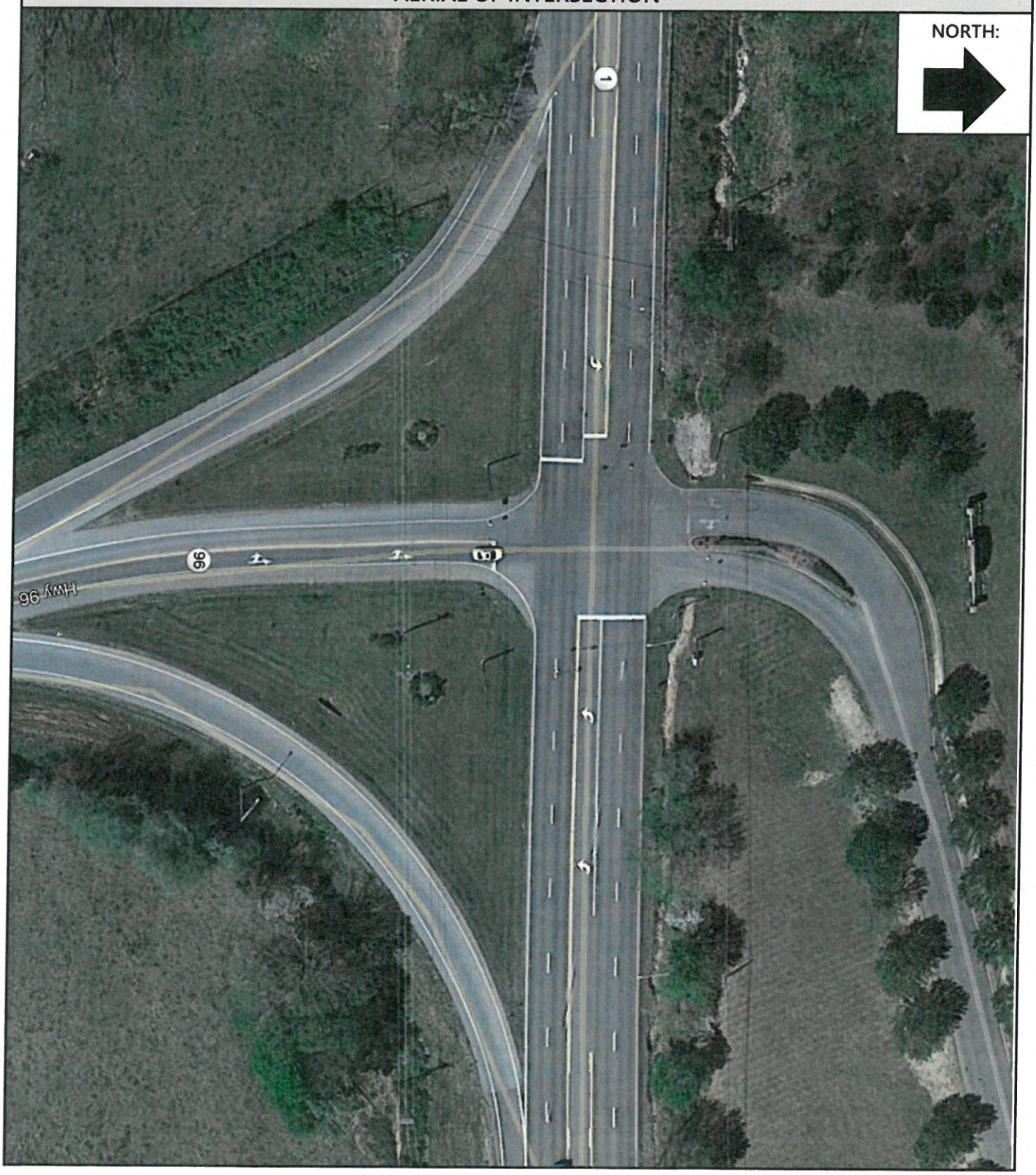
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	College Street (US 70) and SR 96	Intersection Number:	1

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

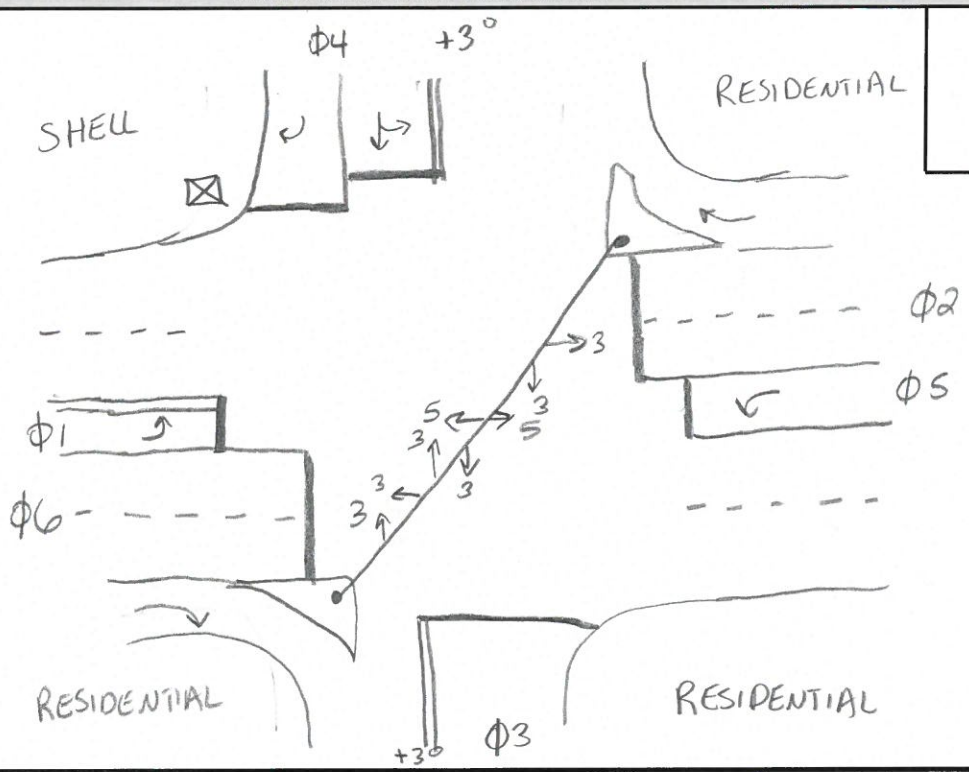
FIELD INVENTORY NOTES

Intersection:	College Street (US 70) and Hummingbird Lane	Date:	2/9/2021
Intersection Number:	2	Prepared By:	MAS
NB Street:	HUMMING BIRD LANE	NB Speed Limit:	30
SB Street:	HUMMING BIRD LANE	SB Speed Limit:	30
EB Street:	COLLEGE STREET (HWY 70)	EB Speed Limit:	45
WB Street:	COLLEGE STREET (HWY 70)	WB Speed Limit:	45

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

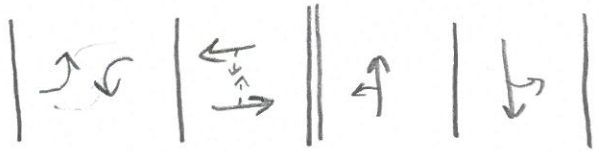
NORTH: ↑



What to Include in Sketch:

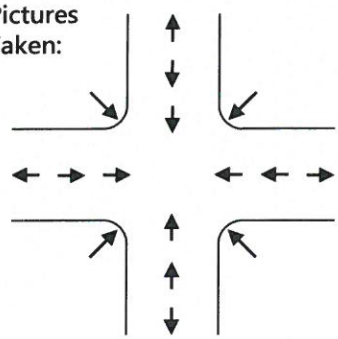
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or (Span Wire)
- ☑ (Loop) or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK TRANSYT 3000 SERIES
Conflict Monitor: RENO A&E MMU-1600G
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- Φ1 Detector Fail | Always called
- SB Approach needs paint (Stop bar and arrows)

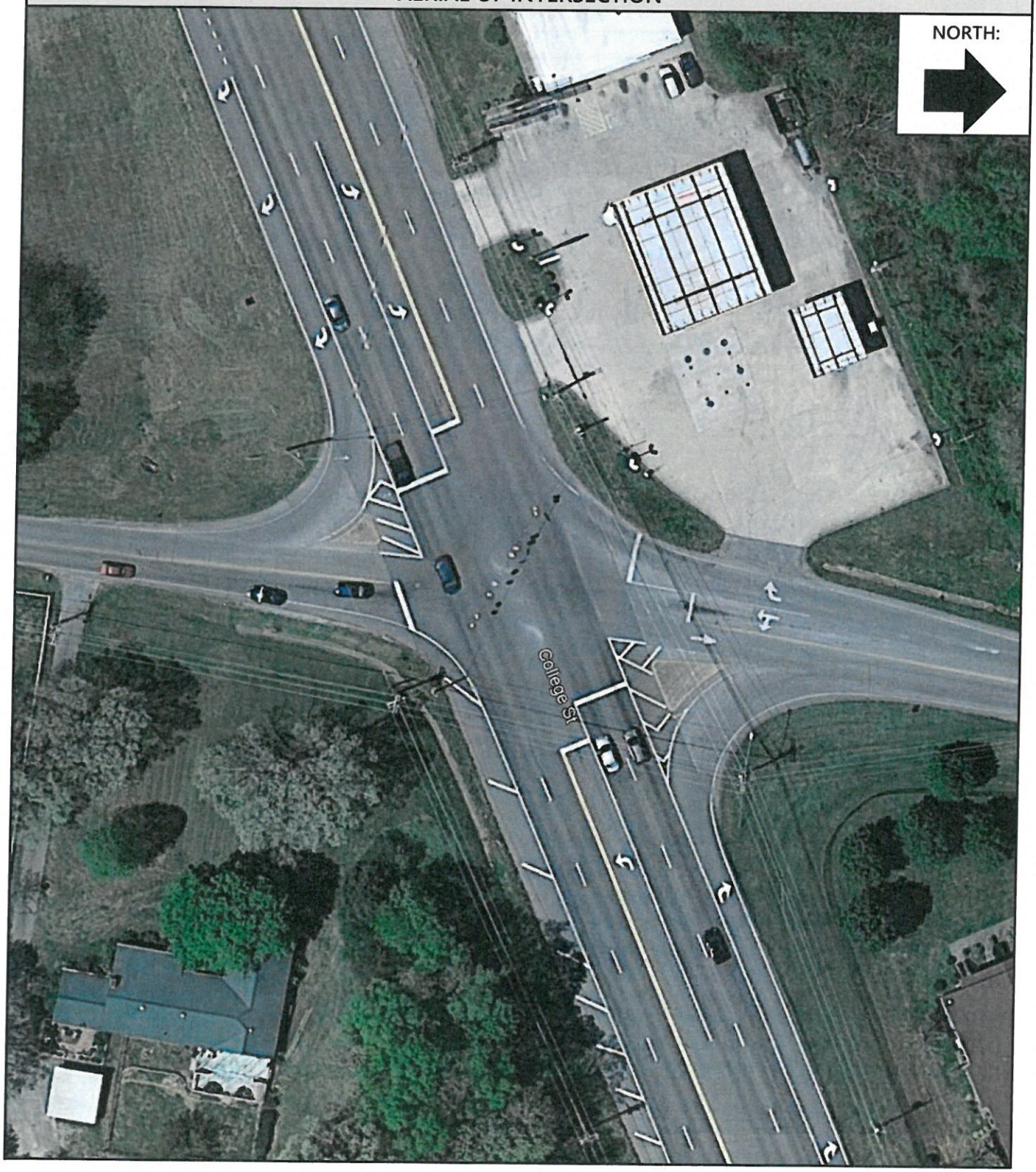
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	College Street (US 70) and Hummingbird Lane	Intersection Number:	2

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

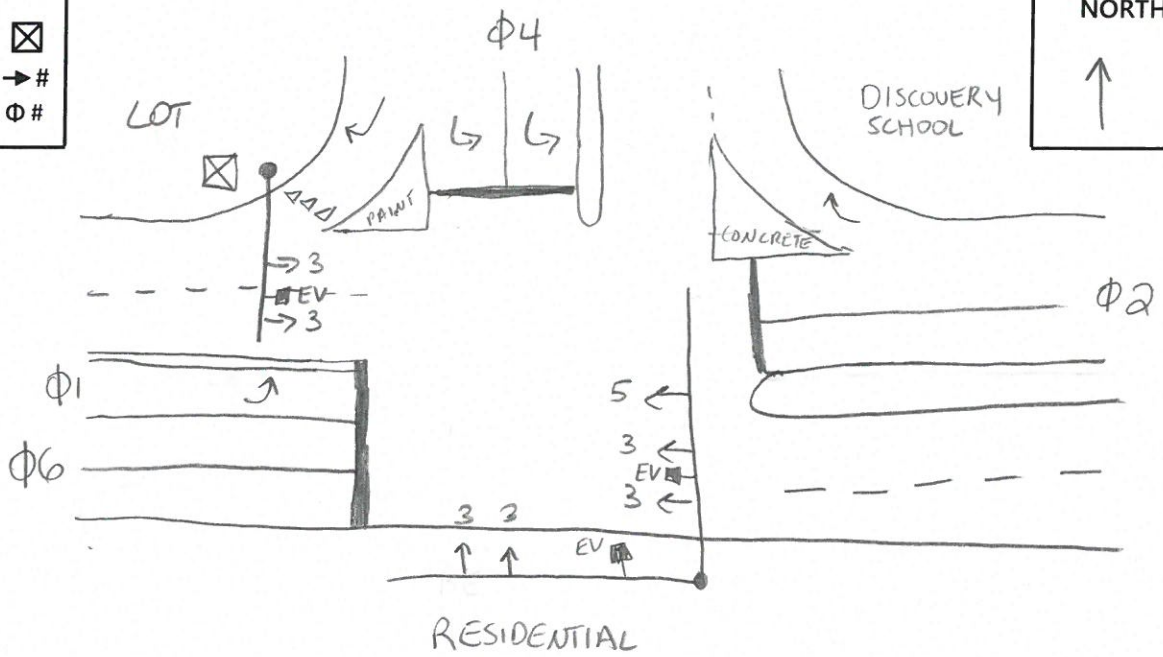
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and College Street (US 70 Bypass)	Date:	2/9/2021
Intersection Number:	3	Prepared By:	MAS
NB Street:	N/A	NB Speed Limit:	N/A
SB Street:	HENSLEE DRIVE (HWY 70)	SB Speed Limit:	35
EB Street:	COLLEGE STREET	EB Speed Limit:	40
WB Street:	COLLEGE STREET (HWY 70)	WB Speed Limit:	45

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

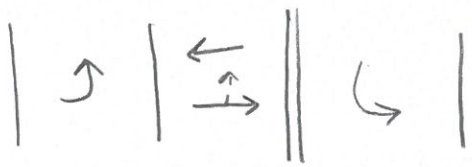
NORTH: ↑



What to Include in Sketch:

- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ (Mast Arm) or Span Wire
- ☑ (Loop) or Video Detection
- ☑ Signal Heads and Phasing

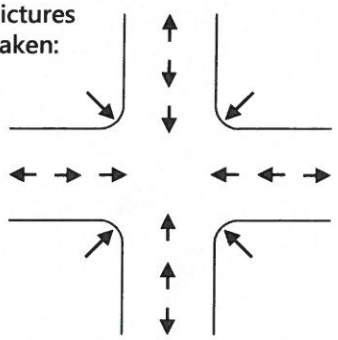
Signal Phasing: ↑N



Signal Controller Type: McCain ATCeX
Conflict Monitor: RENO A&E MMU-16DDG
EVP System: SONEM 2000
GPS: NONE

NOTES AND DEFICIENCIES:

Pictures Taken:



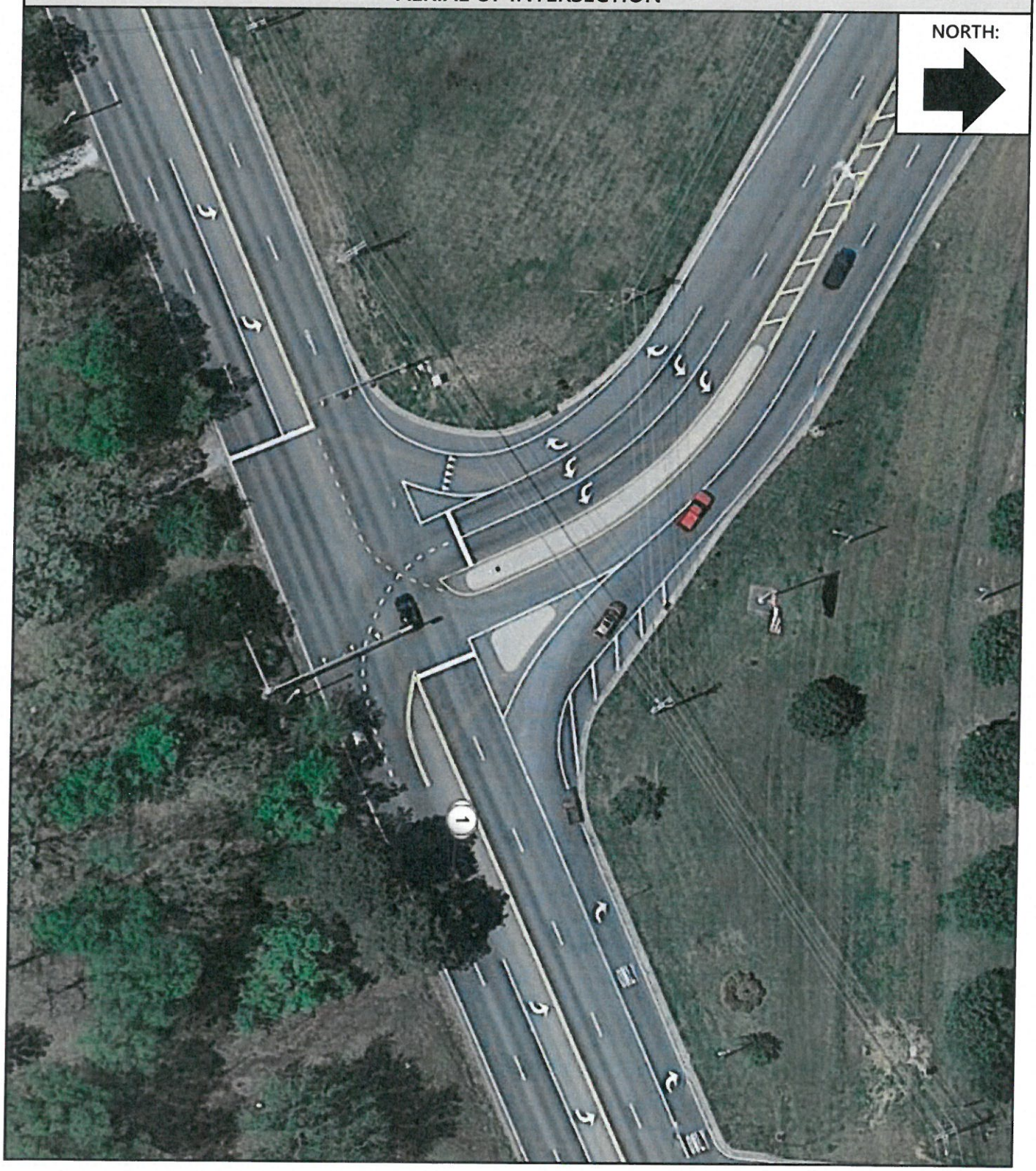
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and College Street (US 70 Bypass)	Intersection Number:	3

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

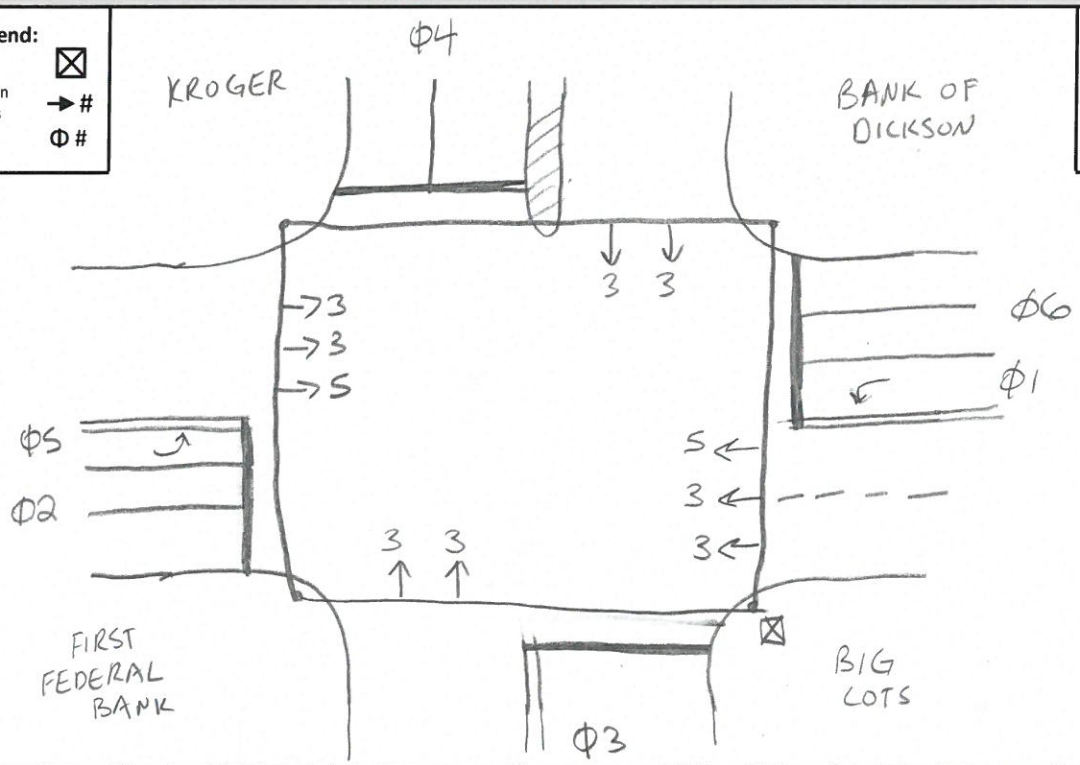
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and Plaza Drive	Date:	2/9/2021
Intersection Number:	4	Prepared By:	MAS
NB Street:	PLAZA DRIVE	NB Speed Limit:	NOT POSTED
SB Street:	PLAZA DRIVE	SB Speed Limit:	NOT POSTED
EB Street:	HENSLEE DRIVE (US 70)	EB Speed Limit:	35
WB Street:	HENSLEE DRIVE (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

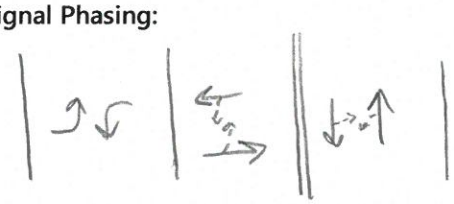
NORTH: ↑



What to Include in Sketch:

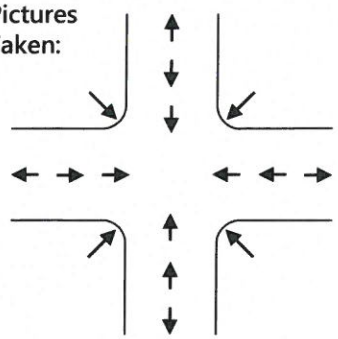
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or (Span Wire)
- ☑ (Loop) or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK TRANSYT 3000 SERIES
Conflict Monitor: TRANSYT 12ELRA
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- NB approach needs fresh paint (stop bar)
- NB/SB opperating concurrently.
- SB approach does not have arrows.

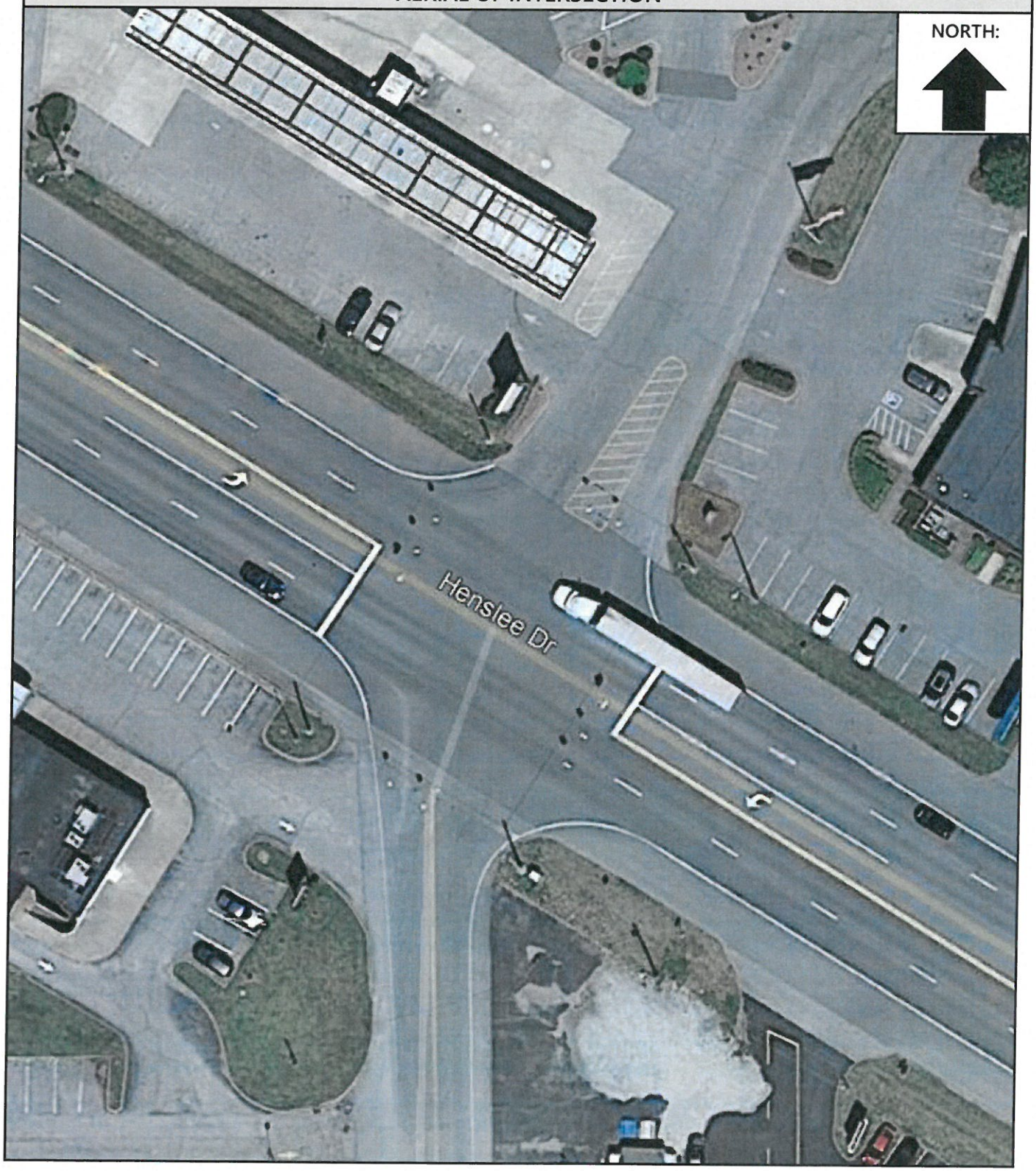
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and Plaza Drive	Intersection Number:	4

AERIAL OF INTERSECTION



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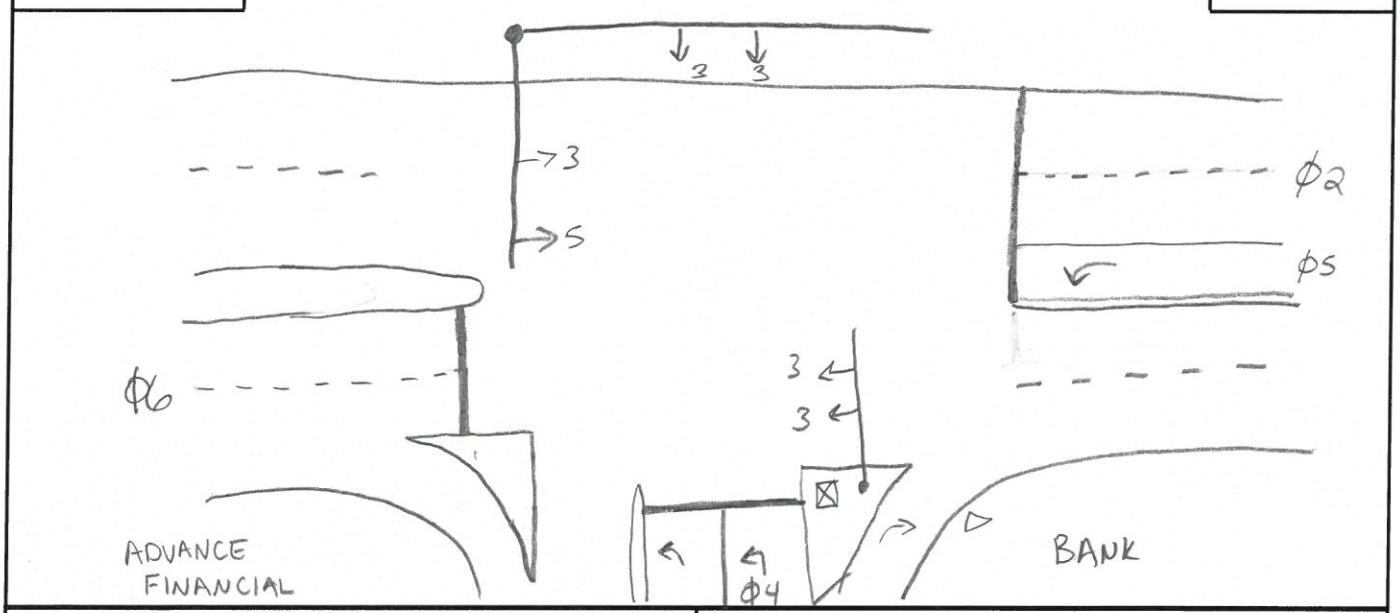
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and Mathis Drive (SR 46)	Date:	2/9/2021
Intersection Number:	5	Prepared By:	MAS
NB Street:	Mathis Drive (SR 46)	NB Speed Limit:	30
SB Street:	N/A	SB Speed Limit:	N/A
EB Street:	Henslee Drive (US 70)	EB Speed Limit:	35
WB Street:	Henslee Drive (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

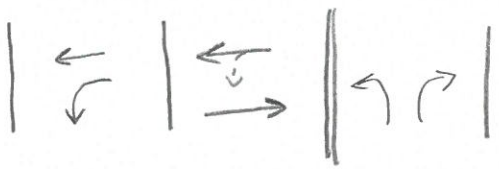
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What to Include in Sketch:

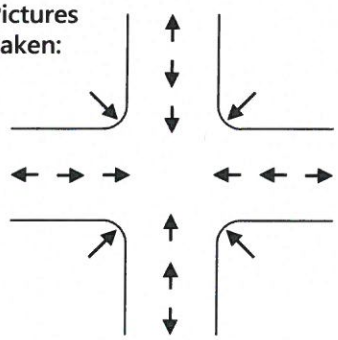
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☐ Mast Arm or Span Wire
- ☑ Loop or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK 3000E
Conflict Monitor: PEEK Double Diamond
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- NB approach needs fresh paint (stop bar and arrows)

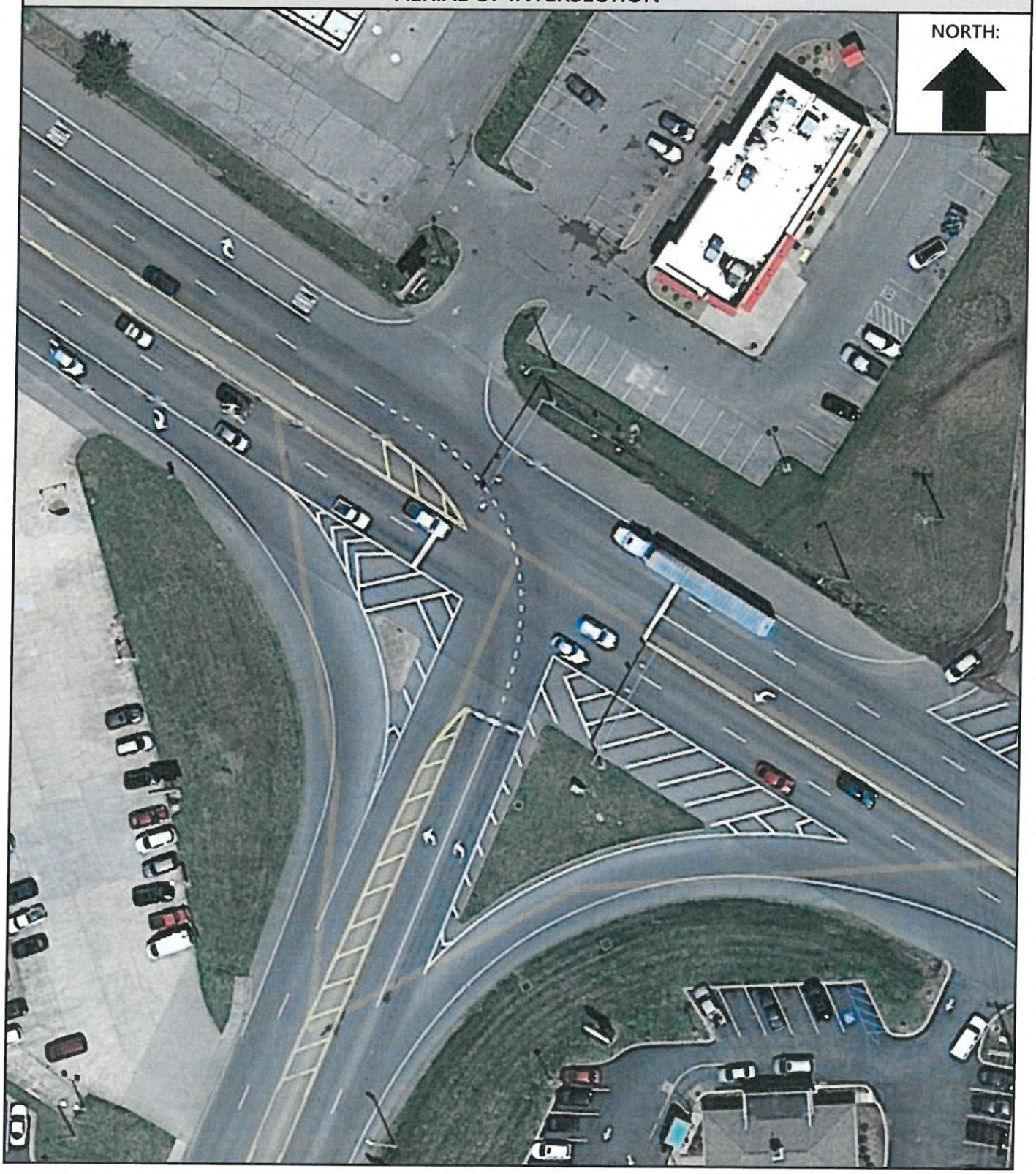
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and Mathis Drive (SR 46)	Intersection Number:	5

AERIAL OF INTERSECTION



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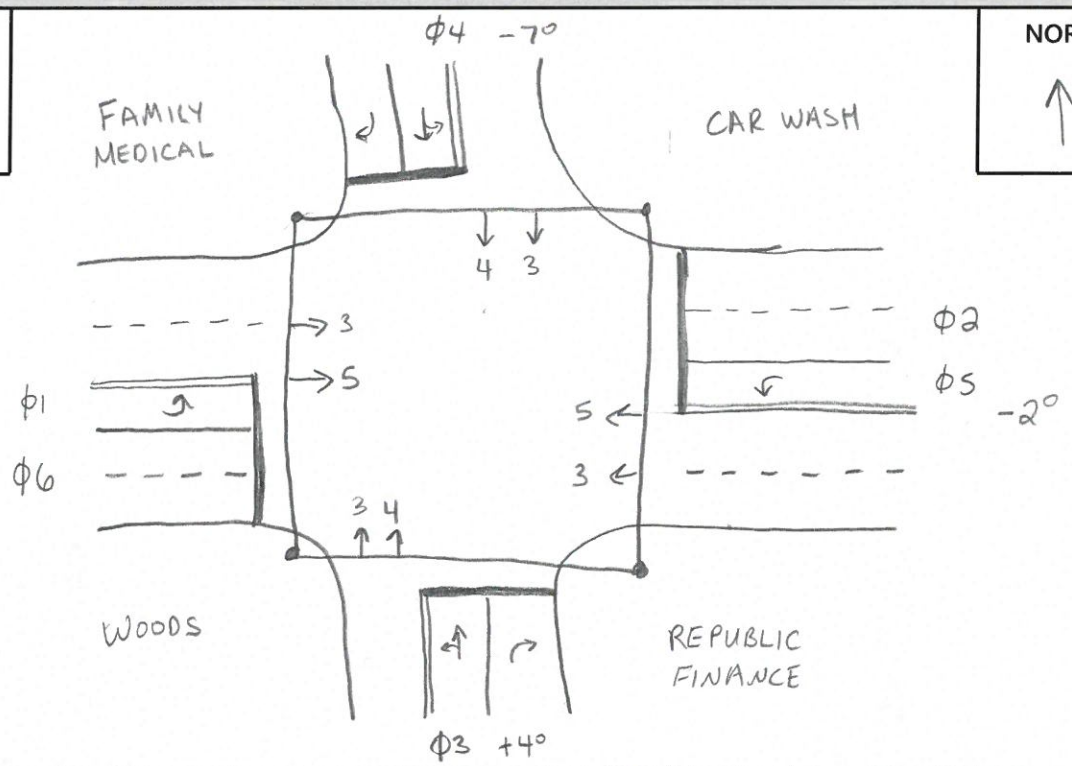
892002055.02 – TDOT Dickson TSMO

FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and Spring Street/Pump Hill Road	Date:	2/9/2021
Intersection Number:	6	Prepared By:	MAS
NB Street:	SPRING STREET	NB Speed Limit:	30
SB Street:	PUMP HILL ROAD	SB Speed Limit:	20
EB Street:	HENSLEE DRIVE (US 70)	EB Speed Limit:	35
WB Street:	HENSLEE DRIVE (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

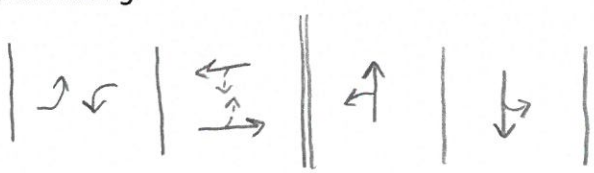
Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#



What to Include in Sketch:

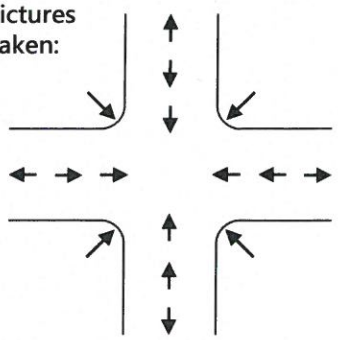
- ☑ Laneage and Widths
- ☐ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☐ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☐ Mast Arm or ~~Span Wire~~
- ☑ Loop or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK TRANSYT 3000 SERIES
Conflict Monitor: RENO A&E NMU-1600G
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- NB approach needs fresh paint (arrows)

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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and Spring Street/Pump Hill Road	Intersection Number:	6

AERIAL OF INTERSECTION



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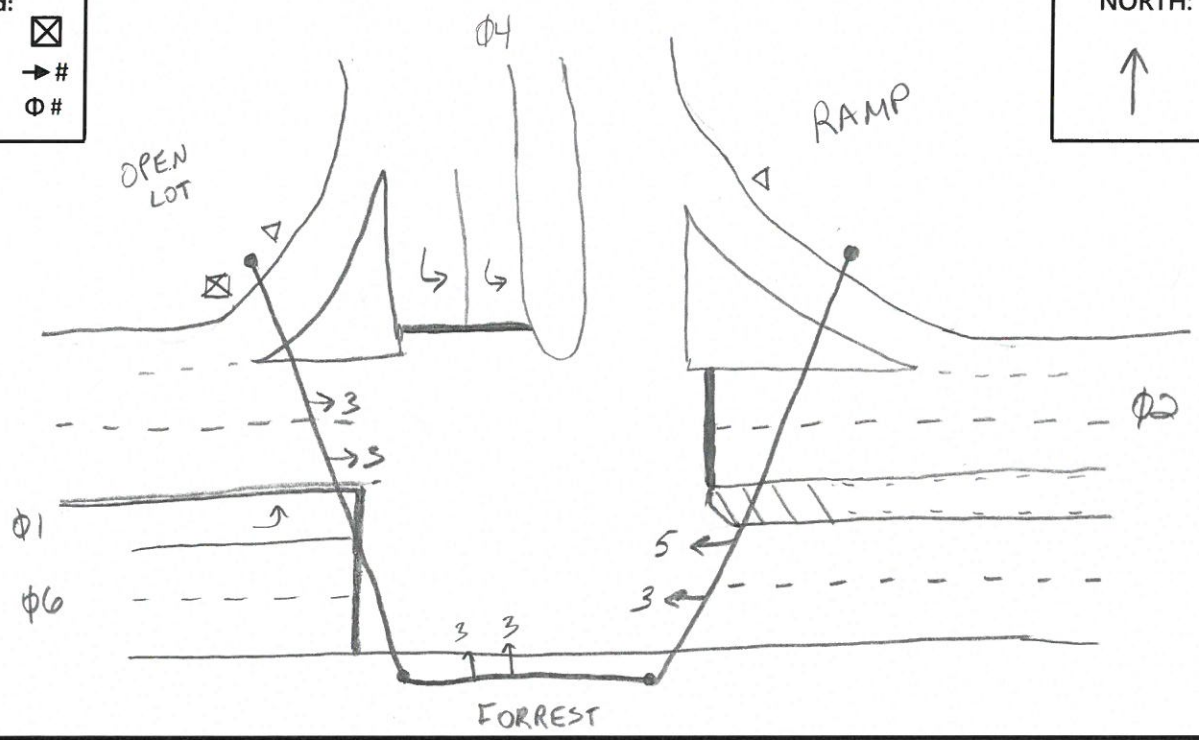
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and SR 48	Date:	2/9/2021
Intersection Number:	7	Prepared By:	MAS
NB Street:	N/A	NB Speed Limit:	N/A
SB Street:	SR 48	SB Speed Limit:	30
EB Street:	HENSLEE DRIVE (US 70)	EB Speed Limit:	35
WB Street:	HENSLEE DRIVE (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

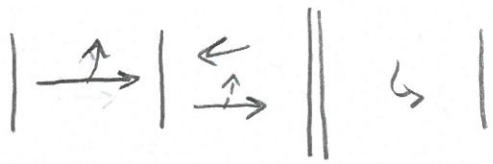
NORTH: ↑



What to Include in Sketch:

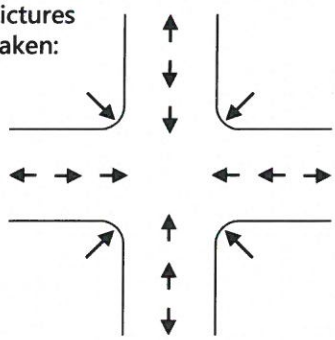
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or Span Wire
- ☑ Loop or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: TRANSYT 1880EL
Conflict Monitor: PEEK DOUBLE DIAMOND
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and SR 48	Intersection Number:	7

AERIAL OF INTERSECTION



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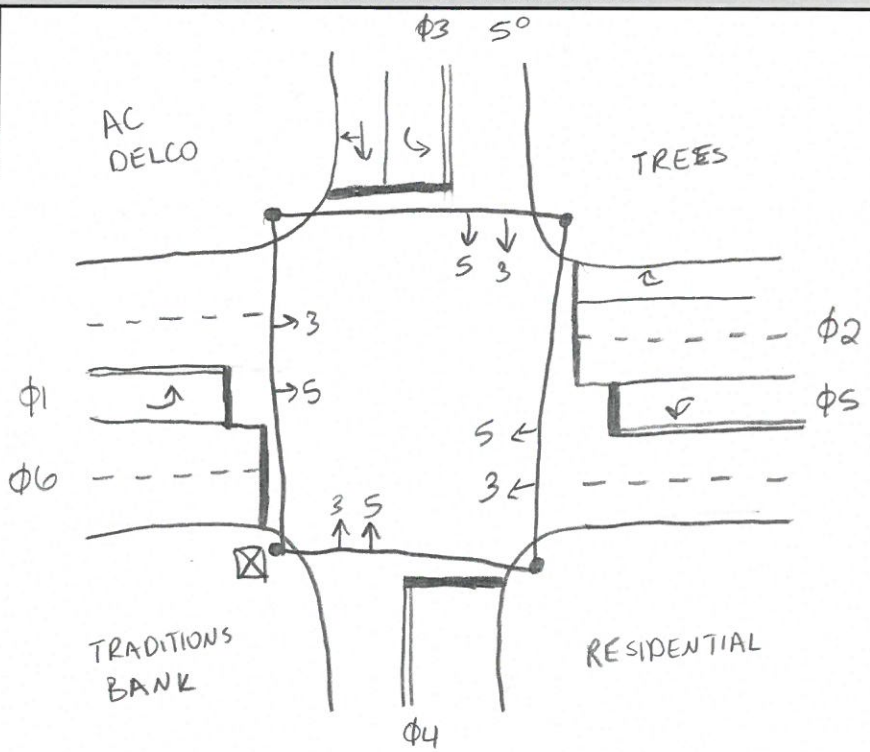
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and North Charlotte Street	Date:	2/9/2021
Intersection Number:	8	Prepared By:	MAS
NB Street:	N CHARLOTTE STREET	NB Speed Limit:	30
SB Street:	N CHARLOTTE STREET	SB Speed Limit:	30
EB Street:	HENSLEE DRIVE (US 70)	EB Speed Limit:	35
WB Street:	HENSLEE DRIVE (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

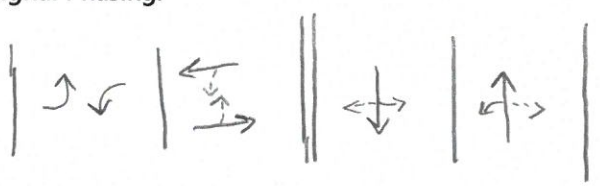
NORTH: ↑



What to Include in Sketch:

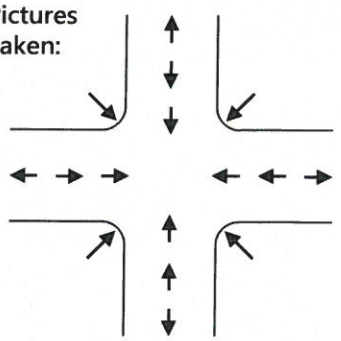
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or ~~Span Wire~~
- ☑ ~~Loop~~ or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK 3000E
Conflict Monitor: PEEK DOUBLE DIAMOND
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- SB approach needs fresh paint (stop bar and arrows)

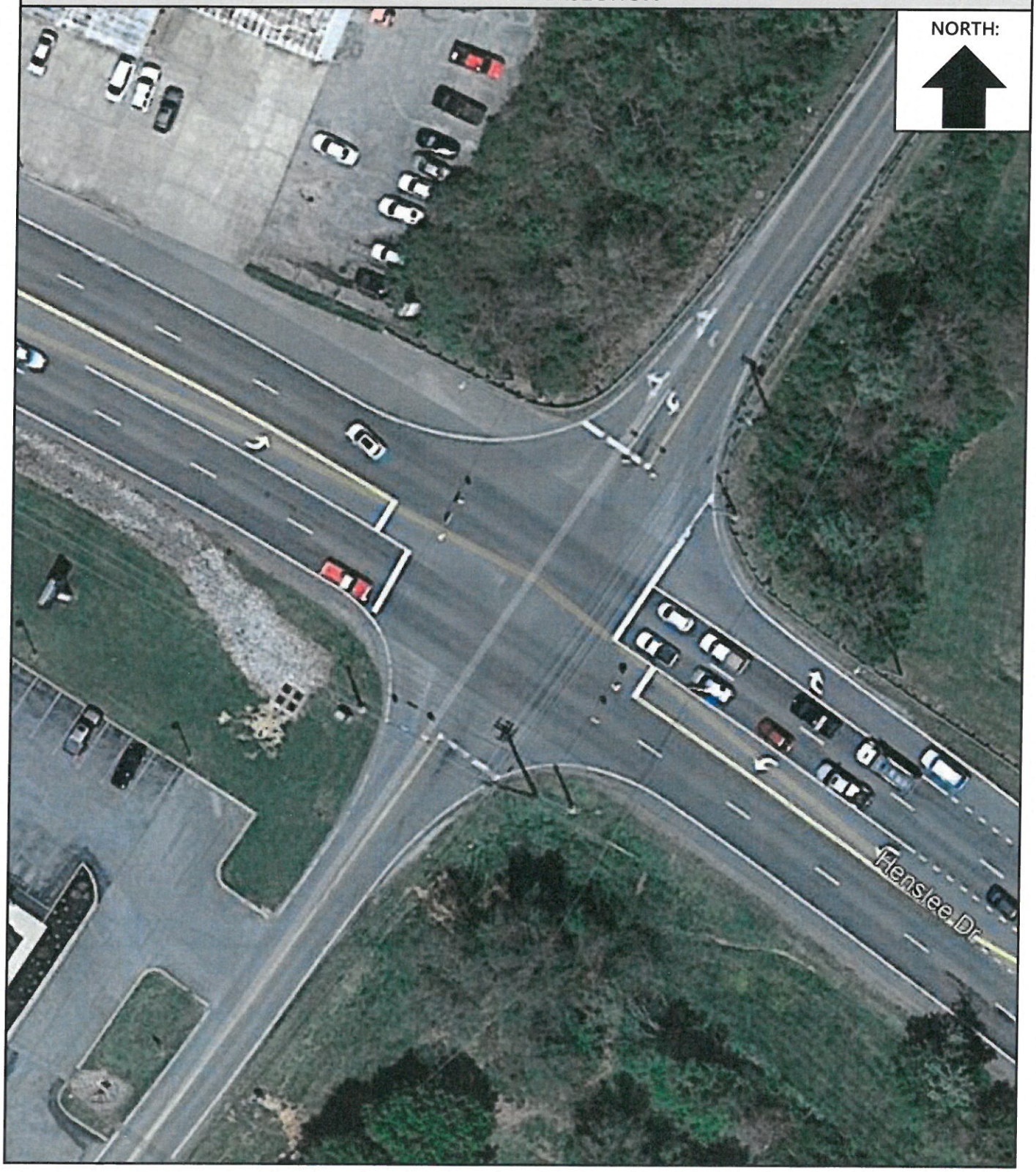
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FIELD INVENTORY NOTES

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Intersection:	Henslee Drive (US 70) and North Charlotte Street	Intersection Number:	8

AERIAL OF INTERSECTION



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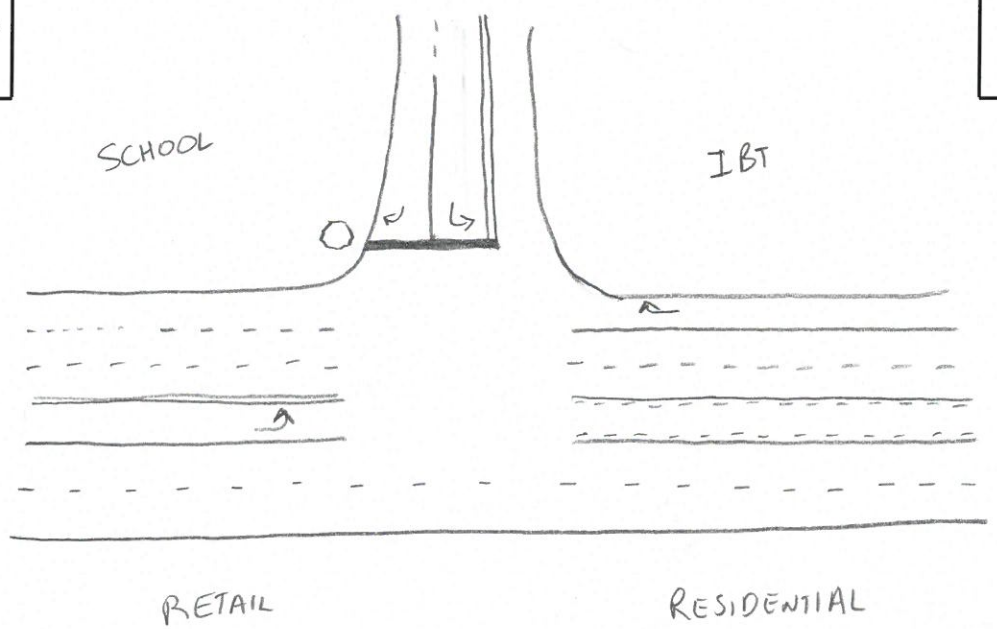
FIELD INVENTORY NOTES

Intersection:	Henslee Drive (US 70) and Cougar Pride Way	Date:	2/9/2021
Intersection Number:	9	Prepared By:	MAS
NB Street:	N/A	NB Speed Limit:	N/A
SB Street:	COUGAR PRIDE WAY	SB Speed Limit:	15
EB Street:	HENSLEE DRIVE (US 70)	EB Speed Limit:	35
WB Street:	HENSLEE DRIVE (US 70)	WB Speed Limit:	35

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

NORTH: ↑



What to Include in Sketch:

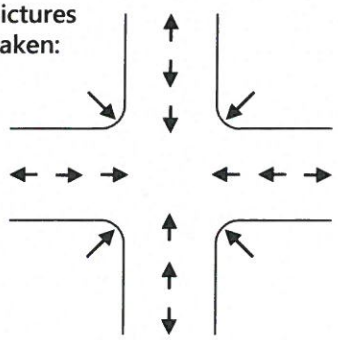
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or Span Wire NONE
- ☑ Loop or Video Detection NONE
- ☑ Signal Heads and Phasing NONE

Signal Phasing:

UNSIGNALIZED

Signal Controller Type: NONE
Conflict Monitor:
EVP System:
GPS:

Pictures Taken:



NOTES AND DEFICIENCIES:

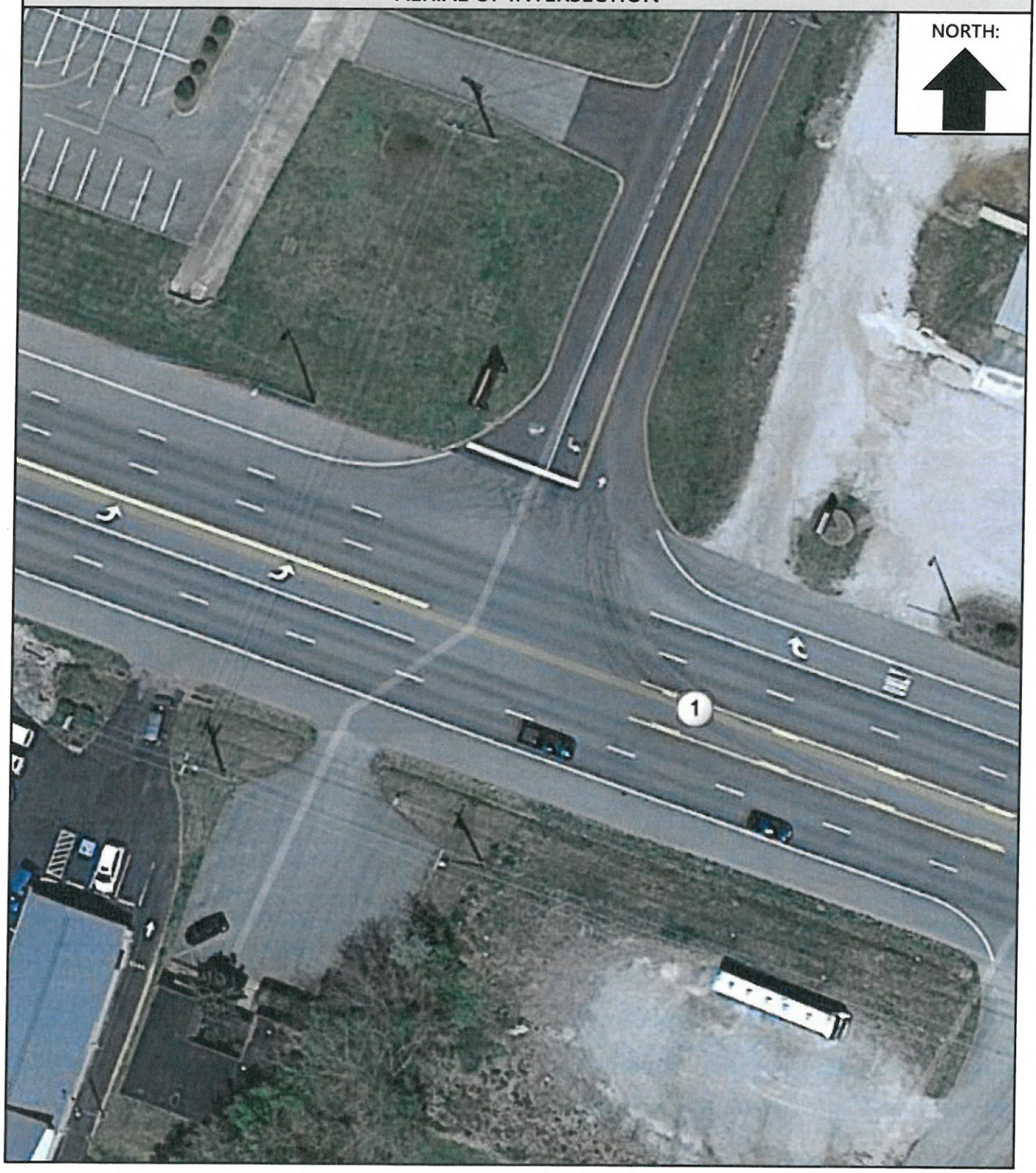
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Henslee Drive (US 70) and Cougar Pride Way	Intersection Number:	9

AERIAL OF INTERSECTION



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FIELD INVENTORY NOTES

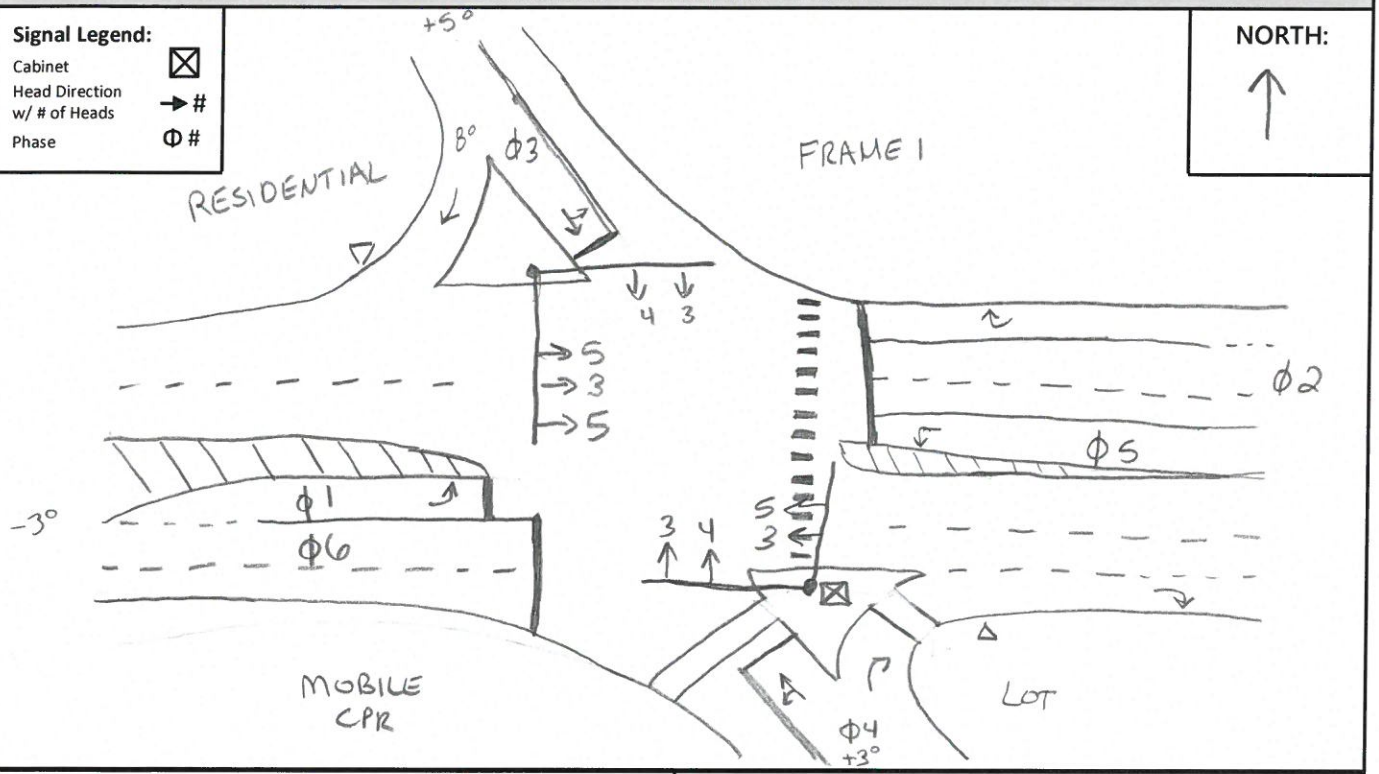
892002055.02 – TDOT Dickson TSMO

Intersection:	Highway 70 West (US 70) and Pond Road (SR 46)/West End Avenue	Date:	2/9/2021
Intersection Number:	10	Prepared By:	MAS
NB Street:	WEST END AVENUE	NB Speed Limit:	30
SB Street:	POND ROAD (SR 46)	SB Speed Limit:	35
EB Street:	HIGHWAY TO WEST	EB Speed Limit:	45
WB Street:	HIGHWAY TO WEST	WB Speed Limit:	45

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

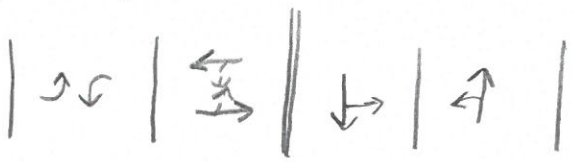
NORTH: ↑



What to Include in Sketch:

- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or Span Wire
- ☑ Loop or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:

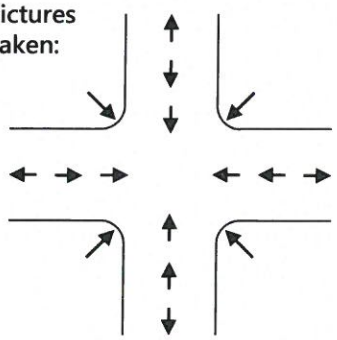


Signal Controller Type: PEEK 3000E
Conflict Monitor: PEEK DOUBLE DIAMOND
EVP System: NONE
GPS: NONE

NOTES AND DEFICIENCIES:

- SR 46 (SB approach) Bridge Closed

Pictures Taken:



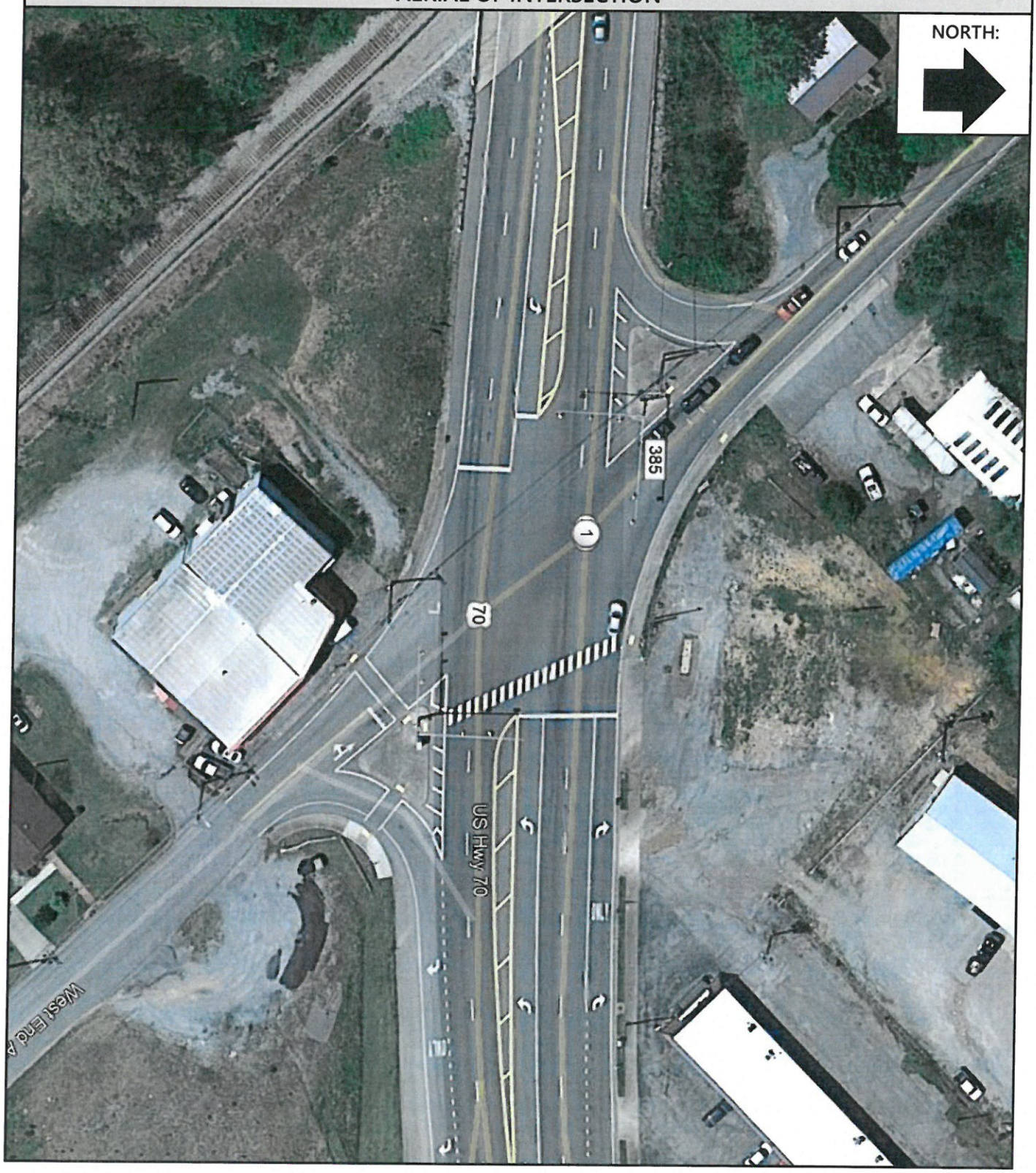
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Highway 70 West (US 70) and Pond Road (SR 46)/West End Avenue	Intersection Number:	10

AERIAL OF INTERSECTION



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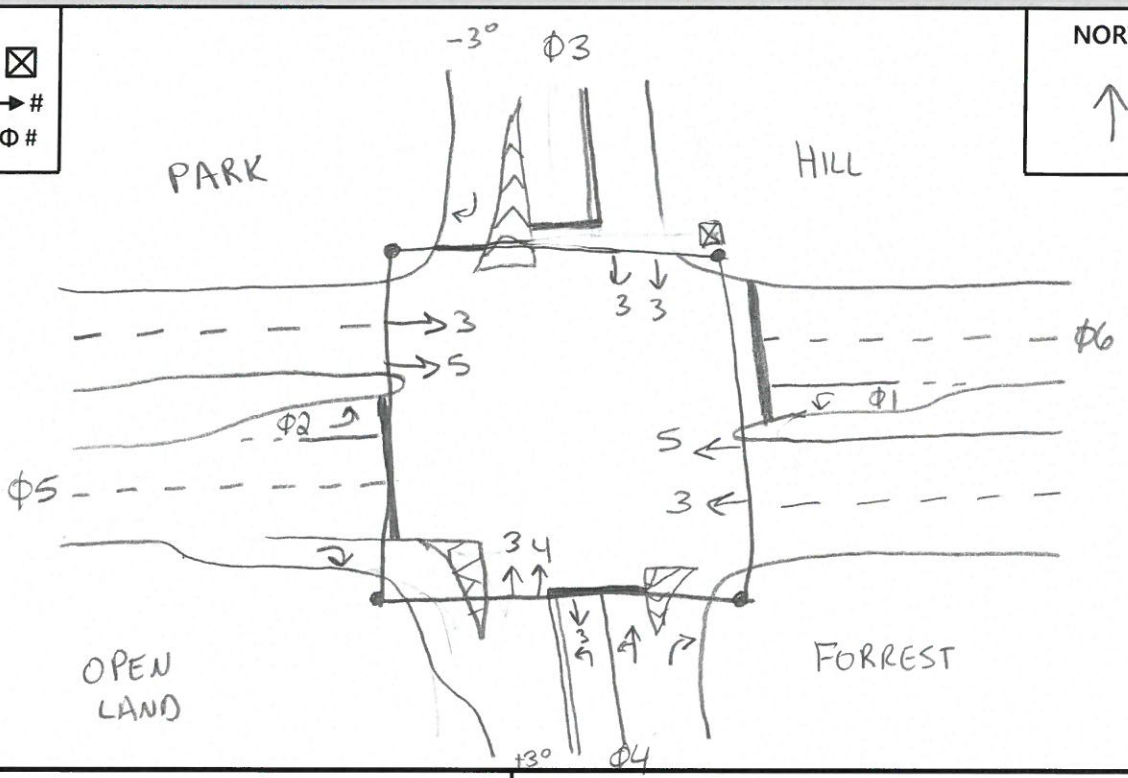
FIELD INVENTORY NOTES

Intersection:	Highway 70 West (US 70) and Beasley Drive	Date:	2/9/2021
Intersection Number:	11	Prepared By:	MAS
NB Street:	BEASLEY DRIVE	NB Speed Limit:	40
SB Street:	BEASLEY DRIVE	SB Speed Limit:	30
EB Street:	HIGHWAY 70 WEST	EB Speed Limit:	45
WB Street:	HIGHWAY 70 WEST	WB Speed Limit:	45

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

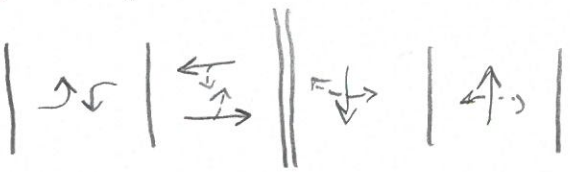
NORTH: ↑



What to Include in Sketch:

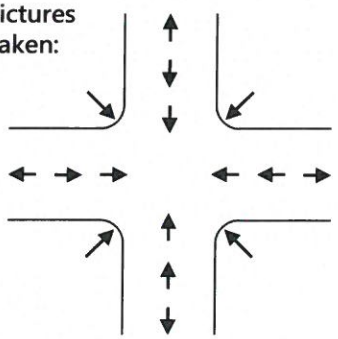
- ☑ Laneage and Widths
- ☑ Storage/Taper Length
- ☑ Right-Turn Treatments
- ☑ Left-Turn Treatments
- ☑ Restricted Movements
- ☑ On-Street Parking NONE
- ☑ Pedestrian Treatments NONE
- ☑ Pertinent Signing/Markings
- ☑ Approach Grades
- ☑ Sight Dist. Obstructions
- ☑ Surrounding Lane Uses
- ☑ Mast Arm or (Span Wire)
- ☑ (Loop) or Video Detection
- ☑ Signal Heads and Phasing

Signal Phasing:



Signal Controller Type: PEEK 3000 SERIES
Conflict Monitor: RENO A&E MMU-1600G
EVP System: NONE
GPS: NONE

Pictures Taken:



NOTES AND DEFICIENCIES:

- NB approach needs fresh paint (stop bar and arrows)

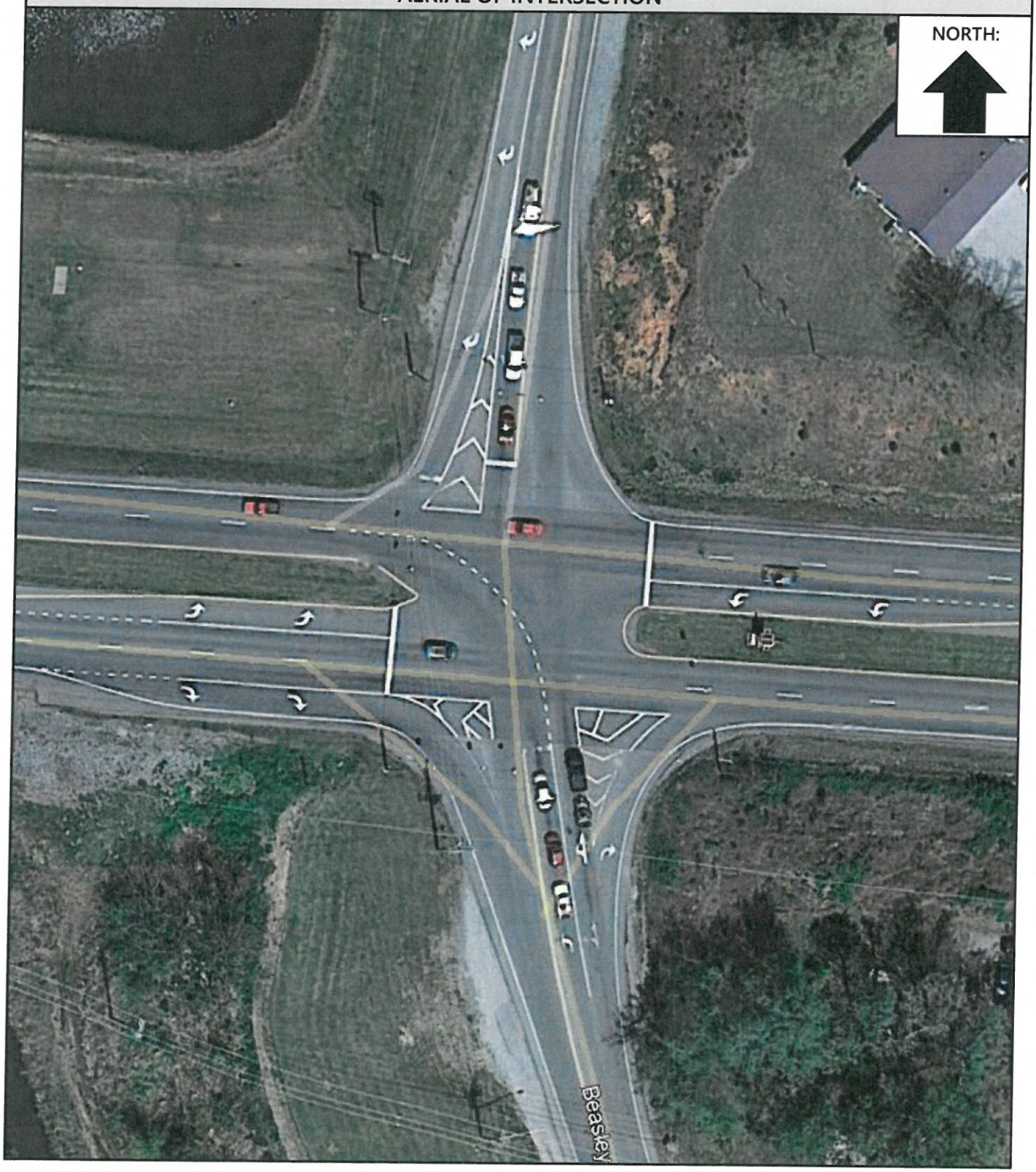
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Highway 70 West (US 70) and Beasley Drive	Intersection Number:	11

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

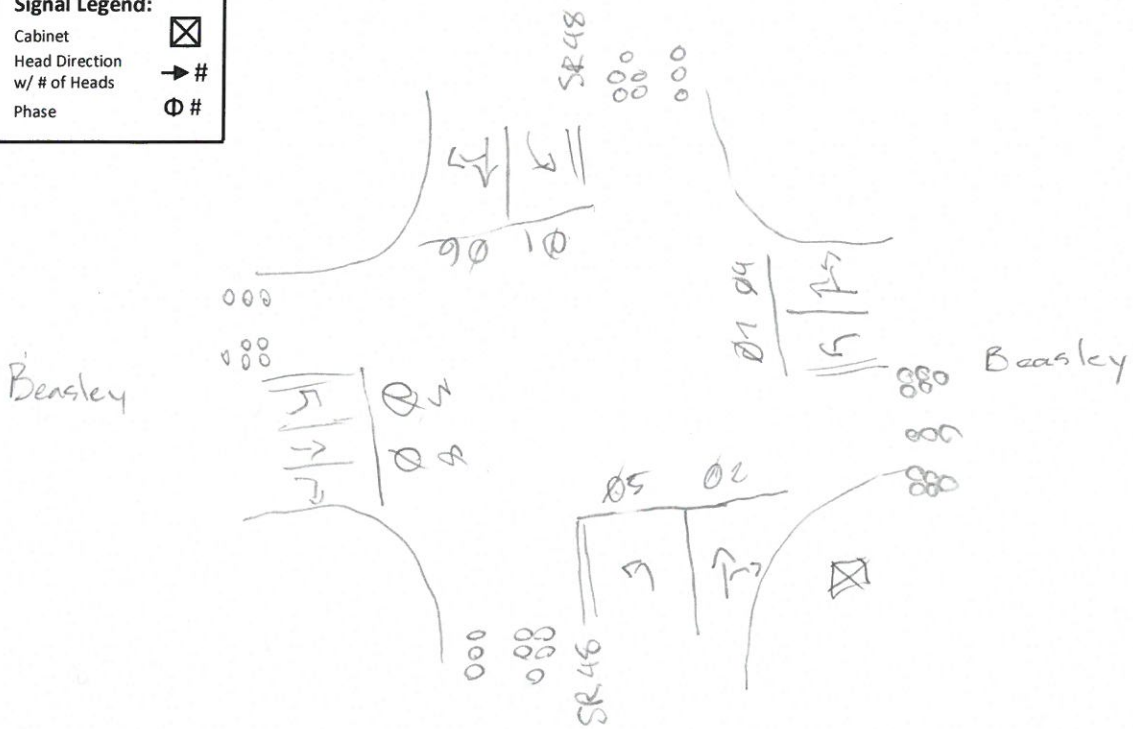
FIELD INVENTORY NOTES

Intersection:	Beasley Drive and Center Avenue (SR 48)	Date:	2/9/21
Intersection Number:	12	Prepared By:	MAT
NB Street:	Beasley	NB Speed Limit:	45
SB Street:	Beasley	SB Speed Limit:	45
EB Street:	SR 48	EB Speed Limit:	45
WB Street:	SR 48	WB Speed Limit:	30

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ⊠
Head Direction w/ # of Heads →#
Phase Φ#

NORTH:



What to Include in Sketch:

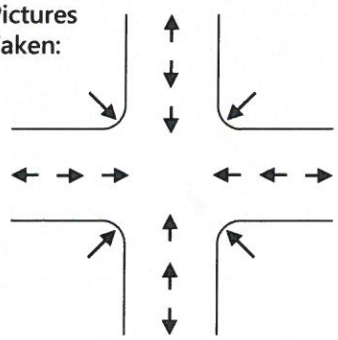
- ☐ Laneage and Widths
- ☐ Storage/Taper Length
- ☐ Right-Turn Treatments
- ☐ Left-Turn Treatments
- ☐ Restricted Movements
- ☐ On-Street Parking
- ☐ Pedestrian Treatments
- ☐ Pertinent Signing/Markings
- ☐ Approach Grades
- ☐ Sight Dist. Obstructions
- ☐ Surrounding Lane Uses
- ☐ Mast Arm or Span Wire
- ☐ Loop or Video Detection Radar
- ☐ Signal Heads and Phasing

Signal Phasing:

See SP diagram

Signal Controller Type:
Conflict Monitor:
EVP System:
GPS:

Pictures Taken:



NOTES AND DEFICIENCIES:

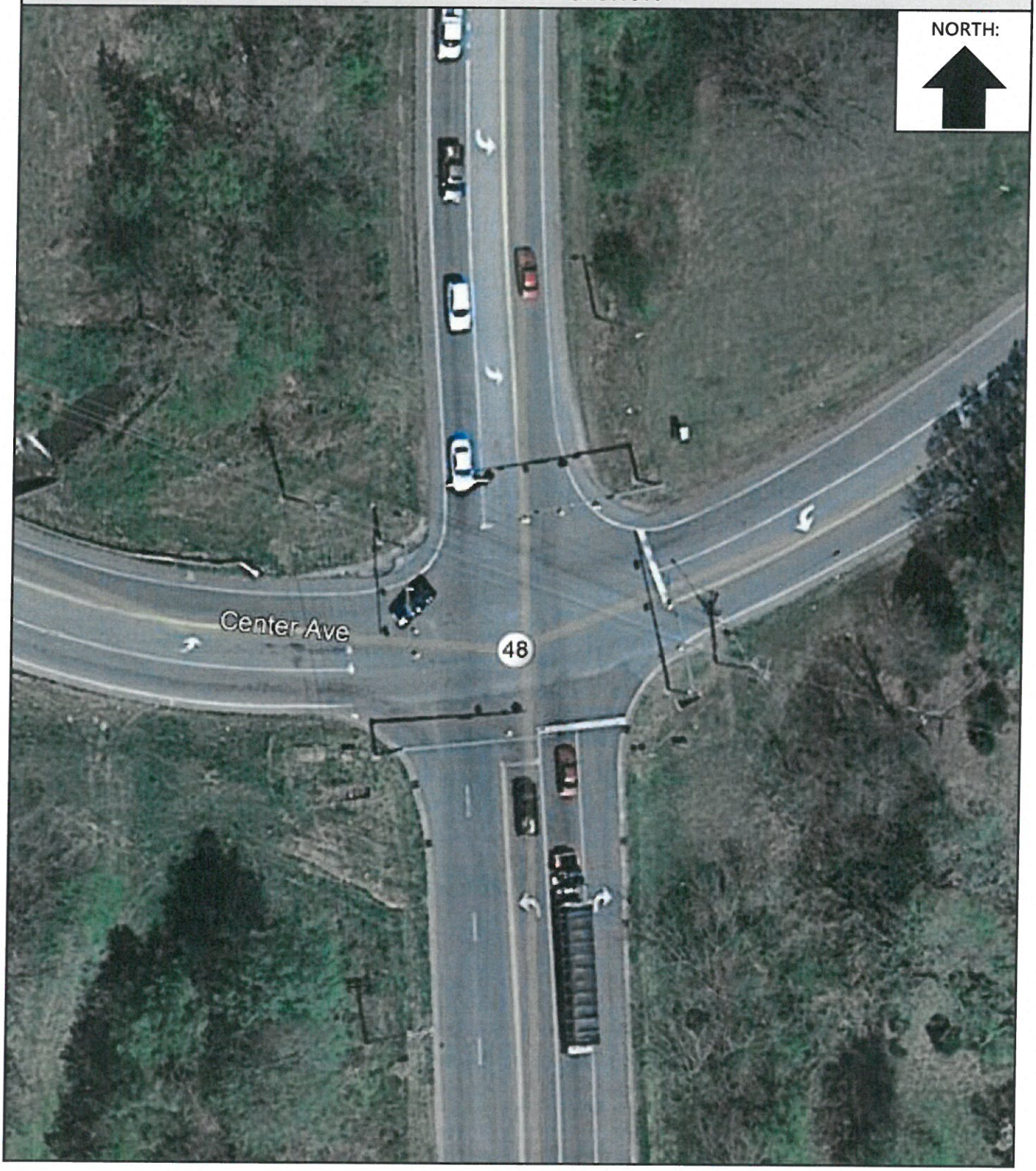
KCI TECHNOLOGIES
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Beasley Drive and Center Avenue (SR 48)	Intersection Number:	12

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

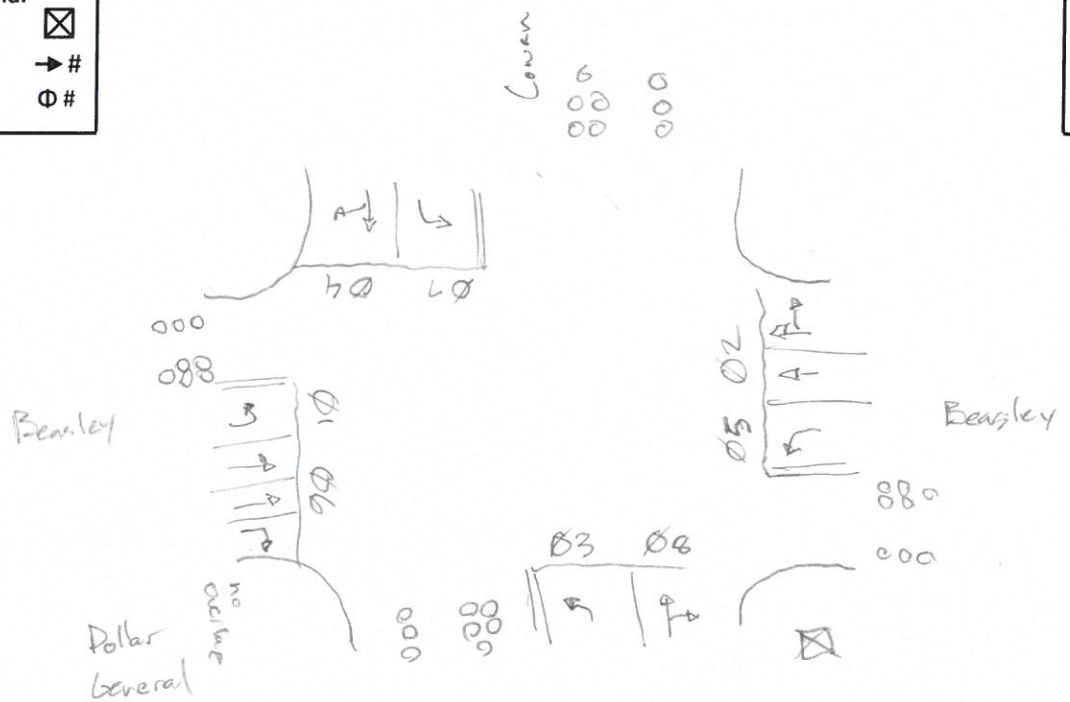
FIELD INVENTORY NOTES

Intersection:	Beasley Drive and Cowan Road	Date:	2/10/21
Intersection Number:	13	Prepared By:	MAT
NB Street:	Cowan Rd	NB Speed Limit:	25
SB Street:	Cowan Rd	SB Speed Limit:	30
EB Street:	Beasley	EB Speed Limit:	45
WB Street:	Beasley	WB Speed Limit:	30

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

NORTH: ↓



What to Include in Sketch:

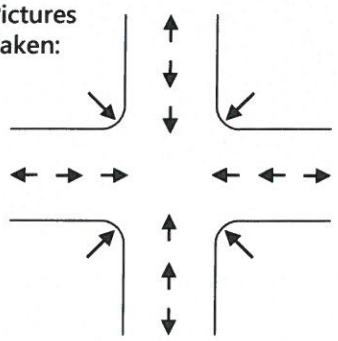
- ☐ Laneage and Widths
- ☐ Storage/Taper Length
- ☐ Right-Turn Treatments
- ☐ Left-Turn Treatments
- ☐ Restricted Movements
- ☐ On-Street Parking
- ☐ Pedestrian Treatments
- ☐ Pertinent Signing/Markings
- ☐ Approach Grades
- ☐ Sight Dist. Obstructions
- ☐ Surrounding Lane Uses
- ☐ Mast Arm or Span Wire
- ☐ Loop or Video Detection
- ☐ Signal Heads and Phasing

Signal Phasing:

See SP sheet ✓

Signal Controller Type:
Conflict Monitor:
EVP System:
GPS:

Pictures Taken:



NOTES AND DEFICIENCIES:

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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Beasley Drive and Cowan Road	Intersection Number:	13

AERIAL OF INTERSECTION



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892002055.02 – TDOT Dickson TSMO

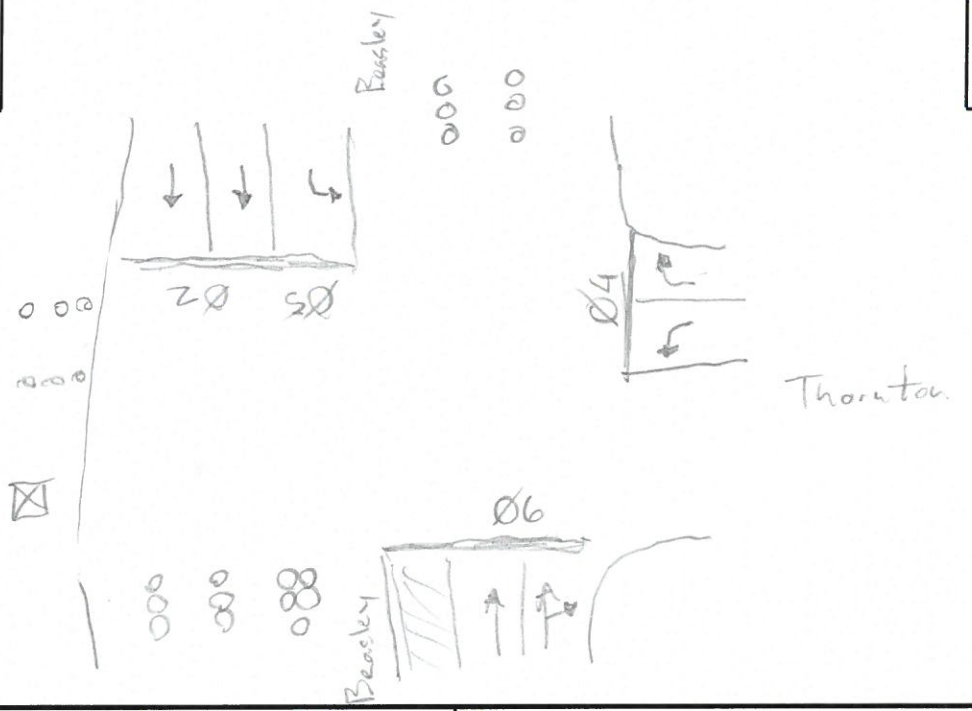
FIELD INVENTORY NOTES

Intersection:	Beasley Drive and Thornton Drive	Date:	2/10/21
Intersection Number:	14	Prepared By:	MAT
NB Street:	Beasley Dr	NB Speed Limit:	30
SB Street:	Beasley Dr	SB Speed Limit:	30
EB Street:		EB Speed Limit:	
WB Street:	Thornton Dr	WB Speed Limit:	15

SKETCH OF INTERSECTION

Signal Legend:
Cabinet ☒
Head Direction w/ # of Heads →#
Phase Φ#

NORTH: ↑



What to Include in Sketch:

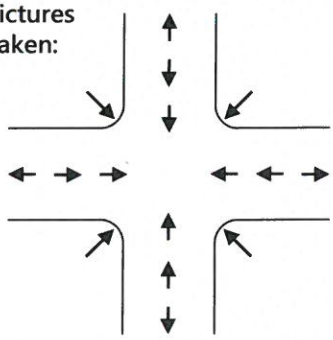
- ☐ Laneage and Widths
- ☐ Storage/Taper Length
- ☐ Right-Turn Treatments
- ☐ Left-Turn Treatments
- ☐ Restricted Movements
- ☐ On-Street Parking
- ☐ Pedestrian Treatments
- ☐ Pertinent Signing/Markings
- ☐ Approach Grades
- ☐ Sight Dist. Obstructions
- ☐ Surrounding Lane Uses
- ☐ Mast Arm or Span Wire
- ☐ Loop or Video Detection
- ☐ Signal Heads and Phasing

Signal Phasing:

See photo

Signal Controller Type:
Conflict Monitor:
EVP System:
GPS:

Pictures Taken:



NOTES AND DEFICIENCIES:

Detectors all placed.

ToD not correct

Ø6 Detector "Fault" (not on)

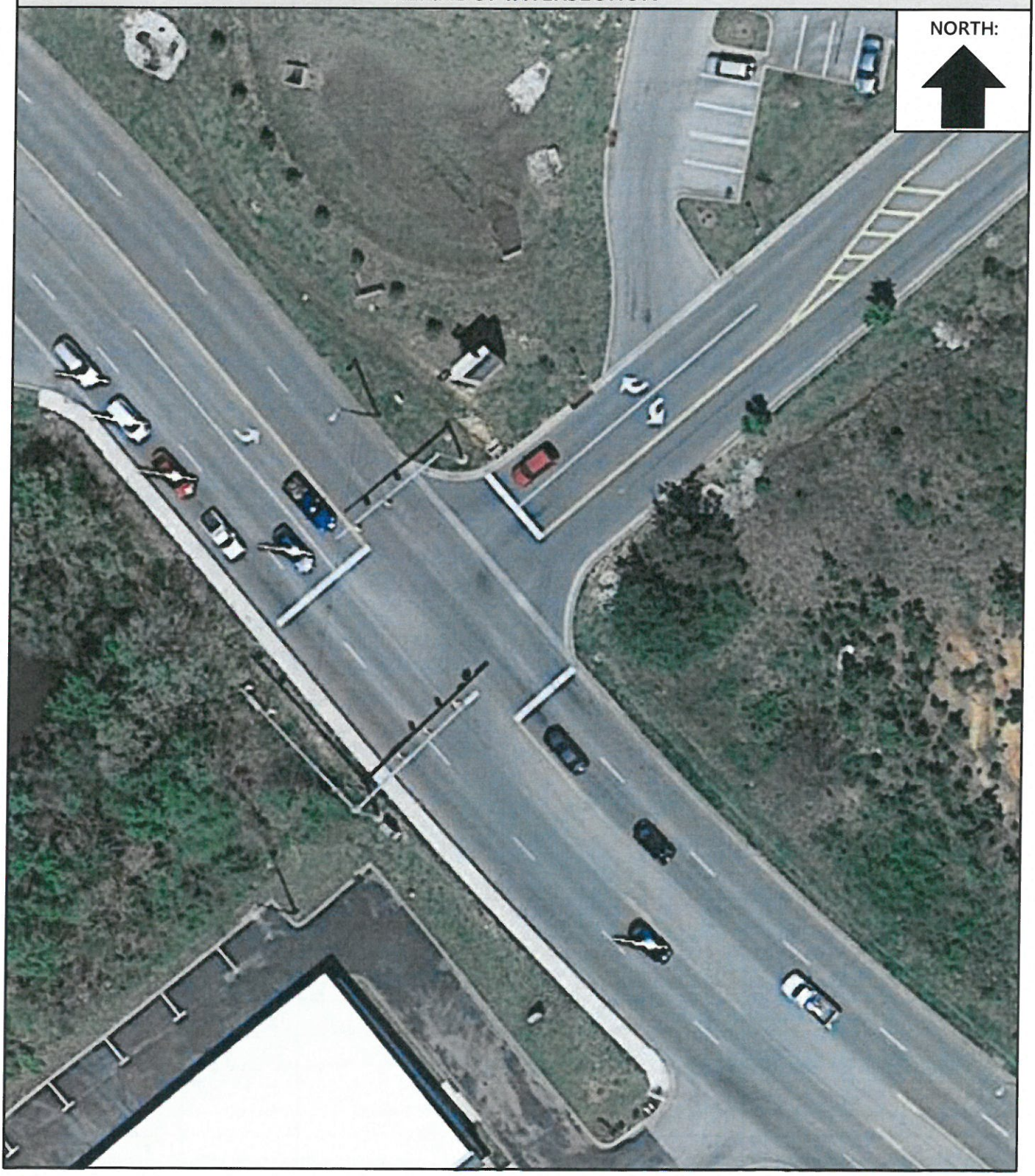
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FIELD INVENTORY NOTES

892002055.02 – TDOT Dickson TSMO

Intersection:	Beasley Drive and Thornton Drive	Intersection Number:	14

AERIAL OF INTERSECTION



APPENDIX C
INTERSECTION INVENTORY PHOTOS

Intersection 1 - College Street (US 70) and First Baptist Church/SR 96














Intersection 2 - College Street (US 70) and Hummingbird Lane





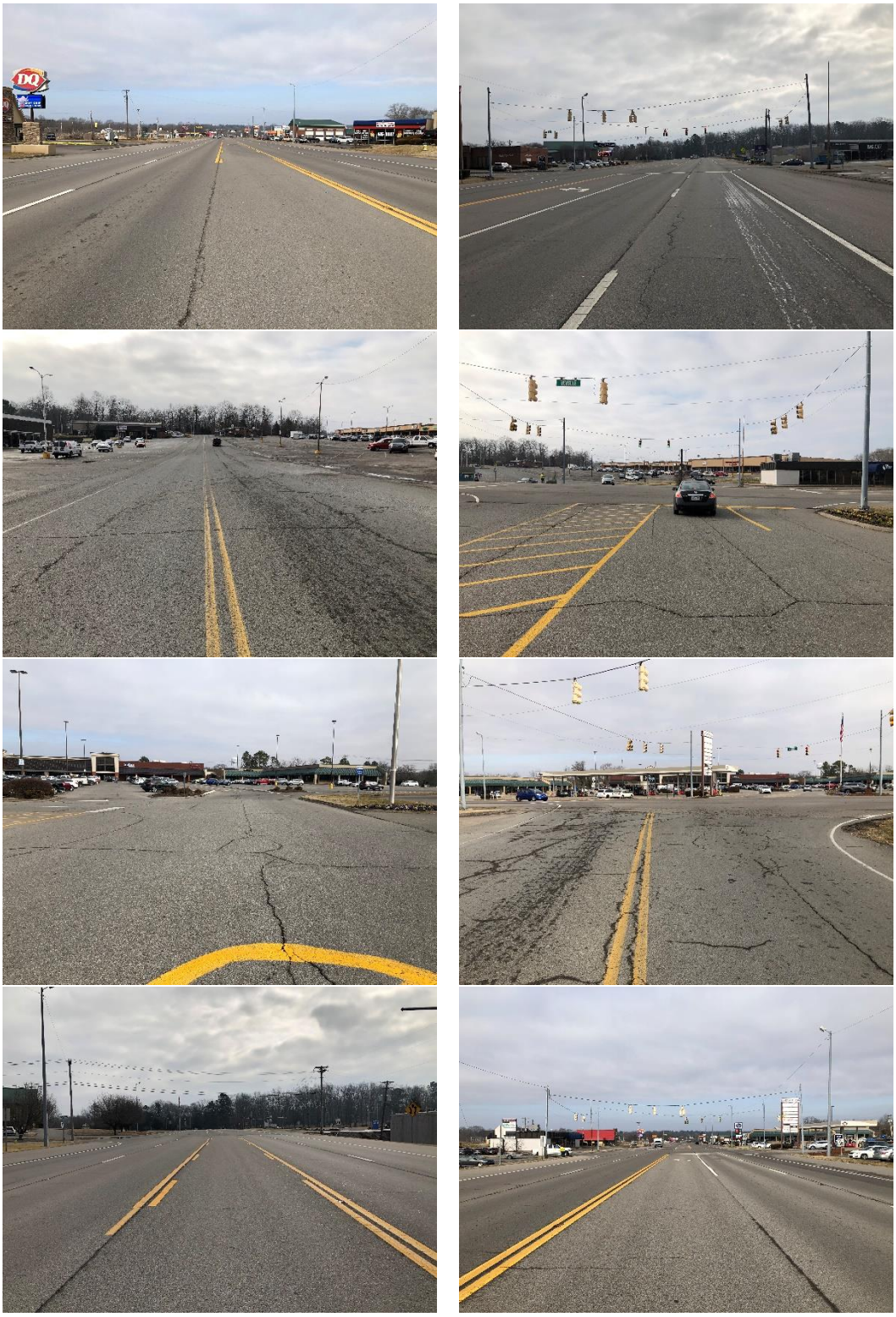





Intersection 3 - College Street (US 70) and Henslee Drive (US 70)



Intersection 4 - Henslee Drive (US 70) and Plaza Drive

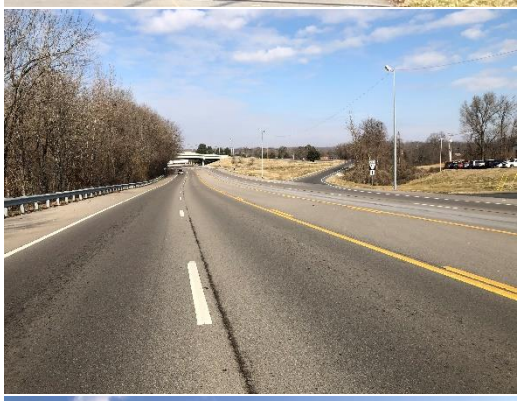


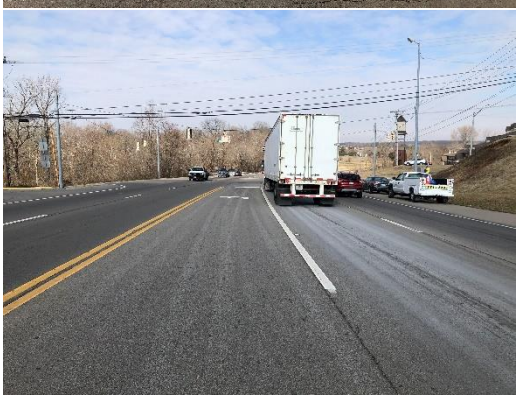
Intersection 5 - Henslee Drive (US 70) and Mathis Drive (SR 46)



Intersection 6 - Henslee Drive (US 70) and Pumphill Road/Spring Street




Intersection 7 - Henslee Drive (US 70) and SR 48 Ramp



Intersection 8 - Henslee Drive (US 70) and North Charlotte Street



Intersection 9 - Henslee Drive (US 70) and Cougar Pride Way



Intersection 10 - Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue







2





Intersection 11 - Highway 70 West (US 70) and Beasley Drive








Intersection 12 - Beasley Drive and Center Avenue (SR 48)








Intersection 13 - Beasley Drive and Cowan Road

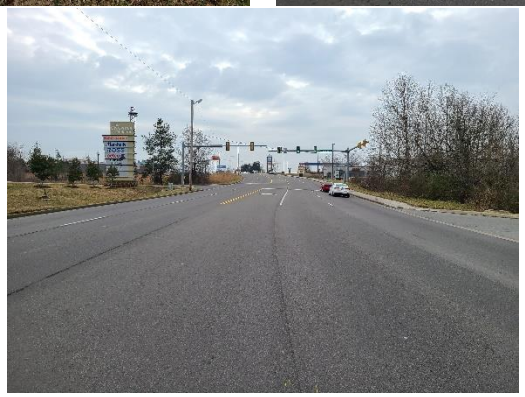


Intersection 14 - Beasley Drive and Thornton Drive









APPENDIX D
CYCLE LENGTH ANALYSIS

CYCLE LENGTH ANALYSIS
MINIMUM CYCLE LENGTH

Minimum Cycle Length Evaluation
TDOT Dickson Signal Timing Optimization Study
Dickson, Tennessee

Movement Type	Acronym	Min Green
Side Street Through	1	7
Main Street Through	2	10
Left-Turn	3	5

Inputs
Final

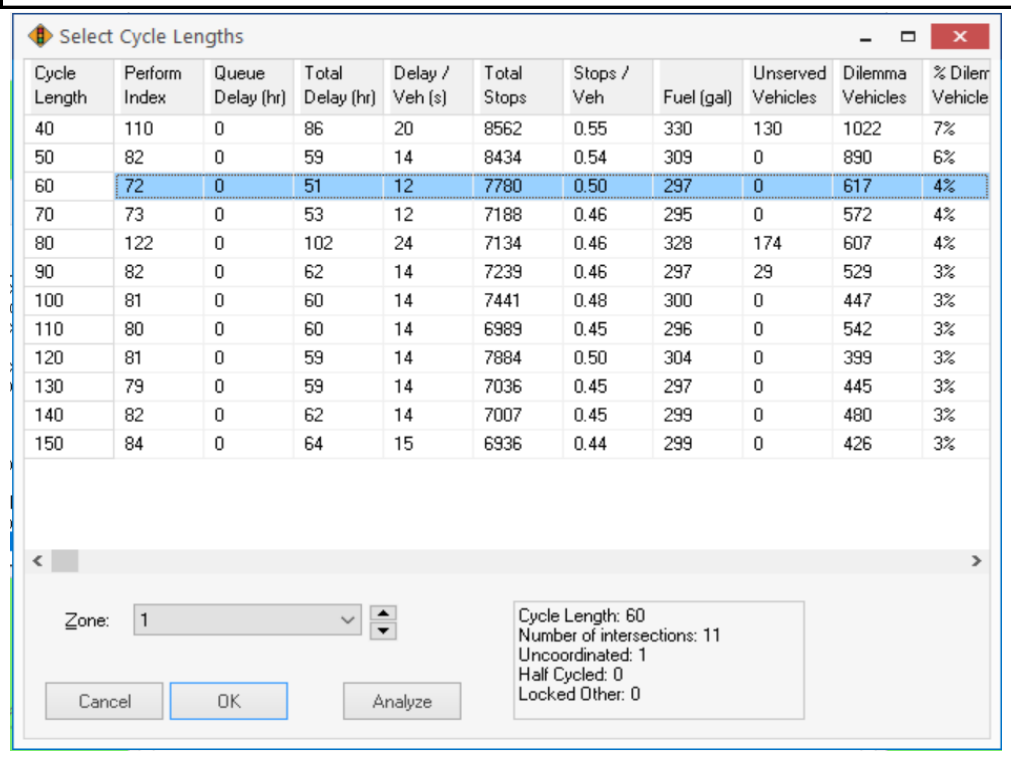
KCI TECHNOLOGIES

Intersection	Phase #	Approach	Movement	Min Green	Yellow	Red	Phase Timing w Ped	Adjusted Phase Timing w Ped	Phases	Ring Diagram w Ped	Adjusted Ring Diagram w Ped	Min Cycle Length (Intersection)	Adjusted Min Cycle Length (Intersection)	Adjusted Phase Timing w/o Side Street Ped	Adjusted Ring Diagram w/o Side Street Ped	Adjusted Min Cycle Length w/o Ped (Intersection)
Intersection 1 - College Street (US 70) and First Baptist Church/SR 96	1	WBL	3	5	4.0	2.0	11.0	15.0	1 & 5	11.0	15.0	40.0	47			
	2	EB	2	10	5.0	1.0	16.0	17.0								
	4	SB	1	7	5.0	1.0	13.0	15.0	2 & 6	16.0	17.0					
	5	EBL	3	5	4.0	2.0	11.0	15.0								
	6	WB	2	10	5.0	1.0	16.0	17.0	4 & 8	13.0	15.0					
	8	NB	1	7	5.0	1.0	13.0	15.0								
Intersection 2 - College Street (US 70) and Hummingbird Lane	1	EBL	3	5	3.5	2.5	11.0	15.0	1 & 5	11.0	15.0	51.0	62			
	2	WB	2	10	5.0	1.0	16.0	17.0								
	3	NB	1	7	3.5	1.0	11.5	15.0	2 & 6	16.0	17.0					
	4	SB	1	7	3.5	1.5	12.0	15.0								
	5	WBL	3	5	3.5	2.5	11.0	15.0	3	11.5	15.0					
	6	EB	2	10	5.0	1.0	16.0	17.0	4	12.0	15.0					
Intersection 3 - College Street (US 70) and Henslee Drive (US 70)	1	EBL	3	5	3.5	2.5	11.0	15.0	1 & 2	27.0	32.0	39.0	47			
	2	WB	2	10	5.0	1.0	16.0	17.0								
	4	SB	1	7	4.0	1.0	12.0	15.0	4	12.0	15.0					
	6	EB	2	10	5.0	1.0	16.0	17.0	6	16.0	17.0					
Intersection 4 - Henslee Drive (US 70) and Plaza Drive	1	WBL	3	5	3.0	2.0	10.0	15.0	1 & 5	10.5	15.0	37.0	46			
	2	EB	2	10	4.0	1.0	15.0	16.0								
	4	SB	1	7	3.5	1.0	11.5	15.0	2 & 6	15.0	16.0					
	5	EBL	3	5	3.0	2.5	10.5	15.0								
	6	WB	2	10	4.0	1.0	15.0	16.0	4 & 8	11.5	15.0					
	8	NB	1	7	3.5	1.0	11.5	15.0								
Intersection 5 - Henslee Drive (US 70) and Mathis Drive (SR 46)	2	WB	2	10	4.0	1.0	15.0	16.0	2	15.0	16.0	37.0	46			
	4	NB	1	7	3.5	1.0	11.5	15.0	4	11.5	15.0					
	5	WBL	3	5	3.0	2.5	10.5	15.0	5 & 6	25.5	31.0					
	6	EB	2	10	4.0	1.0	15.0	16.0								
Intersection 6 - Henslee Drive (US 70) and Pumphill Road/Spring Street	1	EBL	3	5	3.0	2.5	10.5	15.0	1 & 5	10.5	15.0	51.0	62			
	2	WB	2	10	4.0	1.5	15.5	16.5								
	3	NB	1	7	3.5	1.5	12.0	15.0	2 & 6	15.5	16.5					
	4	SB	1	7	3.0	2.5	12.5	15.0								
	5	WBL	3	5	3.0	2.5	10.5	15.0	3	12.0	15.0					
	6	EB	2	10	4.0	1.5	15.5	16.5	4	12.5	15.0					
Intersection 7 - Henslee Drive (US 70) and SR 48 Ramp	1	EBL	3	5	3.0	2.0	10.0	15.0	1 & 2	25.0	31.0	37.0	46			
	2	WB	2	10	4.0	1.0	15.0	16.0								
	4	SB	1	7	3.5	1.0	11.5	15.0	4	11.5	15.0					
	6	EB	2	10	4.0	1.0	15.0	16.0	6	15.0	16.0					
Intersection 8 - Henslee Drive (US 70) and North Charlotte Street	1	EBL	3	5	3.0	3.0	11.0	15.0	1 & 5	11.0	15.0	50.0	61			
	2	WB	2	10	4.0	1.0	15.0	16.0								
	3	SB	1	7	3.5	1.5	12.0	15.0	2 & 6	15.0	16.0					
	4	NB	1	7	3.5	1.5	12.0	15.0								
	5	WBL	3	5	3.0	2.5	10.5	15.0	3	12.0	15.0					
	6	EB	2	10	4.0	1.0	15.0	16.0	4	12.0	15.0					
Intersection 9 - Henslee Drive (US 70) and Cougar Pride Way	1	EBL	3	5	3.0	3.0	11.0	15.0	1 & 5	11.0	15.0	79.0	89	15.0 16.0	15.0	61
	2	WB	2	10	4.0	1.0	15.0	16.0								
	3	NB	1	7	3.0	1.0	11.0	15.0	2 & 6	15.0	16.0			15.0 15.0	16.0	
	4	SB	1	7	3.0	3.0	42.0	43.0								
	5	WBL	3	5	3.0	3.0	11.0	15.0	3	11.0	15.0			15.0	15.0	
	6	EB	2	10	4.0	1.0	15.0	16.0	4	42.0	43.0			16.0	15.0	
Intersection 10 - Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	1	EBL	3	5	4.0	2.0	11.0	15.0	1 & 5	11.0	15.0	122.0	130.0	15.0 17.0	15.0	95
	2	WB	2	10	5.0	1.0	16.0	17.0								
	3	SB	1	7	4.0	2.0	13.0	15.0	2 & 6	49.0	50.0			15.0 15.0	50.0	
	4	NB	1	7	3.5	2.5	49.0	50.0								
	5	WBL	3	5	4.0	2.0	11.0	15.0	3	13.0	15.0			15.0	15.0	
	6	EB	2	10	5.0	1.0	49.0	50.0	4	49.0	50.0			50.0	15.0	
Intersection 11 - Highway 70 West (US 70) and Beasley Drive	1	WBL	3	5	4.0	2.0	11.0	15.0	1 & 5	11.0	15.0	52	62			
	2	EB	2	10	5.0	1.0	16.0	17.0								
	3	NB	1	7	4.5	1.0	12.5	15.0	2 & 6	16.0	17.0					
	4	SB	1	7	3.5	1.5	12.0	15.0								
	5	EBL	3	5	4.0	2.0	11.0	15.0	3	12.5	15.0					
	6	WB	2	10	5.0	1.0	16.0	17.0	4	12.0	15.0					
Intersection 12 - Beasley Drive and Center Avenue (SR 48)	1	EBL	3	5	4.0	2.0	11.0	15.0	1 & 5	11.0	15.0	51	62			
	2	WB	2	7	5.0	1.0	13.0	15.0								
	3	NBL	3	5	4.0	2.0	11.0	15.0	2 & 6	13.0	15.0					
	4	SB	1	10	5.0	1.0	16.0	17.0								
	5	WBL	3	5	3.0	2.5	10.5	15.0	3 & 7	11.0	15.0					
	6	EB	2	7	5.0	1.0	13.0	15.0								
	7	SBL	3	5	4.0	2.0	11.0	15.0	4 & 8	16.0	17.0					
	8	NB	1	10	5.0	1.0	16.0	17.0								
Intersection 13 - Beasley Drive and Cowan Road	1	WBL	3	5	3.0	2.5	10.5	15.0	1 & 5	11.0	15.0	50	62			
	2	EB	2	10	5.0	1.0	16.0	17.0								
	3	SBL	3	5	3.0	2.5	10.5	15.0	2 & 6	16.0	17.0					
	4	NB	1	7	3.5	1.5	12.0	15.0								
	5	EBL	3	5	4.0	2.0	11.0	15.0	3 & 7	11.0	15.0					
	6	WB	2	10	5.0	1.0	16.0	17.0								
	7	NBL	3	5	3.0	3.0	11.0	15.0	4 & 8	12.0	15.0					
	8	SB	1	7	3.5	1.5	12.0	15.0								
Intersection 14 - Beasley Drive and Thornton Drive	2	SB	1	10	3.5	1.0	14.5	15.0	2	14.5	15.0	36	45			
	4	WB	2	7	3.0	2.0	12.0	15.0	4	12.0	15.0					
	5	SBL	3	5	3.0	1.5	9.5	15.0	5 & 6	24.0	30.0					
	6	NB	1	10	3.5	1.0	14.5	15.0								

CYCLE LENGTH ANALYSIS
FOUR-STEP EVALUATION

Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

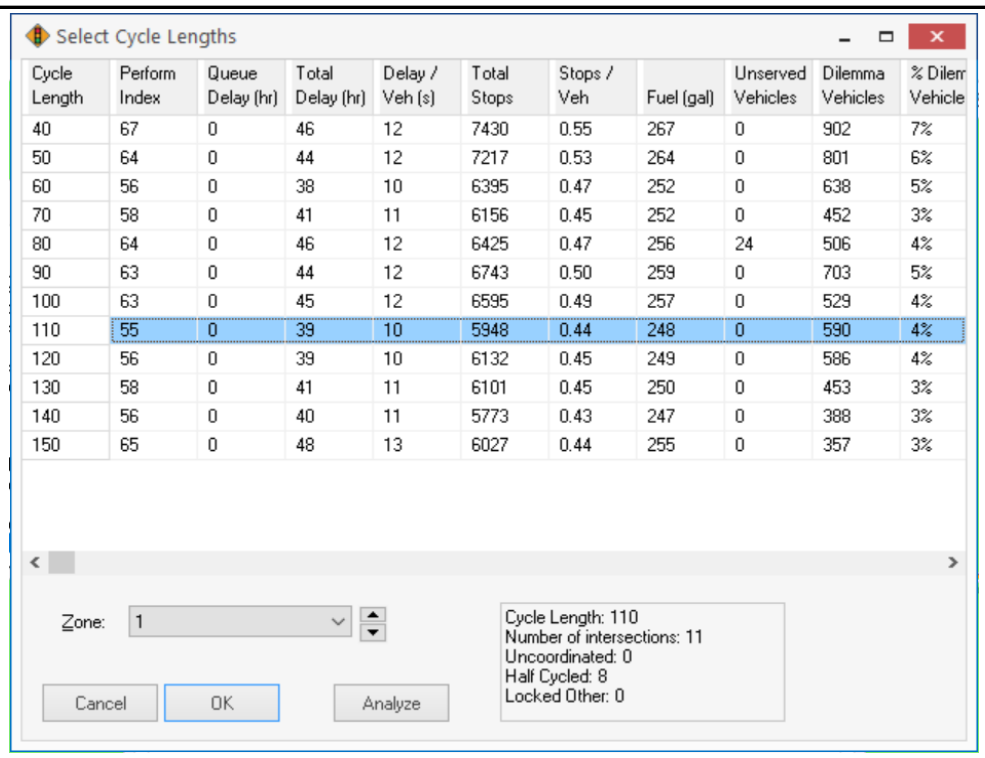
US 70 - AM Peak				
Cycle Length	College Street (US 70) and Henslee Drive (US 70)	Henslee Drive (US 70) and Mathis Drive (SR 46)	Henslee Drive (US 70) and North Charlotte Street	Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Existing	FREE (85 Synchro)	FREE (85 Synchro)	FREE (130 Synchro)	FREE (130 Synchro)
Natural	55	50	60	90
Minimum	47	46	61	95
Synchro Recommended	60			
Uniform Arrivals	40	43	50	55
Recommended	70			



Cycle Length	Perform Index	Queue Delay (hr)	Total Delay (hr)	Delay / Veh (s)	Total Stops	Stops / Veh	Fuel (gal)	Unserved Vehicles	Dilemma Vehicles	% Dilem Vehicle
40	110	0	86	20	8562	0.55	330	130	1022	7%
50	82	0	59	14	8434	0.54	309	0	890	6%
60	72	0	51	12	7780	0.50	297	0	617	4%
70	73	0	53	12	7188	0.46	295	0	572	4%
80	122	0	102	24	7134	0.46	328	174	607	4%
90	82	0	62	14	7239	0.46	297	29	529	3%
100	81	0	60	14	7441	0.48	300	0	447	3%
110	80	0	60	14	6989	0.45	296	0	542	3%
120	81	0	59	14	7884	0.50	304	0	399	3%
130	79	0	59	14	7036	0.45	297	0	445	3%
140	82	0	62	14	7007	0.45	299	0	480	3%
150	84	0	64	15	6936	0.44	299	0	426	3%

Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

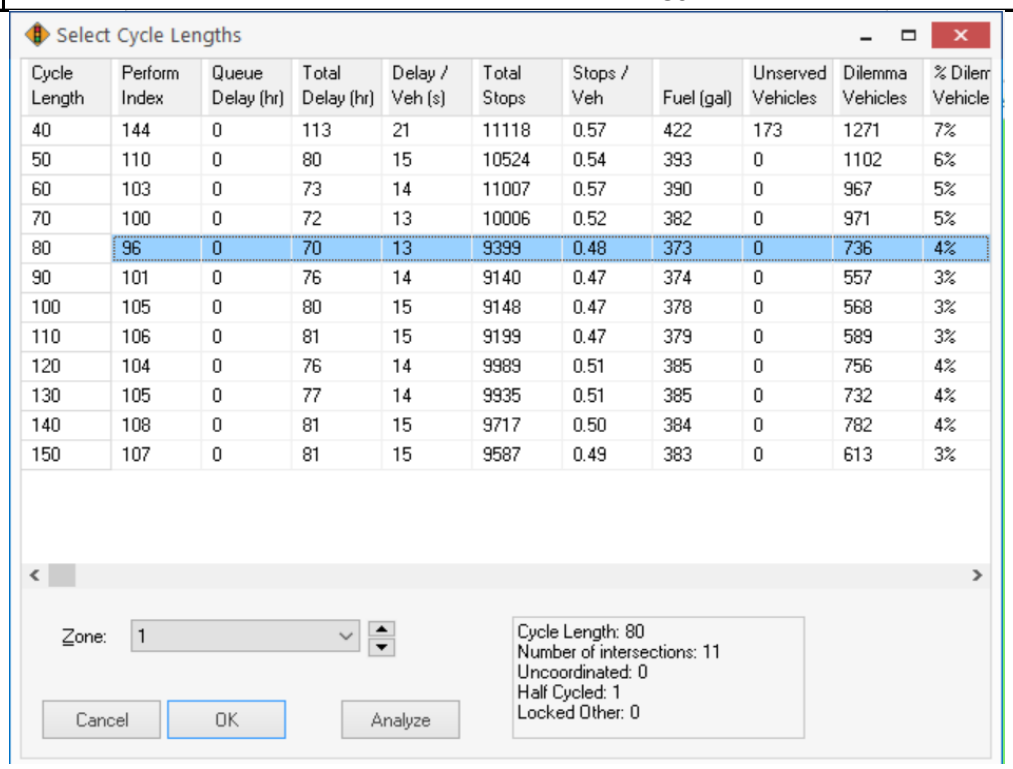
US 70 - Midday Peak				
Cycle Length	College Street (US 70) and Henslee Drive (US 70)	Henslee Drive (US 70) and Mathis Drive (SR 46)	Henslee Drive (US 70) and North Charlotte Street	Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Existing	FREE (85 Synchro)	FREE (85 Synchro)	FREE (130 Synchro)	FREE (130 Synchro)
Natural	40	40	50	80
Minimum	47	46	61	95
Synchro Recommended	110			
Uniform Arrivals	53	60	68	61
Recommended	80			



Cycle Length	Perform Index	Queue Delay (hr)	Total Delay (hr)	Delay / Veh (s)	Total Stops	Stops / Veh	Fuel (gal)	Unserved Vehicles	Dilemma Vehicles	% Dilem Vehicle
40	67	0	46	12	7430	0.55	267	0	902	7%
50	64	0	44	12	7217	0.53	264	0	801	6%
60	56	0	38	10	6395	0.47	252	0	638	5%
70	58	0	41	11	6156	0.45	252	0	452	3%
80	64	0	46	12	6425	0.47	256	24	506	4%
90	63	0	44	12	6743	0.50	259	0	703	5%
100	63	0	45	12	6595	0.49	257	0	529	4%
110	55	0	39	10	5948	0.44	248	0	590	4%
120	56	0	39	10	6132	0.45	249	0	586	4%
130	58	0	41	11	6101	0.45	250	0	453	3%
140	56	0	40	11	5773	0.43	247	0	388	3%
150	65	0	48	13	6027	0.44	255	0	357	3%

Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

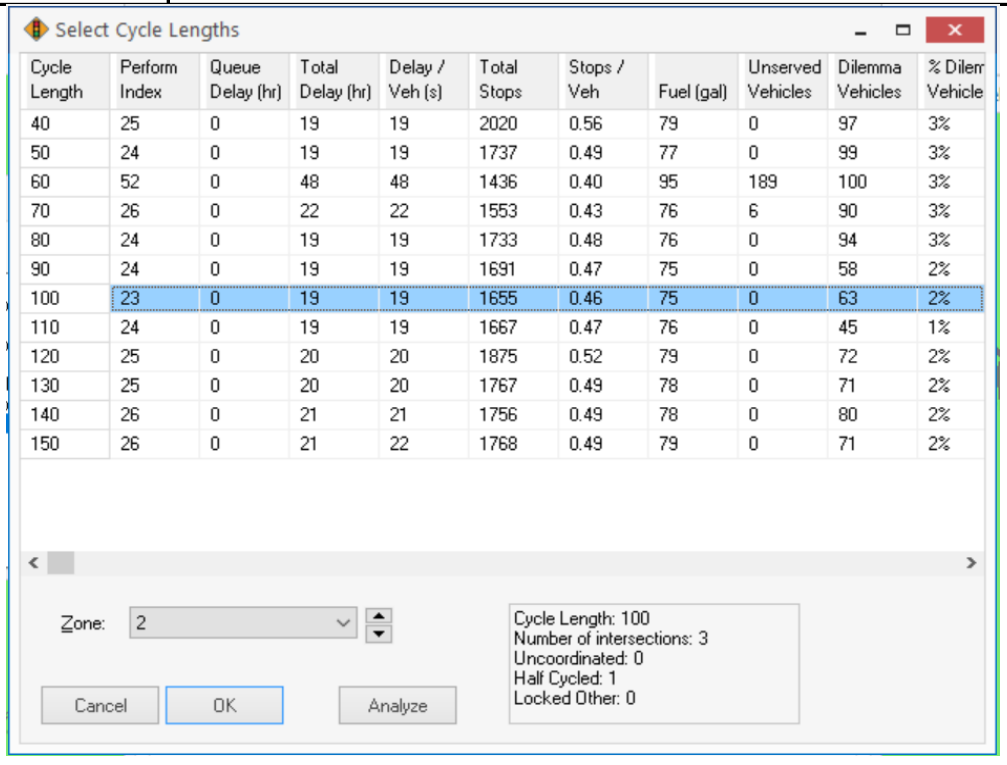
US 70 - PM Peak				
Cycle Length	College Street (US 70) and Henslee Drive (US 70)	Henslee Drive (US 70) and Mathis Drive (SR 46)	Henslee Drive (US 70) and North Charlotte Street	Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Existing	FREE (85 Synchro)	FREE (85 Synchro)	FREE (130 Synchro)	FREE (130 Synchro)
Natural	50	55	60	80
Minimum	47	46	61	95
Synchro Recommended	80			
Uniform Arrivals	50	65	64	59
Recommended	80			



Cycle Length	Perform Index	Queue Delay (hr)	Total Delay (hr)	Delay / Veh (s)	Total Stops	Stops / Veh	Fuel (gal)	Unserved Vehicles	Dilemma Vehicles	% Dilem Vehicle
40	144	0	113	21	11118	0.57	422	173	1271	7%
50	110	0	80	15	10524	0.54	393	0	1102	6%
60	103	0	73	14	11007	0.57	390	0	967	5%
70	100	0	72	13	10006	0.52	382	0	971	5%
80	96	0	70	13	9399	0.48	373	0	736	4%
90	101	0	76	14	9140	0.47	374	0	557	3%
100	105	0	80	15	9148	0.47	378	0	568	3%
110	106	0	81	15	9199	0.47	379	0	589	3%
120	104	0	76	14	9989	0.51	385	0	756	4%
130	105	0	77	14	9935	0.51	385	0	732	4%
140	108	0	81	15	9717	0.50	384	0	782	4%
150	107	0	81	15	9587	0.49	383	0	613	3%

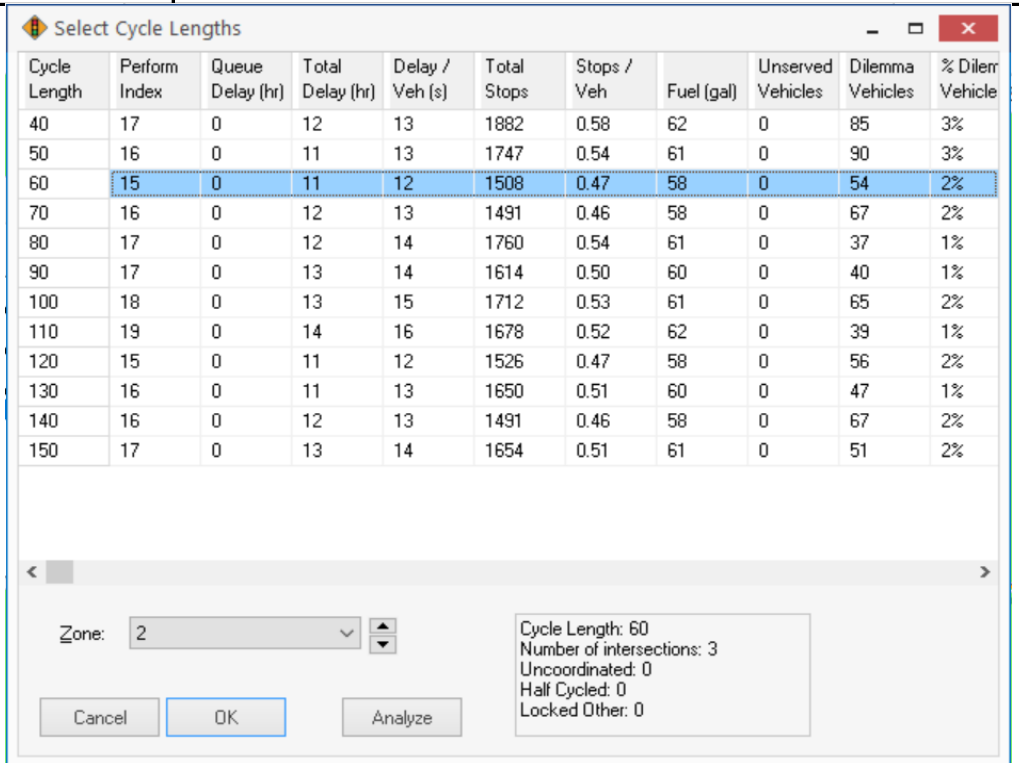
Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

Beasley - AM Peak			
Cycle Length	Beasley Drive and Center Avenue (SR 48)	Beasley Drive and Cowan Road	Beasley Drive and Thornton Drive
Existing	FREE (105 Synchro)	FREE (110 Synchro)	FREE (58 Synchro)
Natural	90	60	40
Minimum	62	62	46
Synchro Recommended	100		
Uniform Arrivals	104	65	41
Recommended	90		



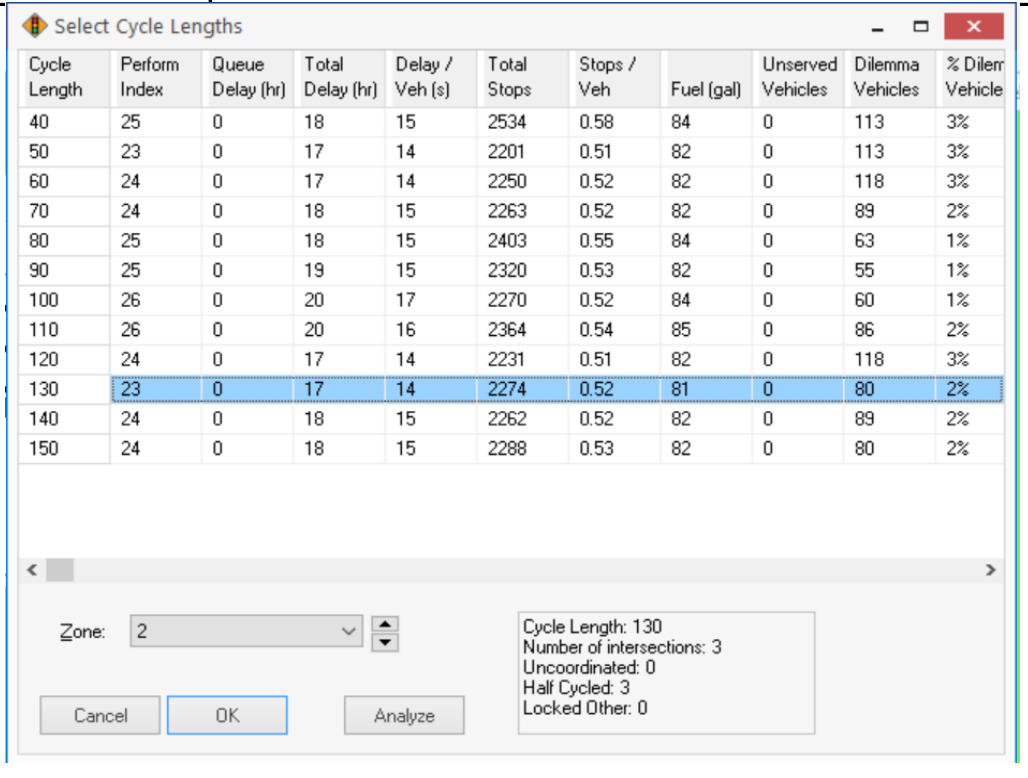
Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

Beasley - Midday Peak			
Cycle Length	Beasley Drive and Center Avenue (SR 48)	Beasley Drive and Cowan Road	Beasley Drive and Thornton Drive
Existing	FREE (105 Synchro)	FREE (110 Synchro)	FREE (58 Synchro)
Natural	60	50	40
Minimum	62	62	46
Synchro Recommended	60		
Uniform Arrivals	58	44	38
Recommended	70		



Cycle Length Evaluation
Dickson Signal Timing Optimization Study
Dickson, Tennessee

Beasley - PM Peak			
Cycle Length	Beasley Drive and Center Avenue (SR 48)	Beasley Drive and Cowan Road	Beasley Drive and Thornton Drive
Existing	FREE (105 Synchro)	FREE (110 Synchro)	FREE (58 Synchro)
Natural	60	55	40
Minimum	62	62	46
Synchro Recommended	130		
Uniform Arrivals	104	78	66
Recommended	80		

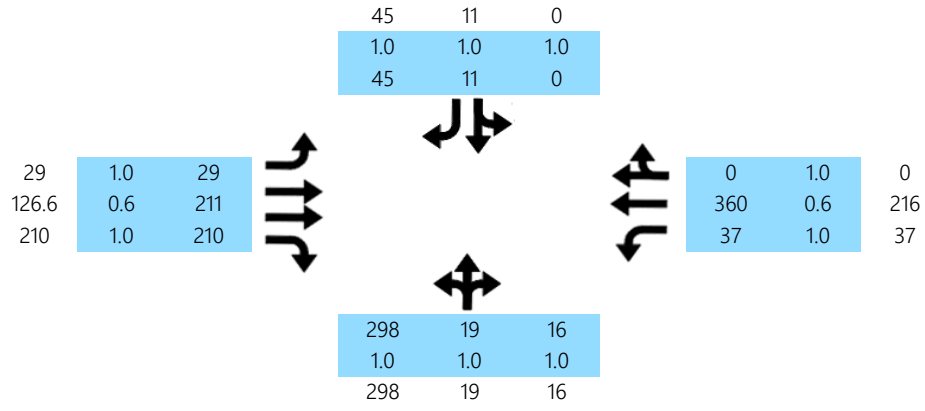


APPENDIX E
PHASE SPLIT ANALYSIS

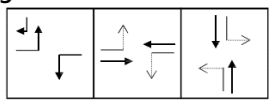
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: College Street (US 70) and First Baptist Church/SR 96
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	8/8	13/18	23/7/9	
No Ped	8	18	23	49
W/ Ped	-	-	-	
Chosen	15	25	30	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Approach:

333 / 51 = 6.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.5	2.3	+	5.0	+	1.0	23

EB Left:

29 / 51 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	4.0	+	2.0	8

EB Through:

126.6 / 51 = 2.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.5	3.0	+	0.0	0.0	+	5.0	+	1.0	13

EB Right: (Channelized Right-Turn Lane)

210 / 51 = 4.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.1	2.3	+	5.0	+	1.0	18

SB Through/Left:

11 / 51 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	5.0	+	1.0	7

SB Right:

45 / 51 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	5.0	+	1.0	9

WB Left:

37.0 / 51 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	4.0	+	2.0	8

WB Through/Right:

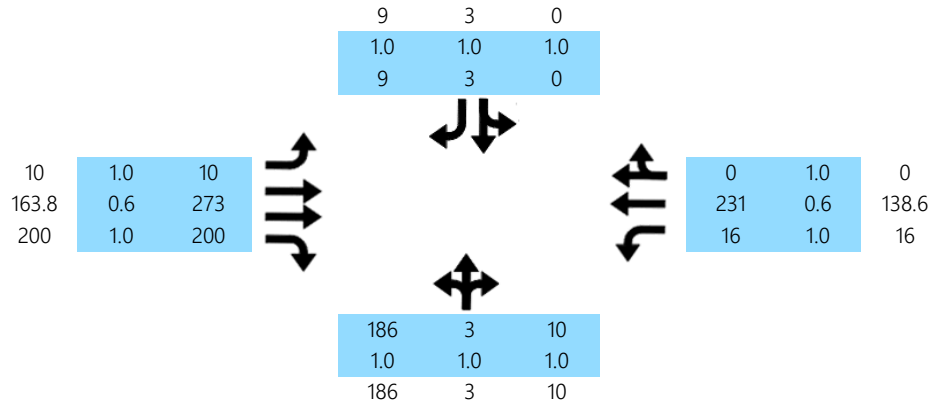
216 / 51 = 4.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.2	2.3	+	5.0	+	1.0	18

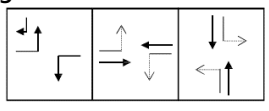
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: College Street (US 70) and First Baptist Church/SR 96
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	7/7	16/15	18/6/7	
No Ped	7	16	18	41
W/ Ped	-	-	-	
Chosen	15	35	30	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

199 / 45 = 4.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.4	2.3	+	5.0	+	1.0	18

EB Left:

10 / 45 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	4.0	+	2.0	7

EB Through:

163.8 / 45 = 3.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.6	2.3	+	5.0	+	1.0	16

EB Right: (Channelized Right-Turn Lane)

200 / 45 = 4.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.4	2.3	+	5.0	+	1.0	18

SB Through/Left:

3 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	5.0	+	1.0	6

SB Right:

9 / 45 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	5.0	+	1.0	7

WB Left:

16.0 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	4.0	+	2.0	7

WB Through/Right:

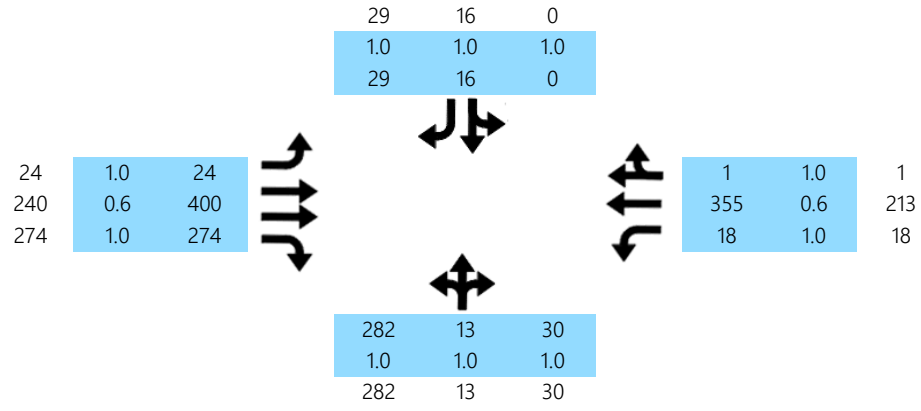
138.6 / 45 = 3.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.1	2.3	+	5.0	+	1.0	15

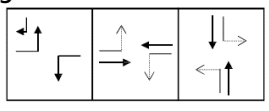
Dickson Signal Timing Study ȷ Study
US 70 Corridor
PM Peak M Peak

Intersection: College Street (US 70) and First Baptist Church/SR 96
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	8/7	20/19	25/7/8	
No Ped	8	20	25	53
W/ Ped	-	-	-	
Chosen	15	30	35	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

325 / 45 = 7.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.2	2.3	+	5.0	+	1.0	25

EB Left:

24 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	4.0	+	2.0	8

EB Through:

240 / 45 = 5.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.3	2.3	+	5.0	+	1.0	20

EB Right: (Channelized Right-Turn Lane)

274 / 45 = 6.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.1	2.3	+	5.0	+	1.0	22

SB Through/Left:

16 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	5.0	+	1.0	7

SB Right:

29 / 45 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	5.0	+	1.0	8

WB Left:

18.0 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	4.0	+	2.0	7

WB Through/Right:

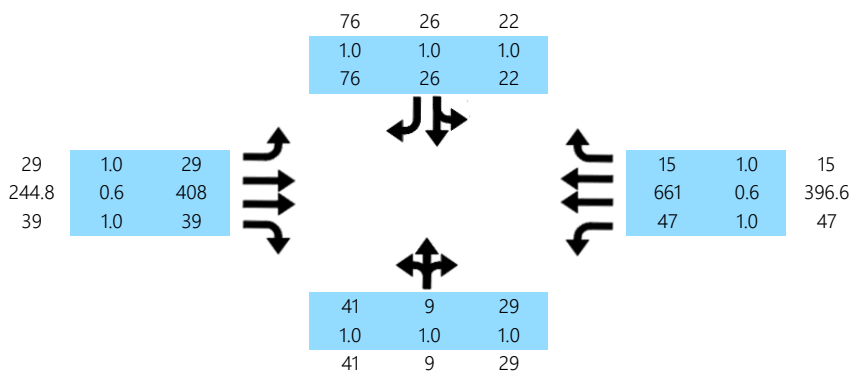
214 / 45 = 4.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.8	2.3	+	5.0	+	1.0	19

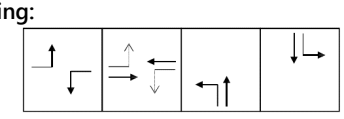
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: College Street (US 70) and Hummingbird Lane
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	8/9	19/26	9	8/9	
No Ped	9	26	9	9	53
W/ Ped	-	-	-	-	
Chosen	15	25	15	15	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Approach:

79 / 51 = 1.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.5	3.0	+	0.0	0	+	3.5	+	1.0	9

EB Left:

29 / 51 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	3.5	+	2.5	8

EB Through:

244.8 / 51 = 4.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.8	2.3	+	5.0	+	1.0	19

EB Right: (Channelized Right-Turn Lane)

39 / 51 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	5.0	+	1.0	8

SB Through/Left:

48 / 51 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.5	+	1.5	8

SB Right:

76 / 51 = 1.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.5	3.0	+	0.0	0.0	+	3.5	+	1.5	9

WB Left:

47 / 51 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.5	+	2.5	9

WB Through:

396.6 / 51 = 7.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.8	2.3	+	5.0	+	1.0	26

WB Right: (Channelized Right-Turn Lane)

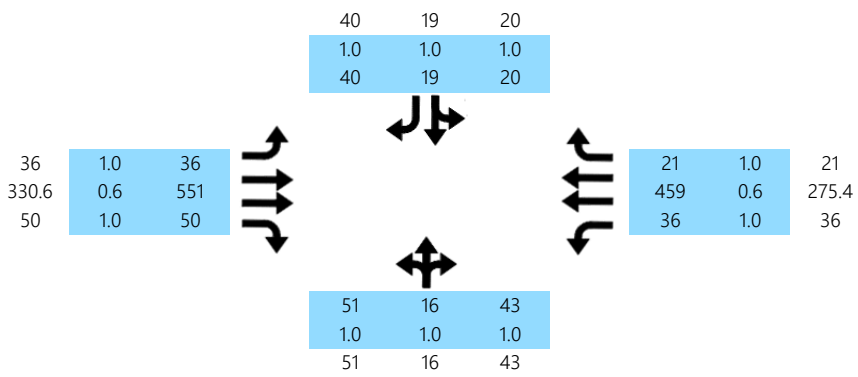
15 / 51 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	5.0	+	1.0	7

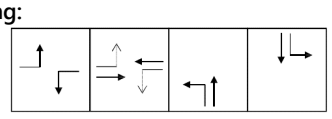
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: College Street (US 70) and Hummingbird Lane
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	8/8	25/22	12	8/8	
No Ped	8	25	12	8	53
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

110 / 45 = 2.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.4	3.0	+	0.0	0	+	3.5	+	1.0	12

EB Left:

36 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	3.5	+	2.5	8

EB Through:

330.6 / 45 = 7.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.3	2.3	+	5.0	+	1.0	25

EB Right: (Channelized Right-Turn Lane)

50 / 45 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	5.0	+	1.0	9

SB Through/Left:

39 / 45 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.5	+	1.5	8

SB Right:

40 / 45 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.5	+	1.5	8

WB Left:

36 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	3.5	+	2.5	8

WB Through:

275.4 / 45 = 6.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.1	2.3	+	5.0	+	1.0	22

WB Right: (Channelized Right-Turn Lane)

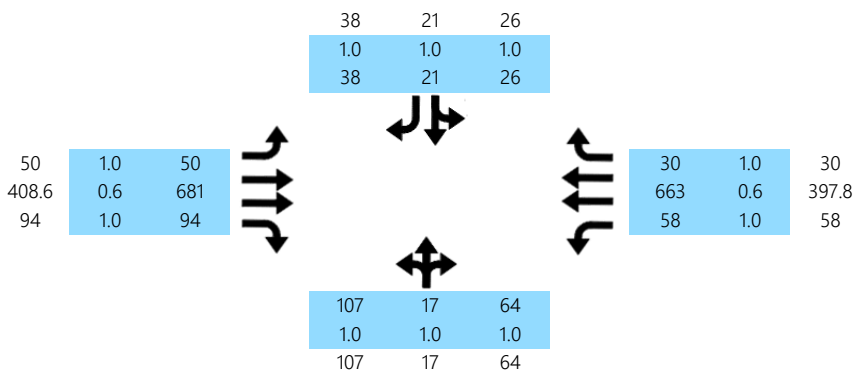
21 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	5.0	+	1.0	7

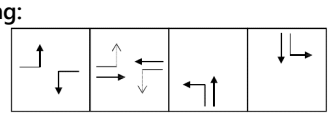
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: College Street (US 70) and Hummingbird Lane
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	9/10	29/28	16	8/8	
No Ped	10	29	16	8	63
W/ Ped	-	-	-	-	
Chosen	15	32	18	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

188 / 45 = 4.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.2	2.3	+	3.5	+	1.0	16

EB Left:

50 / 45 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	3.5	+	2.5	9

EB Through:

408.6 / 45 = 9.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	6.1	2.3	+	5.0	+	1.0	29

EB Right: (Channelized Right-Turn Lane)

94 / 45 = 2.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.1	3.0	+	0.0	0.0	+	5.0	+	1.0	12

SB Through/Left:

47 / 45 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0.0	+	3.5	+	1.5	8

SB Right:

38 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	3.5	+	1.5	8

WB Left:

58 / 45 = 1.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.3	3.0	+	0.0	0.0	+	3.5	+	2.5	10

WB Through:

397.8 / 45 = 8.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.8	2.3	+	5.0	+	1.0	28

WB Right: (Channelized Right-Turn Lane)

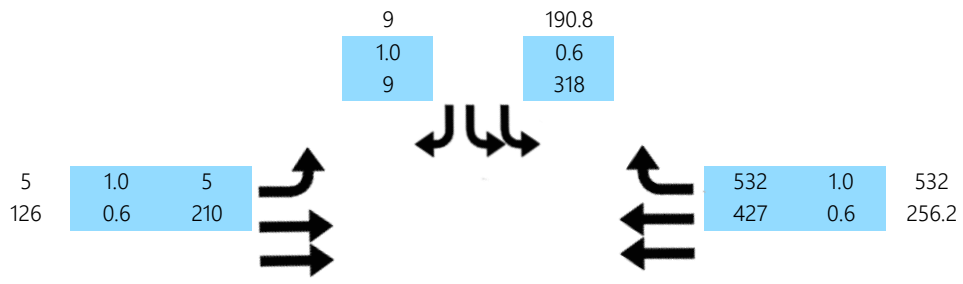
30 / 45 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	5.0	+	1.0	8

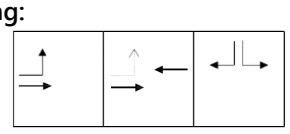
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: College Street (US 70) and Henslee Drive (US 70)
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	6	13/20	16	
No Ped	6	20	16	42
W/ Ped	-	-	-	
Chosen	15	30	25	70

Calculations:

3600 / 70 = 51 Cycles/Hour

EB Left:

5 / 51 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3	+	0.0	0.0	+	3.5	+	2.5	6

EB Through:

126 / 51 = 2.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.5	3	+	0.0	0.0	+	5.0	+	1.0	13

SB Left:

190.8 / 51 = 3.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	0.7	2.3	+	4.0	+	1.0	16

SB Right: (Channelized Right-Turn Lane)

9 / 51 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3	+	0.0	0.0	+	4.0	+	1.0	6

WB Through:

256.2 / 51 = 5.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	2.0	2.3	+	5.0	+	1.0	20

WB Right: (Channelized Right-Turn Lane)

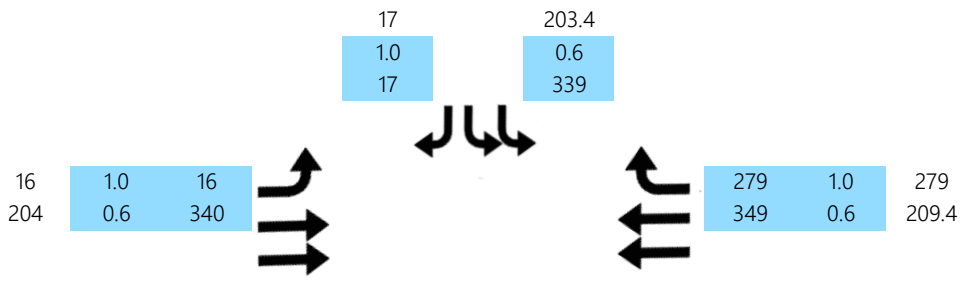
532 / 51 = 10.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	7.4	2.3	+	5.0	+	1.0	32

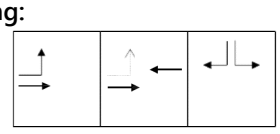
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: College Street (US 70) and Henslee Drive (US 70)
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	7	19/19	17	
No Ped	7	19	17	43
W/ Ped	-	-	-	
Chosen	15	40	25	80

Calculations:

3600 / 80 = 45 Cycles/Hour

EB Left:

16 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3	+	0.0	0.0	+	3.5	+	2.5	7

EB Through:

204 / 45 = 4.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.5	2.3	+	5.0	+	1.0	19

SB Left:

203.4 / 45 = 4.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.5	2.3	+	4.0	+	1.0	17

SB Right: (Channelized Right-Turn Lane)

17 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3	+	0.0	0.0	+	4.0	+	1.0	6

WB Through:

209.4 / 45 = 4.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.7	2.3	+	5.0	+	1.0	19

WB Right: (Channelized Right-Turn Lane)

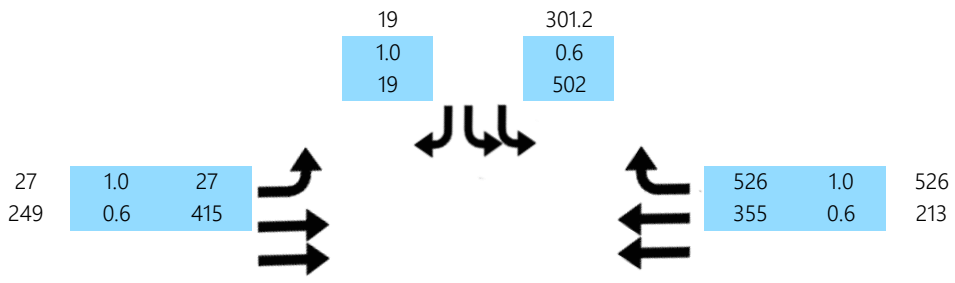
279 / 45 = 6.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	3.2	2.3	+	5.0	+	1.0	22

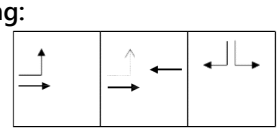
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: College Street (US 70) and Henslee Drive (US 70)
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	17	15	47
UA	8	21/19	22	
No Ped	8	21	22	51
W/ Ped	-	-	-	
Chosen	15	35	30	80

Calculations:

3600 / 80 = 45 Cycles/Hour

EB Left:

27 / 45 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3	+	0.0	0.0	+	3.5	+	2.5	8

EB Through:

249 / 45 = 5.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	2.5	2.3	+	5.0	+	1.0	21

SB Left:

301.2 / 45 = 6.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	3.7	2.3	+	4.0	+	1.0	22

SB Right: (Channelized Right-Turn Lane)

19 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3	+	0.0	0.0	+	4.0	+	1.0	6

WB Through:

213 / 45 = 4.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.7	2.3	+	5.0	+	1.0	19

WB Right: (Channelized Right-Turn Lane)

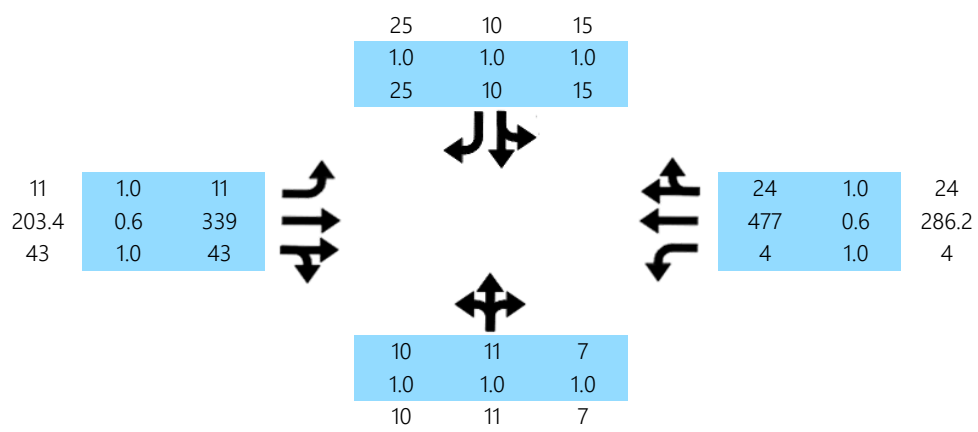
526 / 45 = 11.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	8.7	2.3	+	5.0	+	1.0	35

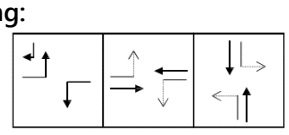
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and Plaza Drive
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	6/5	18/21	6/6/6	
No Ped	6	21	6	33
W/ Ped	-	-	-	
Chosen	15	35	20	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Approach:

28 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0	+	3.5	+	1.0	6

EB Left:

11 / 51 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	3.0	+	2.5	6

EB Through/Right:

246.4 / 51 = 4.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.8	2.3	+	4.0	+	1.0	18

SB Through/Left:

25 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.5	+	1.0	6

SB Right:

25 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.5	+	1.0	6

WB Left:

4 / 51 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	3.0	+	2.0	5

WB Through/Right:

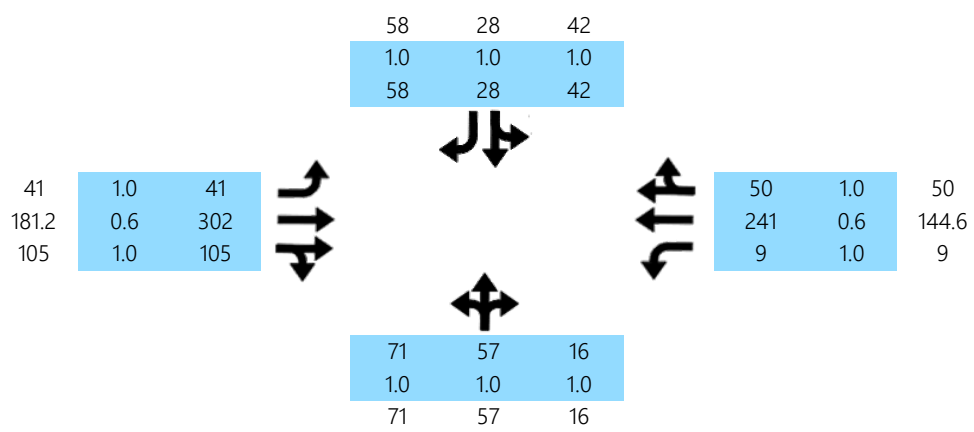
310.2 / 51 = 6.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.1	2.3	+	4.0	+	1.0	21

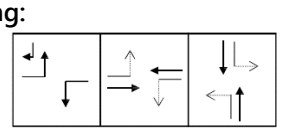
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and Plaza Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	8/6	22/17	14/9/8	
No Ped	8	22	14	44
W/ Ped	-	-	-	
Chosen	15	45	20	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

144 / 45 = 3.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.2	2.3	+	3.5	+	1.0	14

EB Left:

41 / 45 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.0	+	2.5	8

EB Through/Right:

286.2 / 45 = 6.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.4	2.3	+	4.0	+	1.0	22

SB Through/Left:

70 / 45 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3.0	+	0.0	0.0	+	3.5	+	1.0	9

SB Right:

58 / 45 = 1.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.3	3.0	+	0.0	0.0	+	3.5	+	1.0	8

WB Left:

9 / 45 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	3.0	+	2.0	6

WB Through/Right:

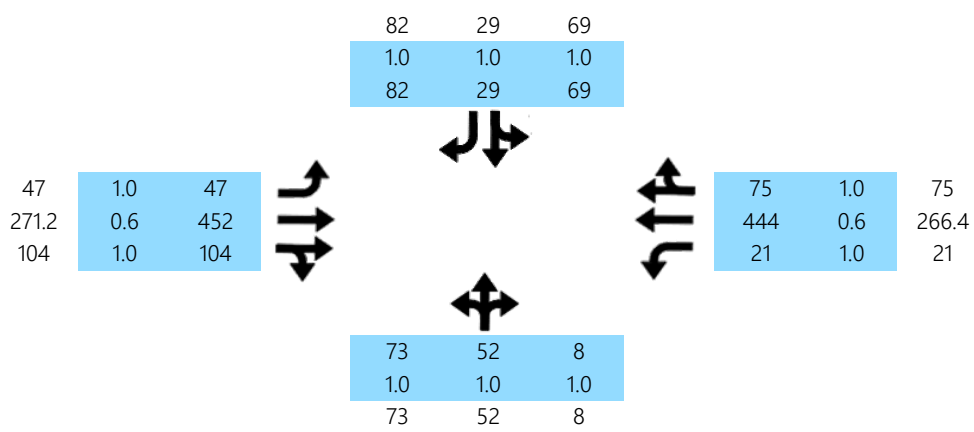
194.6 / 45 = 4.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.3	2.3	+	4.0	+	1.0	17

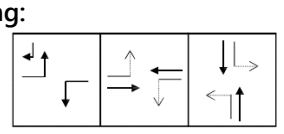
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and Plaza Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	9/6	26/25	13/11/10	
No Ped	9	26	13	48
W/ Ped	-	-	-	
Chosen	15	45	20	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

133 / 45 = 3.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.0	0	+	3.5	+	1.0	13

EB Left:

47 / 45 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0.0	+	3.0	+	2.5	9

EB Through/Right:

375.2 / 45 = 8.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.3	2.3	+	4.0	+	1.0	26

SB Through/Left:

98 / 45 = 2.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.2	3.0	+	0.0	0.0	+	3.5	+	1.0	11

SB Right:

82 / 45 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0.0	+	3.5	+	1.0	10

WB Left:

21 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.0	+	2.0	6

WB Through/Right:

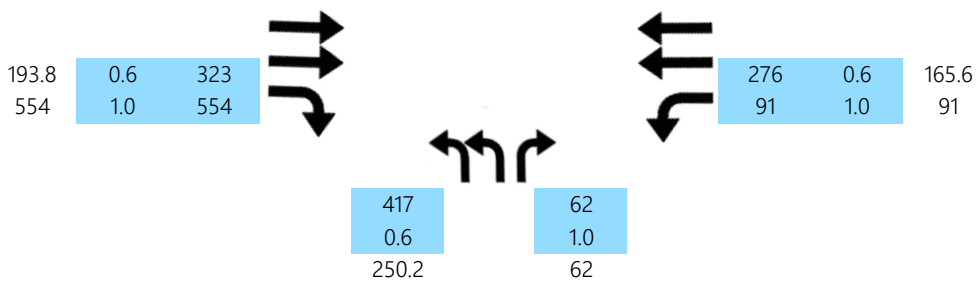
341.4 / 45 = 7.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.6	2.3	+	4.0	+	1.0	25

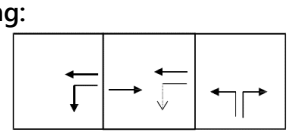
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and Mathis Drive
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	11	16/15	18/8	
No Ped	11	16	18	45
W/ Ped	-	-	-	
Chosen	15	35	20	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Left:

250.2 / 51 = 4.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.9	2.3	+	3.5	+	1.0	18

NB Right: (Channelized Right-Turn Lane)

62 / 51 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0	+	3.5	+	1.0	8

EB Through:

193.8 / 51 = 3.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.8	2.3	+	4.0	+	1.0	16

EB Right: (Channelized Right-Turn Lane)

554 / 51 = 10.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	7.9	2.3	+	4.0	+	1.0	32

WB Left:

91 / 51 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0.0	+	3.0	+	2.5	11

WB Through:

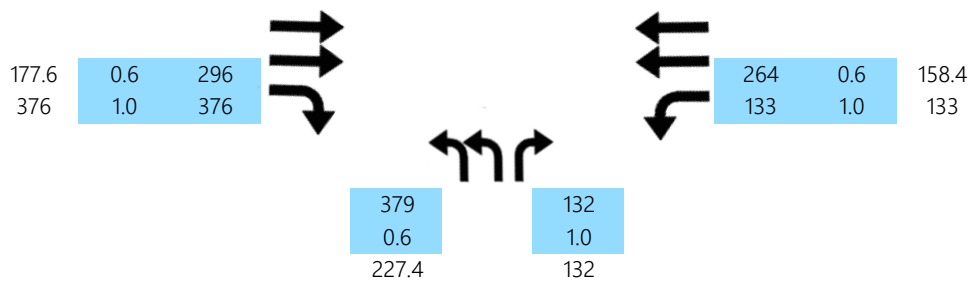
165.6 / 51 = 3.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.2	2.3	+	4.0	+	1.0	15

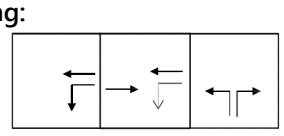
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and Mathis Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	14	16/15	18/13	
No Ped	14	16	18	48
W/ Ped	-	-	-	
Chosen	15	45	20	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Left:

227.4 / 45 = 5.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.1	2.3	+	3.5	+	1.0	18

NB Right: (Channelized Right-Turn Lane)

132 / 45 = 2.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.9	3.0	+	0.0	0	+	3.5	+	1.0	13

EB Through:

177.6 / 45 = 3.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.9	2.3	+	4.0	+	1.0	16

EB Right: (Channelized Right-Turn Lane)

376 / 45 = 8.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.4	2.3	+	4.0	+	1.0	26

WB Left:

133 / 45 = 3.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.0	0.0	+	3.0	+	2.5	14

WB Through:

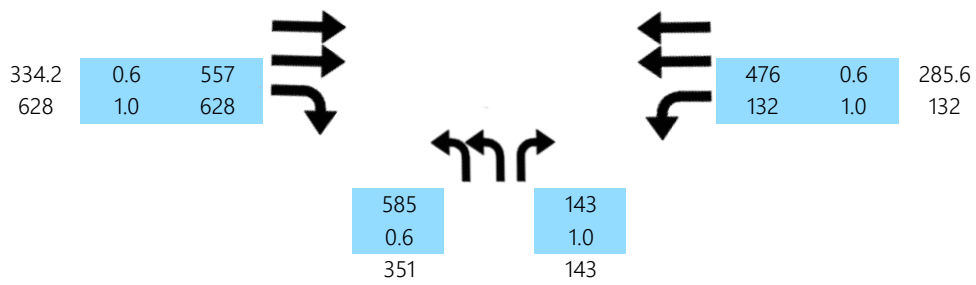
158.4 / 45 = 3.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.5	2.3	+	4.0	+	1.0	15

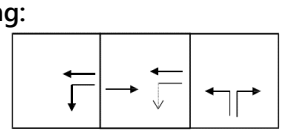
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and Mathis Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	14	24/22	25/14	
No Ped	14	24	25	63
W/ Ped	-	-	-	
Chosen	15	37	28	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Left:

351 / 45 = 7.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.8	2.3	+	3.5	+	1.0	25

NB Right: (Channelized Right-Turn Lane)

143 / 45 = 3.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.2	2.3	+	3.5	+	1.0	14

EB Through:

334.2 / 45 = 7.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.4	2.3	+	4.0	+	1.0	24

EB Right: (Channelized Right-Turn Lane)

628 / 45 = 14.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	11.0	2.3	+	4.0	+	1.0	39

WB Left:

132 / 45 = 2.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.9	3.0	+	0.0	0.0	+	3.0	+	2.5	14

WB Through:

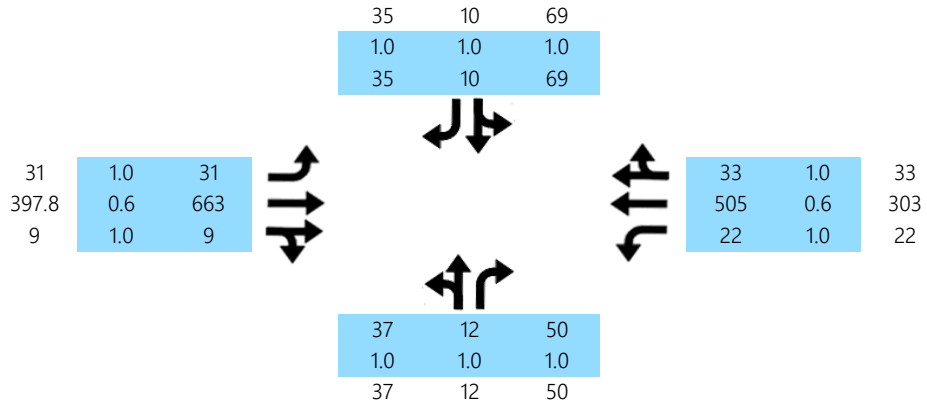
285.6 / 45 = 6.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.3	2.3	+	4.0	+	1.0	22

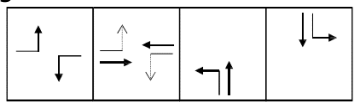
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and Pumphill Road/Spring Street
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/7	26/23	8/8	10/8	
No Ped	7	26	8	10	51
W/ Ped	-	-	-	-	
Chosen	15	25	15	15	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Through/Left:

49 / 51 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0	+	3.5	+	1.5	8

NB Right:

50 / 51 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0	+	3.5	+	1.5	8

EB Left:

31 / 51 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	3.0	+	2.5	7

EB Through/Right:

406.8 / 51 = 8.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.0	2.3	+	4.0	+	1.5	26

SB Through/Left:

79 / 51 = 1.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.5	3.0	+	0.0	0.0	+	3.0	+	2.5	10

SB Right:

35 / 51 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	3.0	+	2.5	8

WB Left:

22 / 51 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Through/Right:

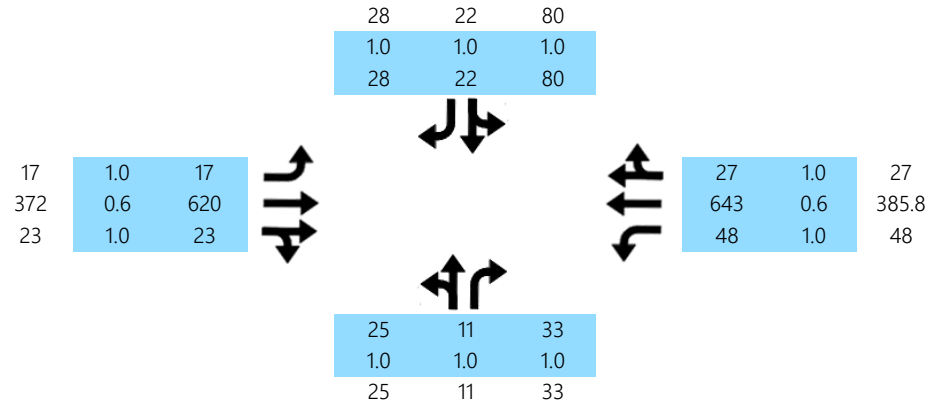
336 / 51 = 6.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.6	2.3	+	4.0	+	1.5	23

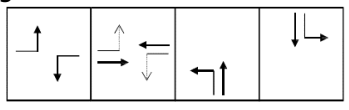
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and Pumphill Road/Spring Street
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/9	28/29	7/7	12/7	
No Ped	9	29	7	12	57
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Through/Left:

36 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0	+	3.5	+	1.5	7

NB Right:

33 / 45 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0	+	3.5	+	1.5	7

EB Left:

17 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	2.5	7

EB Through/Right:

395 / 45 = 8.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.8	2.3	+	4.0	+	1.5	28

SB Through/Left:

102 / 45 = 2.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.3	3.0	+	0.0	0.0	+	3.0	+	2.5	12

SB Right:

28 / 45 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Left:

48 / 45 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	3.0	+	2.5	9

WB Through/Right:

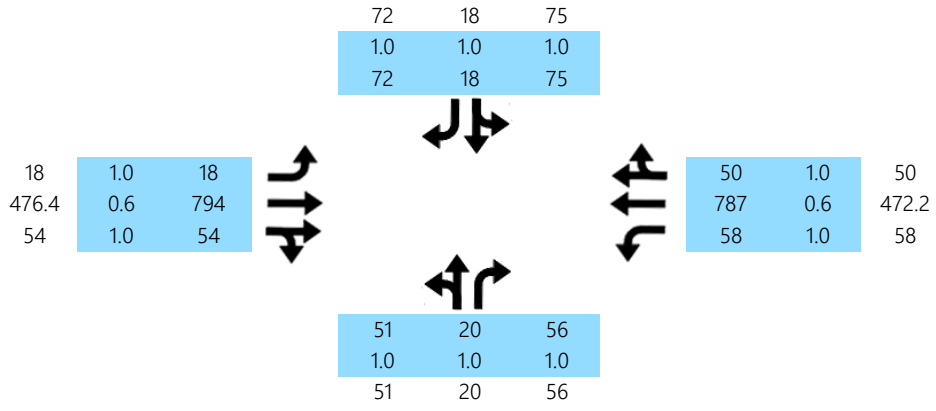
412.8 / 45 = 9.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	6.2	2.3	+	4.0	+	1.5	29

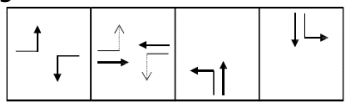
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and Pumphill Road/Spring Street
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/9	35/34	10/9	12/10	
No Ped	9	35	10	12	66
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Through/Left:

71 / 45 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3.0	+	0.0	0	+	3.5	+	1.5	10

NB Right:

56 / 45 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0	+	3.5	+	1.5	9

EB Left:

18 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	2.5	7

EB Through/Right:

530.4 / 45 = 11.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	8.8	2.3	+	4.0	+	1.5	35

SB Through/Left:

93 / 45 = 2.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.1	3.0	+	0.0	0.0	+	3.0	+	2.5	12

SB Right:

72 / 45 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3.0	+	0.0	0.0	+	3.0	+	2.5	10

WB Left:

58 / 45 = 1.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.3	3.0	+	0.0	0.0	+	3.0	+	2.5	9

WB Through/Right:

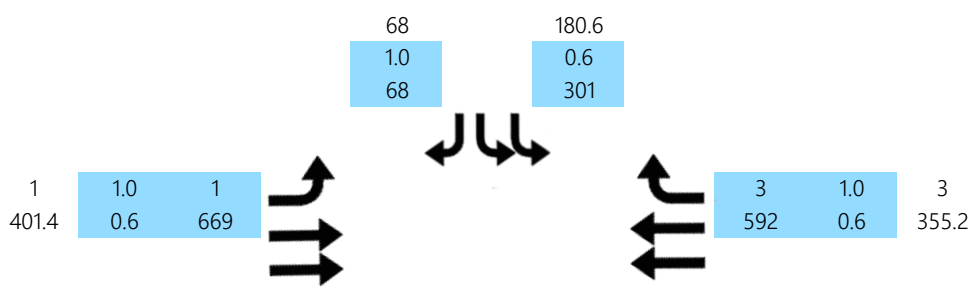
522.2 / 45 = 11.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	8.6	2.3	+	4.0	+	1.5	34

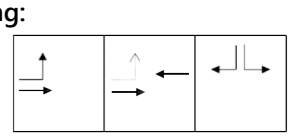
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and SR 48 Ramp
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	5	25/23	15	
No Ped	5	25	15	45
W/ Ped	-	-	-	
Chosen	15	37	18	70

Calculations:

3600 / 70 = 51 Cycles/Hour

EB Left:

1 / 51 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	3.0	+	2.0	5

EB Through:

401.4 / 51 = 7.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.9	2.3	+	4.0	+	1.0	25

SB Left:

180.6 / 51 = 3.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.5	2.3	+	3.5	+	1.0	15

SB Right: (Channelized Right-Turn Lane)

68 / 51 = 1.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.3	3.0	+	0.0	0.0	+	3.5	+	1.0	9

WB Through:

355.2 / 51 = 7.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.0	2.3	+	4.0	+	1.0	23

WB Right: (Channelized Right-Turn Lane)

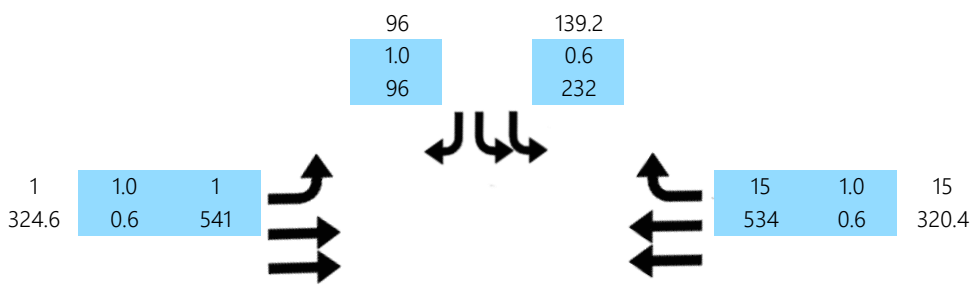
3 / 51 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	4.0	+	1.0	5

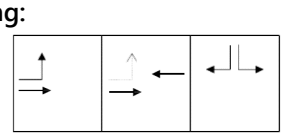
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and SR 48 Ramp
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	5	24/23	14	
No Ped	5	24	14	43
W/ Ped	-	-	-	
Chosen	15	49	16	80

Calculations:

3600 / 80 = 45 Cycles/Hour

EB Left:

1 / 45 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	3.0	+	2.0	5

EB Through:

324.6 / 45 = 7.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.2	2.3	+	4.0	+	1.0	24

SB Left:

139.2 / 45 = 3.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.1	2.3	+	3.5	+	1.0	14

SB Right: (Channelized Right-Turn Lane)

96 / 45 = 2.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.1	3.0	+	0.0	0.0	+	3.5	+	1.0	11

WB Through:

320.4 / 45 = 7.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.1	2.3	+	4.0	+	1.0	23

WB Right: (Channelized Right-Turn Lane)

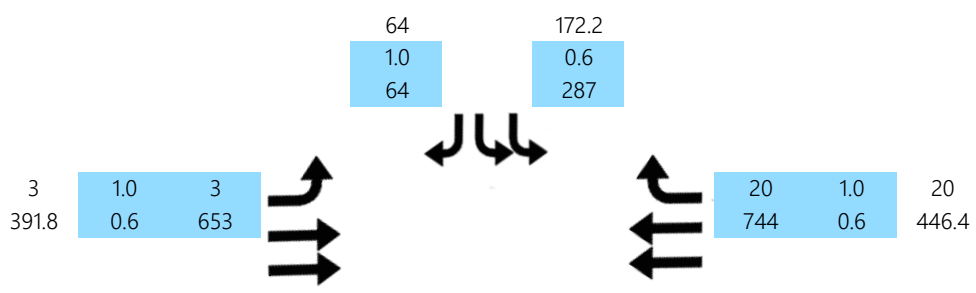
15 / 45 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	1.0	6

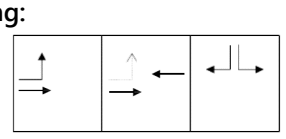
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and SR 48 Ramp
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	16	15	46
UA	5	27/30	15	
No Ped	5	30	15	50
W/ Ped	-	-	-	
Chosen	15	47	18	80

Calculations:

3600 / 80 = 45 Cycles/Hour

EB Left:

3 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	3.0	+	2.0	5

EB Through:

391.8 / 45 = 8.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.7	2.3	+	4.0	+	1.0	27

SB Left:

172.2 / 45 = 3.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.8	2.3	+	3.5	+	1.0	15

SB Right: (Channelized Right-Turn Lane)

64 / 45 = 1.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.4	3.0	+	0.0	0.0	+	3.5	+	1.0	9

WB Through:

446.4 / 45 = 9.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	6.9	2.3	+	4.0	+	1.0	30

WB Right: (Channelized Right-Turn Lane)

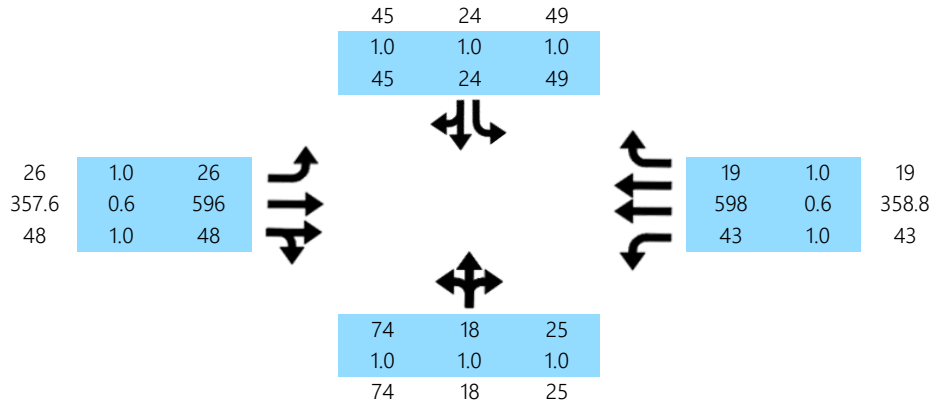
20 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	4.0	+	1.0	6

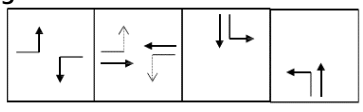
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and North Charlotte Street
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15	61
UA	8/8	25/23/6	8/9	12	
No Ped	8	25	9	12	54
W/ Ped	-	-	-	-	
Chosen	15	25	15	15	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Approach:

117 / 51 = 2.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.3	3.0	+	0.0	0	+	3.5	+	1.5	12

EB Left:

26 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.0	+	3.0	8

EB Through/Right:

405.6 / 51 = 8.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.0	2.3	+	4.0	+	1.0	25

SB Left:

49 / 51 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0.0	+	3.5	+	1.5	8

SB Through/Right:

69 / 51 = 1.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.4	3.0	+	0.0	0.0	+	3.5	+	1.5	9

WB Left:

43 / 51 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	3.0	+	2.5	8

WB Through:

358.8 / 51 = 7.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.0	2.3	+	4.0	+	1.0	23

WB Right:

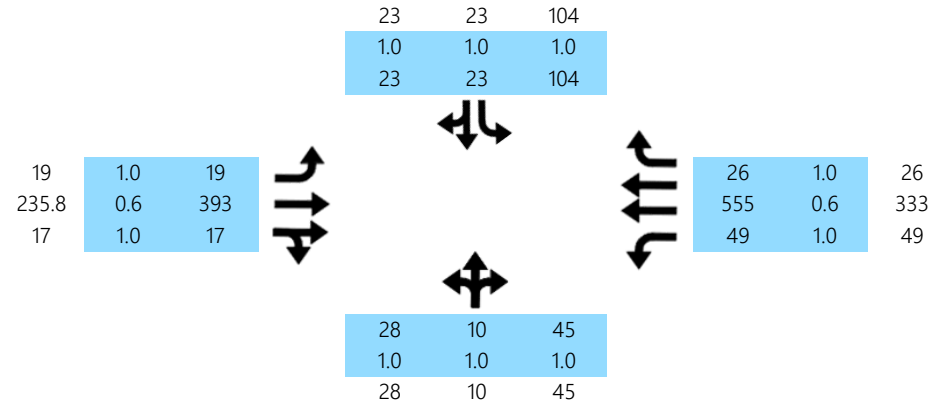
19 / 51 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	4.0	+	1.0	6

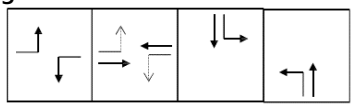
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and North Charlotte Street
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15	46
UA	7/9	20/24/7	12/8	11	
No Ped	9	24	12	11	56
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

83 / 45 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0	+	3.5	+	1.5	11

EB Left:

19 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	3.0	7

EB Through/Right:

252.8 / 45 = 5.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.6	2.3	+	4.0	+	1.0	20

SB Left:

104 / 45 = 2.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.3	3.0	+	0.0	0.0	+	3.5	+	1.5	12

SB Through/Right:

46 / 45 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0.0	+	3.5	+	1.5	8

WB Left:

49 / 45 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	3.0	+	2.5	9

WB Through:

333 / 45 = 7.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.4	2.3	+	4.0	+	1.0	24

WB Right:

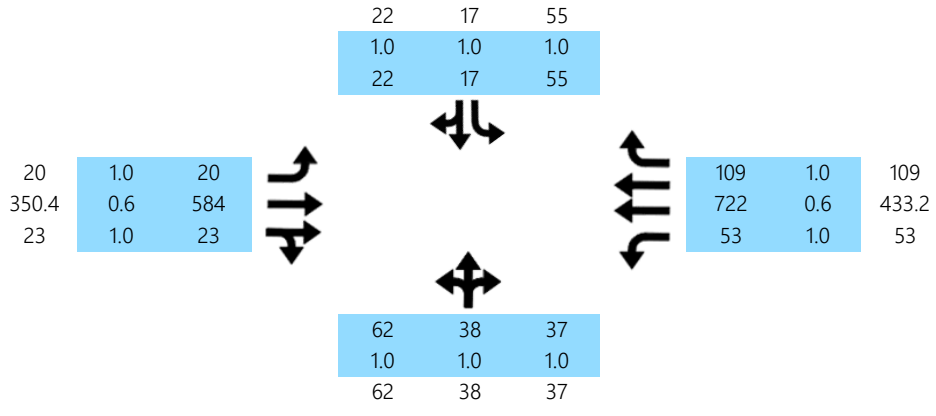
26 / 45 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	4.0	+	1.0	7

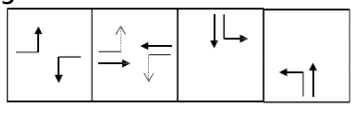
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and North Charlotte Street
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15	46
UA	7/9	26/29/12	9/8	14	
No Ped	9	29	9	14	61
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Approach:

137 / 45 = 3.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.0	2.3	+	3.5	+	1.5	14

EB Left:

20 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	3.0	7

EB Through/Right:

373.4 / 45 = 8.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.3	2.3	+	4.0	+	1.0	26

SB Left:

55 / 45 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0.0	+	3.5	+	1.5	9

SB Through/Right:

39 / 45 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0.0	+	3.5	+	1.5	8

WB Left:

53 / 45 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0.0	+	3.0	+	2.5	9

WB Through:

433.2 / 45 = 9.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	6.6	2.3	+	4.0	+	1.0	29

WB Right:

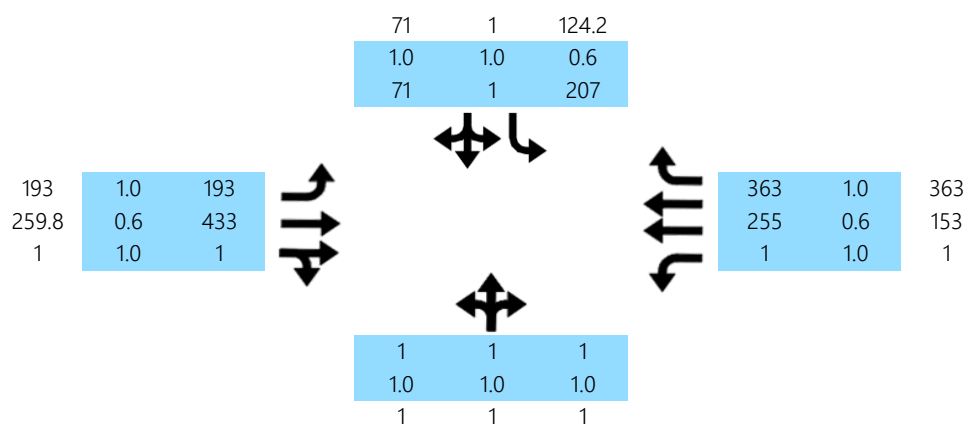
109 / 45 = 2.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.4	3.0	+	0.0	0.0	+	4.0	+	1.0	12

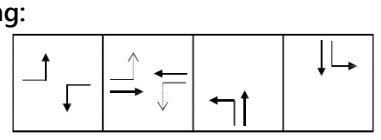
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Henslee Drive (US 70) and Cougar Pride Way
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15/43	46
UA	17/6	19/14/23	4	17	
No Ped	17	23	6	17	63
W/ Ped	17	23	6	43	89
Chosen	17	20	12	21	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Appraoch:

3 / 51 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0	+	3.0	+	1.0	4

EB Left:

193 / 51 = 3.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.8	2.3	+	3.0	+	3.0	17

EB Through/Right:

260.8 / 51 = 5.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.1	2.3	+	4.0	+	1.0	19

SB Approach:

196.2 / 51 = 3.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.8	2.3	+	3.0	+	3.0	17

WB Left:

1 / 51 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	3.0	+	3.0	6

WB Through:

153 / 51 = 3.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.0	0.0	+	4.0	+	1.0	14

WB Right:

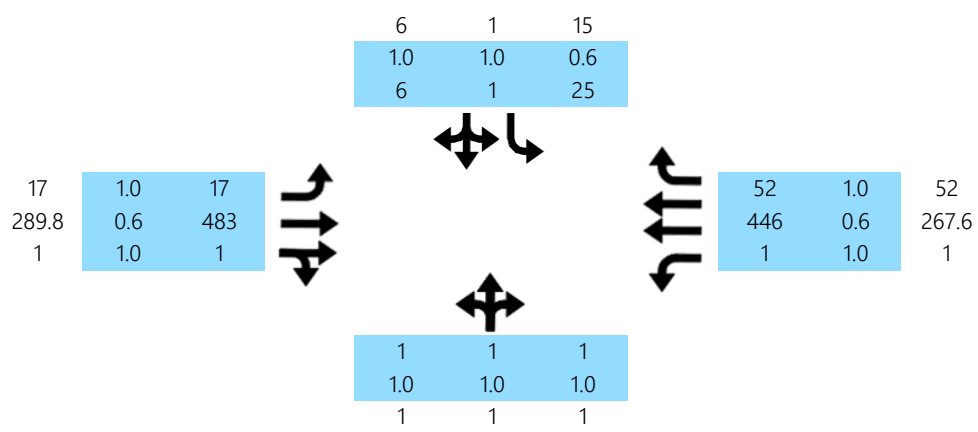
363 / 51 = 7.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.1	2.3	+	4.0	+	1.0	23

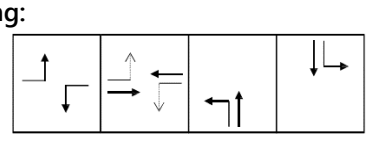
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Henslee Drive (US 70) and Cougar Pride Way
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15/43	46
UA	7/6	22/21/8	4	7	
No Ped	7	22	6	7	42
W/ Ped	7	22	6	43	78
Chosen	15	35	12	18	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Appraoch:

3 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0	+	3.0	+	1.0	4

EB Left:

17 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	3.0	7

EB Through/Right:

290.8 / 45 = 6.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.5	2.3	+	4.0	+	1.0	22

SB Approach:

22 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.0	+	3.0	7

WB Left:

1 / 45 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	3.0	+	3.0	6

WB Through:

267.6 / 45 = 5.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.9	2.3	+	4.0	+	1.0	21

WB Right:

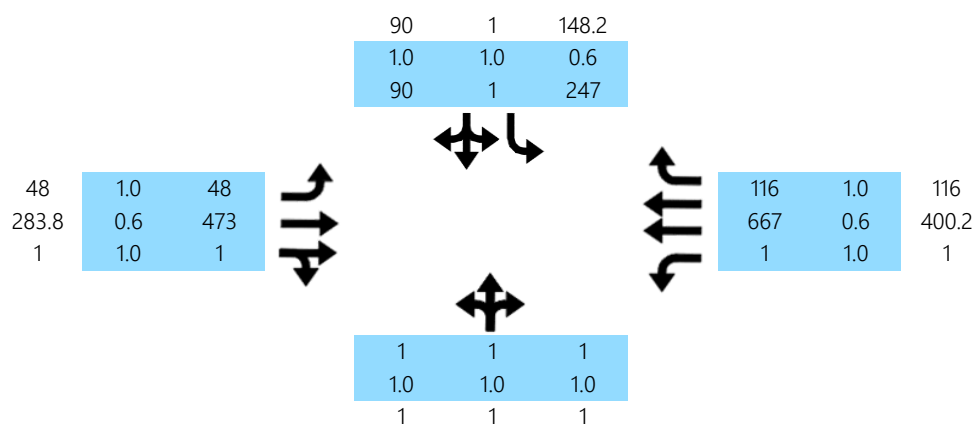
52 / 45 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0.0	+	4.0	+	1.0	8

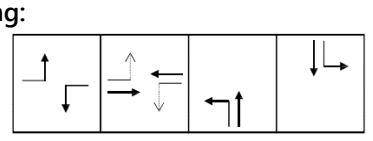
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Henslee Drive (US 70) and Cougar Pride Way
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	16	15	15/43	46
UA	9/6	22/28/13	4	20	
No Ped	9	22	6	20	57
W/ Ped	9	22	6	43	80
Chosen	15	30	12	23	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Appraoch:

3 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0	+	3.0	+	1.0	4

EB Left:

48 / 45 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	3.0	+	3.0	9

EB Through/Right:

284.8 / 45 = 6.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.3	2.3	+	4.0	+	1.0	22

SB Approach:

239.2 / 45 = 5.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.3	2.3	+	3.0	+	3.0	20

WB Left:

1 / 45 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	3.0	+	3.0	6

WB Through:

400.2 / 45 = 8.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.9	2.3	+	4.0	+	1.0	28

WB Right:

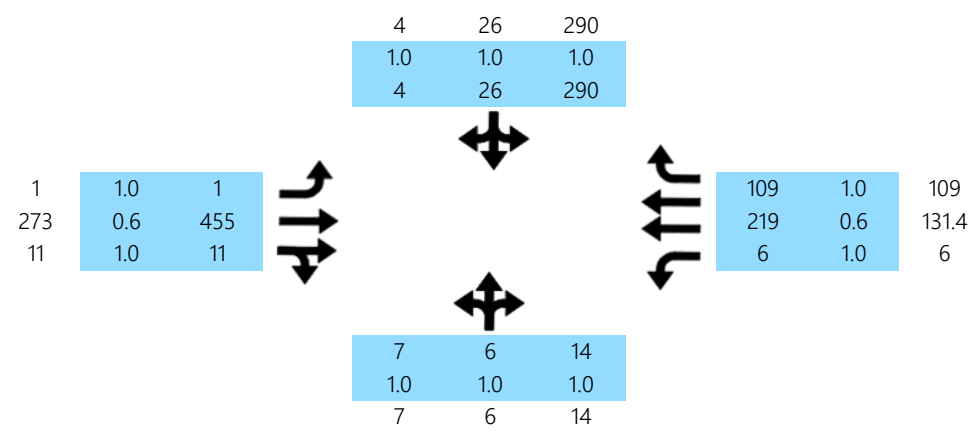
116 / 45 = 2.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.6	3.0	+	0.0	0.0	+	4.0	+	1.0	13

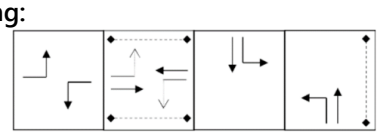
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	50	15	15/50	80
UA	6/6	21/14/12	23	8	
No Ped	6	21	23	8	58
W/ Ped	6	50	23	50	129
Chosen	13	21	23	13	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Appraoch:

27 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0	+	3.5	+	2.5	8

EB Left:

1 / 51 = 0.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.0	3.0	+	0.0	0.0	+	4.0	+	2.0	6

EB Through/Right:

284 / 51 = 5.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.6	2.3	+	5.0	+	1.0	21

SB Approach:

320 / 51 = 6.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.3	2.3	+	4.0	+	2.0	23

WB Left:

6 / 51 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	4.0	+	2.0	6

WB Through:

131.4 / 51 = 2.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.6	3.0	+	0.0	0.0	+	5.0	+	1.0	14

WB Right:

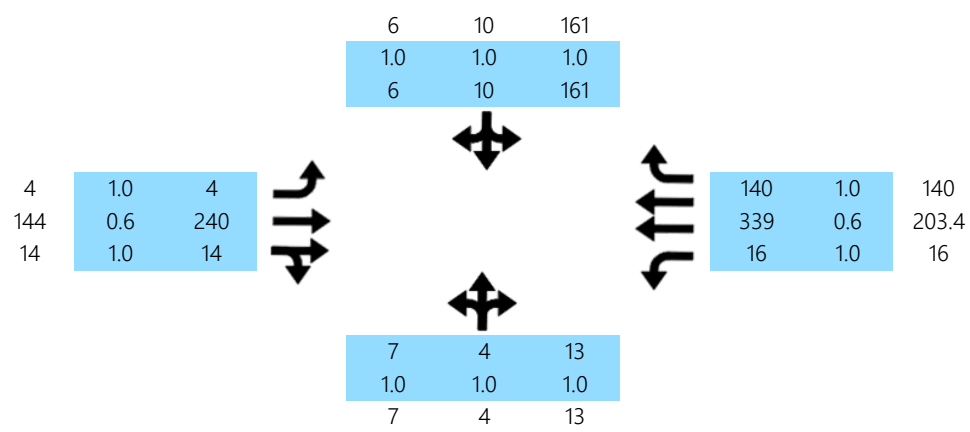
109 / 51 = 2.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.1	3.0	+	0.0	0.0	+	5.0	+	1.0	12

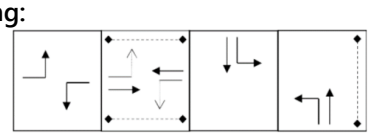
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	50	15	15/50	80
UA	6/7	16/18/15	17	8	
No Ped	7	18	17	8	50
W/ Ped	7	50	17	50	124
Chosen	15	30	20	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Appraoch:

24 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0	+	3.5	+	2.5	8

EB Left:

4 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	4.0	+	2.0	6

EB Through/Right:

158 / 45 = 3.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.5	2.3	+	5.0	+	1.0	16

SB Approach:

177 / 45 = 3.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.9	2.3	+	4.0	+	2.0	17

WB Left:

16 / 45 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	4.0	+	2.0	7

WB Through:

203.4 / 45 = 4.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.5	2.3	+	5.0	+	1.0	18

WB Right:

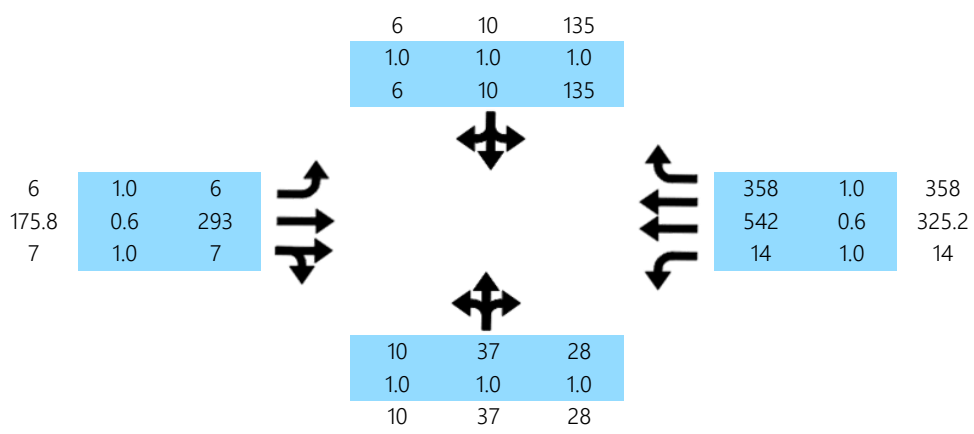
140 / 45 = 3.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.1	2.3	+	5.0	+	1.0	15

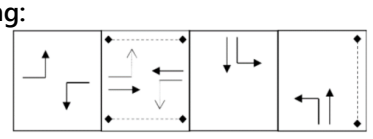
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	50	15	15/50	80
UA	6/7	17/25/26	16	11	
No Ped	7	26	16	11	60
W/ Ped	7	50	16	50	123
Chosen	15	32	18	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Appraoch:

75 / 45 = 1.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.7	3.0	+	0.0	0	+	3.5	+	2.5	11

EB Left:

6 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	4.0	+	2.0	6

EB Through/Right:

182.8 / 45 = 4.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.1	2.3	+	5.0	+	1.0	17

SB Approach:

151 / 45 = 3.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.4	2.3	+	4.0	+	2.0	16

WB Left:

14 / 45 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	2.0	7

WB Through:

325.2 / 45 = 7.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.2	2.3	+	5.0	+	1.0	25

WB Right:

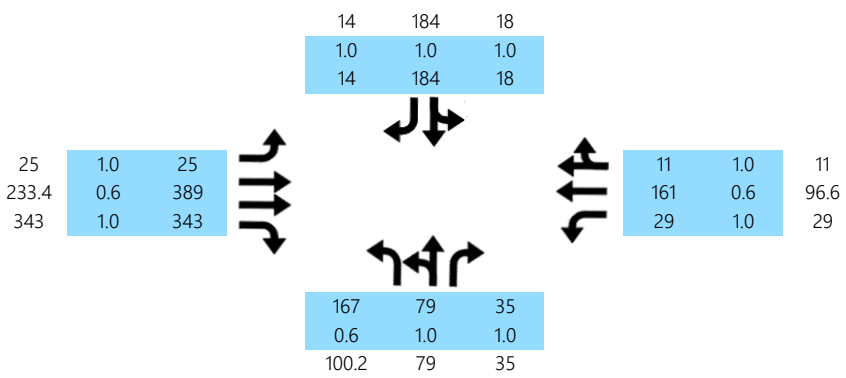
358 / 45 = 8.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.0	2.3	+	5.0	+	1.0	26

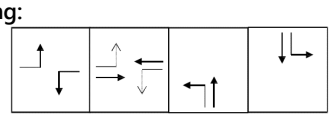
Dickson Signal Timing Study
US 70 Corridor
AM Peak

Intersection: Highway 70 West (US 70) and Beasley Drive
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/8	19/12	16/8	16/6	
No Ped	8	19	16	16	59
W/ Ped	-	-	-	-	
Chosen	13	23	17	17	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Through/Left:

179.2 / 51 = 3.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.5	2.3	+	4.5	+	1.0	16

NB Right:

35 / 51 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0	+	4.5	+	1.0	8

EB Left:

25 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	4.0	+	2.0	7

EB Through:

233.4 / 51 = 4.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.6	2.3	+	5.0	+	1.0	19

EB Right: (Channelized Right-Turn Lane)

343 / 51 = 6.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.7	2.3	+	5.0	+	1.0	24

SB Through/Left:

202 / 51 = 4.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.0	2.3	+	3.5	+	1.5	16

SB Right:

14 / 51 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	3.5	+	1.5	6

WB Left:

29 / 51 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	4.0	+	2.0	8

WB Through/Right:

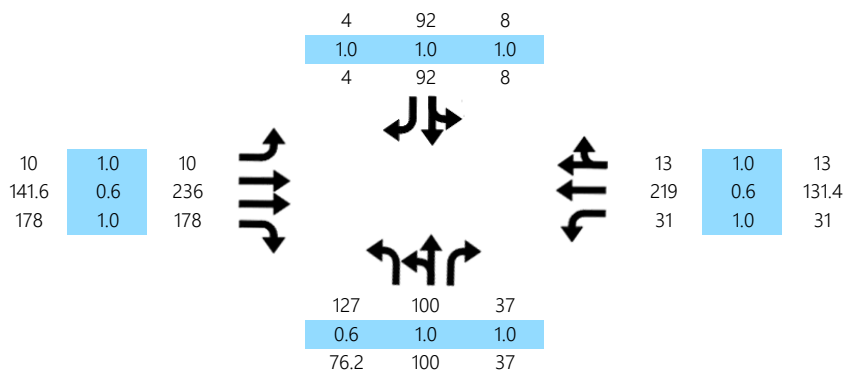
107.6 / 51 = 2.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.1	3.0	+	0.0	0.0	+	5.0	+	1.0	12

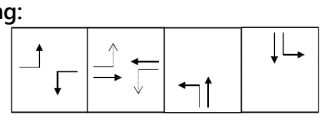
Dickson Signal Timing Study
US 70 Corridor
Midday Peak

Intersection: Highway 70 West (US 70) and Beasley Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/8	15/15	17/8	12/5	
No Ped	8	15	17	12	52
W/ Ped	-	-	-	-	
Chosen	15	30	20	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Through/Left:

176.2 / 45 = 3.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.9	2.3	+	4.5	+	1.0	17

NB Right:

37 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0	+	4.5	+	1.0	8

EB Left:

10 / 45 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0.0	+	4.0	+	2.0	7

EB Through:

141.6 / 45 = 3.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.1	2.3	+	5.0	+	1.0	15

EB Right: (Channelized Right-Turn Lane)

178 / 45 = 4.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.0	2.3	+	5.0	+	1.0	17

SB Through/Left:

100 / 45 = 2.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.2	3.0	+	0.0	0.0	+	3.5	+	1.5	12

SB Right:

4 / 45 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	3.5	+	1.5	5

WB Left:

31 / 45 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	4.0	+	2.0	8

WB Through/Right:

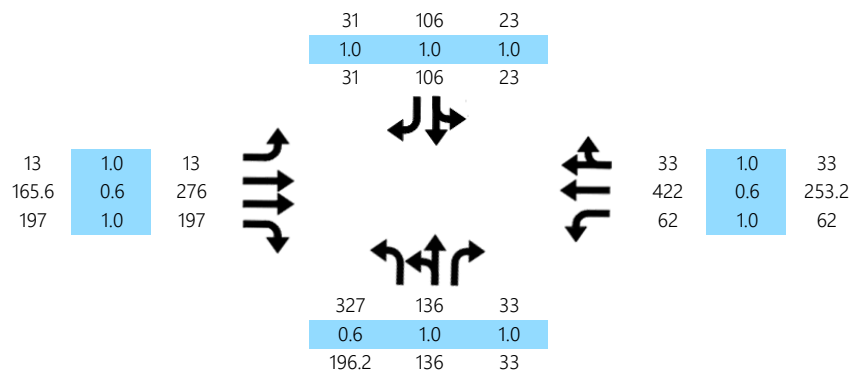
144.4 / 45 = 3.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.2	2.3	+	5.0	+	1.0	15

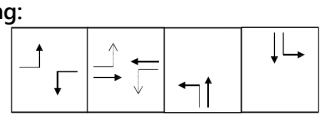
Dickson Signal Timing Study
US 70 Corridor
PM Peak

Intersection: Highway 70 West (US 70) and Beasley Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/10	17/23	25/8	14/7	
No Ped	10	23	25	14	72
W/ Ped	-	-	-	-	
Chosen	15	25	25	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Through/Left:

332.2 / 45 = 7.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.4	2.3	+	4.5	+	1.0	25

NB Right:

33 / 45 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0	+	4.5	+	1.0	8

EB Left:

13 / 45 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	2.0	7

EB Through:

165.6 / 45 = 3.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.7	2.3	+	5.0	+	1.0	17

EB Right: (Channelized Right-Turn Lane)

197 / 45 = 4.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.4	2.3	+	5.0	+	1.0	18

SB Through/Left:

129 / 45 = 2.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.9	3.0	+	0.0	0.0	+	3.5	+	1.5	14

SB Right:

31 / 45 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	3.5	+	1.5	7

WB Left:

62 / 45 = 1.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.4	3.0	+	0.0	0.0	+	4.0	+	2.0	10

WB Through/Right:

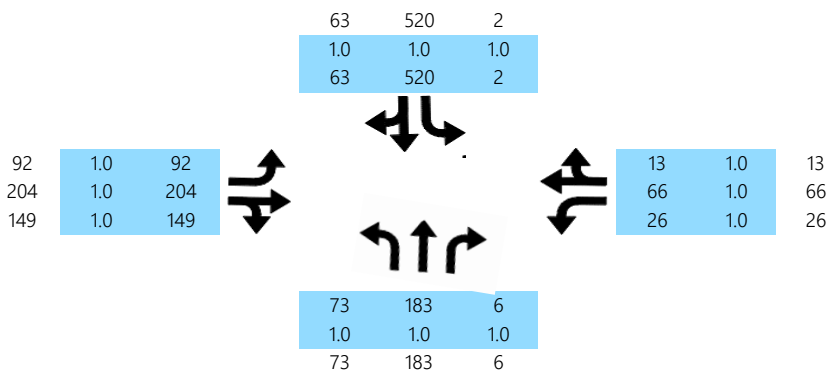
286.2 / 45 = 6.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.4	2.3	+	5.0	+	1.0	23

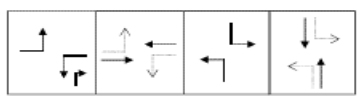
Dickson Signal Timing Study
Beasley Corridor
AM Peak

Intersection: Beasley Drive and Center Avenue (SR 48)
Chosen Cycle Length: 90 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	15	15	17	62
UA	13/7	28/12	11/6	19/6/42	
No Ped	13	28	11	42	94
W/ Ped	-	-	-	-	
Chosen	12	26	12	40	90

Calculations:

3600 / 90 = 40 Cycles/Hour

NB Left:

73 / 40 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0	+	4.0	+	2.0	11

NB Thru:

183 / 40 = 4.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.6	2.3	+	5.0	+	1.0	19

NB Right:

6 / 40 = 0.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.2	3.0	+	0.0	0	+	5.0	+	1.0	6

EB Left:

92 / 40 = 2.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.3	3.0	+	0.0	0.0	+	4.0	+	2.0	13

EB Through/Right:

353 / 40 = 8.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.8	2.3	+	5.0	+	1.0	28

SB Left:

2 / 40 = 0.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.1	3.0	+	0.0	0.0	+	4.0	+	2.0	6

SB Through/Right:

583 / 40 = 14.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	11.6	2.3	+	5.0	+	1.0	42

WB Left:

26.0 / 40 = 0.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.7	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Through/Right:

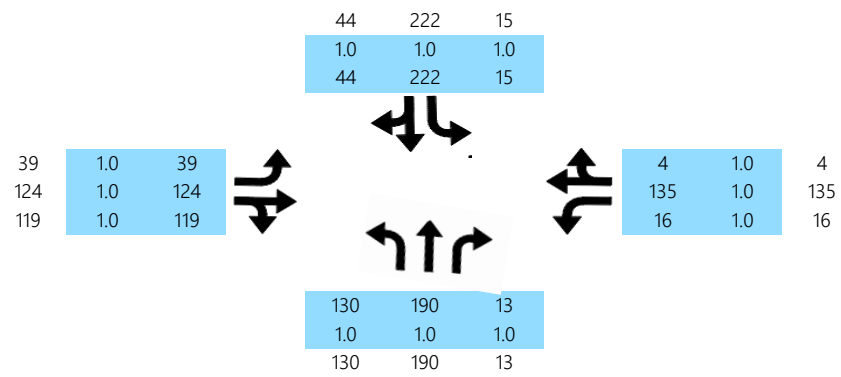
79 / 40 = 2.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.0	3.0	+	0.0	0.0	+	5.0	+	1.0	12

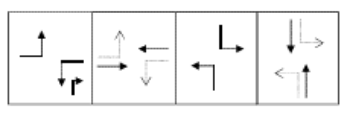
Dickson Signal Timing Study
Beasley Corridor
MD Peak

Intersection: Beasley Drive and Center Avenue (SR 48)
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	15	15	17	62
UA	8/6	19/14	14/7	17/7/20	
No Ped	8	19	14	20	61
W/ Ped	-	-	-	-	
Chosen	12	20	15	23	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Left:

130 / 51 = 2.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.5	3.0	+	0.0	0	+	4.0	+	2.0	14

NB Thru:

190 / 51 = 3.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.7	2.3	+	5.0	+	1.0	17

NB Right:

13 / 51 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0	+	5.0	+	1.0	7

EB Left:

39 / 51 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	4.0	+	2.0	8

EB Through/Right:

243 / 51 = 4.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.8	2.3	+	5.0	+	1.0	19

SB Left:

15 / 51 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	2.0	7

SB Through/Right:

266 / 51 = 5.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.2	2.3	+	5.0	+	1.0	20

WB Left:

16.0 / 51 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	3.0	+	2.5	6

WB Through/Right:

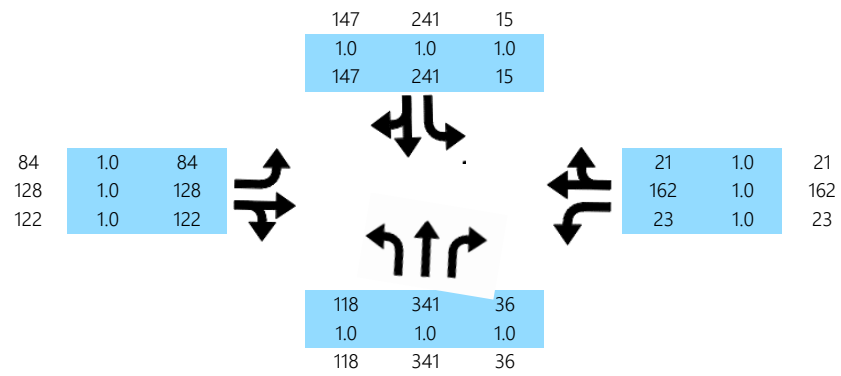
139 / 51 = 2.7 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.7	3.0	+	0.0	0.0	+	5.0	+	1.0	14

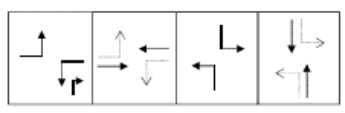
Dickson Signal Timing Study
Beasley Corridor
PM Peak

Intersection: Beasley Drive and Center Avenue (SR 48)
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	15	15	17	62
UA	12/7	21/17	14/7	26/8/28	
No Ped	12	21	14	28	75
W/ Ped	-	-	-	-	
Chosen	15	21	15	29	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Left:

118 / 45 = 2.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.6	3.0	+	0.0	0	+	4.0	+	2.0	14

NB Thru:

341 / 45 = 7.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	4.6	2.3	+	5.0	+	1.0	26

NB Right:

36 / 45 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0	+	5.0	+	1.0	8

EB Left:

84 / 45 = 1.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.9	3.0	+	0.0	0.0	+	4.0	+	2.0	12

EB Through/Right:

250 / 45 = 5.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.6	2.3	+	5.0	+	1.0	21

SB Left:

15 / 45 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	2.0	7

SB Through/Right:

388 / 45 = 8.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	5.6	2.3	+	5.0	+	1.0	28

WB Left:

23.0 / 45 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Through/Right:

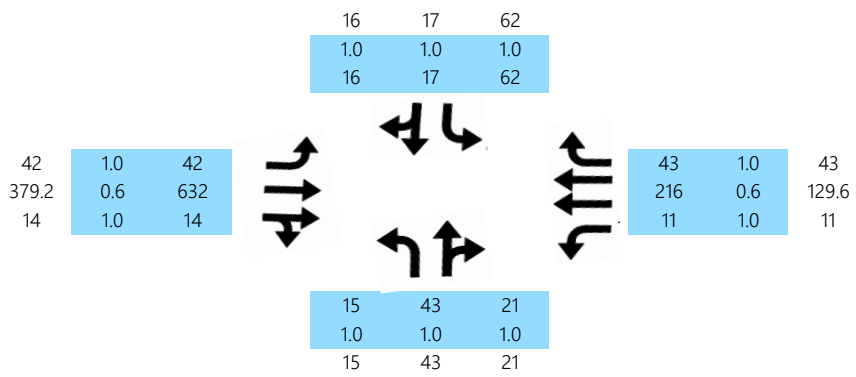
183 / 45 = 4.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.1	2.3	+	5.0	+	1.0	17

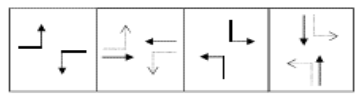
Dickson Signal Timing Study
Beasley Corridor
AM Peak

Intersection: Beasley Drive and Cowan Road
Chosen Cycle Length: 90 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	9/6	31/16/9	7/10	10/7	
No Ped	9	31	10	10	60
W/ Ped	-	-	-	-	
Chosen	15	45	15	15	90

Calculations:

3600 / 90 = 40 Cycles/Hour

NB Left:

15 / 40 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0	+	3.0	+	3.0	7

NB Through/Right:

64 / 40 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3.0	+	0.0	0	+	3.5	+	1.5	10

EB Left:

42 / 40 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	4.0	+	2.0	9

EB Through/Right:

393.2 / 40 = 9.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	6.8	2.3	+	5.0	+	1.0	31

SB Left:

62 / 40 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3.0	+	0.0	0.0	+	3.0	+	2.5	10

SB Through/Right:

33 / 40 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3.0	+	0.0	0.0	+	3.5	+	1.5	7

WB Left:

11 / 40 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	3.0	+	2.5	6

WB Through:

129.6 / 40 = 3.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.2	2.3	+	5.0	+	1.0	16

WB Right:

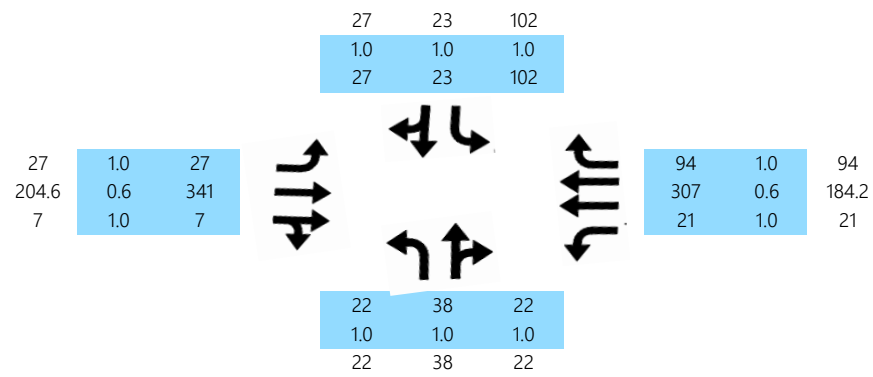
43 / 40 = 1.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.1	3.0	+	0.0	0.0	+	5.0	+	1.0	9

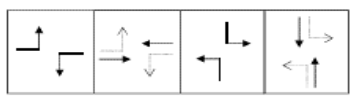
Dickson Signal Timing Study
Beasley Corridor
MD Peak

Intersection: Beasley Drive and Cowan Road
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	8/7	18/16/12	7/12	9/8	
No Ped	8	18	12	9	47
W/ Ped	-	-	-	-	
Chosen	15	25	15	15	70

Calculations:

3600 / 70 = 51 Cycles/Hour

NB Left:

22 / 51 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0	+	3.0	+	3.0	7

NB Through/Right:

60 / 51 = 1.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.2	3.0	+	0.0	0	+	3.5	+	1.5	9

EB Left:

27 / 51 = 0.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.5	3.0	+	0.0	0.0	+	4.0	+	2.0	8

EB Through/Right:

211.6 / 51 = 4.1 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	1.1	2.3	+	5.0	+	1.0	18

SB Left:

102 / 51 = 2.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.0	3.0	+	0.0	0.0	+	3.0	+	2.5	12

SB Through/Right:

50 / 51 = 1.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.0	3.0	+	0.0	0.0	+	3.5	+	1.5	8

WB Left:

21 / 51 = 0.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.4	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Through:

184.2 / 51 = 3.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.6	2.3	+	5.0	+	1.0	16

WB Right:

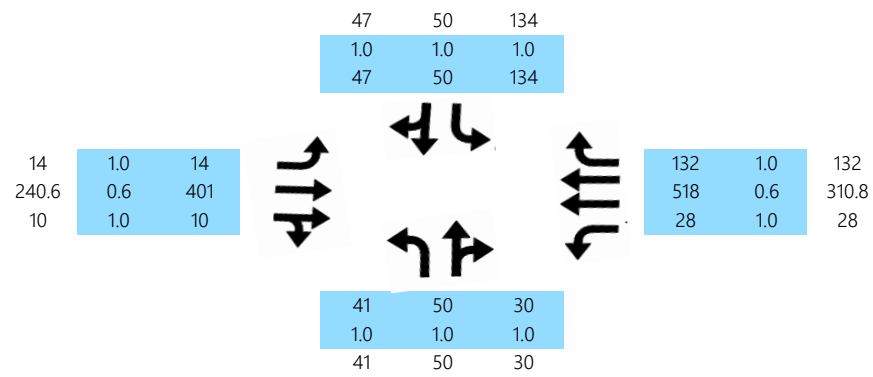
94 / 51 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0.0	+	5.0	+	1.0	12

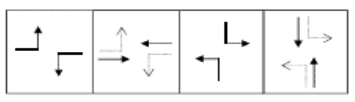
Dickson Signal Timing Study
Beasley Corridor
PM Peak

Intersection: Beasley Drive and Cowan Road
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



					Total
Min	15	17	15	15	62
UA	7/7	21/24/15	9/14	10/11	
No Ped	7	24	14	11	56
W/ Ped	-	-	-	-	
Chosen	15	35	15	15	80

Calculations:

3600 / 80 = 45 Cycles/Hour

NB Left:

41 / 45 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3.0	+	0.0	0	+	3.0	+	3.0	9

NB Through/Right:

80 / 45 = 1.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.8	3.0	+	0.0	0	+	3.5	+	1.5	10

EB Left:

14 / 45 = 0.3 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.3	3.0	+	0.0	0.0	+	4.0	+	2.0	7

EB Through/Right:

250.6 / 45 = 5.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	2.6	2.3	+	5.0	+	1.0	21

SB Left:

134 / 45 = 3.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	0.0	0.0	+	3.0	+	2.5	14

SB Through/Right:

97 / 45 = 2.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.2	3.0	+	0.0	0.0	+	3.5	+	1.5	11

WB Left:

28 / 45 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3.0	+	0.0	0.0	+	3.0	+	2.5	7

WB Through:

310.8 / 45 = 6.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3.0	+	3.9	2.3	+	5.0	+	1.0	24

WB Right:

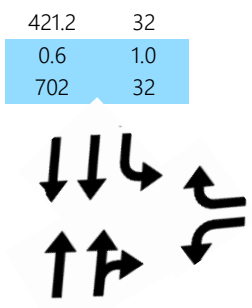
132 / 45 = 2.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.9	3.0	+	0.0	0.0	+	5.0	+	1.0	15

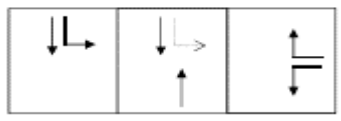
Dickson Signal Timing Study
Beasley Corridor
AM Peak

Intersection: Beasley Drive and Thornton Drive
Chosen Cycle Length: 90 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	15	15	45
UA	7	31/16	7/8	
No Ped	7	31	8	46
W/ Ped	-	-	-	
Chosen	15	60	15	90

Calculations:

3600 / 90 = 40 Cycles/Hour

SB Left:

32 / 40 = 0.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.8	3	+	0.0	0.0	+	3.0	+	1.5	7

SB Through:

421.2 / 40 = 10.5 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	7.5	2.3	+	3.5	+	1.0	31

WB Left:

23 / 40 = 0.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.6	3	+	0.0	0.0	+	3.0	+	2.0	7

WB Right:

36 / 40 = 0.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
0.9	3	+	0.0	0.0	+	3.0	+	2.0	8

NB Through/Right:

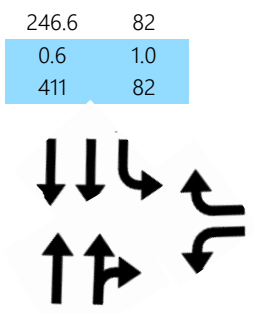
158 / 40 = 4.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.0	2.3	+	3.5	+	1.0	16

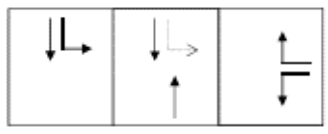
Dickson Signal Timing Study
Beasley Corridor
MD Peak

Intersection: Beasley Drive and Thornton Drive
Chosen Cycle Length: 70 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	15	15	45
UA	9	18/19	13/12	
No Ped	9	19	13	41
W/ Ped	-	-	-	
Chosen	15	35	20	70

Calculations:

3600 / 70 = 51 Cycles/Hour

SB Left:

82 / 51 = 1.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
1.6	3	+	0.0	0.0	+	3.0	+	1.5	9

SB Through:

246.6 / 51 = 4.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	1.8	2.3	+	3.5	+	1.0	18

WB Left:

135 / 51 = 2.6 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.6	3	+	0.0	0.0	+	3.0	+	2.0	13

WB Right:

112 / 51 = 2.2 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.2	3	+	0.0	0.0	+	3.0	+	2.0	12

NB Through/Right:

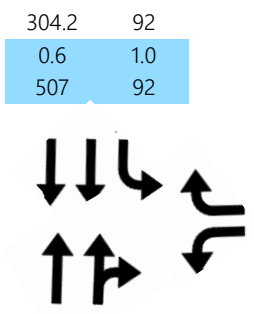
274.8 / 51 = 5.4 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	2.4	2.3	+	3.5	+	1.0	19

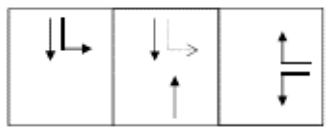
Dickson Signal Timing Study
Beasley Corridor
PM Peak

Intersection: Beasley Drive and Thornton Drive
Chosen Cycle Length: 80 sec

Geometry and Volumes:



Phasing:



				Total
Min	15	15	15	45
UA	11	22/26	11/16	
No Ped	11	26	16	53
W/ Ped	-	-	-	
Chosen	15	40	25	80

Calculations:

3600 / 80 = 45 Cycles/Hour

SB Left:

92 / 45 = 2.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.0	3	+	0.0	0.0	+	3.0	+	1.5	11

SB Through:

304.2 / 45 = 6.8 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	3.8	2.3	+	3.5	+	1.0	22

WB Left:

92 / 45 = 2.0 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
2.0	3	+	0.0	0.0	+	3.0	+	2.0	11

WB Right:

175 / 45 = 3.9 Veh/Cycle

V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	0.9	2.3	+	3.0	+	2.0	16

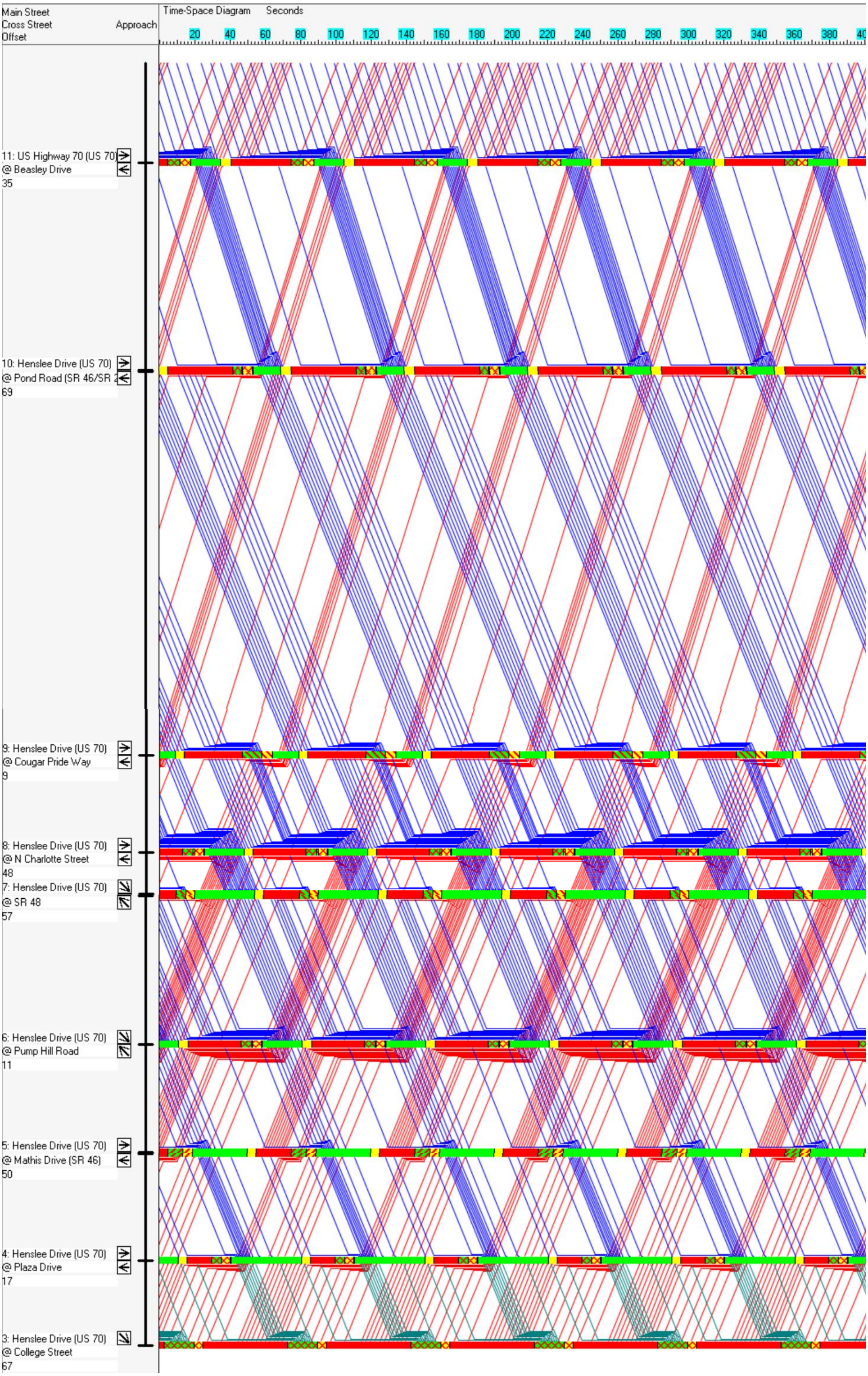
NB Through/Right:

374.8 / 45 = 8.3 Veh/Cycle

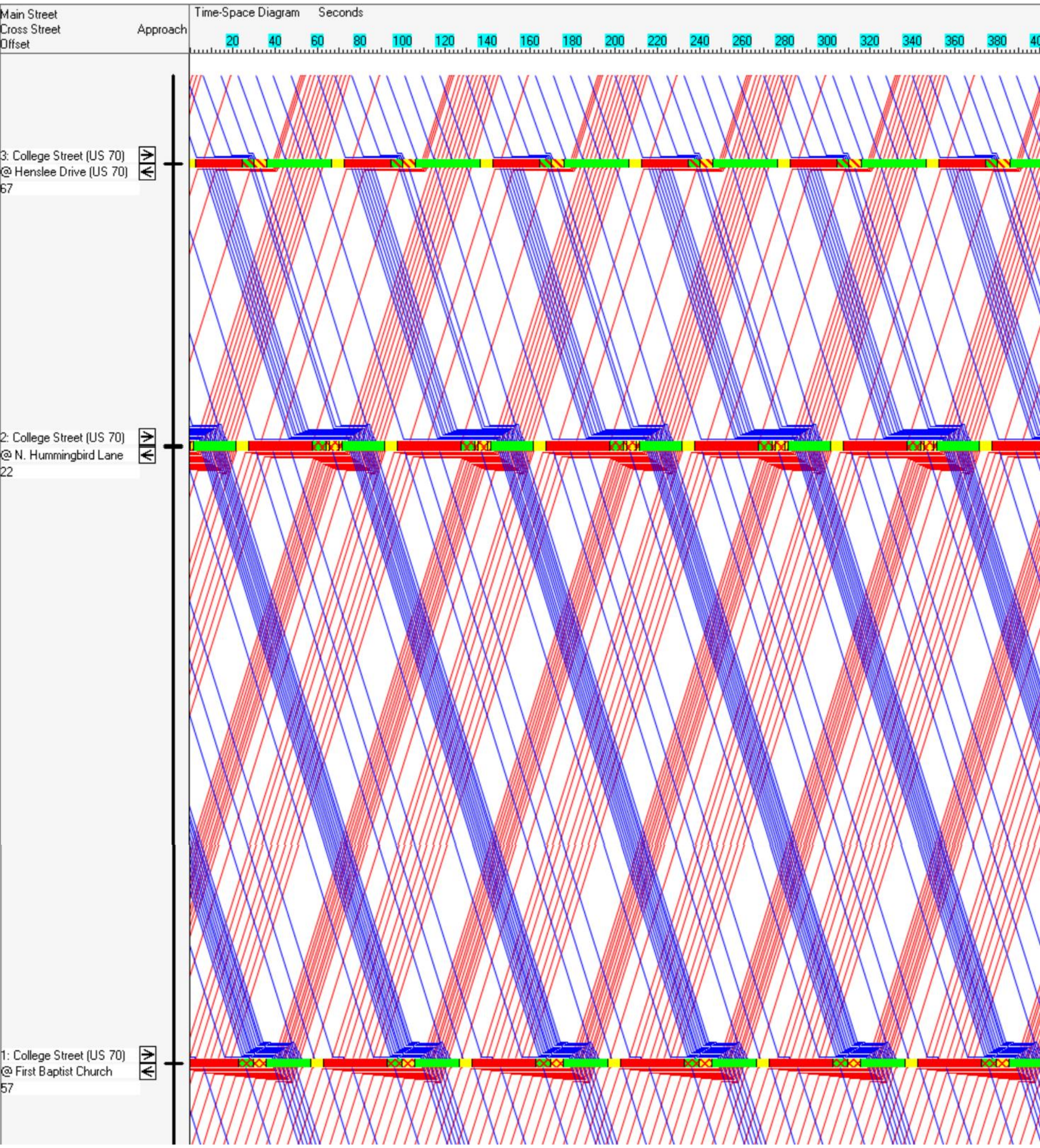
V1	*G1*		*V2*	*G2*		*Y*		*R*	*Total*
3.0	3	+	5.3	2.3	+	3.5	+	1.0	26

APPENDIX F
OFFSET ANALYSIS

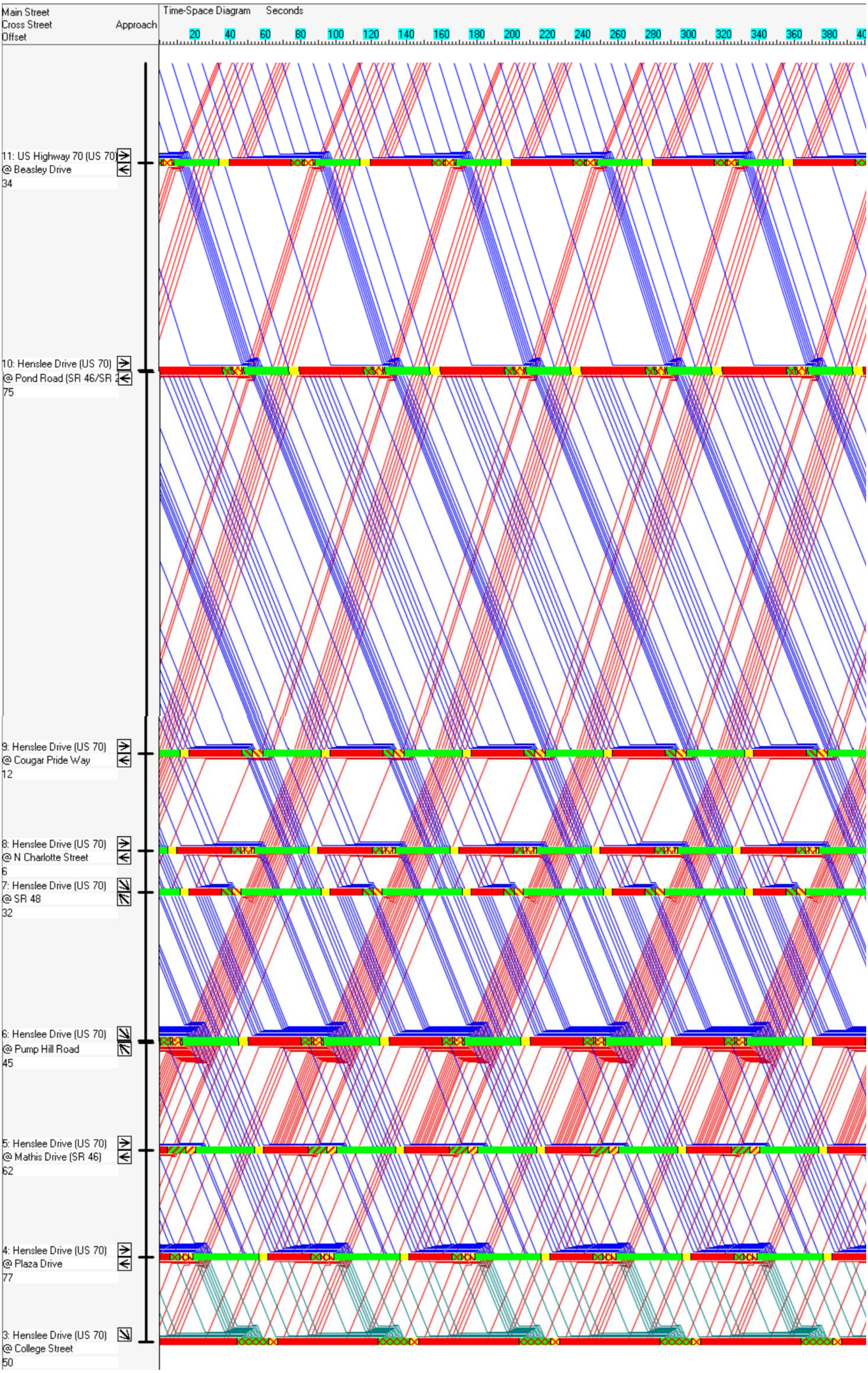
Henslee Drive (US 70) – AM Peak



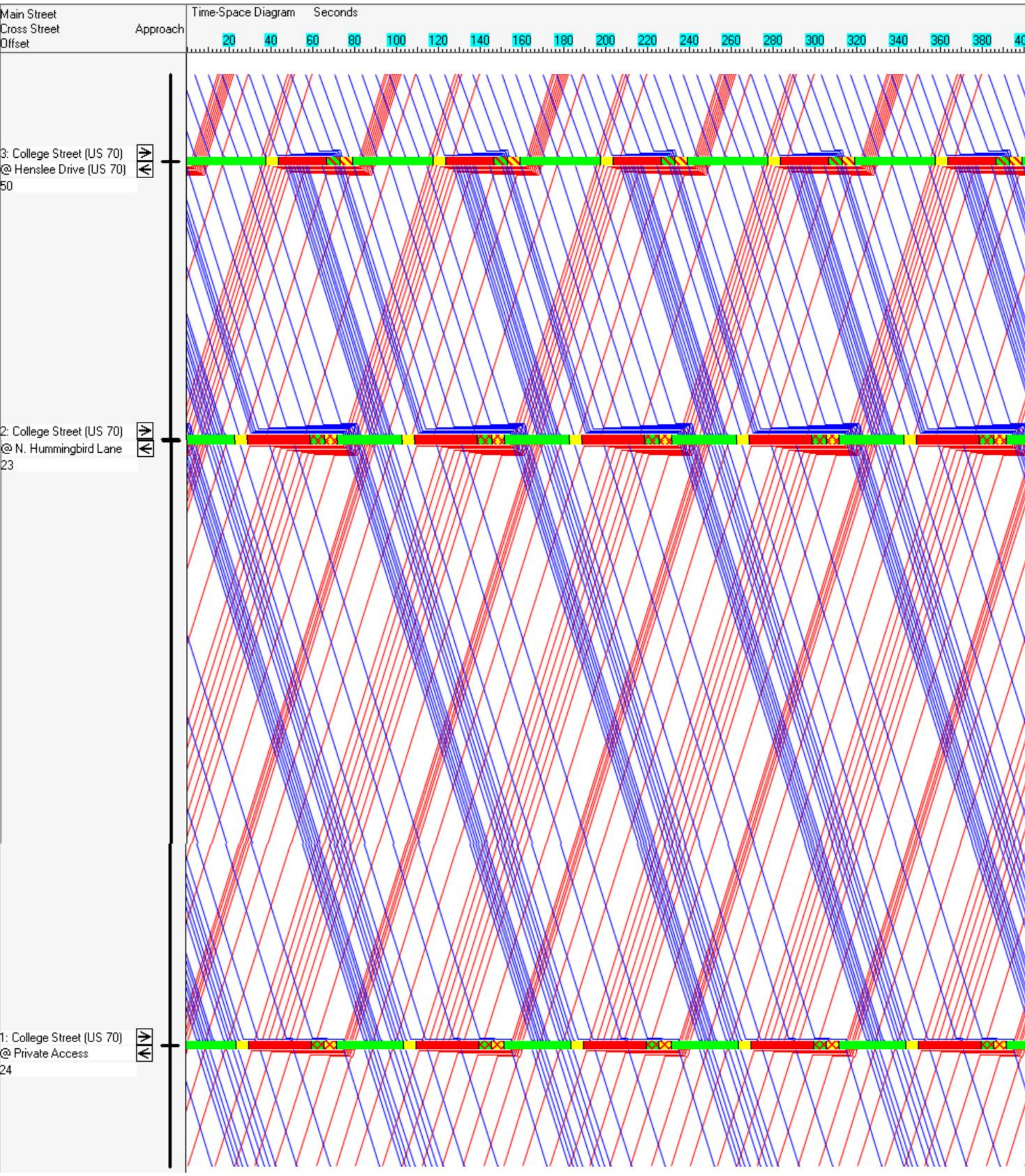
College Street (US 70) – AM Peak



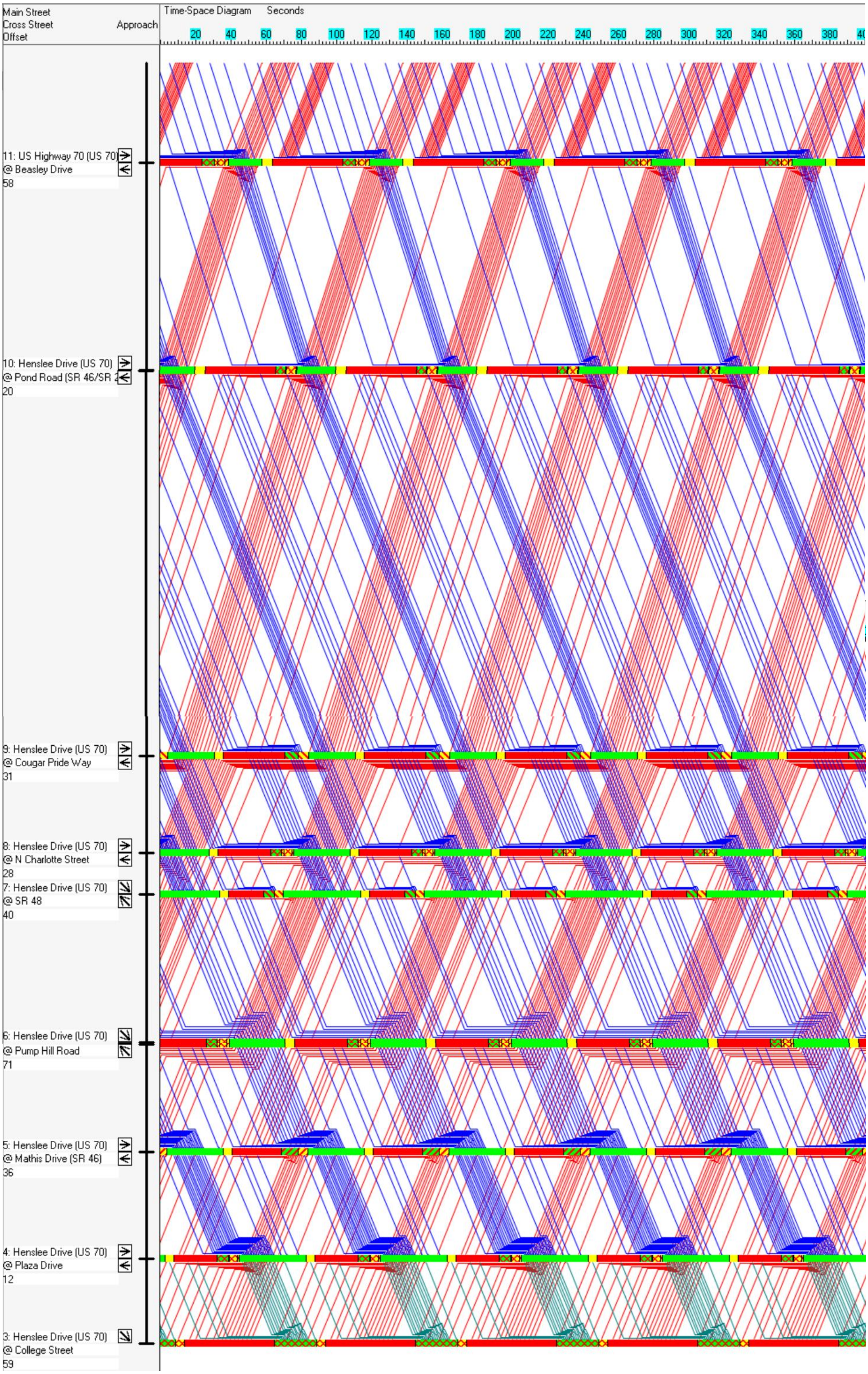
Henslee Drive (US 70) – Midday Peak



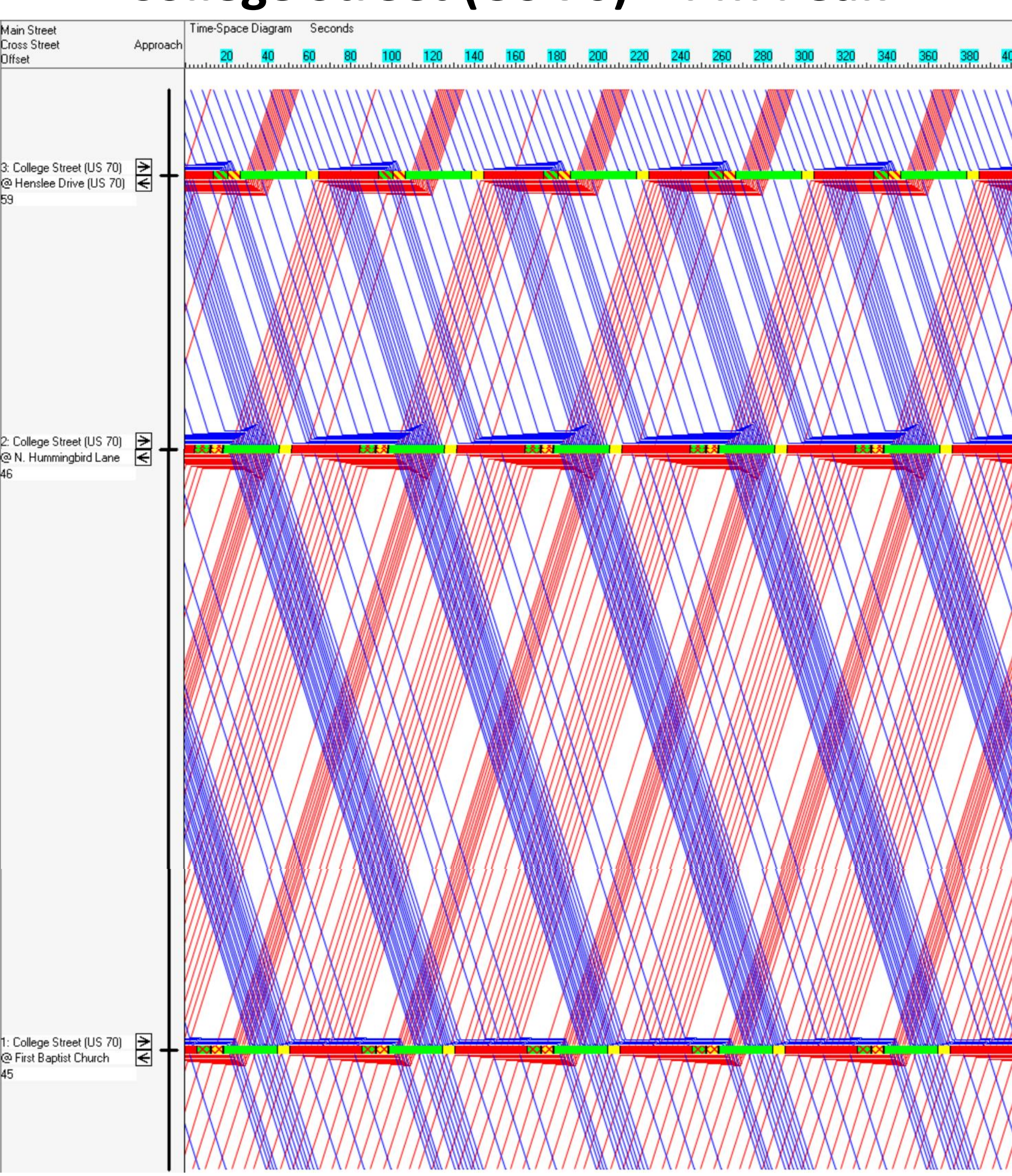
College Street (US 70) – Midday Peak



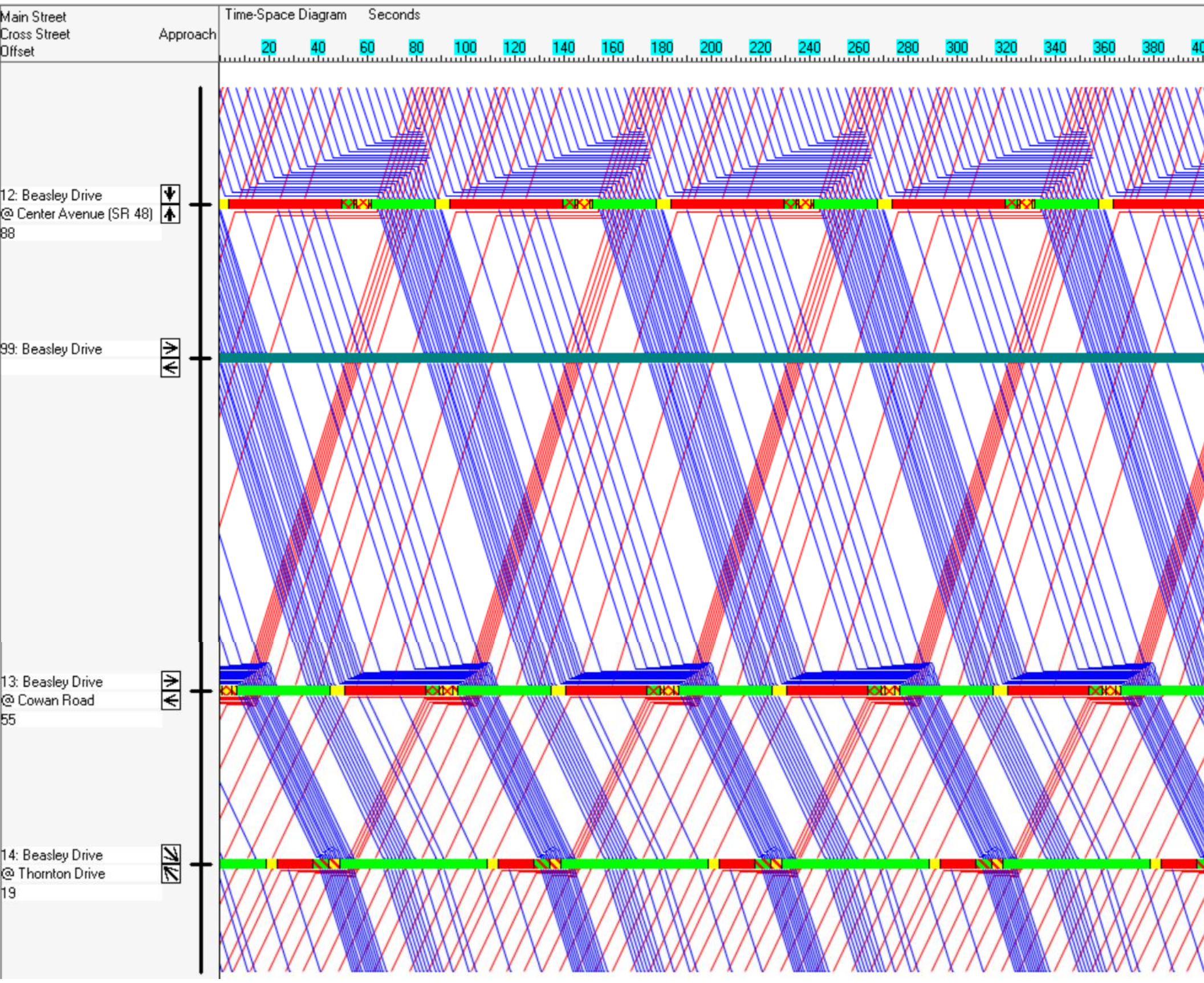
Henslee Drive (US 70) – PM Peak



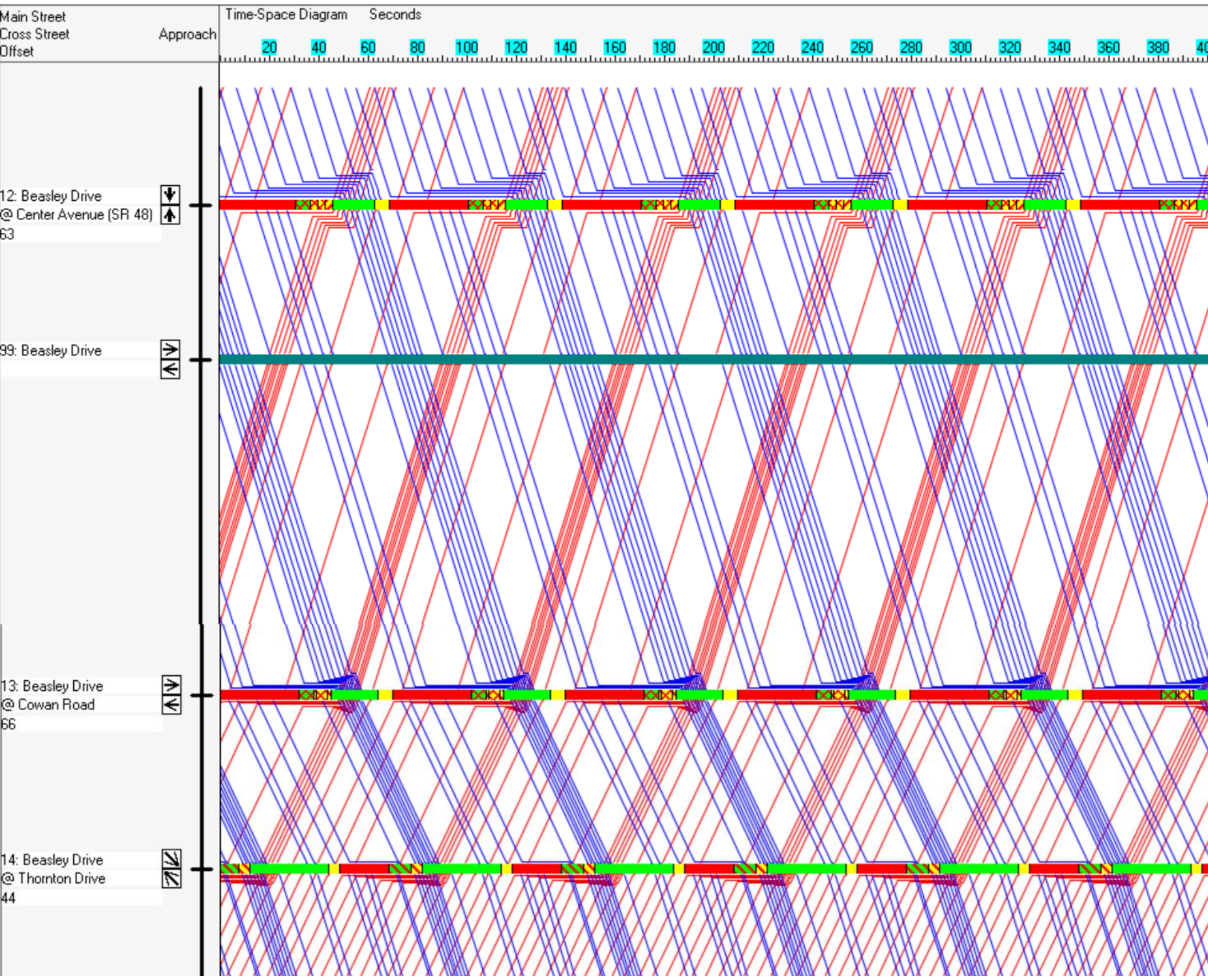
College Street (US 70) – PM Peak



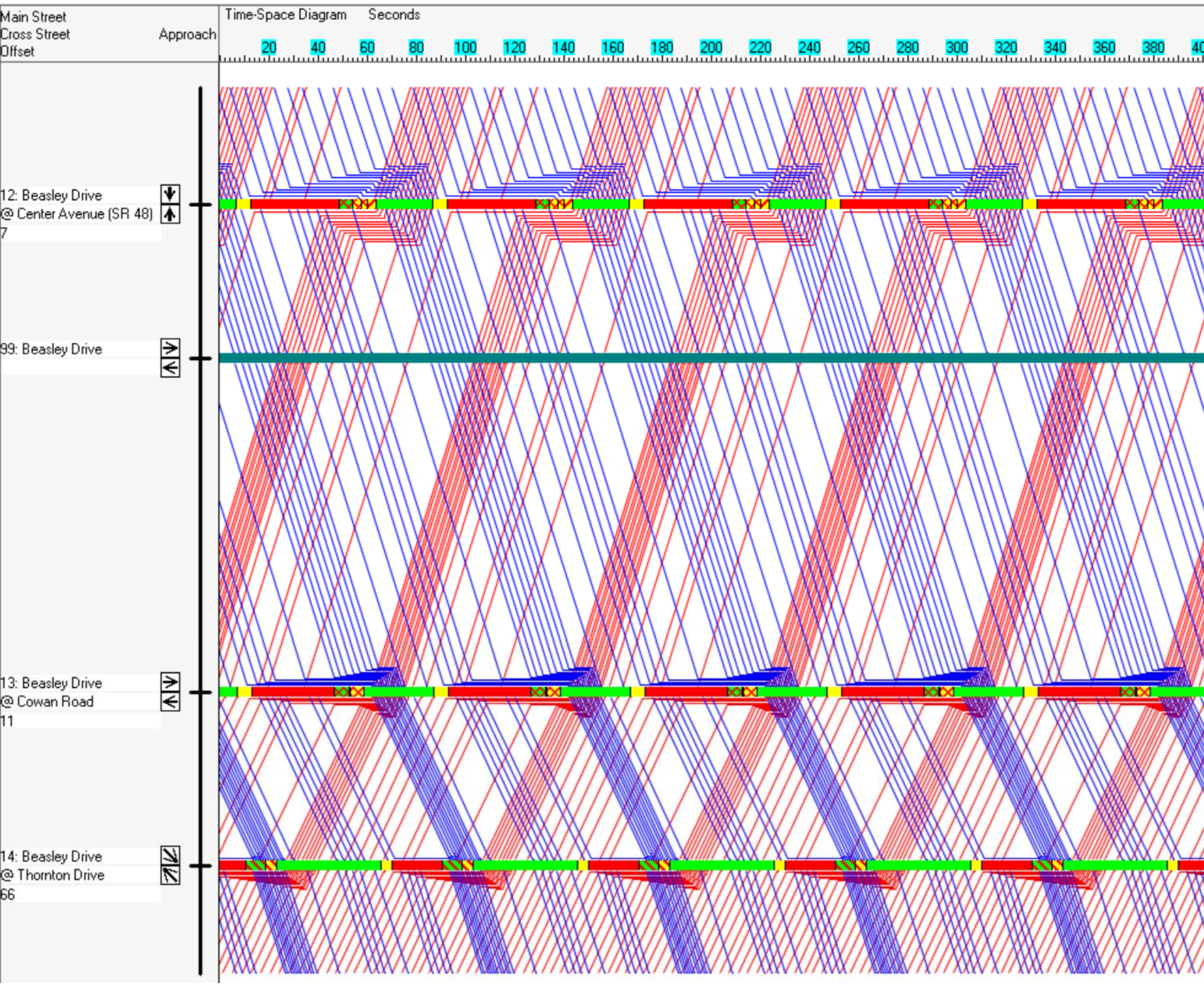
Beasley Drive - AM Peak



Beasley Drive - Midday Peak



Beasley Drive - PM Peak



APPENDIX G
FIELD MONITORING SHEETS

Timing Plan:		AM Peak						
Check		Intersection ID	Φ OR Offset	FROM	TO	Change	NOTES	Initial Date/Time
Field	Sync							
☑	☐	16	Offset	19	64		Coord 2+6 Not 4	MAS 5/11/21
☑	☐	15					Auto Perm to 4 CVAI Turned on	OR 5/17/21
☑	☐	24					Changed C/O/S 2/1/1 to 2/1/2 and 3/1/1 to 3/1/3	OR 5/12/21
☑	☐	13	Φ8	0	20		Dummy Phase	MAS 5/12
☑	☐	23	Φ1	12	16		Φ2 + Φ6 need more time	MAS 5/18
☑	☐	~~23~~ 23	Φ2	26	30		" "	MAS 5/18
☑	☐	23	Φ4	40	32		" "	MAS 5/18
☑	☐	23	Φ5	12	16		" "	MAS 5/18
☑	☐	23	Φ6	26	30		" "	MAS 5/18
☑	☐	23	Φ8	40	32		" "	MAS 5/18
☑	☐	21	Φ2	21	20		Φ4/Φ8 needed min 14	MAS 5/19
☑	☐	21	Φ4	13	14		" "	MAS 5/19
☑	☐	21	Φ6	21	20		" "	MAS 5/19
☑	☐	21	Φ8	13	14		" "	MAS 5/19
☑	☐	17	Offset	19	17		Help Progression	MAS 5/19
☐	☐	16	Offset	64	67		Help Progression	MAS 5/19
☐	☐							
☐	☐							
☐	☐							
☐	☐							
☐	☐							

Timing Plan:		Midday Peak						
Check		Intersection ID	Φ OR Offset	FROM	TO	Change	NOTES	Initial Date/Time
Field	Sync							
☑	☐	16	Offset	20	75		Coord to 2 + 6 Not 4	MAS 5/11/21
☑	☐	13	Φ8	0	20		Dummy Phase	MAS 5/12
☑	☐	25	C10/5				2/1/1 to 2/1/2	MAT 5/12
~~☑~~	☐	~~13~~	~~Offset~~	~~00~~	~~00~~		~~Progression~~	~~MAS 5/19~~
☑	☐	16	Offset	75	50		Progression	MAS 5/19
☐	☐	17	Offset	31	77		Progression	MAS 5/19
☐	☐							
☐	☐							
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☐	☐							
☐	☐							
☐	☐							

Timing Plan:		PM Peak						
Check		Intersection ID	Φ OR Offset	FROM	TO	Change	NOTES	Initial Date/Time
Field	Sync							
☑	☐	16	Offset	40	10		Coord to 2+6 ~~Do~~ Not 4	MAS 5/11/21
☑	☐	13	Ø8	0	28		Dummy Phase	~~MAS~~ 5/12
☑	☐	25	C/O/4				3/1/1 to 3/1/3	MAT 5/12
☑	☐	24	CNA1				CNA1 Pg 2-6	MAT 5/12
☑	☑	16	Offset	10	40		Progression	MAS 5/19
☑	☑	17	Offset	40	0		Progression	5/19 MAS
☑	☑	13	Offset	75	27		Progression	MAS 5/19
☑	☐	21	~~split~~				Ø3 + Ø7 23s to 25s / Ø2+6 27 to 25	MAT 5/20
☐	☐							
☐	☐							
☐	☐							
☐	☐							
☐	☐							
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☐	☐							
☐	☐							

APPENDIX H
SIGNAL CODING SHEETS

SIGNAL CODING SHEETS
PRE-CONDITION

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	6	25		8	6	25		8
PASSAGE	2.5	8.0		3.0	2.5	8.0		3.0
YELLOW	4.0	4.0		4.0	4.0	4.0		4.0
RED CLEAR	2.0	2.0		1.0	2.0	2.0		1.0
WALK								
PED CLEAR								
MAX 1	15	45		20	15	45		20
MAX 2	35	35		35	35	35		35
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X	X				X		
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

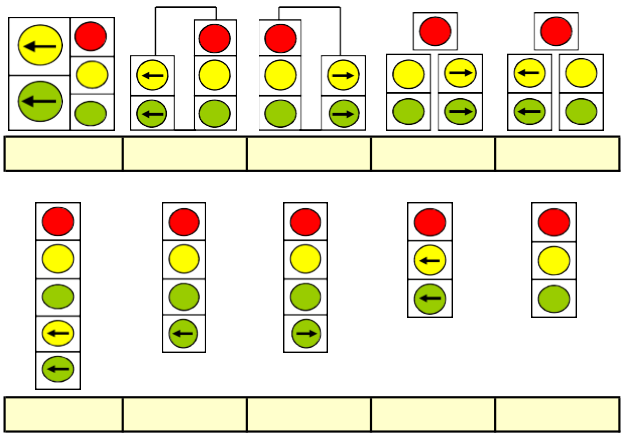
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

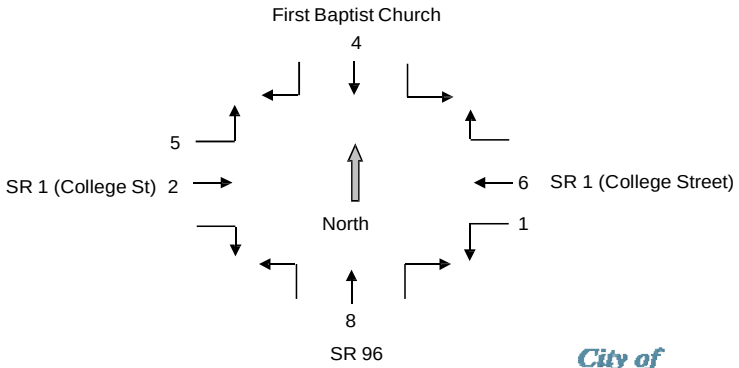
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

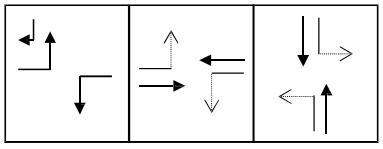
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	80					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: **SR 1 (US 70/College Street) and SR 96**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **15** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	15	5	6	5	15		
PASSAGE	2.0	4.0	2.0	3.0	2.0	4.0		
YELLOW	3.5	4.0	4.0	4.0	3.5	4.0		
RED CLEAR	1.0	2.0	1.5	1.5	1.0	2.0		
WALK								
PED CLEAR								
MAX 1	20	35	20	20	15	35		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL								
MAX RECALL		X				X		
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

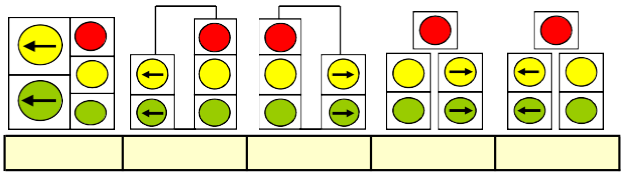
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

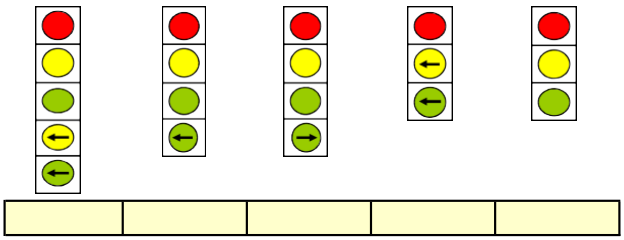
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

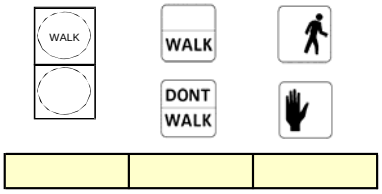
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

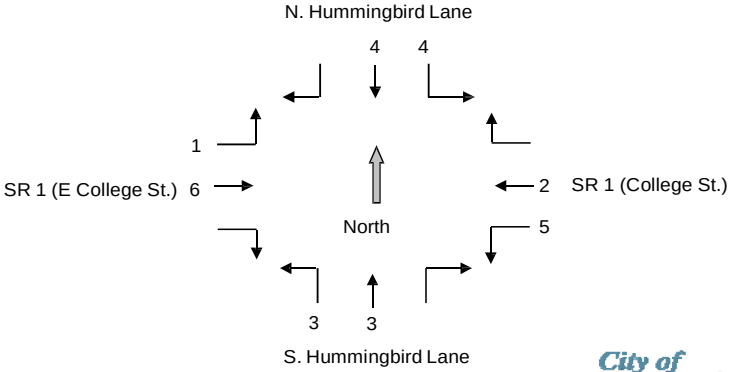
SIGNAL DISPLAYS



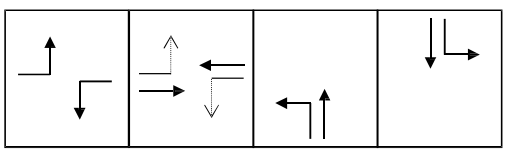




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **15** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

COORDINATION AND OPERATION

INTERSECTION NUMBER: **15** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Kapsch Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	95					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

INTERSECTION NUMBER: **15** ZONE: **C**

INTERSECTION: **SR 1 (US 70/College Street) and Hummingbird Lane**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

City of Dickson Tennessee

McCain
A Company of the SWVRDC Group

ATC eX Series

ZONE: C

INTERSECTION: 16

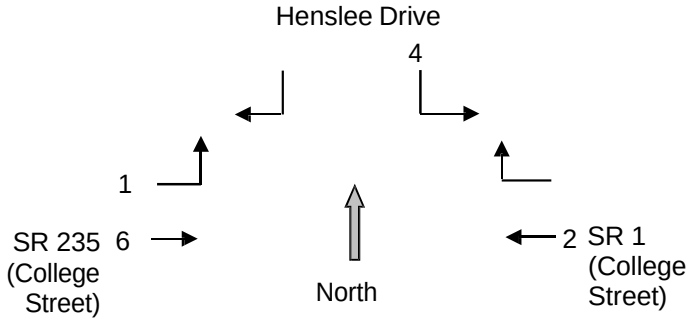
INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 **By:** KCI

Date Implemented: **By:**

2.1 Phase Parameters	Set 1	1	2	3	4	5	6	7	8
Min. Green		5	20		8		20		
Passage /10		25	45		35		45		
Max. 1		15	45		25		45		
Max. 2		30	60		40		60		
Yel/10		45	40		40		40		
Red/10		20	20		20		20		
Walk									
Pedestrian Clear									
Walk									
Pedestrian Clear									
Add In/10									
Max. Initial									
TBR									
CBR									
TTR									
Reduce/10									
Min Gp/10									
DM Limit									
Dm Step/10									
Red Revert/10									
CS Min									
Alt Min Green									
Alt Passage/10									
Alt Walk									
Adv Walk									
Delay Walk									
St Dly/10									
Green Clr/10									

PHASING SCHEMATIC



City of Dickson Tennessee

McCain
A Company of the SWIVEC Group

ATC eX Series

ZONE: C

INTERSECTION: 16

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 **By:** K C I

Date Implemented: **By:**

2.2 Phase Options	Set 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase Omit																	
Ped Omit																	
Min Recall			X				X										
Max Recall																	
Soft Recall																	
Ped Recall																	
Pedestrian Recycle																	
Condition Service																	
Detector Lock																	
Dual Entry																	
Simultaneous Gap																	
Guaranteed Passage																	
Added Initial Calc																	
Walk Rest																	
Red Rest																	
Flash Entry																	
Flash Exit																	
CNA-1																	
CNA-2																	
No Backup																	
Max Walk																	
Max Extension																	
Sequential Timing																	
No Min Yellow																	
FDW PED Recycle																	

City of Dickson Tennessee

McCain
A Company of the SWARCO Group

ATC eX Series

ZONE: C

INTERSECTION: 16

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 **By:** KCI

Date Implemented: **By:**

5.1 Coordination Constants	
Correction Mode	Shortway
Max Cycles Trans	3
Coord Max Mode	Max Inhibit
Coord Force Mode	Floating
Perm Strategy	Maximum
Omit Strategy	Minimum
Sync Point	End Green
No Early Return	Disable
Sync Ref Time	0

5.2 Pattern Parameters	1	2	3	4	5	6	7	8
Cycle Time	85							
Offset Time								
Split								
Sequence								
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Vehicle Overlap Set	1	1	1	1	1	1	1	1
PED Overlap Set	1	1	1	1	1	1	1	1
Transit Priority Set	1	1	1	1	1	1	1	1
Vehicle Detector Set	1	1	1	1	1	1	1	1
PED Detector Set	1	1	1	1	1	1	1	1
Vehicle Det. Diag Set	1	1	1	1	1	1	1	1
Ped Det. Diag Set	1	1	1	1	1	1	1	1
Detector Reset								
Max 2 Phases								
Correction Mode								
Coord Max Mode								
Coord Force Mode								
Perm Strategy								
Omit Strategy								
No Early Return								
TX Diamond Type								

City of Dickson Tennessee

McCain
A Company of the SIRVIDO Group

ATC eX Series

ZONE: C

INTERSECTION: 16

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 **By:** KCI

Date Implemented: **By:**

5.3 Split Table 1																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)																
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit																
Manual Omit																

5.3 Split Table 2																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)																
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit																
Manual Omit																

5.3 Split Table 3																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)																
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit																
Manual Omit																

5.3 Split Table 4																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)																
Mode	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Coord. Phase																
Manual Permit																
Manual Omit																

City of Dickson Tennessee

McCain
A Company of the SWARCO Group

ATC eX Series

ZONE: C

INTERSECTION: 16

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/20 **By: KCI**

Date Implemented: **By:**

6.2 Time Zone	Global DST: Enable DST	Standard Time Zone (+/- hr): -8

6.4 Sched	Month												Days Of Week							Date																															Day
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
2																																																				
3																																																				
4																																																				
5																																																				
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24																																																				
25																																																				

City of Dickson Tennessee

McCain
A Company of the GWATCO Group

ATC eX Series

ZONE: C

INTERSECTION: 16

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 By: KCI

Date Implemented: By:

6.5 DayPlan	1		
Event	Hour	Minute	Action
1	0	0	FREE
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

6.5 DayPlan			
Event	Hour	Minute	Action
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

6.5 DayPlan	3		
Event	Hour	Minute	Action
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

City of Dickson Tennessee

ZONE: C

INTERSECTION: 16

McCain
A Company of the SWARCO Group

ATC eX Series

INTERSECTION: SR 1 (US 70 / College Street) and SR 235 (College Street)

Date Prepared: 3/10/21 **By:** KCI

Date Implemented: **By:**

6.6 Action Parameters	1	2	3	4	5	6	7	8
Pattern	1							
Auxiliary Function								
Special Function								
Detector Reset								
Detector VOS Log								
Speed Trap Log								
Cycle MOE Log								
Hi-Res Log								

6.6 Action Parameters	9	10	11	12	13	14	15	16
Pattern								
Auxiliary Function								
Special Function								
Detector Reset								
Detector VOS Log								
Speed Trap Log								
Cycle MOE Log								
Hi-Res Log								

6.6 Action Parameters	17	18	19	20	21	22	23	24
Pattern								
Auxiliary Function								
Special Function								
Detector Reset								
Detector VOS Log								
Speed Trap Log								
Cycle MOE Log								
Hi-Res Log								

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **17** ZONE: **C**

INTERSECTION: **Henslee Drive and Dickson Plaza Drive**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: **PEEK M3000**

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	8		5	5	8		5
PASSAGE	2.5	5.0		2.5	2.5	5.0		2.5
YELLOW	3.0	4.0		4.0	3.0	4.0		4.0
RED CLEAR	1.0	1.0		1.0	1.0	1.0		1.0
WALK								
PED CLEAR								
MAX 1	12	45		20	15	45		20
MAX 2	30	30		30	30	30		30
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL	X	X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK								
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

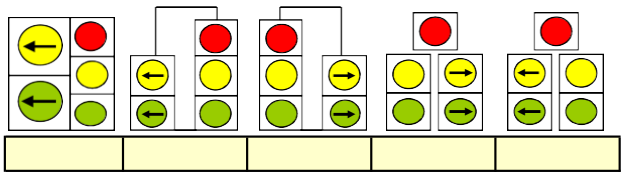
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

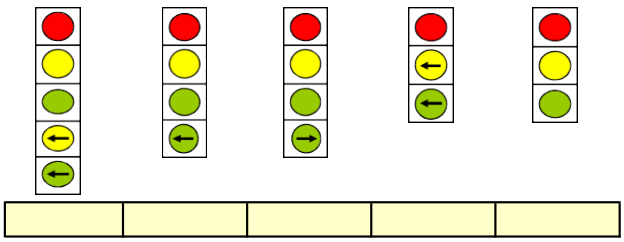
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

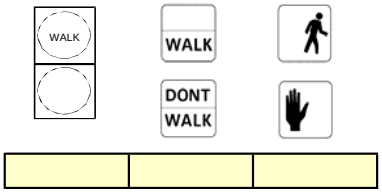
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

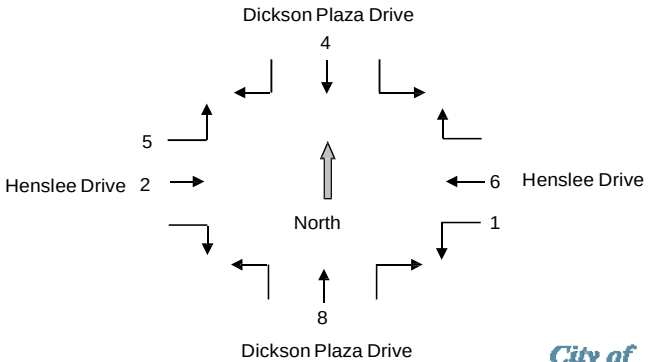
SIGNAL DISPLAYS



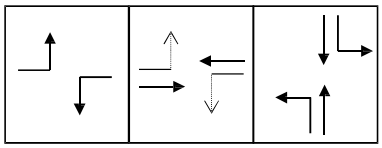




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **17** ZONE: **C**

INTERSECTION: Henslee Drive and Dickson Plaza Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Danaher Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **17** ZONE: **C**

INTERSECTION: **Henslee Drive and Dickson Plaza Drive**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	80					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

INTERSECTION NUMBER: **17** ZONE: **C**

INTERSECTION: **Henslee Drive and Dickson Plaza Drive**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **13** ZONE: **C**

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL		8		6	6	8		
PASSAGE		6.0		4.0	2.5	6.0		
YELLOW		4.0		4.0	3.0	4.0		
RED CLEAR		1.0		1.0	1.0	1.0		
WALK								
PED CLEAR								
MAX 1		35		30	20	35		
MAX 2		30		60	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK				X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

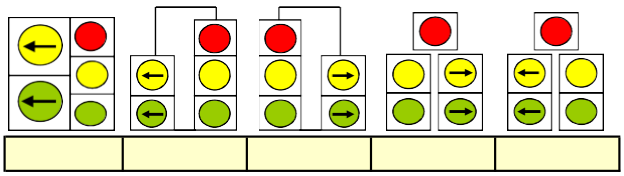
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

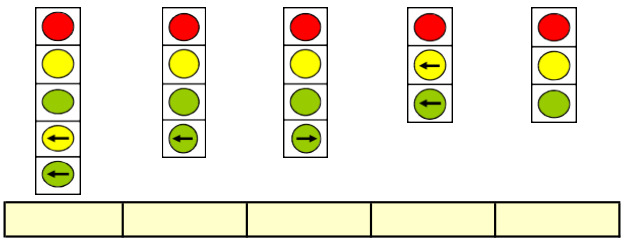
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

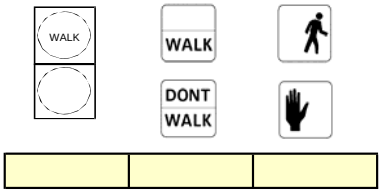
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

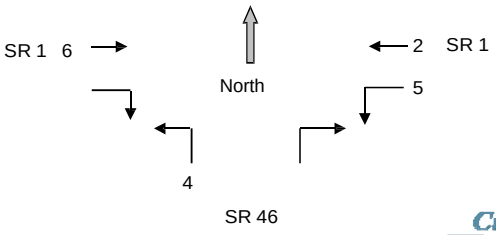
SIGNAL DISPLAYS



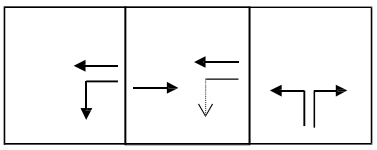




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **13** ZONE: **C**

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **13** ZONE: **C**

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	85					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

INTERSECTION NUMBER: **13** ZONE: **C**

INTERSECTION: **SR 1 (US 70/Henslee Drive) and SR 46**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **18** ZONE: **C**

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	4	8	6	6	4	15		
PASSAGE	2.0	4.0	2.0	2.5	2.0	2.0		
YELLOW	3.0	4.0	4.0	4.0	3.0	4.0		
RED CLEAR	1.0	2.0	1.0	1.0	1.0	2.0		
WALK								
PED CLEAR								
MAX 1	15	45	15	20	15	50		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X			X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

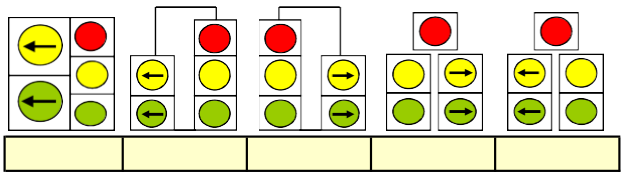
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

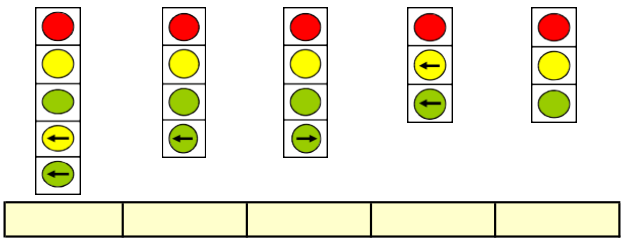
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

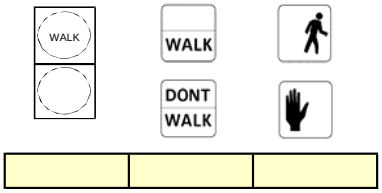
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

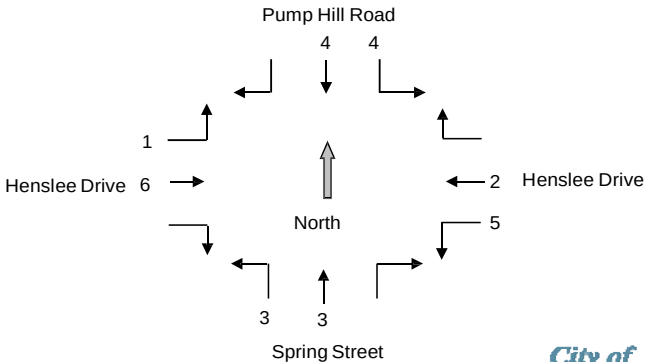
SIGNAL DISPLAYS



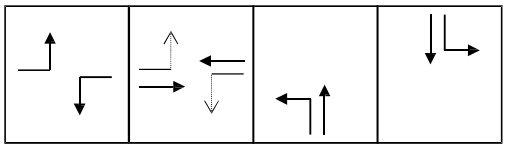




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **18** ZONE: **C**

INTERSECTION: **Henslee Drive and Pump Hill Road / Spring Street**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

COORDINATION AND OPERATION

INTERSECTION NUMBER: **18** ZONE: **C**

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	100					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

INTERSECTION NUMBER: **18** ZONE: **C**

INTERSECTION: **Henslee Drive and Pump Hill Road / Spring Street**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramp

INSTALLATION DATE:

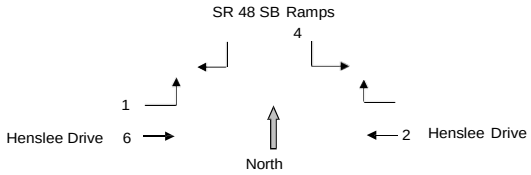
PROGRAMMED BY:

LOCAL CONTROLLER PROGRAMMING CHART

TRANSYT 1880 EL CONTROLLER

NOTES: Zone C

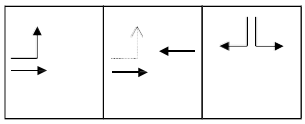
PHASING SCHEMATIC



TIME BY PHASE (SEC.)

INTERVAL	1	2	3	4	5	6	7	8
INITIAL	6.0	15.0		8.0		15.0		
PASSAGE	3.0	5.0		3.0		5.0		
YELLOW	4.0	4.0		4.0		4.0		
RED CLEAR	2.0	2.0		2.0		2.0		
MAX 1	20	45		20		45		
MAX 2	35	35		35		35		
WALK								
PED CLEAR								

PHASING SEQUENCE



INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramps
INSTALLATION DATE:
PROGRAMMED BY:

DOW/TOD	CYCLE NUMBER	OFFSET NUMBER	DOW/TOD	CYCLE NUMBER	OFFSET NUMBER	DOW/TOD	CYCLE NUMBER	OFFSET NUMBER
Monday-Sunday								
00:00 – 11:59	FREE							

DOW = Day of Week
TOD = Time of Day

IMPLEMENTATION DATE:

NOTES:

CYCLE	ZONE 1 CYCLE LENGTH	ZONE 2 CYCLE LENGTH	ZONE 3 CYCLE LENGTH	ZONE 4 CYCLE LENGTH	ZONE 5 CYCLE LENGTH	ZONE 6 CYCLE LENGTH	ZONE 7 CYCLE LENGTH	ZONE 8 CYCLE LENGTH
1	85	- -	- -	- -	- -	- -	- -	- -
2	- -	- -	- -	- -	- -	- -	- -	- -
3	- -	- -	- -	- -	- -	- -	- -	- -
4	- -	- -	- -	- -	- -	- -	- -	- -
5	- -	- -	- -	- -	- -	- -	- -	- -
6	- -	- -	- -	- -	- -	- -	- -	- -

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramp

INSTALLATION DATE: _____

PROGRAMMED BY: _____

COORDINATION PROGRAMMING CHART

TRANSYT 1880 EL CONTROLLER

CYCLE NUMBER	CYCLE LENGTH
1	85
2	
3	
4	
5	
6	

NOTES: Offset is referenced at beginning of yellow

SPLIT SETTINGS (%)

SPLIT NUMBER	PH 1 SPLIT	PH 2 SPLIT	PH 3 SPLIT	PH 4 SPLIT	PH 5 SPLIT	PH 6 SPLIT	PH 7 SPLIT	PH 8 SPLIT
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

OFFSETS AND SPLIT PLAN ALLOCATION

	Typical Weekday 1	Typical Weekend 2	3	4	5
CYCLE 1					
CYCLE 2					
CYCLE 3					
CYCLE 4					
CYCLE 5					
CYCLE 6					

/

= OFFSET % (0-99)
= SPLIT PLAN NO. TO BE ASSOCIATED WITH CYCLE OFFSET COMBINATION

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **20** ZONE: **C**

INTERSECTION: **Henslee Drive and North Charlotte Street**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: **PEEK M3000**

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	8	8	5	10		
PASSAGE	2.0	5.0	4.0	3.0	2.0	5.0		
YELLOW	3.0	4.0	4.0	4.0	3.0	4.0		
RED CLEAR	1.0	1.0	1.0	1.0	1.0	1.0		
WALK								
PED CLEAR								
MAX 1	15	60	25	30	15	60		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

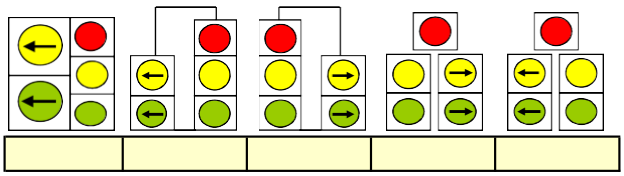
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

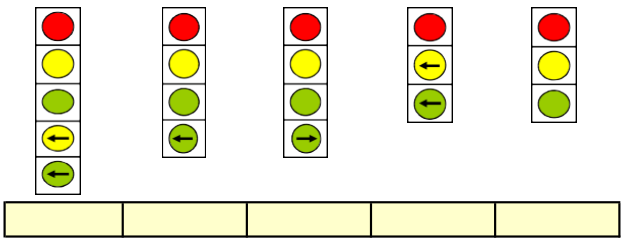
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

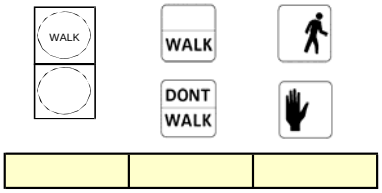
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

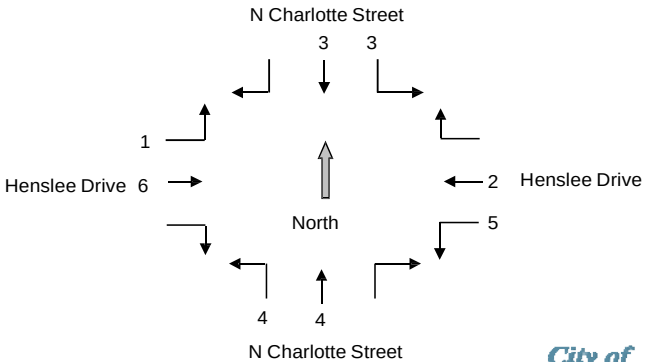
SIGNAL DISPLAYS



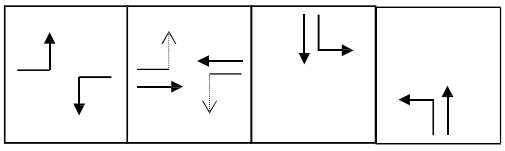




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **20** ZONE: **C**

INTERSECTION: Henslee Drive and North Charlotte Street

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **20** ZONE: **C**

INTERSECTION: Henslee Drive and North Charlotte Street

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	130					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

INTERSECTION NUMBER: **20** ZONE: **C**

INTERSECTION: **Henslee Drive and North Charlotte Street**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	6	20	10	10	6	20		
PASSAGE	2.0	5.0	3.0	3.0	2.0	5.0		
YELLOW	4.0	3.5	4.0	4.0	3.5	4.0		
RED CLEAR	2.0	2.0	3.0	3.0	2.0	2.0		
WALK		5		5		5		
PED CLEAR		12		21		10		
MAX 1	20	45	35	30	20	45		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

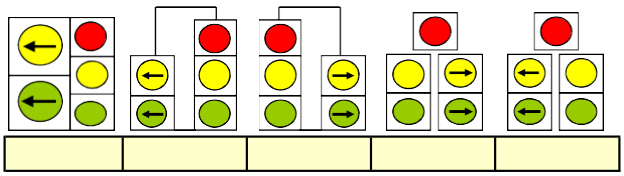
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

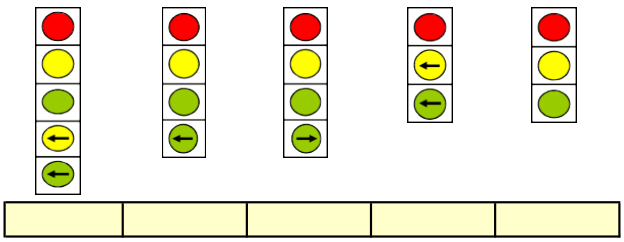
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

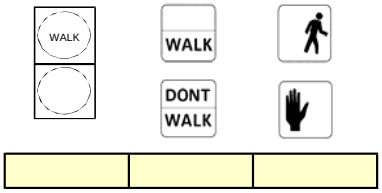
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

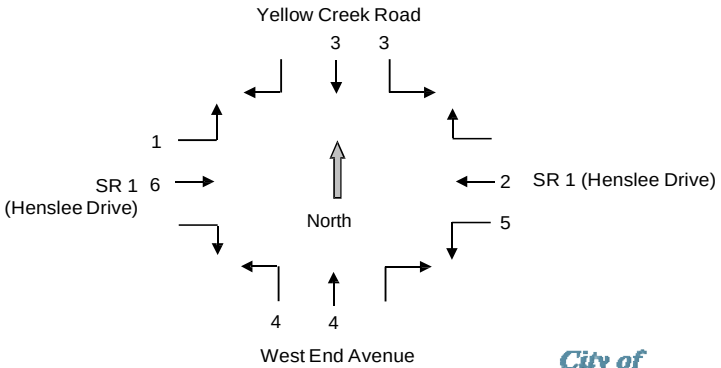
SIGNAL DISPLAYS



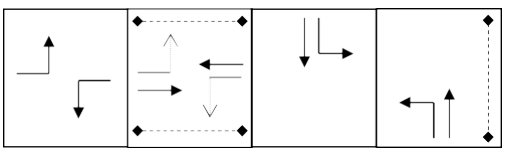




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	130					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	4	3	6	10	4	3		
PASSAGE	3.0	3.0	4.0	4.0	3.0	3.0		
YELLOW	3.5	4.0	4.0	4.0	3.5	4.0		
RED CLEAR	1.0	2.0	1.0	1.0	1.0	2.0		
WALK								
PED CLEAR								
MAX 1	15	40	20	25	15	40		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL				X				
MAX RECALL		X				X		
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

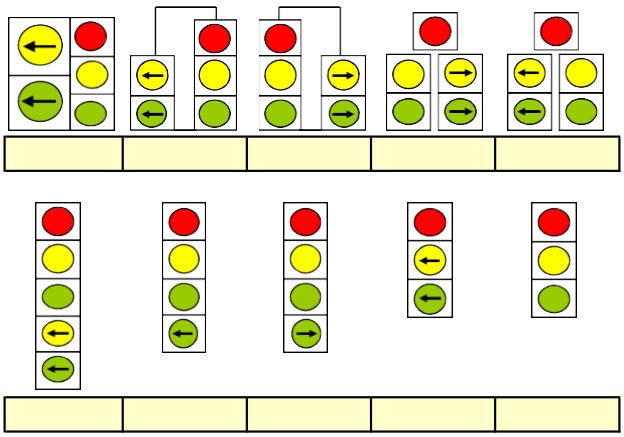
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

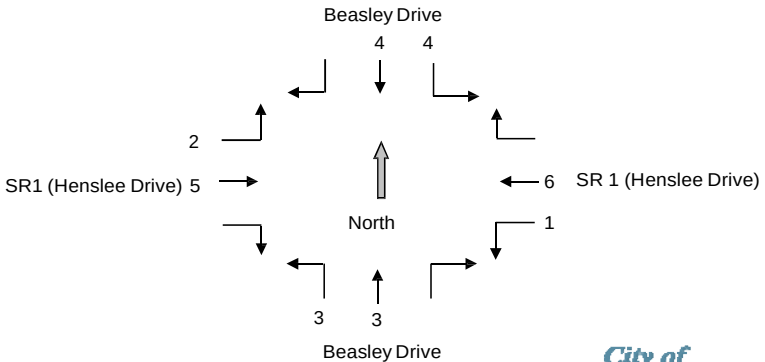
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

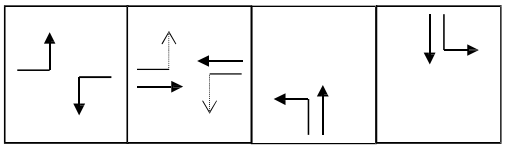
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	100					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: **SR 1 (Henslee Drive) and Beasley Drive**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **23** ZONE: **B**

INTERSECTION: Beasley Drive at SR 48 (Center Avenue)

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	6	10	6	10	6	10	6	10
PASSAGE	1.5	3.0	1.5	3.5	1.5	3.0	1.5	3.5
YELLOW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
WALK								
PED CLEAR								
MAX 1	8	25	15	45	15	25	15	45
MAX 2	15	45	15	45	15	45	15	45
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK								
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

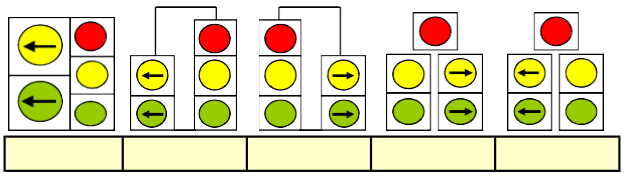
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

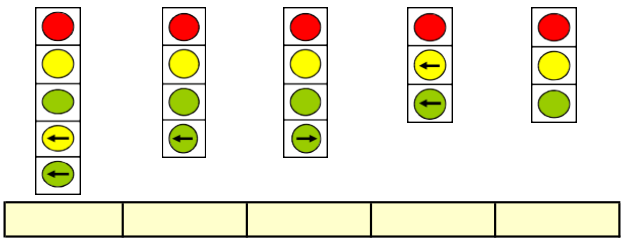
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

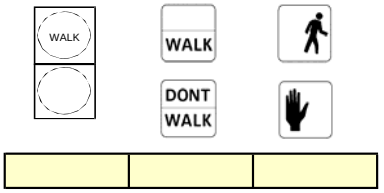
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

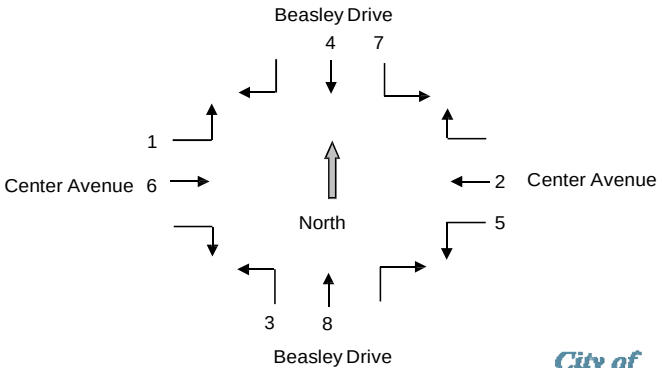
SIGNAL DISPLAYS



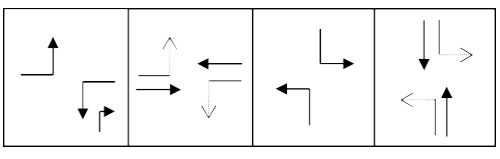




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **23** ZONE: **B**

INTERSECTION: Beasley Drive at SR 48 (Center Avenue)

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **23** ZONE: **B**

INTERSECTION: Beasley Drive at SR 48 (Center Avenue)

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	100					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

TIME OF DAY PROGRAMMING

INTERSECTION NUMBER: **23** ZONE: **B**

INTERSECTION: **Beasley Drive at SR 48 (Center Avenue)**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: Beasley Drive at Cowan Road

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	5	6	5	10	5	6
PASSAGE	2.0	3.0	2.0	2.5	2.0	3.0	2.0	2.5
YELLOW	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5
RED CLEAR	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
WALK								
PED CLEAR								
MAX 1	20	40	20	30	20	40	20	30
MAX 2	35	35	35	35	35	35	35	35
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X		X	X
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

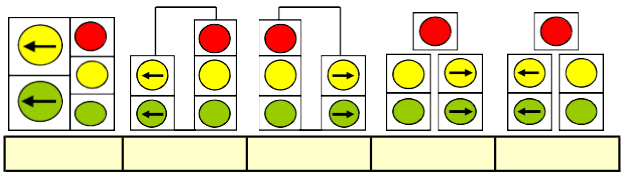
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

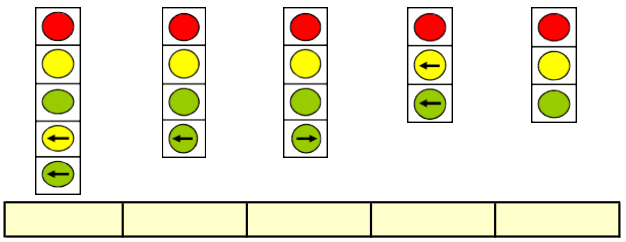
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

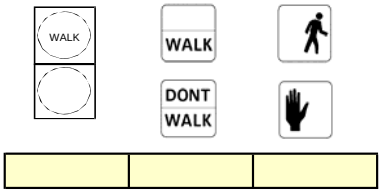
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

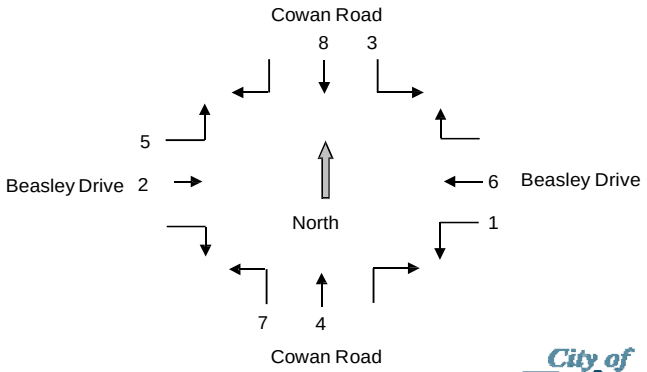
SIGNAL DISPLAYS



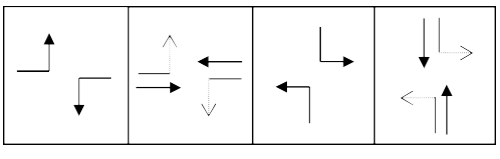




PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: Beasley Drive at Cowan Road

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: Beasley Drive at Cowan Road

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battalion Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	110					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: **Beasley Drive at Cowan Road**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

LOCAL CONTROLLER PROGRAMMING

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

PEEK TRAFFIC

PEEK 3000 SERIES

MASTER TYPE: PEEK M3000

MASTER LOCATION: _____

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL		20		7	7	20		
PASSAGE		3.0		3.0	3.0	3.0		
YELLOW		3.5		3.5	3.5	3.5		
RED CLEAR		2.0		2.5	2.0	2.0		
WALK								
PED CLEAR								
MAX 1		30		15	12	30		
MAX 2		40		20	15	40		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1								
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL								
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK		X		X	X	X		
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

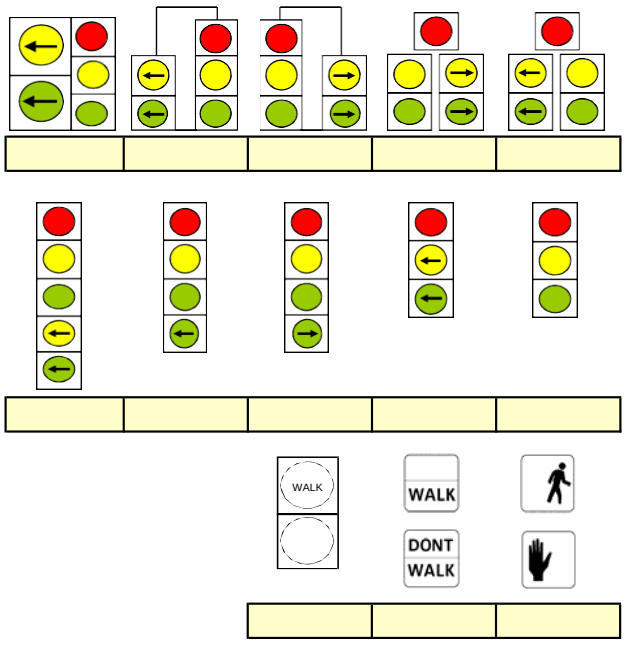
CONTROLLER OPTIONS

PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

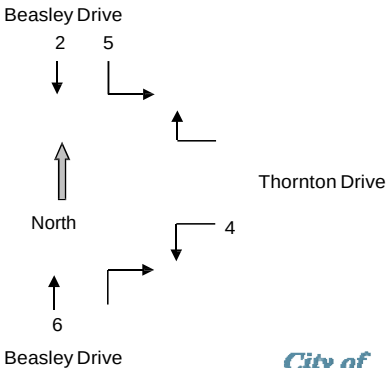
MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		

FLASH	
FREE	
SPECIAL	

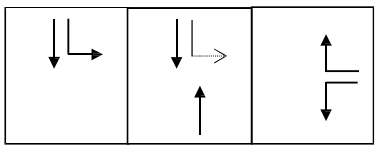
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



City of Dickson Tennessee

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

City of Dickson Tennessee

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

COORDINATION AND OPERATION

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1								
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1								
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	
END OF MAIN ST	
ENHANCED PERM	
FIXED FORCE OFF	
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	
PERM-PA ENTRY IN %	
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	
SPLIT SOURCE	
OFFSET SOURCE	
FREE SOURCE	
FLASH SOURCE	
INTER. TOD REVERT	
TYPE OF PERM	
OFFSET SEEKING	
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	57					
MAX DWELL						
OFFSET 1						
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2								
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1		
2		
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

City of Dickson Tennessee

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: **Beasley Drive at Thornton Drive**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0	1	1	1	1	1	1	1
1							
2							
3							
4							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00		FREE	11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

City of Dickson Tennessee

SIGNAL CODING SHEETS
POST-CONDITION

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 14 **ZONE:** C

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

Overlap Right Turn A with Phase 5

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10		7	5	10		7
PASSAGE	2.5	8.0		3.0	2.5	8.0		5.0
YELLOW	4.0	5.0		5.0	4.0	5.0		5.0
RED CLEAR	2.0	1.0		1.0	2.0	1.0		1.0
WALK								
PED CLEAR								
MAX 1	15	45		20	15	45		20
MAX 2	35	35		35	35	35		35
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X	X				X		
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

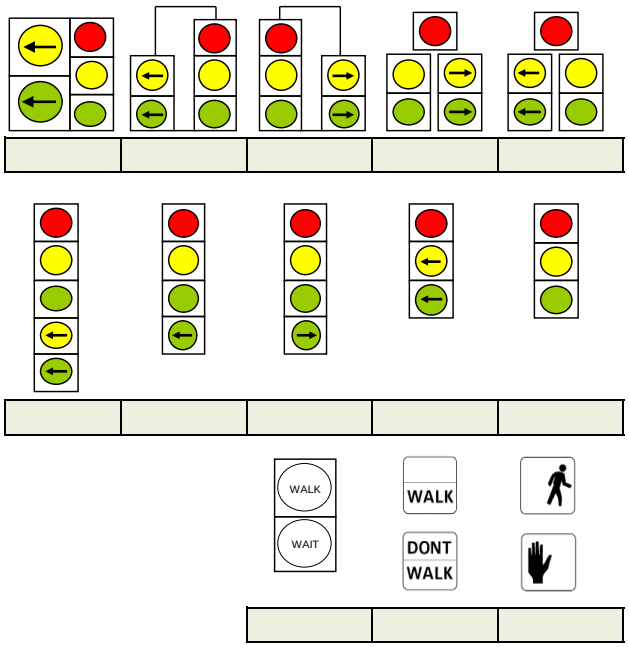
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

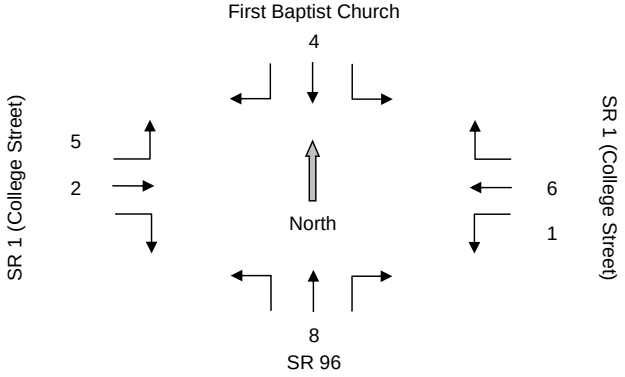
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

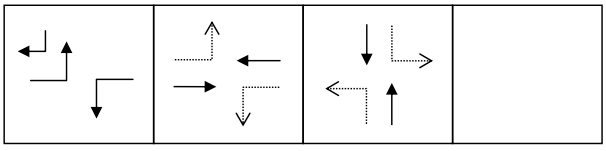
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Vaisala Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **14** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC A Kapsch Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	25		30	15	25		30
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	35		30	15	35		30
CYCLE 2/SPLIT 2	15	30		35	15	30		35
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	57	24				
OFFSET 2		45				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE	CKT	CKT	CKT	CKT
1					
2					

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: 14 ZONE: C

INTERSECTION: SR 1 (US 70/College Street) and SR 96

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Kyntec Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC — A Vaisala Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 15 **ZONE:** C

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK TRANSYT 3000

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10	7	10
PASSAGE	2.0	4.0	2.0	3.0	2.0	4.0	2.0	3.0
YELLOW	3.5	5.0	3.5	3.5	3.5	5.0	3.5	3.5
RED CLEAR	2.5	1.0	1.0	1.5	2.5	1.0	1.5	1.5
WALK								
PED CLEAR								
MAX 1	20	35	20	20	15	35	20	20
MAX 2	30	30	30	30	30	30	30	30
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL								
MAX RECALL		X				X		
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

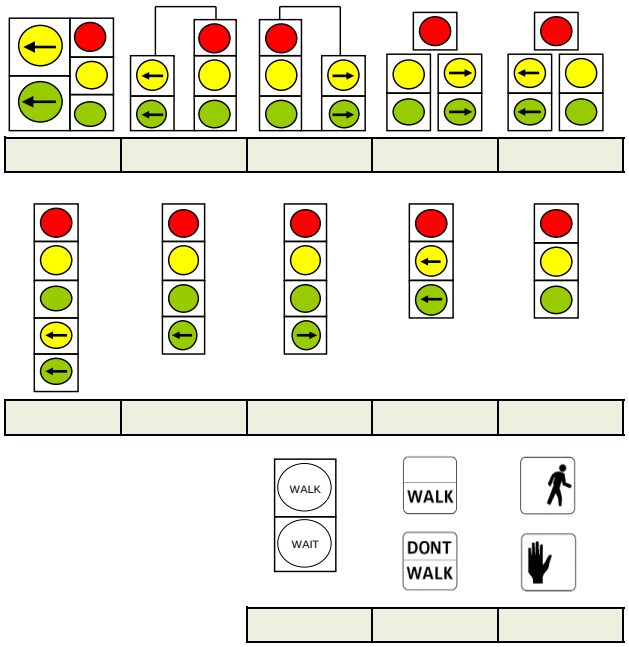
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

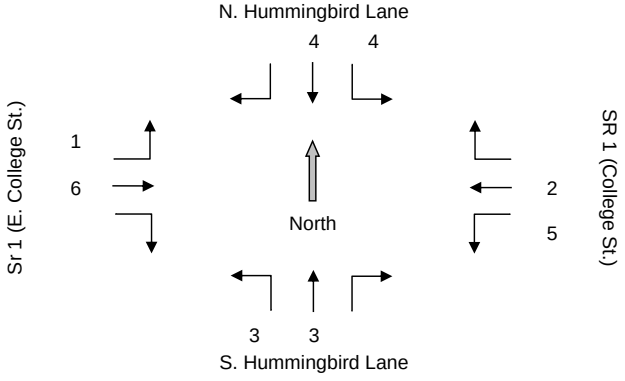
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

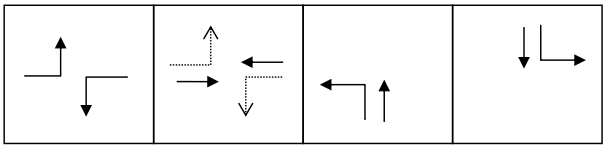
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **15** ZONE: **C**

DETECTOR SETTINGS

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **15** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC A Lytx Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	25	15	15	15	25	15	15
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	35	15	15	15	35	15	15
CYCLE 2/SPLIT 2	15	32	18	15	15	32	18	15
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	22	23				
SPLIT 2/OFFSET 2		46				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: 15 ZONE: C

TIME OF DAY PROGRAMMING

INTERSECTION: SR 1 (US 70/College Street) and Hummingbird Lane
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

PHASING AND OVERLAPS

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

INTERSECTION NUMBER: 16 **ZONE:** C

INTERSECTION: SR 1 (US 70/College Street) and SR 235 (College Street)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

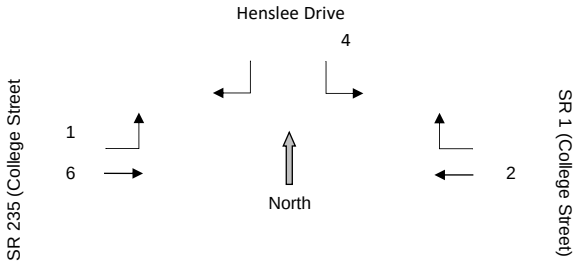
PHASE ENABLE AND RINGS
MM 2-4

PHASE	1	2	3	4	5	6	7	8
RING 1								
RING 2								
RING 3								
RING 4								

PHASE TIMING SET 1
MM 2-1

PHASE	1	2	3	4	5	6	7	8
MIN. GREEN	5	10		7		10		
PASS / 10	25	45		35		45		
MAX 1	15	45		25		45		
MAX 2	30	60		40		60		
YEL / 10	35	50		40		50		
RED / 10	25	10		10		10		
WALK								
PED CLR								
ADDIN / 10								
MAX INIT								
TBR								
CBR								
TTR								
REDUCE / 10								
MIN GP / 10								
DM LIMIT								
DM STP / 10								
RED RV / 10								
CS MIN								
ALT MINGR								
ALT PS / 10								
ALT WALK								
ALT PDCLR								
ADV WALK								
DLY WALK								
ST DLY / 10								
GRN CL / 10								

PHASING SCHEMATIC



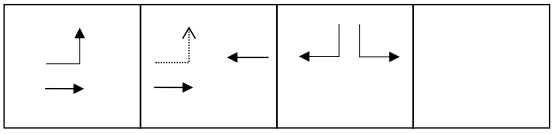
PHASE OPTIONS SET 1
MM 2-2

PHASE	1	2	3	4	5	6	7	8
PHASE OMIT								
PED OMIT								
MIN VEH RECALL		X				X		
MAX VEH RECALL								
SOFT VEH RECALL								
PED RECALL								
PED RECYCLE								
COND SERVICE								
DETECTOR LOCK								
DUAL ENTRY		X				X		
SIMULT. GAP								
GUARANT PASS								
ADD INITIAL CALC								
WALK REST								
RED REST								
FLASH ENTRY								
FLASH EXIT								
CAN - 1								
CAN - 2								
NO BACKUP								
MAX WALK								
MAX EXTENSIONS								
SEQUENTIAL TIMING								
NO MIN YELLOW								

VEHICLE OVERLAPS
MM 3-1

SET	1	2	3	4
TYPE				
INCLUDED PHASES				
MODIFIER PHASES				
EXCLUDED PHASES				
EXCLUDED PEDS				
EXCLUDED WALKS				
NO TRAIL GRN PHS				
DET CALL PHASES				
TRAILING GRN				
TRAILING YEL				
TRAILING RED				
START DELAY				
ACTUATED ONLY				
DETECTOR LOCK				
NO MIN YELLOW				

PHASE SEQUENCE 1
MM 2-3



RING 1	
RING 2	
RING 3	
RING 4	

DETECTOR SETTINGS

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES

INTERSECTION NUMBER: 16 ZONE: C

INTERSECTION: SR 1 (US 70/College Street) and SR 235 (College Street)

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

CONTROLLER TYPE: McCain ATC eX2

MASTER LOCATION: N/A

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **16** ZONE: **C**

INTERSECTION: SR 1 (US 70/College Street) and SR 235 (College Street)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

COORDINATION

McCain® A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

SPLIT TABLES

MM 5-3

TABLE	PHASE	1	2	3	4	5	6	7	8
1	TIME	15	30		25		45		
	MODE								
	COORD		X				X		
	MIN TIME								
	MAN PERM								
	MAN OMIT								
2	TIME	15	40		25		55		
	MODE								
	COORD		X				X		
	MIN TIME								
	MAN PERM								
	MAN OMIT								
3	TIME	15	35		30		50		
	MODE								
	COORD		X				X		
	MIN TIME								
	MAN PERM								
	MAN OMIT								
4	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								
22	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								
	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								

CONSTANTS

MM 5-1

CORRECTION MODE	SHORTWAY
MAX CYCLE TRANS	3
COORD MAX MODE	MAX INHIBIT
COORD FORCE MODE	FLOATING
PERM STRATEGY	MAXIMUM
OMIT STRATEGY	MINIMUM
SYNC POINT	BEGIN OF YELLOW
NO EARLY RETURN	NO
SYNC REF TIME	

PATTERNS

MM 5-2

PATTERN	1	2	3	4	22			
CYCLE TIME	70	80	80					
OFFSET TIME	67	50	59					
SPLIT	1	2	3					
SEQUENCE	1	1	1					
PHASE TIMING SET	1	1	1					
PHASE OPTION SET	1	1	1					
VEH OVERLAP SET	1	1	1					
PED OVERLAP SET	1	1	1					
TRANS PRIORITY SET	1	1	1					
VEHICLE DET SET	1	1	1					
PED DET SET	1	1	1					
VEH DET DIAG SET	1	1	1					
PED DET DIAG SET	1	1	1					
DETECTOR RESET	NO	NO	NO					
MAX 2 PHASES								
CORRECTION MODE								
COORD MAX MODE								
COORD FORCE MODE								
PERM STRATEGY								
OMIT STRATEGY								
NO EARLY RETURN								
TX DIAMOND TYPE								

INTERSECTION NUMBER: 16 **ZONE:** C

INTERSECTION: SR 1 (US 70/College Street) and SR 235 (College Street)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

TIME OF DAY (TOD) PROGRAM

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

TIME ZONE
MM 6-2

TIME ZONE OFFSET	-06:00:00		
US TIME ZONES:			
HST =	-10:00:00	HST =	-09:00:00
PST =	-08:00:00	PST =	-07:00:00
CST =	-06:00:00	CST =	-05:00:00

DAYLIGHT SAVINGS TIME (DST)
MM 6-3

DST MODE	ENABLED

DTS SCHEDULE

YEAR	BEGIN		END	
1	03/14/2021	2:00	11/07/2021	2:00
2	03/13/2022	2:00	11/06/2022	2:00
3	03/12/2023	2:00	11/05/2023	2:00
4	03/10/2024	2:00	11/03/2024	2:00
5	03/09/2025	2:00	11/02/2025	2:00
6	03/08/2026	2:00	11/01/2026	2:00

* UPDATE DTS DATES AS NEEDED

ACTIONS
MM 6-6

ACTION #	1	2	3			
PATTERN	1	2	3			
AUXILIARY FUNCTION						
SPECIAL FUNCTION						
DETECTOR RESET	NO	NO	NO			
DETECTOR VOS LOG						
SPEED TRAP LOG						
CYCLE MOE LOG						
HI-RES LOG						

SPECIAL DEFINED PATTERNS
PATTERN / ACTION PLAN / DESCRIPTION

254 / 127 / FREE
255 / 128 / FLASH

DAY PLANS
MM 6-5

DAY PLAN	EVENT	HOUR	MINUTE	ACTION	DESCRIPTION
1	1	0	0	127	FREE
1	2	6	0	1	AM PEAK
1	3	8	30	2	MIDDAY PEAK
1	4	14	30	3	PM PEAK
1	5	18	0	127	FREE
2	1	0	0	127	FREE

SCHEDULES
MM 6-4

SCH #	MONTH J	F	M	A	M	J	J	A	S	O	N	D	DAY S	M	T	W	T	F	S
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	
2	X	X	X	X	X	X	X	X	X	X	X	X	X						X
3																			
4																			
5																			
6																			

SCH #	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	DAY PLAN
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
3																																
4																																
5																																
6																																

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Vaisala Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 17 **ZONE:** C

INTERSECTION: Henslee Drive and Dickson Plaza Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK TRANSYT 3000

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10		7	5	10		7
PASSAGE	2.5	5.0		2.5	2.5	5.0		2.5
YELLOW	3.0	4.0		3.5	3.0	4.0		3.5
RED CLEAR	2.0	1.0		1.0	2.5	1.0		1.0
WALK								
PED CLEAR								
MAX 1	15	45		20	15	45		20
MAX 2	30	30		30	30	30		30
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL	X	X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK								
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

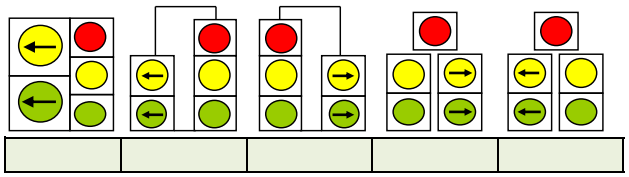
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

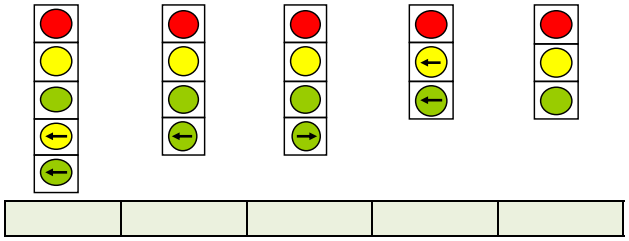
MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

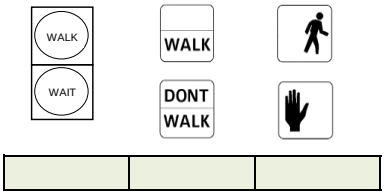
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

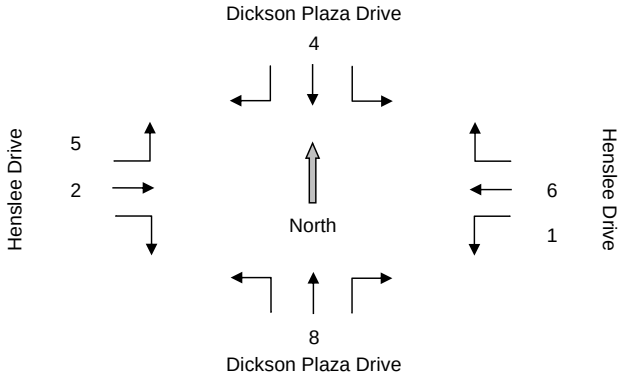
SIGNAL DISPLAYS



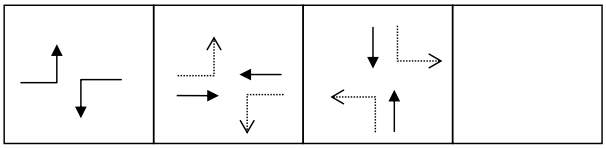




PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **17** ZONE: **C**

INTERSECTION: **Henslee Drive and Dickson Plaza Drive**

INSTALLATION DATE: **Tuesday May 11, 2021**

PROGRAMMED BY: **KCI Technologies, INC**

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Danaher Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 17 ZONE: C

INTERSECTION: Henslee Drive and Dickson Plaza Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC A Lytx Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	35		20	15	35		20
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	45		20	15	45		20
CYCLE 2/SPLIT 2	15	45		20	15	45		20
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	17	77				
SPLIT 2/OFFSET 2		12				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE	CKT	CKT	CKT	CKT
1					
2					

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: 17 ZONE: C

TIME OF DAY PROGRAMMING

INTERSECTION: Henslee Drive and Dickson Plaza Drive
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Vaisala Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 13 **ZONE:** C

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL		10		7	5	10		7
PASSAGE		6.0		4.0	2.5	6.0		4.0
YELLOW		4.0		3.5	3.0	4.0		3.5
RED CLEAR		1.0		1.0	2.5	1.0		1.0
WALK								
PED CLEAR								
MAX 1		35		30	20	35		30
MAX 2		30		60	30	30		60
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK				X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

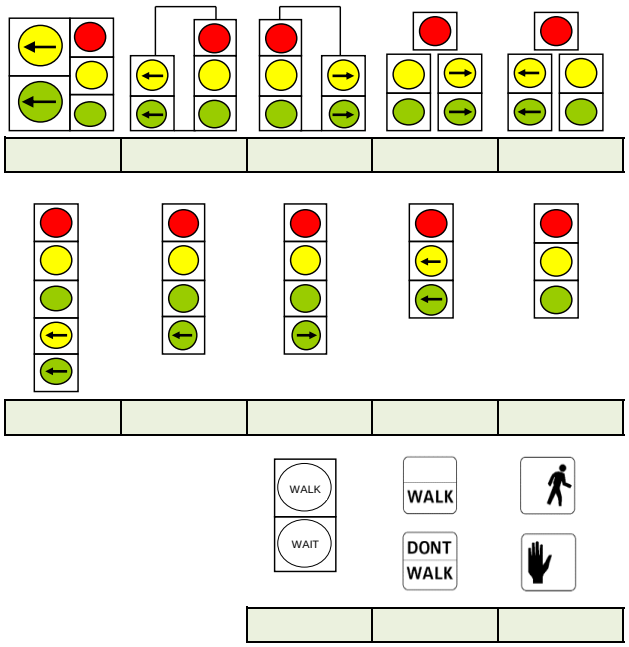
CONTROLLER OPTIONS

PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

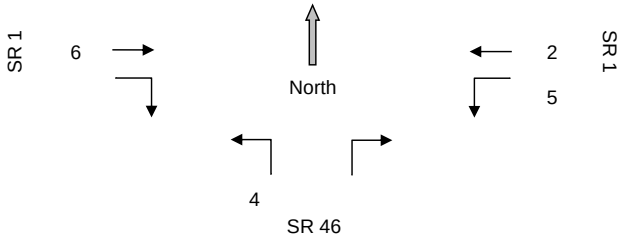
MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		

FLASH	
FREE	
SPECIAL	

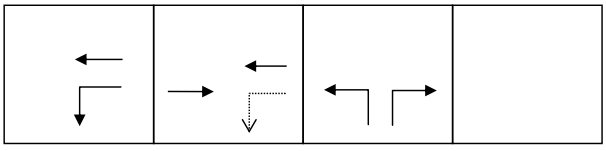
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: 13 ZONE: C

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Danaher Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **13** ZONE: **C**

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC — A Q-Free Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1		50		20	15	35		20
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1		60		20	15	45		20
CYCLE 2/SPLIT 2		52		28	15	37		28
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	50	62				
SPLIT 2/OFFSET 2		36				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: 13 ZONE: C

INTERSECTION: SR 1 (US 70/Henslee Drive) and SR 46
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC — A Vaisala Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 18 **ZONE:** C

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK TRANSYT 3000

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10		
PASSAGE	2.0	4.0	2.0	2.5	2.0	2.0		
YELLOW	3.0	4.0	3.5	3.0	3.0	4.0		
RED CLEAR	2.5	1.5	1.5	2.5	2.5	1.5		
WALK								
PED CLEAR								
MAX 1	15	45	15	20	15	50		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X			X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

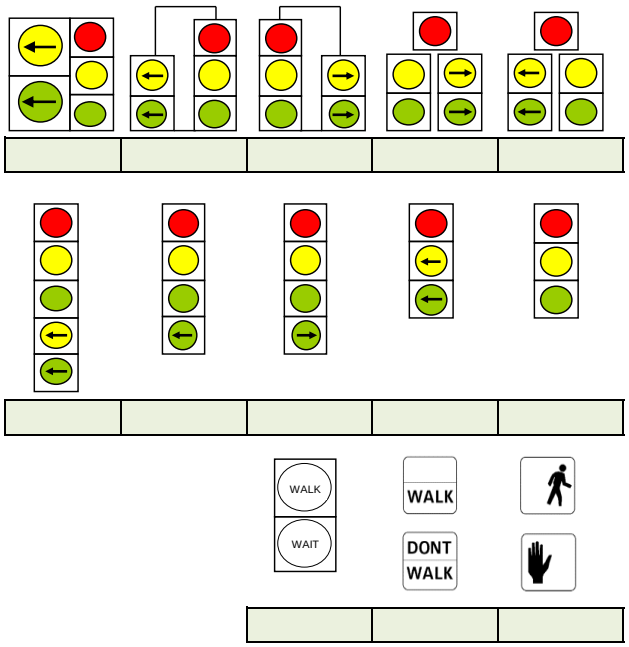
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

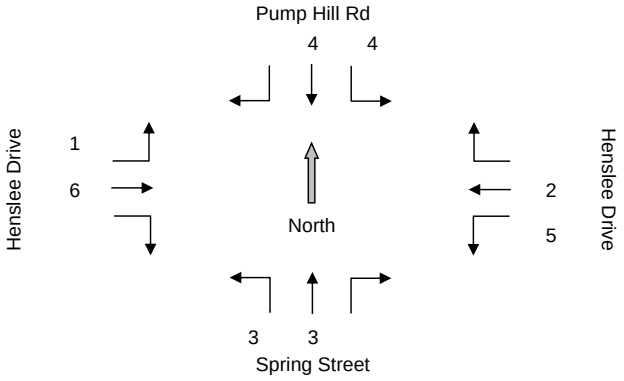
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

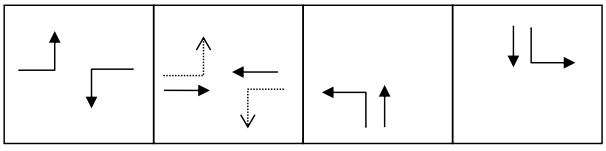
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **18** ZONE: **C**

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Danaher Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 18 ZONE: C

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC A Kapsch Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	25	15	15	15	25		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	35	15	15	15	35		
CYCLE 2/SPLIT 2	15	35	15	15	15	35		
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	11	45				
SPLIT 2/OFFSET 2		71				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE	CKT	CKT	CKT	CKT
1					
2					

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: 18 ZONE: C

TIME OF DAY PROGRAMMING

INTERSECTION: Henslee Drive and Pump Hill Road / Spring Street
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

PEEK TRAFFIC
A Cubic Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING
TRANSYT 1880 EL CONTROLLER

INTERSECTION NUMBER: 19 **ZONE:** C

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramps
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

MASTER TYPE: TRANSYT 1880 EL

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

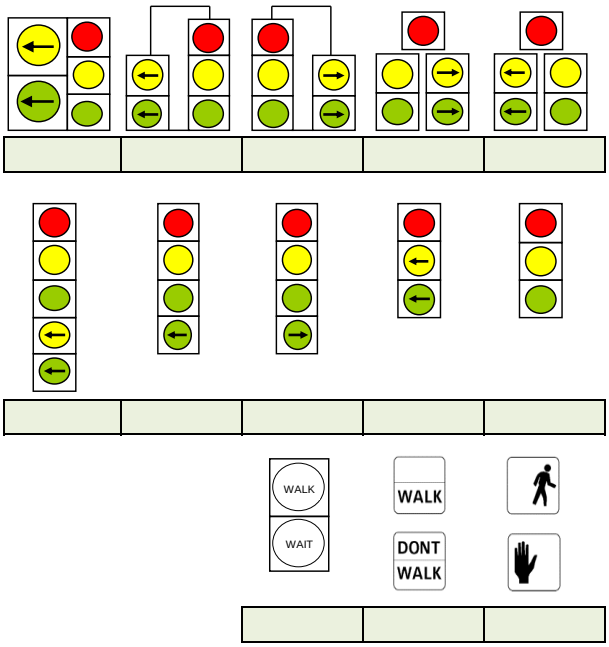
PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10		7		10		
PASSAGE	3.0	5.0		3.0		5.0		
YELLOW	3.0	4.0		3.5		4.0		
RED CLEAR	2.0	1.0		1.0		1.0		
WALK								
PED CLEAR								
MAX 1	20	45		20		45		
MAX 2	35	35		35		35		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL								
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK								
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

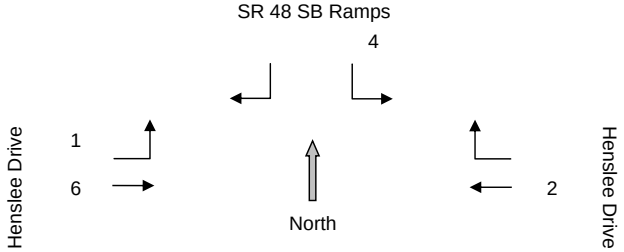
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT OVERRIDES STOP TIME
RED REVERT TIME		UCF TEST A OR B		
AUTO PED CLEAR		PASSAGE SEQUENTIAL		
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		
FLASH				
FREE				
SPECIAL				

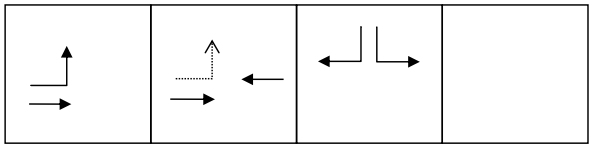
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **19** ZONE: **C**

DETECTOR SETTINGS
TRANSYT 1880 EL CONTROLLER

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramps
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **19** ZONE: **C**

COORDINATION AND OPERATION
TRANSYT 1880 EL CONTROLLER

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramps
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	37		18		52		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	49		16		64		
CYCLE 2/SPLIT 2	15	47		18		62		
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	57	32				
SPLIT 2/OFFSET 2		40				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **19** ZONE: **C**

TIME OF DAY PROGRAMMING
TRANSYT 1880 EL CONTROLLER

INTERSECTION: Henslee Drive and SR 48 Southbound On / Off Ramps
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 20 **ZONE:** C

INTERSECTION: Henslee Drive and North Charlotte Street
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

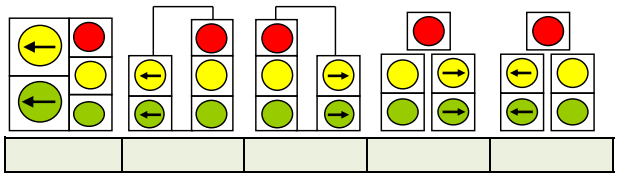
PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10		
PASSAGE	2.0	5.0	4.0	3.0	2.0	5.0		
YELLOW	3.0	4.0	3.5	3.5	3.0	4.0		
RED CLEAR	3.0	1.0	1.5	1.5	2.5	1.0		
WALK								
PED CLEAR								
MAX 1	15	60	25	30	15	60		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

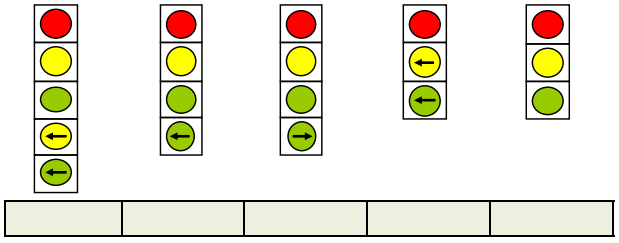
CONTROLLER OPTIONS

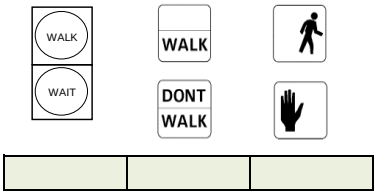
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		
FLASH				
FREE				
SPECIAL				

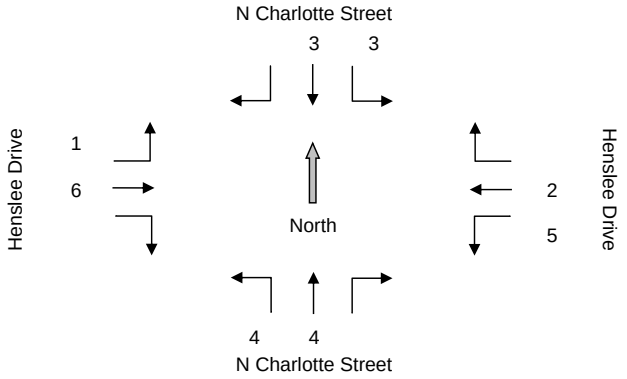
SIGNAL DISPLAYS



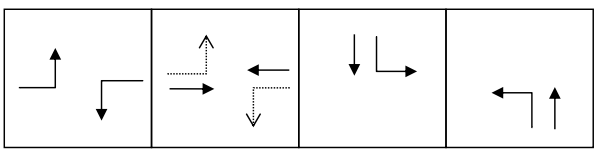




PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: 20 ZONE: C

INTERSECTION: Henslee Drive and North Charlotte Street

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 20 ZONE: C

INTERSECTION: Henslee Drive and North Charlotte Street

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	25	15	15	15	25		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	35	15	15	15	35		
CYCLE 2/SPLIT 2	15	35	15	15	15	35		
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	48	6				
SPLIT 2/OFFSET 2		28				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **20** ZONE: **C**

INTERSECTION: Henslee Drive and North Charlotte Street
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

INTERSECTION NUMBER: **29** ZONE: **C**

INTERSECTION: Henslee Drive and Cougar Pride Way

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10		
PASSAGE	2.0	2.0	2.0	3.0	2.0	2.0		
YELLOW	3.0	4.0	3.0	3.0	3.0	4.0		
RED CLEAR	3.0	1.0	1.0	3.0	3.0	1.0		
WALK				7				
PED CLEAR				22				
MAX 1	15	35	15	25	15	35		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK								
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

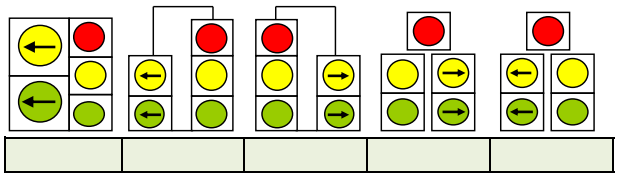
CONTROLLER OPTIONS

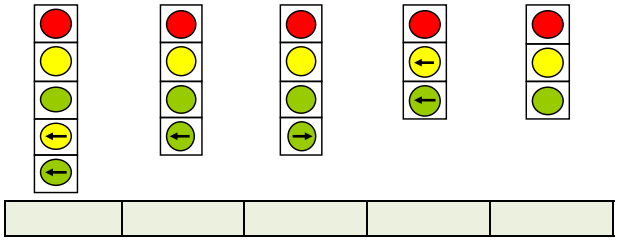
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

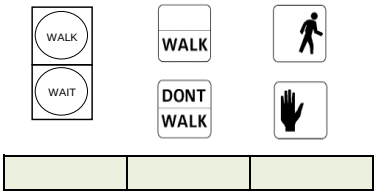
MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		

FLASH	
FREE	
SPECIAL	

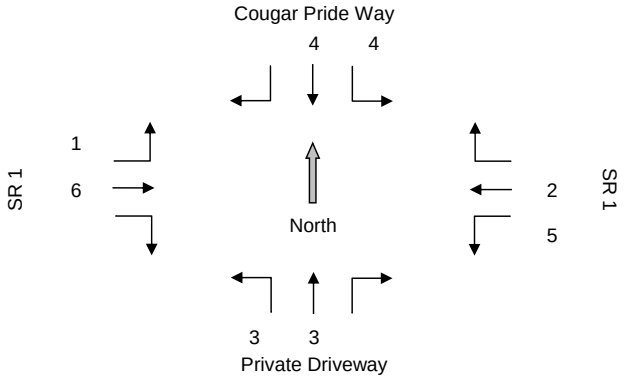
SIGNAL DISPLAYS



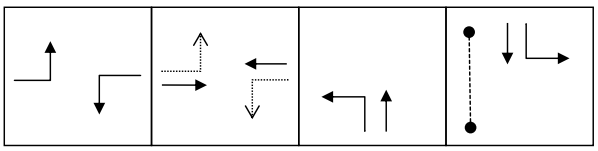




PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: 29 ZONE: C

INTERSECTION: Henslee Drive and Cougar Pride Way

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 29 ZONE: C

INTERSECTION: Henslee Drive and Cougar Pride Way

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	17	20	12	21	17	20		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	35	12	18	15	35		
CYCLE 2/SPLIT 2	15	30	12	23	15	30		
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	9	12				
SPLIT 2/OFFSET 2		31				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **29** ZONE: **C**

INTERSECTION: Henslee Drive and Cougar Pride Way
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

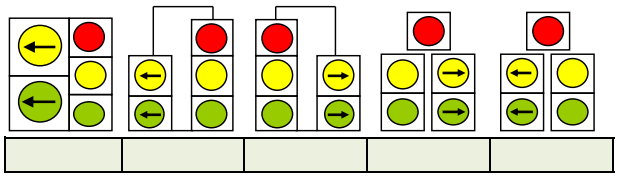
PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10	7	7
PASSAGE	2.0	5.0	4.0	3.0	2.0	5.0	4.0	3.0
YELLOW	4.0	5.0	4.0	3.5	4.0	5.0	4.0	3.5
RED CLEAR	2.0	1.0	2.0	2.5	2.0	1.0	2.0	2.5
WALK				7		7		
PED CLEAR				29		26		
MAX 1	20	45	35	30	20	45	35	30
MAX 2	30	30	30	30	30	30	30	30
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

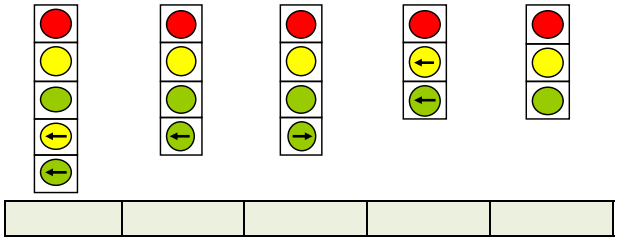
CONTROLLER OPTIONS

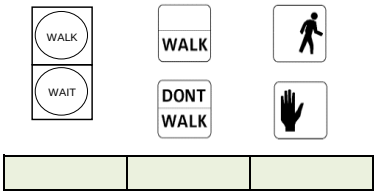
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		
FLASH				
FREE				
SPECIAL				

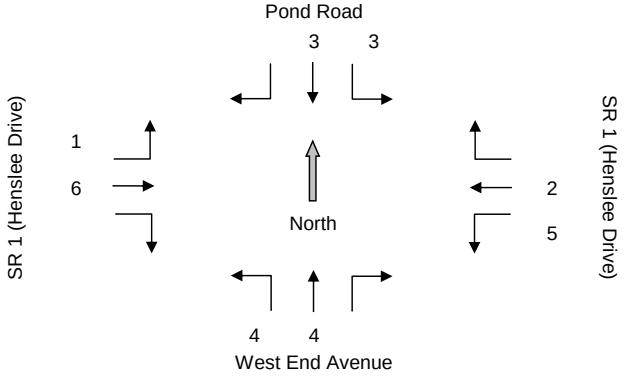
SIGNAL DISPLAYS



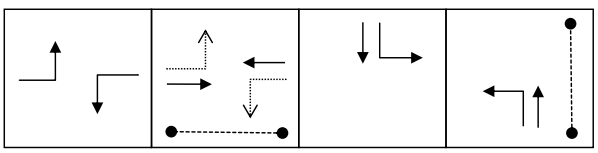




PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: 21 ZONE: D

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 21 ZONE: D

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	13	20	23	14	14	20		13
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	30	20	15	15	30		15
CYCLE 2/SPLIT 2	15	25	25	15	15	25		15
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	69	75				
SPLIT 2/OFFSET 2		20				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **21** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and West End Avenue

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK 3000

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

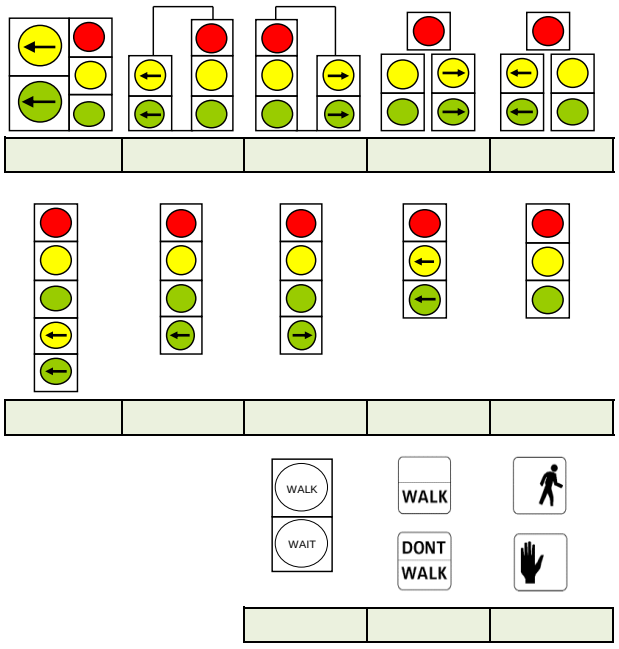
PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	7	7	5	10		
PASSAGE	3.0	3.0	4.0	4.0	3.0	3.0		
YELLOW	4.0	5.0	3.5	4.5	4.0	5.0		
RED CLEAR	2.0	1.0	1.5	1.0	2.0	1.0		
WALK								
PED CLEAR								
MAX 1	15	40	25	20	15	40		
MAX 2	30	30	30	30	30	30		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL			X					
MAX RECALL		X				X		
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X			
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

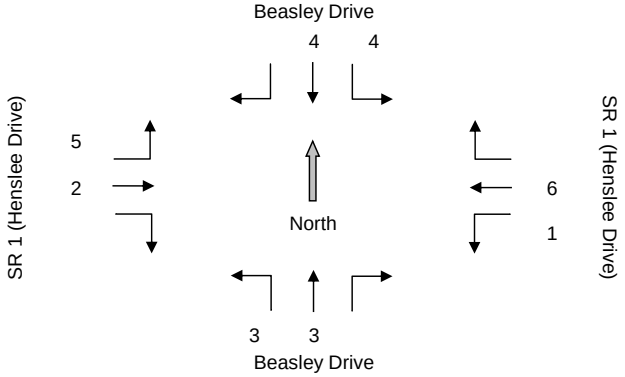
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		
FLASH				
FREE				
SPECIAL				

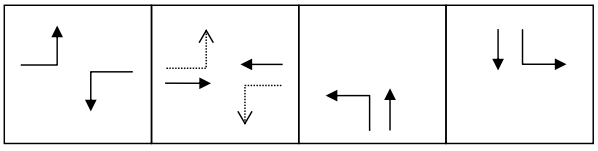
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: 22 ZONE: D

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 22 ZONE: D

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	13	23	17	17	13	23		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	30	15	20	15	30		
CYCLE 2/SPLIT 2	15	25	15	25	15	25		
CYCLE 3/SPLIT 1								
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	70	80				
MAX DWELL						
OFFSET 1	35	34				
SPLIT 2/OFFSET 2		58				
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3		
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **22** ZONE: **D**

INTERSECTION: SR 1 (Henslee Drive) and Beasley Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	06:00	FREE		11	OFF
1	06:00		1/1/1		
1	08:30		2/1/1		
1	14:30		2/2/2		
1	18:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

PHASING AND OVERLAPS

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

INTERSECTION NUMBER: 23 **ZONE:** B

INTERSECTION: Beasley Drive at Center Avenue (SR 48)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

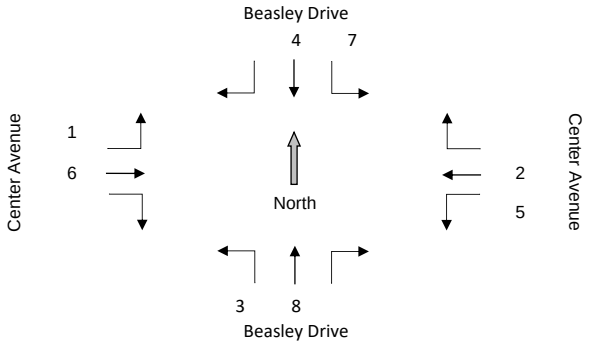
PHASE ENABLE AND RINGS
MM 2-4

PHASE	1	2	3	4	5	6	7	8
RING 1								
RING 2								
RING 3								
RING 4								

PHASE TIMING SET 1
MM 2-1

PHASE	1	2	3	4	5	6	7	8
MIN. GREEN	5	7	5	10	5	7	5	10
PASS / 10	20	30	20	35	20	30	20	35
MAX 1	15	25	15	45	15	25	15	45
MAX 2	15	45	15	45	15	45	15	45
YEL / 10	40	50	40	50	30	50	40	50
RED / 10	20	10	20	10	25	10	20	10
WALK								
PED CLR								
ADDIN / 10								
MAX INIT								
TBR								
CBR								
TTR								
REDUCE / 10								
MIN GP / 10								
DM LIMIT								
DM STP / 10								
RED RV / 10								
CS MIN								
ALT MINGR								
ALT PS / 10								
ALT WALK								
ALT PDCLR								
ADV WALK								
DLY WALK								
ST DLY / 10								
GRN CL / 10								

PHASING SCHEMATIC



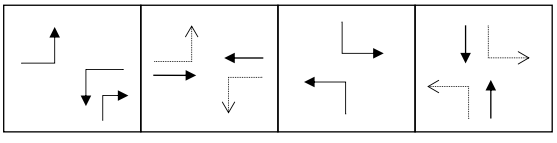
PHASE OPTIONS SET 1
MM 2-2

PHASE	1	2	3	4	5	6	7	8
PHASE OMIT								
PED OMIT								
MIN VEH RECALL				X				X
MAX VEH RECALL								
SOFT VEH RECALL								
PED RECALL								
PED RECYCLE								
COND SERVICE								
DETECTOR LOCK								
DUAL ENTRY		X		X		X		X
SIMULT. GAP								
GUARANT PASS								
ADD INITIAL CALC								
WALK REST								
RED REST								
FLASH ENTRY								
FLASH EXIT								
CAN - 1								
CAN - 2								
NO BACKUP								
MAX WALK								
MAX EXTENSIONS								
SEQUENTIAL TIMING								
NO MIN YELLOW								

VEHICLE OVERLAPS
MM 3-1

SET	1	2	3	4
TYPE	NORMAL			
INCLUDED PHASES	8, 5			
MODIFIER PHASES				
EXCLUDED PHASES				
EXCLUDED PEDS				
EXCLUDED WALKS				
NO TRAIL GRN PHS				
DET CALL PHASES				
TRAILING GRN				
TRAILING YEL				
TRAILING RED				
START DELAY				
ACTUATED ONLY				
DETECTOR LOCK				
NO MIN YELLOW				

PHASE SEQUENCE 1
MM 2-3



RING 1	
RING 2	
RING 3	
RING 4	

DETECTOR SETTINGS

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES

INTERSECTION NUMBER: **23** ZONE: **B**

INTERSECTION: Beasley Drive at Center Avenue (SR 48)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

CONTROLLER TYPE: McCain ATC eX2
MASTER LOCATION: N/A

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: 23 ZONE: B

INTERSECTION: Beasley Drive at Center Avenue (SR 48)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

COORDINATION

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

SPLIT TABLES

MM 5-3

TABLE	PHASE	1	2	3	4	5	6	7	8
1	TIME	16	30	12	32	16	30	12	32
	MODE								
	COORD				X				X
	MIN TIME								
	MAN PERM								
	MAN OMIT								
2	TIME	12	20	15	23	12	20	15	23
	MODE								
	COORD				X				X
	MIN TIME								
	MAN PERM								
	MAN OMIT								
3	TIME	15	21	15	29	15	21	15	29
	MODE								
	COORD				X				X
	MIN TIME								
	MAN PERM								
	MAN OMIT								
4	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								
22	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								
	TIME								
	MODE								
	COORD								
	MIN TIME								
	MAN PERM								
	MAN OMIT								

CONSTANTS

MM 5-1

CORRECTION MODE	SHORTWAY
MAX CYCLE TRANS	3
COORD MAX MODE	MAX INHIBIT
COORD FORCE MODE	FLOATING
PERM STRATEGY	MAXIMUM
OMIT STRATEGY	MINIMUM
SYNC POINT	BEGIN OF YELLOW
NO EARLY RETURN	NO
SYNC REF TIME	

PATTERNS

MM 5-2

PATTERN	1	2	3	4	22			
CYCLE TIME	90	70	80					
OFFSET TIME	88	63	7					
SPLIT	1	2	3					
SEQUENCE	1	1	1					
PHASE TIMING SET	1	1	1					
PHASE OPTION SET	1	1	1					
VEH OVERLAP SET	1	1	1					
PED OVERLAP SET	1	1	1					
TRANS PRIORITY SET	1	1	1					
VEHICLE DET SET	1	1	1					
PED DET SET	1	1	1					
VEH DET DIAG SET	1	1	1					
PED DET DIAG SET	1	1	1					
DETECTOR RESET	NO	NO	NO					
MAX 2 PHASES								
CORRECTION MODE								
COORD MAX MODE								
COORD FORCE MODE								
PERM STRATEGY								
OMIT STRATEGY								
NO EARLY RETURN								
TX DIAMOND TYPE								

TIME OF DAY (TOD) PROGRAM

McCain
A Company of the SWARCO Group

McCAIN ATC SERIES CONTROLLER

INTERSECTION NUMBER: 23 **ZONE:** B

INTERSECTION: Beasley Drive at Center Avenue (SR 48)
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

CONTROLLER TYPE: McCain ATCeX
MASTER LOCATION: N/A

TIME ZONE

MM 6-2

TIME ZONE OFFSET	-06:00:00

US TIME ZONES:

HST =	-10:00:00	HST =	-09:00:00
PST =	-08:00:00	PST =	-07:00:00
CST =	-06:00:00	CST =	-05:00:00

DAYLIGHT SAVINGS TIME (DST)

MM 6-3

DST MODE	ENABLED

DTS SCHEDULE

YEAR	BEGIN		END	
1	03/10/2019	2:00	11/03/2019	2:00
2	03/08/2020	2:00	11/01/2020	2:00
3	03/14/2021	2:00	11/07/2021	2:00
4	03/13/2022	2:00	11/06/2022	2:00
5	03/12/2023	2:00	11/05/2023	2:00
6	03/10/2024	2:00	11/03/2024	2:00

* UPDATE DTS DATES AS NEEDED

ACTIONS

MM 6-6

ACTION #	1	2	3			
PATTERN	1	2	3			
AUXILIARY FUNCTION						
SPECIAL FUNCTION						
DETECTOR RESET	NO	NO	NO			
DETECTOR VOS LOG						
SPEED TRAP LOG						
CYCLE MOE LOG						
HI-RES LOG						

SPECIAL DEFINED PATTERNS

PATTERN / ACTION PLAN / DESCRIPTION

254 / 127 / FREE
255 / 128 / FLASH

DAY PLANS

MM 6-5

DAY PLAN	EVENT	HOUR	MINUTE	ACTION	DESCRIPTION
1	1	0	0	127	FREE
1	2	4	15	1	AM PEAK
1	3	8	30	2	MIDDAY PEAK
1	4	13	30	3	PM PEAK
1	5	19	0	127	FREE
2	1	0	0	127	FREE

SCHEDULES

MM 6-4

SCH #	MONTH												DAY							DATE																													DAY PLAN
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
2	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
3																																																		
4																																																		
5																																																	
6																																																	

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Battelle Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 24 **ZONE:** B

INTERSECTION: Beasley Drive at Cowan Road

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK 3000E

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	10	5	7	5	10	5	7
PASSAGE	2.0	3.0	2.0	2.5	2.0	3.0	2.0	2.5
YELLOW	3.0	5.0	3.0	3.5	4.0	5.0	3.0	3.5
RED CLEAR	2.5	1.0	2.5	1.5	2.0	1.0	3.0	1.5
WALK								
PED CLEAR								
MAX 1	20	40	20	30	20	40	20	30
MAX 2	35	35	35	35	35	35	35	35
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK	X		X	X	X		X	X
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

CONTROLLER OPTIONS

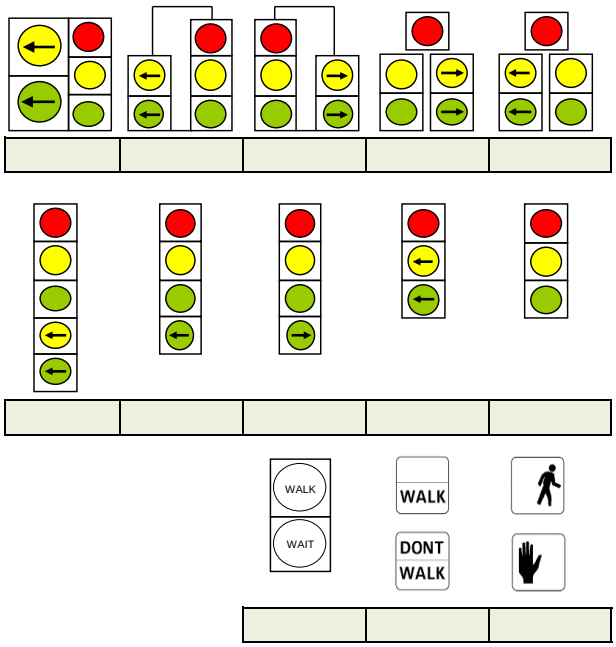
PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

MIN RED REVERT		UCF OVERRIDE HOLD	
RED REVERT TIME		UCF TEST A OR B	
AUTO PED CLEAR		PASSAGE SEQUENTIAL	
START UP FLASH		ENABLE SIM. GAP	
START UP INTERVAL		ENHANCED PED OPERATION	
START UP ALL RED		EXT. START OVERRIDES	

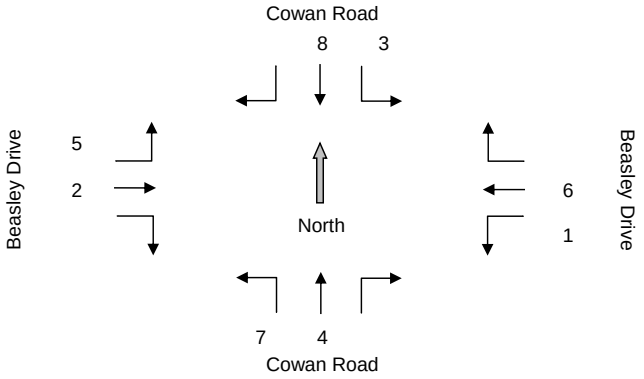
PRE-EMPT OVERRIDES STOP TIME

FLASH	
FREE	
SPECIAL	

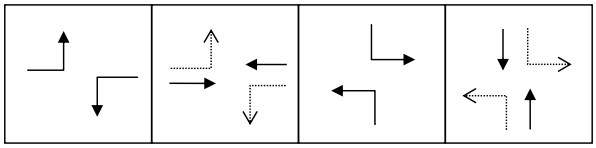
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: Beasley Drive at Cowan Road

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: **Beasley Drive at Cowan Road**

INSTALLATION DATE: **Tuesday May 11, 2021**

PROGRAMMED BY: **KCI Technologies, INC**

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC
A Kapsch Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1	15	45	15	15	15	45	15	15
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1	15	25	15	15	15	25	15	15
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1	15	35	15	15	15	35	15	15
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	90	70	80			
MAX DWELL						
OFFSET 1	55					
SPLIT 2/OFFSET 2		66				
OFFSET 3			22			
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								X
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8				X				

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3	2	6
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **24** ZONE: **B**

INTERSECTION: Beasley Drive at Cowan Road
INSTALLATION DATE: Tuesday May 11, 2021
PROGRAMMED BY: KCI Technologies, INC
NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC
A Kapsch Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	04:15	FREE		11	OFF
1	04:15		1 / 1 / 1		
1	08:30		2 / 1 / 2		
1	13:30		3 / 1 / 3		
1	19:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

LOCAL CONTROLLER PROGRAMMING

PEEK TRAFFIC
A Battalix Company

PEEK 3000 SERIES

INTERSECTION NUMBER: 25 **ZONE:** B

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

MASTER TYPE: PEEK ATC-1000

MASTER LOCATION: N/A

TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
INITIAL		10		7	5	10		
PASSAGE		3.0		3.0	3.0	3.0		
YELLOW		3.5		3.0	3.0	3.5		
RED CLEAR		1.0		2.0	1.5	1.0		
WALK								
PED CLEAR								
MAX 1		30		15	15	30		
MAX 2		40		20	15	40		
MAX 3 LIMIT								
MAX 3 ADJUST								
CNA 1		X				X		
CNA 2								
WALK REST MOD.								
FLASH WALK								
INHIBIT MAX								
PED RECYCLE								
MIN RECALL								
MAX RECALL								
PED RECALL								
SOFT RECALL								
NON-LOCK		X		X	X	X		
VEHICLE OMIT								
PED OMIT								
MAX OUTS TO ADJ MAX 3								
GAP OUTS TO ADJ MAX 3								

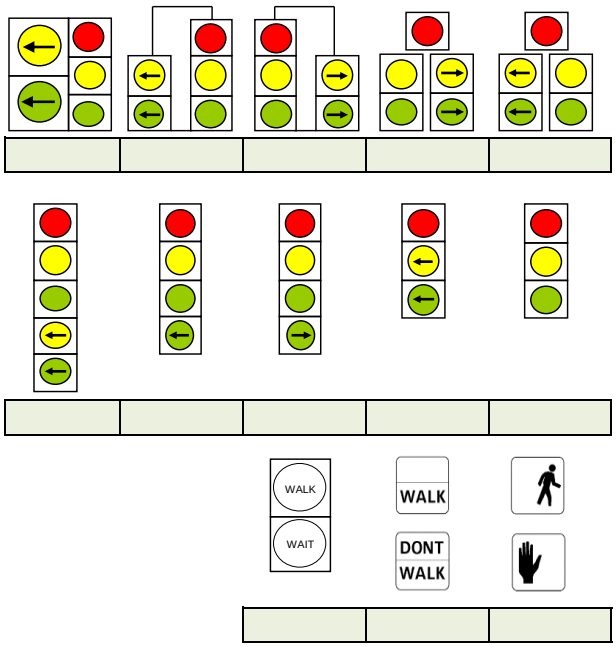
CONTROLLER OPTIONS

PHASE	1	2	3	4	5	6	7	8
START UP								
UCF LAST								
UCF EXIT								
SIM. GAP								

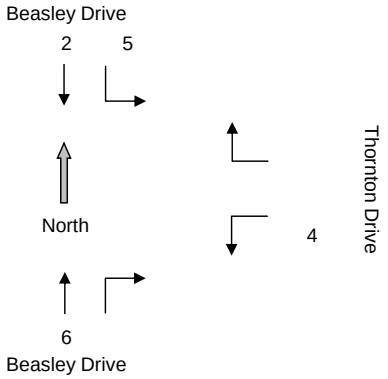
MIN RED REVERT		UCF OVERRIDE HOLD		PRE-EMPT
RED REVERT TIME		UCF TEST A OR B		OVERRIDES
AUTO PED CLEAR		PASSAGE SEQUENTIAL		STOP TIME
START UP FLASH		ENABLE SIM. GAP		
START UP INTERVAL		ENHANCED PED OPERATION		
START UP ALL RED		EXT. START OVERRIDES		

FLASH	
FREE	
SPECIAL	

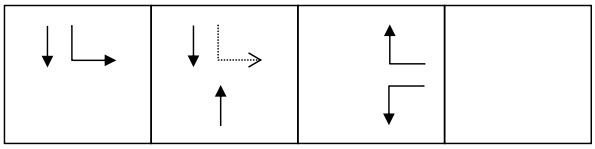
SIGNAL DISPLAYS



PHASING SCHEMATIC



PHASING SEQUENCE



INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

DETECTOR SETTINGS

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS																
VIDEO																

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7							X	
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4			
5			
6			
7			
8			

DELAY INHIBITS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR 1																
DETECTOR 2																
DETECTOR 3																
DETECTOR 4																
DETECTOR 5																
DETECTOR 6																
DETECTOR 7																
DETECTOR 8																

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: **Beasley Drive at Thornton Drive**

INSTALLATION DATE: **Tuesday May 11, 2021**

PROGRAMMED BY: **KCI Technologies, INC**

NOTES:

COORDINATION AND OPERATION

PEEK TRAFFIC
A Q-Free Company

PEEK 3000 SERIES CONTROLLER

PHASE ALLOCATIONS (SEC)

PHASE	1	2	3	4	5	6	7	8
CYCLE 1/SPLIT 1		75		15	15	60		
CYCLE 1/SPLIT 2								
CYCLE 2/SPLIT 1		50		20	15	35		
CYCLE 2/SPLIT 2								
CYCLE 3/SPLIT 1		55		25	15	40		
CYCLE 3/SPLIT 2								
CYCLE 4/SPLIT 1								
CYCLE 4/SPLIT 2								

DYNAMIC OMITS

PHASE/OVL	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								
OMIT PHASE								
IF PHASE OR OVL ON								

OPERATING MODE

FUNCTION	
AUTO PERM	Y
END OF MAIN ST	Y
ENHANCED PERM	
FIXED FORCE OFF	N
YELLOW OFFSET	
CENTRAL OVERIDE	
NO PCL OFFSET ADJ	
OFFSET ENTRY IN %	N
PERM-PA ENTRY IN %	N
INVERT FREE IN	
SPLIT MATRIX	
4 SPLITS / CYCLE	
NO EARLY COORD PED	
CYCLE SOURCE	0 - TOD
SPLIT SOURCE	0 - TOD
OFFSET SOURCE	0 - TOD
FREE SOURCE	0 - TOD
FLASH SOURCE	0 - TOD
INTER. TOD REVERT	
TYPE OF PERM	1 - SINGLE
OFFSET SEEKING	2 - SR
PED PERMISSIVE	
YIELD PERCENT	

CYCLE LENGTH / DWELL / OFFSETS

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	90	70	80			
MAX DWELL						
OFFSET 1	19	44	66			
SPLIT 2/OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG

DUAL ENTRY

PHASE	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2						X		
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6		X						
PHASE 7								
PHASE 8								

COORD. PHASES

CYCLE	PHASES TO BE COORD	
1	2	6
2	2	6
3	2	6
4		
5		
6		

CYCLE / OFFSET / SPLIT / FREE TO TOD CIRCUITS

PLAN	C / O / S / FREE				CKT	CKT	CKT	CKT
1								
2								

COS TO LEAD/LAG

PATTERN	C/O/S

INTERSECTION NUMBER: **25** ZONE: **B**

INTERSECTION: Beasley Drive at Thornton Drive

INSTALLATION DATE: Tuesday May 11, 2021

PROGRAMMED BY: KCI Technologies, INC

NOTES:

TIME OF DAY PROGRAMMING

PEEK TRAFFIC A Kapsch Company

PEEK 3000 SERIES CONTROLLER

WEEKLY PROGRAM PLAN

PLAN	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	2	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

CIRCUIT OVERRIDES

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

PLAN	HH:MM	CKT PLAN	C/O/S	CKT	ON/OFF
1	00:00	FREE		11	ON
1	04:15	FREE		11	OFF
1	04:15		1 / 1 / 1		
1	08:30		2 / 1 / 1		
1	13:30		3 / 1 / 1		
1	19:00	FREE		11	ON
2	00:00	FREE		11	ON

TOD CIRCUIT PLANS

PLAN	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF	CKT	ON/OFF
1								
2								
3								

APPENDIX I
TRAVEL TIME DATA COLLECTION SHEETS

TRAVEL TIME DATA COLLECTION SHEETS
PRE-CONDITION

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(1) AM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	0729	AT: (LOCATION)	SR 96
		MILEAGE:	1726.0.6
TRIP ENDED AT: (TIME)	0740	AT: (LOCATION)	Beasley
		MILEAGE:	1726.4.6

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:52	S-	10sec	
US 70 and US 70 Bypass	2:57	S-	3sec	
US 70 and Plaza Drive	3:29			
US 70 and SR 46 (Mathis Drive)	4:48	S-	42sec	
US 70 and Pumphill Road	5:37	S-	11sec	
US 70 and SR 48	6:26	S-	9sec	
US 70 and North Charlotte Street	7:02	S-	13sec	
US 70 and Cougar Pride Way (unsignalized)	7:42			
US 70 and SR 235	9:18	S-	5sec	
US 70 and Beasley Drive	10:36	S-	17sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(1) AM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	0740	AT: (LOCATION)	Beasley
		MILEAGE:	17265.0
TRIP ENDED AT: (TIME)	0750	AT: (LOCATION)	SR 96
		MILEAGE:	17269.3

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	0:00			
US 70 and SR 235	1:18	S-	31sec	
US 70 and Cougar Pride Way (unsignalized)	3:01			
US 70 and North Charlotte Street	4:06	S-	19sec	
US 70 and SR 48	4:17			
US 70 and Pumphill Road	5:04			
US 70 and SR 46 (Mathis Drive)	5:50	S-	9sec	
US 70 and Plaza Drive	6:15			
US 70 and US 70 Bypass	6:58			
US 70 and Hummingbird Lane	7:49			
US 70 and SR 96	9:21			

15 MPH School Zone

15 MPH School Zone

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(2) AM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	0750	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17269.9
TRIP ENDED AT:	0800	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17274.0

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:43	S-	11sec	
US 70 and US 70 Bypass	2:36			
US 70 and Plaza Drive	3:06			
US 70 and SR 46 (Mathis Drive)	4:00	S-	27sec	
US 70 and Pumphill Road	4:58	S-	27sec	
US 70 and SR 48	5:28			
US 70 and North Charlotte Street	5:36			
US 70 and Cougar Pride Way (unsignalized)	6:17			
US 70 and SR 235	7:59	S-	22sec	
US 70 and Beasley Drive	8:38			

757 Traffic Control Top Leaves Cougar Pride Way Intersection

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(2) AM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	0801	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17274.2
TRIP ENDED AT:	0804	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17278.3

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	1:47			
US 70 and North Charlotte Street	2:09			
US 70 and SR 48	2:20			
US 70 and Pumphill Road	2:51			
US 70 and SR 46 (Mathis Drive)	4:27	S-	68sec	
US 70 and Plaza Drive	4:59			
US 70 and US 70 Bypass	5:28	S-	7sec	
US 70 and Hummingbird Lane	6:17			
US 70 and SR 96	7:42			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/17/21	WEATHER:	Sunny, Clear
TRIP NO.:	(9) AM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	0832	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17289.1
TRIP ENDED AT:	0634	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17288.1

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:23			
US 70 and US 70 Bypass	2:12			
US 70 and Plaza Drive	2:36			
US 70 and SR 46 (Mathis Drive)	2:57			
US 70 and Pumphill Road	3:45	S-	25sec	
US 70 and SR 48	4:26	S-	4sec	
US 70 and North Charlotte Street	4:37			
US 70 and Cougar Pride Way (unsignalized)	4:54			
US 70 and SR 235	5:54			
US 70 and Beasley Drive	6:32			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	3 AM	ROUTE:	4570
		DIRECTION:	EB
TRIP STARTED AT:	0839	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17288.3
TRIP ENDED AT:	0846	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17292.5

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:36			
US 70 and Cougar Pride Way (unsignalized)	1:40			
US 70 and North Charlotte Street	1:57			
US 70 and SR 48	2:14	S-	25ec	
US 70 and Pumphill Road	2:53	S-	2sec	
US 70 and SR 46 (Mathis Drive)	3:18			
US 70 and Plaza Drive	3:41			
US 70 and US 70 Bypass	4:12	S-	14sec	
US 70 and Hummingbird Lane	5:05			
US 70 and SR 96	6:15			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) KM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	0848	AT: (LOCATION)	SR 96
		MILEAGE:	17293.2
TRIP ENDED AT: (TIME)	0854	AT: (LOCATION)	Beasley
		MILEAGE:	17297.4

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:28			
US 70 and US 70 Bypass	2:10			
US 70 and Plaza Drive	2:28			
US 70 and SR 46 (Mathis Drive)	2:45			
US 70 and Pumphill Road	3:16	S-	35sec	
US 70 and SR 48	4:07	S-	17sec	
US 70 and North Charlotte Street	4:36	S-	12sec	
US 70 and Cougar Pride Way (unsignalized)	4:54			
US 70 and SR 235	5:52			
US 70 and Beasley Drive	6:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) AM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	0855	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17297.5
TRIP ENDED AT:	0902	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17301.5

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	1:00			
US 70 and SR 235	1:32	S-	5 sec	
US 70 and Cougar Pride Way (unsignalized)	2:36			
US 70 and North Charlotte Street	2:58			
US 70 and SR 48	3:06			
US 70 and Pumphill Road	3:44	S-	4sec	
US 70 and SR 46 (Mathis Drive)	4:32	S-	15sec	
US 70 and Plaza Drive	4:57			
US 70 and US 70 Bypass	5:36	S-	16sec	
US 70 and Hummingbird Lane	6:18			
US 70 and SR 96	7:40			

Signal Recalled to SR 48 off Ramp

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/4/21	WEATHER:	Cloudy, Dawn, Overcast
TRIP NO.:	(5) AM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	0727	AT: (LOCATION)	SR-96
		MILEAGE:	1751 6.5
TRIP ENDED AT: (TIME)	0737	AT: (LOCATION)	Beasley
		MILEAGE:	1752 0.6

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:25			
School Zone Sign Flashing 15 MPH → US 70 and US 70 Bypass	2:25			
US 70 and Plaza Drive	2:58			
US 70 and SR 46 (Mathis Drive)	3:29			
US 70 and Pumphill Road	4:24	S-	25sec	
US 70 and SR 48	5:21	S-	22sec	
US 70 and North Charlotte Street	5:58	S-	16sec	
School Zone Sign Flashing 15 MPH → US 70 and Cougar Pride Way (unsignalized)	7:15	LT-	26sec	
US 70 and SR 235	9:03	S-	23sec	
US 70 and Beasley Drive	10:00	S-	7sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(5) AM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	0738	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17520.5
TRIP ENDED AT:	0747	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17524.9

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:37			
US 70 and Cougar Pride Way (unsignalized)	2:06			
US 70 and North Charlotte Street	3:00	S-	8sec	
US 70 and SR 48	3:27	S-	12sec	
US 70 and Pumphill Road	4:00			
US 70 and SR 46 (Mathis Drive)	4:43	S-	16sec	
US 70 and Plaza Drive	5:32	S-	14sec	
US 70 and US 70 Bypass	6:26	S-	10sec	
US 70 and Hummingbird Lane	7:34	S-	6sec	
US 70 and SR 96	9:42	S-	21sec	

15 MPH

Queuing from V. Charlotte ... into SR 48 intersection NB

15 MPH

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	6AM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	0749	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17525.7
TRIP ENDED AT:	0757	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17529.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:27			
US 70 and US 70 Bypass	2:21			
US 70 and Plaza Drive	2:48			
US 70 and SR 46 (Mathis Drive)	3:07			
US 70 and Pumphill Road	3:28			
US 70 and SR 48	3:56			
US 70 and North Charlotte Street	4:09			
US 70 and Cougar Pride Way (unsignalized)	5:26	LT-	36 sec	
US 70 and SR 235	6:45			
US 70 and Beasley Drive	8:15	S-	37 sec	

15 MPH

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(6) AM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	0758	AT: (LOCATION)	Beasley
		MILEAGE:	17530.0
TRIP ENDED AT: (TIME)	0806	AT: (LOCATION)	SR 96
		MILEAGE:	17354.2

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	0:01			
US 70 and SR 235	1:23	S-	37sec	
US 70 and Cougar Pride Way (unsignalized)	2:39			
US 70 and North Charlotte Street	3:01			
US 70 and SR 48	3:15			
US 70 and Pumphill Road	3:48			
US 70 and SR 46 (Mathis Drive)	4:27	S-	4sec	
US 70 and Plaza Drive	5:06	S-	8sec	
US 70 and US 70 Bypass	5:41	S-	3sec	
US 70 and Hummingbird Lane	6:28			
US 70 and SR 96	7:58			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: JR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(1) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1100	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17317.4
TRIP ENDED AT:	1108	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17317.3

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:40			
US 70 and US 70 Bypass	2:42			
US 70 and Plaza Drive	3:21	S-	12sec	
US 70 and SR 46 (Mathis Drive)	4:17	S-	22sec	
US 70 and Pumphill Road	4:52			
US 70 and SR 48	5:24			
US 70 and North Charlotte Street	5:39			
US 70 and Cougar Pride Way (unsignalized)	5:57			
US 70 and SR 235	7:04			
US 70 and Beasley Drive	7:54	S-	8sec	

TRIP LENGTH TRIP TIME TRAVEL SPEED

RUNNING TIME STOPPED TIME RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(1) MD	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1108	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17321.7
TRIP ENDED AT:	1117	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17325.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:43			
US 70 and Cougar Pride Way (unsignalized)	1:35			
US 70 and North Charlotte Street	2:23	S-	25sec	
US 70 and SR 48	2:38			
US 70 and Pumphill Road	3:17			
US 70 and SR 46 (Mathis Drive)	4:26	S-	29sec	
US 70 and Plaza Drive	5:12	S-	14sec	
US 70 and US 70 Bypass	5:56	S-	16sec	
US 70 and Hummingbird Lane	7:09	S-	13sec	
US 70 and SR 96	8:33			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/7/21	WEATHER:	Sunny, Clear
TRIP NO.:	(2) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1118	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17326.7
TRIP ENDED AT:	1127	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17330.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:47	S-	16sec	
US 70 and US 70 Bypass	2:39			
US 70 and Plaza Drive	3:22	S-	12sec	
US 70 and SR 46 (Mathis Drive)	4:31	S-	98sec	
US 70 and Pumphill Road	5:19	S-	165ec	
US 70 and SR 48	6:09	S-	115ec	
US 70 and North Charlotte Street	6:44	S-	17sec	
US 70 and Cougar Pride Way (unsignalized)	7:03			
US 70 and SR 235	8:03			
US 70 and Beasley Drive	8:39			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(2) MD	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1128	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17331.0
TRIP ENDED AT:	1195	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17335.1

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:54	S-	9sec	
US 70 and Cougar Pride Way (unsignalized)	2:00			
US 70 and North Charlotte Street	2:19			
US 70 and SR 48	2:49	S-	12sec	
US 70 and Pumphill Road	3:17			
US 70 and SR 46 (Mathis Drive)	4:03	S-	16sec	
US 70 and Plaza Drive	4:42	S-	6sec	
US 70 and US 70 Bypass	5:27	S-	18sec	
US 70 and Hummingbird Lane	6:15			
US 70 and SR 96	7:43			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(3) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1137	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17335.8
TRIP ENDED AT:	1144	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17340.0

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:22			
US 70 and US 70 Bypass	2:02			
US 70 and Plaza Drive	2:20			
US 70 and SR 46 (Mathis Drive)	2:41			
US 70 and Pumphill Road	3:01			
US 70 and SR 48	3:42	S-	5sec	
US 70 and North Charlotte Street	4:14	S-	45ec	
US 70 and Cougar Pride Way (unsignalized)	4:34			
US 70 and SR 235	5:34			
US 70 and Beasley Drive	6:39	S-	23sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(3)MB	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	1145	AT: (LOCATION)	Beasley
		MILEAGE:	17340.1
TRIP ENDED AT: (TIME)	1153	AT: (LOCATION)	SR 96
		MILEAGE:	17344.2

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:38			
US 70 and Cougar Pride Way (unsignalized)	1:47			
US 70 and North Charlotte Street	2:30	S-	15sec	
US 70 and SR 48	2:54	S-	12sec	
US 70 and Pumphill Road	3:59	S-	24sec	
US 70 and SR 46 (Mathis Drive)	4:27			
US 70 and Plaza Drive	4:57	S-	2sec	
US 70 and US 70 Bypass	5:25			
US 70 and Hummingbird Lane	6:14			
US 70 and SR 96	7:58	S-	9sec	

TRIP LENGTH TRIP TIME TRAVEL SPEED

RUNNING TIME STOPPED TIME RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/9/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1155	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17345.1
TRIP ENDED AT:	1203	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17349.2

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	2:08	S-	36sec	
US 70 and US 70 Bypass	2:58			
US 70 and Plaza Drive	3:25	S-	1sec	
US 70 and SR 46 (Mathis Drive)	3:51			
US 70 and Pumphill Road	4:14			
US 70 and SR 48	4:39			
US 70 and North Charlotte Street	5:11	S-	7sec	
US 70 and Cougar Pride Way (unsignalized)	5:32			
US 70 and SR 235	6:33			
US 70 and Beasley Drive	7:42	S-	25sec	

Beasley is Split Phasing

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) MD	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1204	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17349.6
TRIP ENDED AT:	1211	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17353.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:37			
US 70 and Cougar Pride Way (unsignalized)	1:46			
US 70 and North Charlotte Street	2:03			
US 70 and SR 48	2:10			
US 70 and Pumphill Road	3:03	S -	65sec	
US 70 and SR 46 (Mathis Drive)	3:36			
US 70 and Plaza Drive	4:02			
US 70 and US 70 Bypass	4:27			
US 70 and Hummingbird Lane	5:14			
US 70 and SR 96	6:35			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(5) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1201	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17571.6
TRIP ENDED AT:	1209	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17575.8

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:25			
US 70 and US 70 Bypass	2:10			
US 70 and Plaza Drive	2:29			
US 70 and SR 46 (Mathis Drive)	2:51			
US 70 and Pumphill Road	3:38	S-	7sec	
US 70 and SR 48	4:21	S-	7sec	
US 70 and North Charlotte Street	4:30			
US 70 and Cougar Pride Way (unsignalized)	4:49			
US 70 and SR 235	5:59			
US 70 and Beasley Drive	7:14	S-	25sec	

NB T-head signal red light + S bound out

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(5) MD	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1209	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	1757.9
TRIP ENDED AT:	1217	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	1758.0

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:55	S-	16sec	
US 70 and Cougar Pride Way (unsignalized)	2:06			
US 70 and North Charlotte Street	2:24			
US 70 and SR 48	2:45	S-	7sec	
US 70 and Pumphill Road	3:28	S-	3sec	
US 70 and SR 46 (Mathis Drive)	3:51			
US 70 and Plaza Drive	4:12			
US 70 and US 70 Bypass	4:33			
US 70 and Hummingbird Lane	5:21			
US 70 and SR 96	7:11	S-	10sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(6) MD	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1218	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17560.8
TRIP ENDED AT:	1226	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17584.9

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:35			
US 70 and US 70 Bypass	2:26			
US 70 and Plaza Drive	2:48			
US 70 and SR 46 (Mathis Drive)	3:21	S-	25ec	
US 70 and Pumphill Road	3:57	S-	25ec	
US 70 and SR 48	4:30			
US 70 and North Charlotte Street	4:39			
US 70 and Cougar Pride Way (unsignalized)	4:59			
US 70 and SR 235	6:05			
US 70 and Beasley Drive	7:07	S-	17sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/4/21	WEATHER:	Cloudy, Overcast
TRIP NO.:	(6)MD	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	1226	AT: (LOCATION)	Beasley
		MILEAGE:	17585.0
TRIP ENDED AT: (TIME)	1234	AT: (LOCATION)	SR96
		MILEAGE:	17589.2

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:51	S-	2sec	
US 70 and Cougar Pride Way (unsignalized)	2:05			
US 70 and North Charlotte Street	2:28			
US 70 and SR 48	2:49	S-	2sec	
US 70 and Pumphill Road	3:24			
US 70 and SR 46 (Mathis Drive)	4:50	S-	47sec	
US 70 and Plaza Drive	5:15			
US 70 and US 70 Bypass	5:46	S-	5sec	
US 70 and Hummingbird Lane	6:37			
US 70 and SR 96	8:09			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/2/21	WEATHER:	Sunny / Clear
TRIP NO.:	(1) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1636	AT: (LOCATION)	SR 96
		MILEAGE:	17126.0
TRIP ENDED AT: (TIME)	1645	AT: (LOCATION)	Beasley
		MILEAGE:	17130.1

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and SR 96	00:00			
US 70 and Hummingbird Lane	01:37			
US 70 and US 70 Bypass	02:28			
US 70 and Plaza Drive	02:50			
US 70 and SR 46 (Mathis Drive)	03:30	S-	45ec	
US 70 and Pumphill Road	04:54	S-	12sec + 16sec	N. Charlotte St. Red Signal
US 70 and SR 48	05:34			
US 70 and North Charlotte Street	06:09	S-	16sec	
US 70 and Cougar Pride Way (unsignalized)	06:32			
US 70 and SR 235	08:04	S-	45ec	
US 70 and Beasley Drive	08:49			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: Drew Randolph

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/2/21	WEATHER:	Sunny / Clear / Dusk
TRIP NO.:	(1) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	1651	AT: (LOCATION)	Beasley
		MILEAGE:	171 31.6
TRIP ENDED AT: (TIME)	1701	AT: (LOCATION)	SR 96
		MILEAGE:	171 35.5

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	00:00			
US 70 and SR 235	01:15	S-	14sec	
US 70 and Cougar Pride Way (unsignalized)	02:21			
US 70 and North Charlotte Street	02:44			
US 70 and SR 48	03:00			
US 70 and Pumphill Road	04:09	S-	21sec	
US 70 and SR 46 (Mathis Drive)	05:00	S-	11sec	
US 70 and Plaza Drive	05:41	S-	7sec	
US 70 and US 70 Bypass	06:54	S-	45sec	
US 70 and Hummingbird Lane	08:00	S-	8sec	
US 70 and SR 96	09:46			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: Drew Randolph

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/2/21	WEATHER:	Sunny / Clear / Dusk
TRIP NO.:	(2) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1705	AT: (LOCATION)	SR 96
		MILEAGE:	1732.6
TRIP ENDED AT: (TIME)	1719	AT: (LOCATION)	Beasley
		MILEAGE:	1740.7

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and SR 96	00:00			
US 70 and Hummingbird Lane	01:42			
US 70 and US 70 Bypass	02:31			
US 70 and Plaza Drive	02:52			
US 70 and SR 46 (Mathis Drive)	03:15			
US 70 and Pumphill Road	07:49			
US 70 and SR 48	04:55	S-	13sec	for N. Charlotte St. Red Signal
US 70 and North Charlotte Street	05:05			
US 70 and Cougar Pride Way (unsignalized)	05:26			
US 70 and SR 235	06:39			
US 70 and Beasley Drive	07:16			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/2/21	WEATHER:	Clear / Dusk
TRIP NO.:	(2) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1715	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17140.9
TRIP ENDED AT:	1723	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17145.0

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	00:00			
US 70 and SR 235	00:54			
US 70 and Cougar Pride Way (unsignalized)	02:05			
US 70 and North Charlotte Street	02:25			
US 70 and SR 48	02:32			
US 70 and Pumphill Road	03:36	S-	2½sec	
US 70 and SR 46 (Mathis Drive)	04:02			
US 70 and Plaza Drive	04:32			
US 70 and US 70 Bypass	05:20	S-	21sec	
US 70 and Hummingbird Lane	06:08			
US 70 and SR 96	07:36			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/9/21	WEATHER:	Sunny, Clear
TRIP NO.:	(3) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1500	AT: (LOCATION)	SR 96
		MILEAGE:	17364.6
TRIP ENDED AT: (TIME)	1512	AT: (LOCATION)	Peasley
		MILEAGE:	17358.8

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and SR 96	0:00			
Maybe split passing Minor Road — US 70 and Hummingbird Lane	2:03	S-	28sec	
15 MPH School Zone — US 70 and US 70 Bypass	2:51			
US 70 and Plaza Drive	3:39	S-	12 sec	
US 70 and SR 46 (Mathis Drive)	4:28	S-	10sec	
US 70 and Pumphill Road	5:47	S-	44sec	
US 70 and SR 48	6:23			
US 70 and North Charlotte Street	6:30	stopped traffic on 70 for		
5 MPH School Zone — US 70 and Cougar Pride Way (unsignalized)	10:25	officer ^ LT from School Dwy	180sec	
US 70 and SR 235	11:46			
US 70 and Beasley Drive	12:22			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(3) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1513	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17368.9
TRIP ENDED AT:	1524	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17373.0

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	1:44	S-	58sec	
US 70 and Cougar Pride Way (unsignalized)	3:12			
US 70 and North Charlotte Street	3:41			
US 70 and SR 48	3:54			
US 70 and Pumphill Road	4:53	S-	11sec	
US 70 and SR 46 (Mathis Drive)	6:06	S-	38sec	
US 70 and Plaza Drive	6:54	S-	10sec	
US 70 and US 70 Bypass	7:49	S-	15sec	
US 70 and Hummingbird Lane	8:34			
US 70 and SR 96	10:26	S-	13sec	

235 split phasing

15 MPH school zone

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1525	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17373.8
TRIP ENDED AT:	1533	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17377.9

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:40	S-	5sec	
15MPH School Zone — US 70 and US 70 Bypass	2:31			
US 70 and Plaza Drive	3:10	S-	5sec	
US 70 and SR 46 (Mathis Drive)	3:42			
US 70 and Pumphill Road	4:05			
US 70 and SR 48	4:34			
US 70 and North Charlotte Street	4:59	S-	5sec	
No School Zone Flash — US 70 and Cougar Pride Way (unsignalized)	5:21			
US 70 and SR 235	6:30			
US 70 and Beasley Drive	7:23	S-	3sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(4) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1534	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17378.0
TRIP ENDED AT:	1541	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17382.2

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	1:53			
US 70 and North Charlotte Street	2:15			
US 70 and SR 48	2:22			
US 70 and Pumphill Road	2:54			
US 70 and SR 46 (Mathis Drive)	2:57	S-	23sec	
US 70 and Plaza Drive	4:30			
US 70 and US 70 Bypass	5:14	S-	14sec	
US 70 and Hummingbird Lane	5:54			
US 70 and SR 96	7:23			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(5) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1542	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17352.9
TRIP ENDED AT:	1551	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17387.1

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	2:01	S-	29sec	
US 70 and US 70 Bypass	2:56			
US 70 and Plaza Drive	3:45	S-	21sec	
US 70 and SR 46 (Mathis Drive)	4:44	S-	27sec	
US 70 and Pumphill Road	5:07			
US 70 and SR 48	5:30			
US 70 and North Charlotte Street	5:36			
US 70 and Cougar Pride Way (unsignalized)	5:54			
US 70 and SR 235	7:15	S-	2sec	
US 70 and Beasley Drive	7:55			

School Zone Not Flashing

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(5) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1552	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17387.2
TRIP ENDED AT:	1559	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17391.3

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:42			
US 70 and Cougar Pride Way (unsignalized)	1:49			
US 70 and North Charlotte Street	2:18	S-	25sec	
US 70 and SR 48	2:27			
US 70 and Pumphill Road	3:03			
US 70 and SR 46 (Mathis Drive)	4:05	S-	24sec	
US 70 and Plaza Drive	4:35			
US 70 and US 70 Bypass	5:24	S-	20sec	
US 70 and Hummingbird Lane	6:15			
US 70 and SR 96	7:39			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	2/9/21	WEATHER:	Sunny, Clear
TRIP NO.:	(6) PM	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	1601	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17292.1
TRIP ENDED AT:	1610	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	17396.2

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0:00			
US 70 and Hummingbird Lane	1:24			
US 70 and US 70 Bypass	2:05			
US 70 and Plaza Drive	2:41	S-	6sec	
US 70 and SR 46 (Mathis Drive)	3:18			
US 70 and Pumphill Road	4:04	S-	7sec	
US 70 and SR 48	4:58	S-	10sec	
US 70 and North Charlotte Street	5:22	S-	3sec	
US 70 and Cougar Pride Way (unsignalized)	5:45			
US 70 and SR 235	7:10	S-	5sec	
US 70 and Beasley Drive	8:20	S-	23sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	2/3/21	WEATHER:	Sunny, Clear
TRIP NO.:	(6) PM	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	1610	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	1739 6.4
TRIP ENDED AT:	1618	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	17400.5

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	0:00			
US 70 and SR 235	0:34			
US 70 and Cougar Pride Way (unsignalized)	1:44			
US 70 and North Charlotte Street	2:40	S-	26sec	
US 70 and SR 48	2:47			
US 70 and Pumphill Road	3:11			
US 70 and SR 46 (Mathis Drive)	3:36			
US 70 and Plaza Drive	4:22	S-	15sec	
US 70 and US 70 Bypass	5:04	S-	12sec	
US 70 and Hummingbird Lane	6:09	S-	4sec	
US 70 and SR 96	7:36			

Split phasing on N. Charlotte

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: VR

7-8 Peak Hour

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/28/21	WEATHER:	Clear ↓ Dawn
TRIP NO.:	(1) AM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	6:59	AT: (LOCATION)	Thornton
		MILEAGE:	18655.2
TRIP ENDED AT: (TIME)	7:01	AT: (LOCATION)	SR 48
		MILEAGE:	18656.2

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:32			
Beasley Drive and SR 48	1:36			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Clear & Dawn
TRIP NO.:	(1) AM	ROUTE:	Reedley
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	6:12	AT: (LOCATION)	SR 46
		MILEAGE:	1857.4
TRIP ENDED AT: (TIME)	6:14	AT: (LOCATION)	Thornton
		MILEAGE:	1858.4

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:16			
Beasley Drive and Thornton Drive	1:45			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Clear & Dawn
TRIP NO.:	(2) AM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	6:19	AT: (LOCATION)	Thornton
		MILEAGE:	1665.8
TRIP ENDED AT: (TIME)	6:21	AT: (LOCATION)	SR 48
		MILEAGE:	1660.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:30			
Beasley Drive and SR 48	1:38			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Clear, Dawn
TRIP NO.:	(2) AM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	7:29	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1862.8
TRIP ENDED AT:	7:31	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1863.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:16	S-	4sec	
Beasley Drive and Thornton Drive	1:42			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Clear Dawn
TRIP NO.:	3) AM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	7:34	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1866.2
TRIP ENDED AT:	7:36	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1865.2

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:27			
Beasley Drive and SR 48	1:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/29/21	WEATHER:	Clear, Dawn
TRIP NO.:	(3) AM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	7:43	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18667.2
TRIP ENDED AT:	7:45	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18668.2

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:21	S-	8sec	
Beasley Drive and Thornton Drive	2:03	S-	5sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Overcast, Dawn
TRIP NO.:	(4) AM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	7:48	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1866B.5
TRIP ENDED AT:	7:49	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18669.5

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:25			
Beasley Drive and SR 48	1:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Overcast, Partly Sunny
TRIP NO.:	(4) AM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	7:57	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1867.1.6
TRIP ENDED AT:	8:00	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1867.2.6

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	2:02	S-	49sec	
Beasley Drive and Thornton Drive	2:29	S-	1sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Overcast
TRIP NO.:	(5) AM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	8:05	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18672.9
TRIP ENDED AT:	8:07	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18673.9

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:42	S-	11sec	
Beasley Drive and SR 48	1:53			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Overcast
TRIP NO.:	(5) AM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	8:15	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1867.6.0
TRIP ENDED AT:	8:17	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1867.0

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:03			
Beasley Drive and Thornton Drive	1:28			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

12 - 1 Peak Hour

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy, Rain
TRIP NO.:	(1) MD	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1101	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1693.0
TRIP ENDED AT:	1103	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1694.0

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:24			
Beasley Drive and SR 48	1:33			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Cloudy, Rain
TRIP NO.:	(1) MD	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1110	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1696.1
TRIP ENDED AT:	1112	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1697.1

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:04			
Beasley Drive and Thornton Drive	1:36	S-	2sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy, Rain
TRIP NO.:	(2) MD	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1116	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1697.4
TRIP ENDED AT:	1118	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1698.4

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:26			
Beasley Drive and SR 48	1:45	S-	55sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/29/21	WEATHER:	Rainy Cloudy
TRIP NO.:	(2) MD	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1122	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18700.5
TRIP ENDED AT:	1124	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18701.5

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:30	S-	10sec	
Beasley Drive and Thornton Drive	1:58			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(3) MD	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1231	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1702.6
TRIP ENDED AT:	1233	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1709.6

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:41	S-	7sec	
Beasley Drive and SR 48	1:55			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/29/21	WEATHER:	Cloudy
TRIP NO.:	(9) NO	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1238	AT:	1805.7
(TIME)		(LOCATION)	
		MILEAGE:	SR 48
TRIP ENDED AT:	1240	AT:	1806.7
(TIME)		(LOCATION)	
		MILEAGE:	Thornton

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:38	S-	29sec	
Beasley Drive and Thornton Drive	2:05			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/29/21	WEATHER:	Cloudy
TRIP NO.:	(4) MD	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1242	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1707.0
TRIP ENDED AT:	1244	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1708.1

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:33			
Beasley Drive and SR 48	1:39			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(4) MD	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1249	AT:	SR48
(TIME)		(LOCATION)	
		MILEAGE:	187 10.1
TRIP ENDED AT:	1252	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1871.1

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:51	S-	37sec	
Beasley Drive and Thornton Drive	2:14			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: VR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/22/21	WEATHER:	Cloudy
TRIP NO.:	(5) MD	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1253	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1871.3
TRIP ENDED AT:	1255	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1872.3

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:78	S-	25EC	
Beasley Drive and SR 48	1:49			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(5) MD	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1259	AT:	SR48
(TIME)		(LOCATION)	
		MILEAGE:	18714.4
TRIP ENDED AT:	1301	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18715.4

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:32	S-	2/sec	
Beasley Drive and Thornton Drive	1:58			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

3:15 – 5:00 Peak Times

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(1) PM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1615	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18769.1
TRIP ENDED AT:	1618	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18770.1

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:01			
Beasley Drive and Cowan Road	0:52	S-	16sec	
Beasley Drive and SR 48	1:54			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	2/23/21	WEATHER:	Cloudy
TRIP NO.:	(1) PM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1621	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18772.2
TRIP ENDED AT:	1629	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18773.2

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:27	S-	18sec	
Beasley Drive and Thornton Drive	1:54			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/29/21	WEATHER:	Cloudy
TRIP NO.:	(2) PM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1630	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1873.4
TRIP ENDED AT:	1632	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1874.4

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:52	S-	11sec	
Beasley Drive and SR 48	2:09	S-	5sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	cloudy
TRIP NO.:	(2) PM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1637	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1876.5
TRIP ENDED AT:	1639	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1877.5

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:51	S-	43sec	
Beasley Drive and Thornton Drive	2:17			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	9/23/21	WEATHER:	Cloudy
TRIP NO.:	(3) PM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1646	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1877.9
TRIP ENDED AT:	1648	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1878.9

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:27			
Beasley Drive and SR 48	2:24	S-	48 sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(3) PM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1653	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18780.9
TRIP ENDED AT:	1655	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18781.9

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:00			
Beasley Drive and Thornton Drive	1:25			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(4) PM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1708	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18782.4
TRIP ENDED AT:	1710	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18783.4

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:30			
Beasley Drive and SR 48	2:03	S-	27sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	9/29/21	WEATHER:	Cloudy
TRIP NO.:	(4) PM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1714	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18785.5
TRIP ENDED AT:	1716	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18786.5

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:31	S-	23sec	
Beasley Drive and Thornton Drive	1:58			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	3/23/21	WEATHER:	Cloudy
TRIP NO.:	(5) PM	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1730	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	1876.8
TRIP ENDED AT:	1732	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	1787.8

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:28			
Beasley Drive and SR 48	1:30			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	3/27/21	WEATHER:	Cloudy
TRIP NO.:	5 PM	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1725	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	18789.9
TRIP ENDED AT:	1737	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	18790.9

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:06			
Beasley Drive and Thornton Drive	1:31			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL TIME DATA COLLECTION SHEETS
POST-CONDITION

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (1)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	7:01 AM	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13251
TRIP ENDED AT:	7:09 AM	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13255

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	2:09	S	31	
US 70 and US 70 Bypass	2:59			
US 70 and Plaza Drive	3:26			
US 70 and SR 46 (Mathis Drive)	3:49			
US 70 and Pumphill Road	4:12			
US 70 and SR 48	4:41			
US 70 and North Charlotte Street	4:49			
US 70 and Cougar Pride Way (unsignalized)	5:28			
US 70 and SR 235	7:15	S	5	
US 70 and Beasley Drive	7:58			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (2)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	7:22	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13260
TRIP ENDED AT:	7:32	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13265

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:47	S	4	
US 70 and US 70 Bypass	2:40			
US 70 and Plaza Drive	3:15			
US 70 and SR 46 (Mathis Drive)	3:57	S	10	
US 70 and Pumphill Road	4:55	S	17	
US 70 and SR 48	5:25			
US 70 and North Charlotte Street	5:33			
US 70 and Cougar Pride Way (unsignalized)	7:01	(traffic cop) SS	25	
US 70 and SR 235	8:17			
US 70 and Beasley Drive	9:10	S	6	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (3)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	7:48	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13270
TRIP ENDED AT:	7:57	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13275

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:42	S	2	
US 70 and US 70 Bypass	2:34			
US 70 and Plaza Drive	3:17	S	15	
US 70 and SR 46 (Mathis Drive)	3:54	S	3	
US 70 and Pumphill Road	4:20			
US 70 and SR 48	5:11	S	16	
US 70 and North Charlotte Street	5:21			
US 70 and Cougar Pride Way (unsignalized)	6:16	S	6	
US 70 and SR 235	8:10	S	11	
US 70 and Beasley Drive	8:49			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (4)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	8:09 AM	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13280
TRIP ENDED AT:	8:14	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13285

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:25			
US 70 and US 70 Bypass	2:09			
US 70 and Plaza Drive	2:25			
US 70 and SR 46 (Mathis Drive)	2:46			
US 70 and Pumphill Road	3:07			
US 70 and SR 48	3:35			
US 70 and North Charlotte Street	3:40			
US 70 and Cougar Pride Way (unsignalized)	3:55			
US 70 and SR 235	5:00			
US 70 and Beasley Drive	5:50	S	6	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (5)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	8:36 AM	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13 290
TRIP ENDED AT:	8:49	AT:	13 295
(TIME)		(LOCATION)	
		MILEAGE:	

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:55	S	20	
US 70 and US 70 Bypass	2:42			
US 70 and Plaza Drive	3:01			
US 70 and SR 46 (Mathis Drive)	3:33	S	2	
US 70 and Pumphill Road	4:31	S	26	
US 70 and SR 48	4:58			
US 70 and North Charlotte Street	5:08			
US 70 and Cougar Pride Way (unsignalized)	5:26			
US 70 and SR 235	6:36			
US 70 and Beasley Drive	7:15			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: (Mid-Day Timing)

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM(1)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	7:11 AM	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13255
TRIP ENDED AT:	7:20 AM	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13260

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	~~0:00~~			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	2:05			
US 70 and North Charlotte Street	2:36			
US 70 and SR 48	2:44			
US 70 and Pumphill Road	3:31	S	3	
US 70 and SR 46 (Mathis Drive)	4:02			
US 70 and Plaza Drive	4:29			
US 70 and US 70 Bypass	5:52	S	40	
US 70 and Hummingbird Lane	7:00	S	7	
US 70 and SR 96	8:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (2)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	7:34	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13 265
TRIP ENDED AT:	7:42	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13270

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:39			
US 70 and Cougar Pride Way (unsignalized)	2:05			
US 70 and North Charlotte Street	2:40			
US 70 and SR 48	2:48			
US 70 and Pumphill Road	3:23			
US 70 and SR 46 (Mathis Drive)	3:50			
US 70 and Plaza Drive	4:14			
US 70 and US 70 Bypass	5:17	S	45	
US 70 and Hummingbird Lane	6:30			
US 70 and SR 96	8:29	S	8	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (3)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	7:58 AM	AT: (LOCATION)	Beasley
		MILEAGE:	13275
TRIP ENDED AT: (TIME)	8:05	AT: (LOCATION)	
		MILEAGE:	13280

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:35			
US 70 and Cougar Pride Way (unsignalized)	2:26			
US 70 and North Charlotte Street	2:34			
US 70 and SR 48	3:10	2:43		
US 70 and Pumphill Road	3:38			
US 70 and SR 46 (Mathis Drive)	4:00			
US 70 and Plaza Drive	4:33			
US 70 and US 70 Bypass				
US 70 and Hummingbird Lane	5:28	S	2	
US 70 and SR 96	7:03			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Progression fixed after school zone ends

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (4)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	8:16	AT: (LOCATION)	Beasley
		MILEAGE:	13285
TRIP ENDED AT: (TIME)	9:24	AT: (LOCATION)	Beasley
		MILEAGE:	13290

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:33			
US 70 and Cougar Pride Way (unsignalized)	1:33			
US 70 and North Charlotte Street	2:19			
US 70 and SR 48	2:30	S	20	
US 70 and Pumphill Road	3:14	S	5	
US 70 and SR 46 (Mathis Drive)	3:36			
US 70 and Plaza Drive	4:19	S	6	
US 70 and US 70 Bypass	5:42	S	52	
US 70 and Hummingbird Lane	6:58	S	20	
US 70 and SR 96	8:31			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AM (5)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	8:45	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13295
TRIP ENDED AT:	8:52	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13300

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:38			
US 70 and Cougar Pride Way (unsignalized)	1:43			
US 70 and North Charlotte Street	2:00			
US 70 and SR 48	2:20			
US 70 and Pumphill Road	2:49			
US 70 and SR 46 (Mathis Drive)	3:10			
US 70 and Plaza Drive	3:32			
US 70 and US 70 Bypass	3:51			
US 70 and Hummingbird Lane	4:38			
US 70 and SR 96	6:35	S	20	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: (Mid-day Timing)

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (1)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	11:10	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13 31 1
TRIP ENDED AT:	11:16	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13 31 6

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:28			
US 70 and US 70 Bypass	2:12			
US 70 and Plaza Drive	2:41			
US 70 and SR 46 (Mathis Drive)	3:10			
US 70 and Pumphill Road	3:33			
US 70 and SR 48	4:06			
US 70 and North Charlotte Street	4:15			
US 70 and Cougar Pride Way (unsignalized)	4:32			
US 70 and SR 235	5:35			
US 70 and Beasley Drive	6:10			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	AD (2)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	11:29	AT: (LOCATION)	SR 96
		MILEAGE:	13 321
TRIP ENDED AT: (TIME)	11:37	AT: (LOCATION)	[illegible]
		MILEAGE:	13325

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:31			
US 70 and US 70 Bypass	2:18			
US 70 and Plaza Drive	2:37			
US 70 and SR 46 (Mathis Drive)	3:02			
US 70 and Pumphill Road	3:24			
US 70 and SR 48	3:52			
US 70 and North Charlotte Street	3:59			
US 70 and Cougar Pride Way (unsignalized)	4:15			
US 70 and SR 235	5:55	S	25	
US 70 and Beasley Drive	6:39			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (3)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	11:48	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13330
TRIP ENDED AT:	11:55	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13335

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:29			
US 70 and US 70 Bypass	2:18			
US 70 and Plaza Drive	2:49	S	2	
US 70 and SR 46 (Mathis Drive)	3:49	S	24	
US 70 and Pumphill Road	4:14			
US 70 and SR 48	4:55	S	3	
US 70 and North Charlotte Street	5:04			
US 70 and Cougar Pride Way (unsignalized)	5:26			
US 70 and SR 235	6:55	S	20	
US 70 and Beasley Drive	7:33			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (4)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	12:08	AT: (LOCATION)	SR 96
		MILEAGE:	13340
TRIP ENDED AT: (TIME)	12:15	AT: (LOCATION)	
		MILEAGE:	13344

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:23			
US 70 and US 70 Bypass	2:08			
US 70 and Plaza Drive	2:51	S	20	
US 70 and SR 46 (Mathis Drive)	3:11			
US 70 and Pumphill Road	4:02	S	11	
US 70 and SR 48	4:44	S	9	
US 70 and North Charlotte Street	4:56			
US 70 and Cougar Pride Way (unsignalized)	5:56	traffic cop SS	25	
US 70 and SR 235	7:00			
US 70 and Beasley Drive	7:42			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Mid-day dismissal at High school

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (5)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	12:27	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13349
TRIP ENDED AT:	11:33	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13354

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:37			
US 70 and US 70 Bypass	2:25			
US 70 and Plaza Drive	2:45			
US 70 and SR 46 (Mathis Drive)	3:10			
US 70 and Pumphill Road	3:35			
US 70 and SR 48	4:02			
US 70 and North Charlotte Street	4:09			
US 70 and Cougar Pride Way (unsignalized)	4:29			
US 70 and SR 235	5:36			
US 70 and Beasley Drive	6:12			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Dismissal Ended

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (6)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	11:44	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13359
TRIP ENDED AT:	4:52	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13363

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:21			
US 70 and US 70 Bypass	2:25			
US 70 and Plaza Drive	3:15	S	22	
US 70 and SR 46 (Mathis Drive)	3:35			
US 70 and Pumphill Road	4:06			
US 70 and SR 48	4:49	S	15	
US 70 and North Charlotte Street	4:59			
US 70 and Cougar Pride Way (unsignalized)	5:15			
US 70 and SR 235	6:21			
US 70 and Beasley Drive	6:54			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (1)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	10:58	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13307
TRIP ENDED AT:	11:07	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13311

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:41			
US 70 and Cougar Pride Way (unsignalized)	1:49			
US 70 and North Charlotte Street	2:12			
US 70 and SR 48	2:20			
US 70 and Pumphill Road	3:03	S	2	
US 70 and SR 46 (Mathis Drive)	4:22	S	20	
US 70 and Plaza Drive	4:47			
US 70 and US 70 Bypass	6:14	S	39	
US 70 and Hummingbird Lane	6:58			
US 70 and SR 96	8:53	S	16	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Mathis stop due to Popeyes Access

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (2)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	11:17	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13316
TRIP ENDED AT:	11:24	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13321

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:34			
US 70 and Cougar Pride Way (unsignalized)	1:44			
US 70 and North Charlotte Street	2:02			
US 70 and SR 48	2:10			
US 70 and Pumphill Road	[illegible]	2:45		
US 70 and SR 46 (Mathis Drive)	3:14			
US 70 and Plaza Drive	3:37			
US 70 and US 70 Bypass	4:45	9	5	
US 70 and Hummingbird Lane	5:30			
US 70 and SR 96	7:00			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (3)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	~~N~~ 9 11:38	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	~~13321~~ 13326
TRIP ENDED AT:	11:46	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13 330

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
US 70 and Beasley Drive	0			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	1:49			
US 70 and North Charlotte Street	2:10			
US 70 and SR 48	2:24			
US 70 and Pumphill Road	3:10	S	S	
US 70 and SR 46 (Mathis Drive)	3:46			
US 70 and Plaza Drive	4:50	S	28	
US 70 and US 70 Bypass	5:16			
US 70 and Hummingbird Lane	6:01			
US 70 and SR 96	7:38	S	2	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (4)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	11:57	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13335
TRIP ENDED AT:	12:06	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13340

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:35			
US 70 and Cougar Pride Way (unsignalized)	1:38			
US 70 and North Charlotte Street	2:14	S	2	
US 70 and SR 48	2:28			
US 70 and Pumphill Road	3:02			
US 70 and SR 46 (Mathis Drive)	4:27	2 cycles S	55	
US 70 and Plaza Drive	5:00			
US 70 and US 70 Bypass	6:18	S	57	
US 70 and Hummingbird Lane	7:02			
US 70 and SR 96	8:53	S	20	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Charlotte ran 5x green (less than min)

RECORDER:

multiple dump trucks held traffic
- consider throwing out

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (5)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	12:18	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13344
TRIP ENDED AT:	12:25	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13349

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:39			
US 70 and Cougar Pride Way (unsignalized)	1:56	traffic cop		
US 70 and North Charlotte Street	2:22			
US 70 and SR 48	2:28			
US 70 and Pumphill Road	2:53			
US 70 and SR 46 (Mathis Drive)	4:11	S	48	
US 70 and Plaza Drive	4:34			
US 70 and US 70 Bypass	4:50			
US 70 and Hummingbird Lane	5:34			
US 70 and SR 96	7:34	S	23	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: MD dismissal High School

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (10)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	12:30	AT: (LOCATION)	Beasley
		MILEAGE:	13354
TRIP ENDED AT: (TIME)	12:43	AT: (LOCATION)	
		MILEAGE:	13358

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	1:53			
US 70 and North Charlotte Street	2:12			
US 70 and SR 48	2:21			
US 70 and Pumphill Road	2:50			
US 70 and SR 46 (Mathis Drive)	3:25	S	5	
US 70 and Plaza Drive	3:46			
US 70 and US 70 Bypass	4:55	S	40	
US 70 and Hummingbird Lane	5:40			
US 70 and SR 96	7:03			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	MD (7)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	12:54	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13363
TRIP ENDED AT:	1:02	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13368

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:31			
US 70 and Cougar Pride Way (unsignalized)	1:45			
US 70 and North Charlotte Street	2:11			
US 70 and SR 48	2:28			
US 70 and Pumphill Road	3:00			
US 70 and SR 46 (Mathis Drive)	3:35	S	2	
US 70 and Plaza Drive	4:01			
US 70 and US 70 Bypass	5:12	S	40	
US 70 and Hummingbird Lane	5:56			
US 70 and SR 96	7:55	S	27	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: SR 96 Tuck did not clear (large fuel truck)

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (1)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	3:16	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13381
TRIP ENDED AT:	3:24	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13385

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:28			
US 70 and US 70 Bypass	2:12			
US 70 and Plaza Drive	2:55	S	7	
US 70 and SR 46 (Mathis Drive)	3:30			
US 70 and Pumphill Road	4:15	Q From Mathis LT S	5	
US 70 and SR 48	4:51			
US 70 and North Charlotte Street	5:05			
US 70 and Cougar Pride Way (unsignalized)	6:18	Traffic Cop S	16	
US 70 and SR 235	7:39			
US 70 and Beasley Drive	8:19			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: School Zones

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (2)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	3:38	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13389
TRIP ENDED AT:	3:45	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13394

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:29			
US 70 and US 70 Bypass	2:16			
US 70 and Plaza Drive	2:35			
US 70 and SR 46 (Mathis Drive)	2:54			
US 70 and Pumphill Road	3:21			
US 70 and SR 48	3:54			
US 70 and North Charlotte Street	4:10			
US 70 and Cougar Pride Way (unsignalized)	4:36			
US 70 and SR 235	6:04	S	8	
US 70 and Beasley Drive	6:52			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: No school zones / good progression

RECORDER:

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (3)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	3:57	AT: (LOCATION)	SR 96
		MILEAGE:	13399
TRIP ENDED AT: (TIME)	4:04	AT: (LOCATION)	13403
		MILEAGE:	

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:31			
US 70 and US 70 Bypass	2:17			
US 70 and Plaza Drive	2:59	S	14	
US 70 and SR 46 (Mathis Drive)	3:35	S	6	
US 70 and Pumphill Road	4:25	S	10	
US 70 and SR 48	5:01			
US 70 and North Charlotte Street	5:12			
US 70 and Cougar Pride Way (unsignalized)	5:35			
US 70 and SR 235	6:37			
US 70 and Beasley Drive	7:10			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (4)	ROUTE:	NC 70
		DIRECTION:	WB
TRIP STARTED AT:	4:16	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13408
TRIP ENDED AT:		AT:	13413
(TIME)		(LOCATION)	
		MILEAGE:	

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:56	S	19	
US 70 and US 70 Bypass	2:43			
US 70 and Plaza Drive	3:26	S	15	
US 70 and SR 46 (Mathis Drive)	3:56	emergency vehicle		
US 70 and Pumphill Road	4:46	S	14	
US 70 and SR 48	5:16			
US 70 and North Charlotte Street	5:23			
US 70 and Cougar Pride Way (unsignalized)	5:41			
US 70 and SR 235	6:48			
US 70 and Beasley Drive	7:24			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (5)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT:	4:34	AT:	SR 96
(TIME)		(LOCATION)	
		MILEAGE:	13418
TRIP ENDED AT:	4:40	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13422

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:29			
US 70 and US 70 Bypass	2:12			
US 70 and Plaza Drive	2:28			
US 70 and SR 46 (Mathis Drive)	3:06	Road blocked by veh		
US 70 and Pumphill Road	3:22			
US 70 and SR 48	3:59			
US 70 and North Charlotte Street	4:08			
US 70 and Cougar Pride Way (unsignalized)	4:26			
US 70 and SR 235	5:28			
US 70 and Beasley Drive	6:02			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Westbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (6)	ROUTE:	US 70
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	4:51	AT: (LOCATION)	SR 96
		MILEAGE:	13429
TRIP ENDED AT: (TIME)	4:59	AT: (LOCATION)	
		MILEAGE:	13432

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and SR 96	0			
US 70 and Hummingbird Lane	1:59	S	22	
US 70 and US 70 Bypass	2:52			
US 70 and Plaza Drive	3:15			
US 70 and SR 46 (Mathis Drive)	3:58	S	6	
US 70 and Pumphill Road	4:34	S	10	
US 70 and SR 48	5:03			
US 70 and North Charlotte Street	5:09			
US 70 and Cougar Pride Way (unsignalized)	5:24			
US 70 and SR 235	6:22			
US 70 and Beasley Drive	7:19	S	8	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Pond Q 7 vehs / Queue not clearing ~156 green)

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (1)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	2:59	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13374
TRIP ENDED AT:	3:10	AT:	13379
(TIME)		(LOCATION)	
		MILEAGE:	

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:37			
US 70 and Cougar Pride Way (unsignalized)	2:04	Traffic Cop		
US 70 and North Charlotte Street	2:54	S	7	
US 70 and SR 48	3:04			
US 70 and Pumphill Road	3:54	S	3	
US 70 and SR 46 (Mathis Drive)	4:40	S	7	
US 70 and Plaza Drive	5:30	S	7	
US 70 and US 70 Bypass	6:54	S	15	
US 70 and Hummingbird Lane	7:40			
US 70 and SR 96	9:10			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Beasley Queue doesn't clear / 70 looked empty (more green)

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (2)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	3:26	AT: (LOCATION)	Beasley
		MILEAGE:	
TRIP ENDED AT: (TIME)	3:36	AT: (LOCATION)	13385
		MILEAGE:	13389

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:36	back SB Q		
US 70 and Cougar Pride Way (unsignalized)	1:48	Cop gone / school zone		
US 70 and North Charlotte Street	3:00	S	23	
US 70 and SR 48	3:10			
US 70 and Pumphill Road	3:52	S	2	
US 70 and SR 46 (Mathis Drive)	4:38	S	9	
US 70 and Plaza Drive	5:31	S	22	
US 70 and US 70 Bypass	7:03	S	60	
US 70 and Hummingbird Lane	7:48			
US 70 and SR 96	9:15			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Beasley Q cleared

SB 3:00 school?

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (3)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	3:47	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13394
TRIP ENDED AT:	3:56	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13398

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:40			
US 70 and Cougar Pride Way (unsignalized)	1:45			
US 70 and North Charlotte Street	2:07			
US 70 and SR 48	2:15			
US 70 and Pumphill Road	2:47			
US 70 and SR 46 (Mathis Drive)	3:46	S	18	
US 70 and Plaza Drive	4:31	S	12	
US 70 and US 70 Bypass	6:01	S	22	
US 70 and Hummingbird Lane	6:50			
US 70 and SR 96	8:49	S	22	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/20/21	WEATHER:	Clear
TRIP NO.:	PM (4)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	4:06	AT: (LOCATION)	Beasley
		MILEAGE:	13403
TRIP ENDED AT: (TIME)	4:14	AT: (LOCATION)	
		MILEAGE:	13408

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:35			
US 70 and Cougar Pride Way (unsignalized)	1:42			
US 70 and North Charlotte Street	1:59			
US 70 and SR 48	2:06			
US 70 and Pumphill Road	2:38			
US 70 and SR 46 (Mathis Drive)	3:29	S	10	
US 70 and Plaza Drive	4:06	S	3	
US 70 and US 70 Bypass	5:25	S	48	
US 70 and Hummingbird Lane	6:26	S	4	
US 70 and SR 96	8:19	S	15	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	DMA 5/20/21	WEATHER:	Clear
TRIP NO.:	PM (5)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	4:24	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13413
TRIP ENDED AT:	4:52	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13418

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:42			
US 70 and Cougar Pride Way (unsignalized)	1:47			
US 70 and North Charlotte Street	2:03			
US 70 and SR 48	2:10			
US 70 and Pumphill Road	2:39			
US 70 and SR 46 (Mathis Drive)	3:18	S	2	
US 70 and Plaza Drive	4:13	S	25	
US 70 and US 70 Bypass	4:40			
US 70 and Hummingbird Lane	5:25			
US 70 and SR 96	7:18	S	20	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: Pond @ 6-7 veh

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
US Route 70 (Eastbound)

DATE:	5/22/24	WEATHER:	Clear
TRIP NO.:	PM (6)	ROUTE:	US 70
		DIRECTION:	EB
TRIP STARTED AT:	4:42	AT:	Beasley
(TIME)		(LOCATION)	
		MILEAGE:	13422
TRIP ENDED AT:	4:49	AT:	
(TIME)		(LOCATION)	
		MILEAGE:	13427

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
US 70 and Beasley Drive	0			
US 70 and SR 235	0:36			
US 70 and Cougar Pride Way (unsignalized)	1:39			
US 70 and North Charlotte Street	2:02			
US 70 and SR 48	2:12			
US 70 and Pumphill Road	2:57	S	6	
US 70 and SR 46 (Mathis Drive)	3:32	S	3	
US 70 and Plaza Drive	4:27	S	20	
US 70 and US 70 Bypass	4:52			
US 70 and Hummingbird Lane	5:34			
US 70 and SR 96	6:50			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: _____

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM (1)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	0654	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22063
TRIP ENDED AT:	0656	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22064

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:24			
Beasley Drive and SR 48	1:28			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(1)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0704	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22068
TRIP ENDED AT:	0705	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22069

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:04			
Beasley Drive and Thornton Drive	1:29			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(2)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	0713	AT: (LOCATION)	Thornton
		MILEAGE:	22069
TRIP ENDED AT: (TIME)	0715	AT: (LOCATION)	SR 48
		MILEAGE:	22070

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:25			
Beasley Drive and SR 48	1:28			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(2)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0728	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22074
TRIP ENDED AT:	0730	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22075

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:07			
Beasley Drive and Thornton Drive	1:32			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(3)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	0732	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22075
TRIP ENDED AT:	0735	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22076

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:25			
Beasley Drive and SR 48	1:44	S -	10sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(3)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0745	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22180
TRIP ENDED AT:	0747	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22181

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:17	S	6sec	
Beasley Drive and Thornton Drive	1:41			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(4)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	0750	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22081
TRIP ENDED AT:	0752	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22082

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:24			
Beasley Drive and SR 48	1:22			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(4)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0756	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22084
TRIP ENDED AT:	0759	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22085

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:52	S-	40 sec	
Beasley Drive and Thornton Drive	2:26	S-	2 sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(5)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	0800	AT: (LOCATION)	Thornton
		MILEAGE:	22086
TRIP ENDED AT: (TIME)	0802	AT: (LOCATION)	SR48
		MILEAGE:	22087

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:27			
Beasley Drive and SR 48	1:52	S-	15sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(5)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0811	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22090
TRIP ENDED AT:	0812	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22091

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:03			
Beasley Drive and Thornton Drive	1:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(6)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	0815	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22092
TRIP ENDED AT:	0817	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22093

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:27			
Beasley Drive and SR 48	1:44	S-	5sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	AM(6)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	0825	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22096
TRIP ENDED AT:	0827	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22097

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:15	S-	2sec	
Beasley Drive and Thornton Drive	1:42			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (1)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1057	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22118
TRIP ENDED AT:	1059	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22119

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:25			
Beasley Drive and SR 48	1:26			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(1)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1105	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22123
TRIP ENDED AT:	1107	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22124

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:02			
Beasley Drive and Thornton Drive	1:26			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(2)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1107	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22124
TRIP ENDED AT:	1109	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22125

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:49	S	14 sec	
Beasley Drive and SR 48	1:56			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (2)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1117	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22129
TRIP ENDED AT:	1119	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22130

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:02			
Beasley Drive and Thornton Drive	1:29			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(3)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1124	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22130
TRIP ENDED AT:	1126	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22131

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:45	S-	12sec	
Beasley Drive and SR 48	1:50			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(3)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1136	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22196
TRIP ENDED AT:	1137	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22197

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:07	S	2sec	
Beasley Drive and Thornton Drive	1:34			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	1 (4)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1146	AT: (LOCATION)	Thornton
		MILEAGE:	22137
TRIP ENDED AT: (TIME)	1148	AT: (LOCATION)	SR 48
		MILEAGE:	22138

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:38	S	7sec	
Beasley Drive and SR 48	2:06	S	14sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (4)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1156	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22142
TRIP ENDED AT:	1158	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22143

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:25	S	15 sec	
Beasley Drive and Thornton Drive	1:52			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (5)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	12 18	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22151
TRIP ENDED AT:	12 21	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22152

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:25			
Beasley Drive and SR 48	1:25			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (5)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1225	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22154
TRIP ENDED AT:	1226	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22155

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:10			
Beasley Drive and Thornton Drive	1:35			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(6)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1228	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22155
TRIP ENDED AT:	1230	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22156

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:58	S	26sec	
Beasley Drive and SR 48	2:12	S	2sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (6)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1235	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22158
TRIP ENDED AT:	1237	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22159

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:12	S	3sec	
Beasley Drive and Thornton Drive	1:40			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (1)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1238	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22/60
TRIP ENDED AT:	1240	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22/61

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:24			
Beasley Drive and SR 48	1:35			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (1)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1244	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22163
TRIP ENDED AT:	1246	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22164

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:35	S	26sec	
Beasley Drive and Thornton Drive	2:01			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD(8)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1247	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22164
TRIP ENDED AT:	1249	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22165

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:56	S	23sec	
Beasley Drive and SR 48	2:00			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	MD (8)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1253	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22167
TRIP ENDED AT:	1255	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22168

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:15	S	45sec	
Beasley Drive and Thornton Drive	2:00	S	12sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	PM (1)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1500	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22202
TRIP ENDED AT:	1502	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22204

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:54	S	17sec	
Beasley Drive and SR 48	2:08	S	3sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	PM (1)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1512	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22207
TRIP ENDED AT:	1513	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22208

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:08			
Beasley Drive and Thornton Drive	1:33			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	PM (2)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1516	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22209
TRIP ENDED AT:	1518	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22210

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:36	S	2sec	
Beasley Drive and SR 48	2:08	S	9sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Sunny
TRIP NO.:	PM(2)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1529	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22213
TRIP ENDED AT:	1531	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22214

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:03			
Beasley Drive and Thornton Drive	1:27			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DA

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/21	WEATHER:	clear, Sunny
TRIP NO.:	PM (3)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1532	AT: (LOCATION)	Thornton
		MILEAGE:	22214
TRIP ENDED AT: (TIME)	1534	AT: (LOCATION)	SR 48
		MILEAGE:	22215

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:47	S	11sec	
Beasley Drive and SR 48	2:09	S	2sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(3)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT: (TIME)	1543	AT: (LOCATION)	SR 48
		MILEAGE:	22219
TRIP ENDED AT: (TIME)	1545	AT: (LOCATION)	Thornton
		MILEAGE:	22220

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:19	S	13sec	
Beasley Drive and Thornton Drive	1:48			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/~~20~~/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(4)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1546	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22220
TRIP ENDED AT:	1549	AT:	SR48
(TIME)		(LOCATION)	
		MILEAGE:	22221

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:39	S	45sec	
Beasley Drive and SR 48	2:06	S	13sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM (4)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1557	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22225
TRIP ENDED AT:	1558	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22226

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:16	S	5sec	
Beasley Drive and Thornton Drive	1:43			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

DATE:	5/25/12	WEATHER:	clear, sunny
TRIP NO.:	PM (5)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1600	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22226
TRIP ENDED AT:	1602	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22227

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:35	S	2sec	
Beasley Drive and SR 48	1:56	S	8sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

25

DATE:	5/26/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(5)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1615	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22235
TRIP ENDED AT:	1617	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22236

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:44	S	37sec	
Beasley Drive and Thornton Drive	2:11			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/~~20~~/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(6)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1619	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22236
TRIP ENDED AT:	1621	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22237

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:29			
Beasley Drive and SR 48	2:03	S	18sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/~~26~~25/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(6)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1629	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22241
TRIP ENDED AT:	1630	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22242

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:11	S	5sec	
Beasley Drive and Thornton Drive	1:36			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/20/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(7)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1633	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22242
TRIP ENDED AT:	1695	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22243

CONTROL POINTS		*STOPS OR SLOWS*		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:34	S	25sec	
Beasley Drive and SR 48	1:58	S	11sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

DATE:	5/25/21	WEATHER:	Clear, Sunny
TRIP NO.:	PM(7)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1646	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22245
TRIP ENDED AT:	1648	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22246

CONTROL POINTS		STOPS OR SLOWS		
LOCATION	TIME	LOCATION	SEC Delay	TIME
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:25	S	12sec	
Beasley Drive and Thornton Drive	1:55			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/~~26~~/21	WEATHER:	Clear, Sunny
TRIP NO.:	~~AM (1)~~ PM (8)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1649	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22276
TRIP ENDED AT:	1651	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22247

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:44	S	9sec	
Beasley Drive and SR 48	2:00			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

25

DATE:	5/~~30~~/21	WEATHER:	Clear, Sunny
TRIP NO.:	~~AM (1)~~ PM(8)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1655	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22250
TRIP ENDED AT:	1657	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22251

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:06			
Beasley Drive and Thornton Drive	1:36			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/26/21	WEATHER:	Clear, Sunny
TRIP NO.:	~~Alex~~ PM(9)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT:	1658	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22251
TRIP ENDED AT:	1700	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22252

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:40	S	12sec	
Beasley Drive and SR 48	1:45			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS: _____

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

25

DATE:	5/~~26~~/24	WEATHER:	Clear, Sunny
TRIP NO.:	~~AM (1)~~ PM(9)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1703	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22254
TRIP ENDED AT:	1705	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22255

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	1:14	S	3 sec	
Beasley Drive and Thornton Drive	1:41			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Westbound)

25

DATE:	5/7/21	WEATHER:	clear, Sunny
TRIP NO.:	~~AM (2)~~ PM(10)	ROUTE:	Beasley
		DIRECTION:	WB
TRIP STARTED AT: (TIME)	1706	AT: (LOCATION)	Thornton
		MILEAGE:	22253
TRIP ENDED AT: (TIME)	1708	AT: (LOCATION)	SR 48
		MILEAGE:	22256

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and Thornton Drive	0:00			
Beasley Drive and Cowan Road	0:56	S	19sec	
Beasley Drive and SR 48	2:20	S	13sec	

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DR

TRAVEL-TIME AND DELAY STUDY
AVERAGE VEHICLE METHOD
FIELD SHEET
Beasley Drive (Eastbound)

25

DATE:	5/~~26~~/21	WEATHER:	Clear, Sunny
TRIP NO.:	~~AM (5)~~ PM(10)	ROUTE:	Beasley
		DIRECTION:	EB
TRIP STARTED AT:	1713	AT:	SR 48
(TIME)		(LOCATION)	
		MILEAGE:	22258
TRIP ENDED AT:	1714	AT:	Thornton
(TIME)		(LOCATION)	
		MILEAGE:	22259

CONTROL POINTS		***STOPS OR SLOWS***		
LOCATION	**TIME**	**LOCATION**	**SEC Delay**	**TIME**
Beasley Drive and SR 48	0:00			
Beasley Drive and Cowan Road	0:54			
Beasley Drive and Thornton Drive	1:22			

TRIP LENGTH	TRIP TIME	TRAVEL SPEED
RUNNING TIME	STOPPED TIME	RUNNING SPEED

SYMBOLS OF DELAY CAUSE: S-TRAFFIC SIGNALS SS-STOP SIGN LT-LEFT TURNS
PK-PARKED CARS DP-DOUBLE PARKING T-GENERAL
PED-PEDESTRIANS BP-BUS PASSENGERS LOADING OR UNLOADING

COMMENTS:

RECORDER: DA

APPENDIX J
SIMTRAFFIC TRAVEL TIME ANALYSIS

SIMTRAFFIC TRAVEL TIME ANALYSIS
PRE-CONDITION

Summary of All Intervals

Run Number	1	2	3	4	5	6	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:15	7:15	7:15	7:15	7:15	7:15	7:15
Total Time (min)	18	18	18	18	18	18	18
Time Recorded (min)	15	15	15	15	15	15	15
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	2045	2135	2027	2100	2058	2154	2082
Vehs Exited	1926	1958	1828	2010	1856	1990	1928
Starting Vehs	235	224	192	253	203	209	206
Ending Vehs	354	401	391	343	405	373	364
Travel Distance (mi)	2088	2134	2020	2139	2029	2159	2095
Travel Time (hr)	88.7	91.7	87.3	89.8	84.4	92.3	89.0
Total Delay (hr)	30.2	32.0	30.8	30.3	27.8	32.0	30.5
Total Stops	2673	2843	2398	2671	2631	2636	2635
Fuel Used (gal)	75.7	78.7	74.2	78.5	73.6	78.7	76.6

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	2	3	4	5	6	Avg
Vehs Entered	2045	2135	2027	2100	2058	2154	2082
Vehs Exited	1926	1958	1828	2010	1856	1990	1928
Starting Vehs	235	224	192	253	203	209	206
Ending Vehs	354	401	391	343	405	373	364
Travel Distance (mi)	2088	2134	2020	2139	2029	2159	2095
Travel Time (hr)	88.7	91.7	87.3	89.8	84.4	92.3	89.0
Total Delay (hr)	30.2	32.0	30.8	30.3	27.8	32.0	30.5
Total Stops	2673	2843	2398	2671	2631	2636	2635
Fuel Used (gal)	75.7	78.7	74.2	78.5	73.6	78.7	76.6

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	17.9	34.7	0.2	22
West End Avenue	10	17.9	50.7	0.4	32
Cougar Pride Way	9	5.1	72.1	0.8	42
N Charlotte Street	8	11.4	30.2	0.2	24
SR 48	7	7.5	15.4	0.1	18
Spring Street	6	8.2	33.9	0.3	34
Mathis Drive (SR 46)	5	12.0	32.5	0.2	25
Plaza Drive	4	7.9	28.0	0.2	29
College Street	3	16.6	35.7	0.2	17
S. Hummingbird Lane	2	7.4	47.5	0.5	39
SR 96	1	12.7	88.1	1.1	46
Total		124.7	468.9	4.3	33

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
First Baptist Church	1	7.9	24.9	0.2	32
N. Hummingbird Lane	2	11.9	83.6	1.1	48
US 70	3	10.4	47.5	0.5	39
Plaza Drive	4	5.1	28.4	0.2	22
Mathis Drive (SR 46)	5	4.3	23.0	0.2	35
Pump Hill Road	6	6.4	25.4	0.2	32
SR 48	7	8.3	38.2	0.3	30
N Charlotte Street	8	13.4	21.1	0.1	13
Cougar Pride Way	9	2.0	21.3	0.2	34
Pond Road (SR 46/SR	10	10.2	73.5	0.8	41
Beasley Drive	11	15.3	49.2	0.4	33
Total		95.3	436.0	4.3	36

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	52.6	66.6	0.2	10
	99	4.3	22.3	0.2	37
Cowan Road	13	9.5	49.3	0.5	38
Thornton Drive	14	5.0	35.5	0.3	27
Total		71.3	173.8	1.2	25

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	2.9	21.9	0.2	27
Cowan Road	13	6.7	34.9	0.3	27
	99	3.0	42.9	0.5	43
Center Avenue (SR 48	12	14.1	31.7	0.2	26
Total		26.7	131.4	1.2	32

Summary of All Intervals

Run Number	1	2	3	4	5	6	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:15	7:15	7:15	7:15	7:15	7:15	7:15
Total Time (min)	18	18	18	18	18	18	18
Time Recorded (min)	15	15	15	15	15	15	15
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	1683	1707	1701	1691	1684	1761	1708
Vehs Exited	1612	1641	1592	1623	1594	1662	1622
Starting Vehs	202	186	193	210	177	196	183
Ending Vehs	273	252	302	278	267	295	269
Travel Distance (mi)	1775	1781	1778	1809	1774	1889	1801
Travel Time (hr)	66.2	67.6	67.1	68.4	67.4	71.7	68.1
Total Delay (hr)	16.4	17.8	17.5	17.8	17.8	19.1	17.7
Total Stops	2193	2222	2278	2292	2248	2449	2274
Fuel Used (gal)	62.8	63.7	62.8	64.4	63.0	67.1	64.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	2	3	4	5	6	Avg
Vehs Entered	1683	1707	1701	1691	1684	1761	1708
Vehs Exited	1612	1641	1592	1623	1594	1662	1622
Starting Vehs	202	186	193	210	177	196	183
Ending Vehs	273	252	302	278	267	295	269
Travel Distance (mi)	1775	1781	1778	1809	1774	1889	1801
Travel Time (hr)	66.2	67.6	67.1	68.4	67.4	71.7	68.1
Total Delay (hr)	16.4	17.8	17.5	17.8	17.8	19.1	17.7
Total Stops	2193	2222	2278	2292	2248	2449	2274
Fuel Used (gal)	62.8	63.7	62.8	64.4	63.0	67.1	64.0

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	15.1	31.8	0.2	24
West End Avenue	10	10.3	42.4	0.4	38
Cougar Pride Way	9	3.4	71.0	0.8	42
N Charlotte Street	8	10.3	29.0	0.2	25
SR 48	7	6.9	14.8	0.1	19
Spring Street	6	10.2	38.8	0.3	29
Mathis Drive (SR 46)	5	10.0	30.2	0.2	27
Plaza Drive	4	10.5	29.8	0.2	27
College Street	3	14.1	33.0	0.2	19
S. Hummingbird Lane	2	9.8	52.5	0.5	35
SR 96	1	9.7	78.0	1.1	52
Total		110.3	451.4	4.3	35

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Private Access	1	5.5	22.4	0.2	36
N. Hummingbird Lane	2	8.9	73.0	1.1	55
US 70	3	7.1	44.6	0.5	42
Plaza Drive	4	8.3	31.8	0.2	20
Mathis Drive (SR 46)	5	7.4	28.2	0.2	28
Pump Hill Road	6	8.4	27.7	0.2	29
SR 48	7	6.8	35.4	0.3	32
N Charlotte Street	8	11.9	19.4	0.1	14
Cougar Pride Way	9	2.4	21.1	0.2	34
Pond Road (SR 46/SR	10	7.4	67.3	0.8	45
Beasley Drive	11	10.2	39.6	0.4	41
Total		84.3	410.5	4.3	38

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	20.8	34.8	0.2	19
	99	3.6	21.2	0.2	39
Cowan Road	13	10.1	49.7	0.5	38
Thornton Drive	14	10.4	38.1	0.3	25
Total		44.9	143.8	1.2	30

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	10.1	28.7	0.2	21
Cowan Road	13	9.5	38.6	0.3	25
	99	3.7	44.8	0.5	42
Center Avenue (SR 48	12	18.9	35.5	0.2	23
Total		42.2	147.5	1.2	29

Summary of All Intervals

Run Number	1	2	3	4	5	6	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:15	7:15	7:15	7:15	7:15	7:15	7:15
Total Time (min)	18	18	18	18	18	18	18
Time Recorded (min)	15	15	15	15	15	15	15
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	2445	2466	2551	2418	2438	2461	2460
Vehs Exited	2296	2243	2347	2237	2258	2241	2274
Starting Vehs	282	261	263	276	247	229	241
Ending Vehs	431	484	467	457	427	449	439
Travel Distance (mi)	2445	2499	2536	2395	2404	2425	2451
Travel Time (hr)	110.1	109.1	110.9	110.3	105.6	105.0	108.5
Total Delay (hr)	41.3	39.1	39.5	42.8	38.0	36.6	39.6
Total Stops	3415	3451	3526	3258	3206	3442	3381
Fuel Used (gal)	91.9	93.1	93.3	90.9	89.9	90.2	91.5

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	2	3	4	5	6	Avg
Vehs Entered	2445	2466	2551	2418	2438	2461	2460
Vehs Exited	2296	2243	2347	2237	2258	2241	2274
Starting Vehs	282	261	263	276	247	229	241
Ending Vehs	431	484	467	457	427	449	439
Travel Distance (mi)	2445	2499	2536	2395	2404	2425	2451
Travel Time (hr)	110.1	109.1	110.9	110.3	105.6	105.0	108.5
Total Delay (hr)	41.3	39.1	39.5	42.8	38.0	36.6	39.6
Total Stops	3415	3451	3526	3258	3206	3442	3381
Fuel Used (gal)	91.9	93.1	93.3	90.9	89.9	90.2	91.5

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	18.2	34.8	0.2	22
West End Avenue	10	13.2	44.9	0.4	36
Cougar Pride Way	9	3.3	68.4	0.8	44
N Charlotte Street	8	7.2	24.3	0.2	30
SR 48	7	6.4	14.1	0.1	20
Spring Street	6	12.8	42.1	0.3	27
Mathis Drive (SR 46)	5	19.4	38.5	0.2	21
Plaza Drive	4	11.1	32.8	0.2	24
College Street	3	21.4	40.3	0.2	15
S. Hummingbird Lane	2	12.7	52.5	0.5	35
SR 96	1	13.5	87.5	1.1	46
Total		139.4	480.4	4.3	33

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
First Baptist Church	1	6.8	23.8	0.2	34
N. Hummingbird Lane	2	13.4	78.8	1.1	51
US 70	3	12.5	52.5	0.5	35
Plaza Drive	4	8.6	32.2	0.2	19
Mathis Drive (SR 46)	5	11.8	33.3	0.2	24
Pump Hill Road	6	10.0	29.2	0.2	28
SR 48	7	6.8	34.7	0.3	33
N Charlotte Street	8	9.1	15.8	0.1	18
Cougar Pride Way	9	2.3	20.7	0.2	35
Pond Road (SR 46/SR	10	12.6	71.8	0.8	42
Beasley Drive	11	18.3	51.7	0.4	31
Total		112.1	444.6	4.3	35

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	22.0	35.8	0.2	18
	99	3.7	21.6	0.2	38
Cowan Road	13	11.5	48.2	0.5	39
Thornton Drive	14	12.2	42.6	0.3	22
Total		49.4	148.2	1.2	29

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	10.3	29.2	0.2	20
Cowan Road	13	11.3	39.7	0.3	24
	99	5.3	46.1	0.5	40
Center Avenue (SR 48	12	13.6	29.6	0.2	28
Total		40.5	144.7	1.2	29

SIMTRAFFIC TRAVEL TIME ANALYSIS
POST-CONDITION

Summary of All Intervals

Run Number	1	2	3	4	5	6	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:15	7:15	7:15	7:15	7:15	7:15	7:15
Total Time (min)	18	18	18	18	18	18	18
Time Recorded (min)	15	15	15	15	15	15	15
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	2213	2148	2146	2111	2070	2190	2143
Vehs Exited	2113	2068	2078	2042	1968	2065	2054
Starting Vehs	284	290	298	306	276	274	277
Ending Vehs	384	370	366	375	378	399	363
Travel Distance (mi)	2252	2225	2255	2216	2062	2257	2211
Travel Time (hr)	95.2	94.0	91.3	89.4	82.5	92.0	90.7
Total Delay (hr)	32.1	31.9	28.3	27.4	24.6	29.0	28.9
Total Stops	3047	2727	2839	2823	2606	3028	2842
Fuel Used (gal)	82.0	81.2	80.8	80.5	73.7	82.0	80.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3
Volumes adjusted by 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 PHF.	

Run Number	1	2	3	4	5	6	Avg
Vehs Entered	2213	2148	2146	2111	2070	2190	2143
Vehs Exited	2113	2068	2078	2042	1968	2065	2054
Starting Vehs	284	290	298	306	276	274	277
Ending Vehs	384	370	366	375	378	399	363
Travel Distance (mi)	2252	2225	2255	2216	2062	2257	2211
Travel Time (hr)	95.2	94.0	91.3	89.4	82.5	92.0	90.7
Total Delay (hr)	32.1	31.9	28.3	27.4	24.6	29.0	28.9
Total Stops	3047	2727	2839	2823	2606	3028	2842
Fuel Used (gal)	82.0	81.2	80.8	80.5	73.7	82.0	80.0

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	14.8	31.4	0.2	25
West End Avenue	10	7.4	42.5	0.4	38
Private Driveway	9	9.9	78.5	0.8	38
N Charlotte Street	8	12.2	30.2	0.2	24
SR 48	7	3.8	11.7	0.1	24
Spring Street	6	4.6	30.0	0.3	38
Mathis Drive (SR 46)	5	8.6	28.9	0.2	28
Plaza Drive	4	5.8	26.8	0.2	30
College Street	3	16.4	35.2	0.2	18
S. Hummingbird Lane	2	11.7	53.9	0.5	34
SR 96	1	14.3	89.3	1.1	45
Total		109.4	458.3	4.3	34

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
First Baptist Church	1	11.9	29.1	0.2	28
N. Hummingbird Lane	2	10.8	81.9	1.1	49
US 70	3	11.8	49.1	0.5	38
Plaza Drive	4	5.4	28.2	0.2	22
Mathis Drive (SR 46)	5	4.4	23.1	0.2	35
Pump Hill Road	6	8.1	26.0	0.2	31
SR 48	7	5.1	35.0	0.3	32
N Charlotte Street	8	9.3	16.9	0.1	16
Cougar Pride Way	9	18.6	38.4	0.2	19
Pond Road (SR 46/SR	10	16.2	77.4	0.8	39
Beasley Drive	11	8.0	41.6	0.4	39
Total		109.6	446.6	4.3	35

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	70.8	90.6	0.2	8
	99	4.2	22.2	0.2	37
Cowan Road	13	10.8	50.6	0.5	37
Thornton Drive	14	3.8	34.0	0.3	28
Total		89.6	197.3	1.2	22

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	1.5	20.4	0.2	29
Cowan Road	13	4.8	33.1	0.3	29
	99	2.4	42.7	0.5	44
Center Avenue (SR 48	12	9.7	27.6	0.2	30
Total		18.4	123.7	1.2	34

Summary of All Intervals

Run Number	1	2	3	4	5	6	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:15	7:15	7:15	7:15	7:15	7:15	7:15
Total Time (min)	18	18	18	18	18	18	18
Time Recorded (min)	15	15	15	15	15	15	15
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	1721	1743	1724	1631	1658	1695	1700
Vehs Exited	1617	1651	1608	1571	1544	1576	1596
Starting Vehs	186	195	181	200	170	181	177
Ending Vehs	290	287	297	260	284	300	275
Travel Distance (mi)	1877	1829	1791	1730	1685	1715	1771
Travel Time (hr)	71.5	72.0	68.9	67.3	64.0	65.6	68.2
Total Delay (hr)	19.1	20.6	18.8	18.8	17.2	17.4	18.7
Total Stops	2104	2230	2081	2029	1908	1971	2054
Fuel Used (gal)	65.5	65.4	63.4	61.9	59.0	60.4	62.6

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	2	3	4	5	6	Avg
Vehs Entered	1721	1743	1724	1631	1658	1695	1700
Vehs Exited	1617	1651	1608	1571	1544	1576	1596
Starting Vehs	186	195	181	200	170	181	177
Ending Vehs	290	287	297	260	284	300	275
Travel Distance (mi)	1877	1829	1791	1730	1685	1715	1771
Travel Time (hr)	71.5	72.0	68.9	67.3	64.0	65.6	68.2
Total Delay (hr)	19.1	20.6	18.8	18.8	17.2	17.4	18.7
Total Stops	2104	2230	2081	2029	1908	1971	2054
Fuel Used (gal)	65.5	65.4	63.4	61.9	59.0	60.4	62.6

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	9.1	25.7	0.2	30
West End Avenue	10	4.0	36.6	0.4	44
Private Driveway	9	8.4	75.6	0.8	40
N Charlotte Street	8	14.2	32.9	0.2	22
SR 48	7	5.1	12.8	0.1	22
Spring Street	6	8.0	36.9	0.3	31
Mathis Drive (SR 46)	5	7.1	28.1	0.2	29
Plaza Drive	4	6.4	26.8	0.2	30
College Street	3	31.4	50.5	0.2	12
S. Hummingbird Lane	2	5.7	47.5	0.5	39
SR 96	1	13.3	85.7	1.1	47
Total		112.6	459.0	4.3	34

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Private Access	1	5.2	22.3	0.2	36
N. Hummingbird Lane	2	6.6	73.9	1.1	55
US 70	3	7.0	45.7	0.5	41
Plaza Drive	4	9.5	32.9	0.2	19
Mathis Drive (SR 46)	5	9.9	30.8	0.2	26
Pump Hill Road	6	7.1	26.9	0.2	30
SR 48	7	3.6	32.0	0.3	35
N Charlotte Street	8	4.5	12.1	0.1	23
Cougar Pride Way	9	3.5	22.5	0.2	32
Pond Road (SR 46/SR	10	7.5	67.2	0.8	45
Beasley Drive	11	5.2	35.9	0.4	45
Total		69.5	402.2	4.3	39

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	16.0	30.1	0.2	22
	99	3.0	20.6	0.2	40
Cowan Road	13	5.6	45.8	0.5	41
Thornton Drive	14	4.0	32.0	0.3	30
Total		28.6	128.5	1.2	33

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	5.6	24.4	0.2	25
Cowan Road	13	5.6	35.0	0.3	27
	99	2.4	42.3	0.5	44
Center Avenue (SR 48	12	6.3	23.0	0.2	36
Total		20.0	124.6	1.2	34

Summary of All Intervals

Start Time	6:57
End Time	7:15
Total Time (min)	18
Time Recorded (min)	15
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2519
Vehs Exited	2376
Starting Vehs	332
Ending Vehs	475
Travel Distance (mi)	2551
Travel Time (hr)	114.6
Total Delay (hr)	42.6
Total Stops	3461
Fuel Used (gal)	95.3

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by 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 PHF.

Vehs Entered	2519
Vehs Exited	2376
Starting Vehs	332
Ending Vehs	475
Travel Distance (mi)	2551
Travel Time (hr)	114.6
Total Delay (hr)	42.6
Total Stops	3461
Fuel Used (gal)	95.3

Arterial Level of Service: EB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Beasley Drive	11	17.8	34.0	0.2	23
West End Avenue	10	5.1	36.0	0.4	45
Private Driveway	9	8.2	77.9	0.8	39
N Charlotte Street	8	8.9	25.5	0.2	28
SR 48	7	4.7	12.4	0.1	22
Spring Street	6	14.9	45.2	0.3	25
Mathis Drive (SR 46)	5	16.6	34.4	0.2	24
Plaza Drive	4	13.5	35.5	0.2	23
College Street	3	26.5	46.3	0.2	13
S. Hummingbird Lane	2	7.8	45.6	0.5	40
SR 96	1	14.6	87.6	1.1	46
Total		138.5	480.3	4.3	33

Arterial Level of Service: WB US 70

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
First Baptist Church	1	10.4	27.2	0.2	29
N. Hummingbird Lane	2	10.0	78.9	1.1	51
US 70	3	12.5	55.3	0.5	33
Plaza Drive	4	7.4	31.0	0.2	20
Mathis Drive (SR 46)	5	7.3	29.3	0.2	27
Pump Hill Road	6	10.9	29.9	0.2	27
SR 48	7	6.5	35.1	0.3	32
N Charlotte Street	8	7.6	14.4	0.1	19
Cougar Pride Way	9	8.6	26.4	0.2	27
Pond Road (SR 46/SR	10	7.9	64.6	0.8	47
Beasley Drive	11	7.8	41.6	0.4	39
Total		96.9	433.6	4.3	36

Arterial Level of Service: EB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Center Avenue (SR 48	12	19.2	33.7	0.2	20
	99	3.6	21.3	0.2	39
Cowan Road	13	9.6	45.7	0.5	41
Thornton Drive	14	5.0	34.5	0.3	27
Total		37.4	135.2	1.2	32

Arterial Level of Service: WB Beasley Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Thornton Drive	14	4.9	24.2	0.2	25
Cowan Road	13	6.9	36.1	0.3	26
	99	3.2	43.8	0.5	43
Center Avenue (SR 48	12	14.7	31.6	0.2	26
Total		29.7	135.7	1.2	31

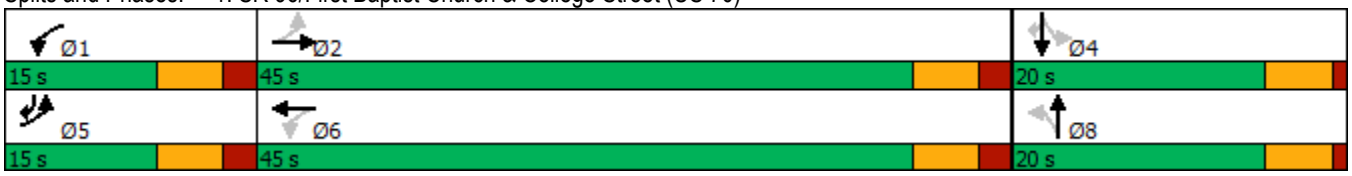
APPENDIX K
CAPACITY ANALYSIS

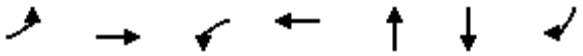
CAPACITY ANALYSIS
PRE-CONDITION

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	29	211	37	360	298	19	11	45
Future Volume (vph)	29	211	37	360	298	19	11	45
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA	pm+ov
Protected Phases	5	2	1	6		8	4	5
Permitted Phases	2		6		8			4
Detector Phase	5	2	1	6	8	8	4	5
Switch Phase								
Minimum Initial (s)	6.0	25.0	6.0	25.0	8.0	8.0	8.0	6.0
Minimum Split (s)	12.0	31.0	12.0	31.0	13.0	13.0	13.0	12.0
Total Split (s)	15.0	45.0	15.0	45.0	20.0	20.0	20.0	15.0
Total Split (%)	18.8%	56.3%	18.8%	56.3%	25.0%	25.0%	25.0%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	31.9	28.4	30.7	26.0		15.1	15.1	26.3
Actuated g/C Ratio	0.52	0.46	0.50	0.42		0.25	0.25	0.43
v/c Ratio	0.08	0.35	0.09	0.34		1.20	0.05	0.11
Control Delay	6.0	6.4	6.1	13.4		143.2	20.3	4.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	6.0	6.4	6.1	13.4		143.2	20.3	4.0
LOS	A	A	A	B		F	C	A
Approach Delay		6.3		12.9		143.2	7.8	
Approach LOS		A		B		F	A	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 61.6	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 41.7	Intersection LOS: D
Intersection Capacity Utilization 65.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 96/First Baptist Church & College Street (US 70)



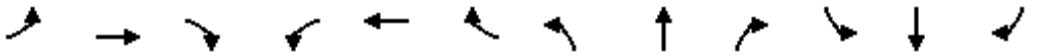


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	44	577	44	507	407	24	80
v/c Ratio	0.08	0.35	0.09	0.34	1.20	0.05	0.11
Control Delay	6.0	6.4	6.1	13.4	143.2	20.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	6.4	6.1	13.4	143.2	20.3	4.0
Queue Length 50th (ft)	6	36	6	69	~200	7	0
Queue Length 95th (ft)	12	46	15	77	#324	13	6
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	585	2194	573	2260	338	457	793
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.26	0.08	0.22	1.20	0.05	0.10

Intersection Summary

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

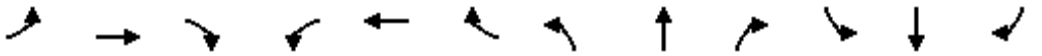
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	211	210	37	360	0	298	19	16	0	11	45
Future Volume (vph)	29	211	210	37	360	0	298	19	16	0	11	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.92		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			1.00	1.00
Satd. Flow (prot)	1770	3271		1770	3539			1765			1863	1583
Flt Permitted	0.44	1.00		0.43	1.00			0.74			1.00	1.00
Satd. Flow (perm)	818	3271		809	3539			1363			1863	1583
Peak-hour factor, PHF	0.66	0.74	0.72	0.84	0.71	0.92	0.86	0.79	0.44	0.92	0.46	0.56
Adj. Flow (vph)	44	285	292	44	507	0	347	24	36	0	24	80
RTOR Reduction (vph)	0	162	0	0	0	0	0	4	0	0	0	55
Lane Group Flow (vph)	44	415	0	44	507	0	0	403	0	0	24	25
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA			NA	pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	33.1	28.4		30.7	27.2			15.1			15.1	19.8
Effective Green, g (s)	33.1	28.4		30.7	27.2			15.1			15.1	19.8
Actuated g/C Ratio	0.52	0.44		0.48	0.42			0.24			0.24	0.31
Clearance Time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Vehicle Extension (s)	2.5	8.0		2.5	8.0			3.0			3.0	2.5
Lane Grp Cap (vph)	492	1451		440	1504			321			439	489
v/s Ratio Prot	c0.01	0.13		0.01	c0.14						0.01	0.00
v/s Ratio Perm	0.04			0.04				c0.30				0.01
v/c Ratio	0.09	0.29		0.10	0.34			1.26			0.05	0.05
Uniform Delay, d1	7.7	11.3		8.9	12.3			24.4			18.9	15.5
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	0.5		0.1	0.6			138.1			0.1	0.0
Delay (s)	7.7	11.8		9.0	12.9			162.6			19.0	15.5
Level of Service	A	B		A	B			F			B	B
Approach Delay (s)		11.5			12.6			162.6			16.3	
Approach LOS		B			B			F			B	

Intersection Summary			
HCM 2000 Control Delay	48.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	211	210	37	360	0	298	19	16	0	11	45
Future Volume (veh/h)	29	211	210	37	360	0	298	19	16	0	11	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	285	0	44	507	0	347	24	0	0	24	80
Peak Hour Factor	0.66	0.74	0.72	0.84	0.71	0.92	0.86	0.79	0.44	0.92	0.46	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	497	1478		612	1478	0	411	20		0	467	478
Arrive On Green	0.05	0.42	0.00	0.05	0.42	0.00	0.25	0.25	0.00	0.00	0.25	0.25
Sat Flow, veh/h	1781	3647	0	1781	3647	0	1183	82	0	0	1870	1585
Grp Volume(v), veh/h	44	285	0	44	507	0	371	0	0	0	24	80
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1265	0	0	0	1870	1585
Q Serve(g_s), s	0.8	3.1	0.0	0.8	5.8	0.0	14.4	0.0	0.0	0.0	0.6	2.2
Cycle Q Clear(g_c), s	0.8	3.1	0.0	0.8	5.8	0.0	15.0	0.0	0.0	0.0	0.6	2.2
Prop In Lane	1.00		0.00	1.00		0.00	0.94		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	497	1478		612	1478	0	432	0		0	467	478
V/C Ratio(X)	0.09	0.19		0.07	0.34	0.00	0.86	0.00		0.00	0.05	0.17
Avail Cap(c_a), veh/h	671	2305		786	2305	0	432	0		0	467	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	11.2	0.0	8.8	12.0	0.0	23.9	0.0	0.0	0.0	17.2	15.4
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.0	0.6	0.0	15.9	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	0.0	0.2	2.0	0.0	6.4	0.0	0.0	0.0	0.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	11.4	0.0	8.8	12.6	0.0	39.9	0.0	0.0	0.0	17.2	15.6
LnGrp LOS	A	B		A	B	A	D	A		A	B	B
Approach Vol, veh/h		329	A		551			371	A		104	
Approach Delay, s/veh		11.1			12.3			39.9			16.0	
Approach LOS		B			B			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	31.0		20.0	9.1	31.0		20.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	9.0	39.0		15.0	9.0	39.0		15.0				
Max Q Clear Time (g_c+I1), s	2.8	5.1		4.2	2.8	7.8		17.0				
Green Ext Time (p_c), s	0.0	6.5		0.2	0.0	11.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		19.8	
HCM 6th LOS		B	

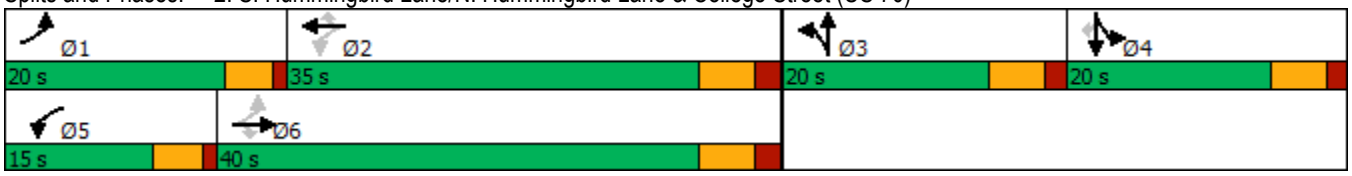
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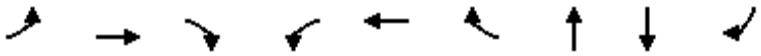
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	29	408	39	47	661	15	9	26	76
Future Volume (vph)	29	408	39	47	661	15	9	26	76
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	NA	Perm
Protected Phases	1	6		5	2		3	4	
Permitted Phases	6		6	2		2			4
Detector Phase	1	6	6	5	2	2	3	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	10.5	11.5	11.5
Total Split (s)	20.0	40.0	40.0	15.0	35.0	35.0	20.0	20.0	20.0
Total Split (%)	21.1%	42.1%	42.1%	15.8%	36.8%	36.8%	21.1%	21.1%	21.1%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None
Act Effct Green (s)	42.8	39.3	39.3	45.2	42.0	42.0	9.5	8.6	8.6
Actuated g/C Ratio	0.58	0.53	0.53	0.61	0.57	0.57	0.13	0.12	0.12
v/c Ratio	0.09	0.25	0.05	0.12	0.37	0.02	0.54	0.30	0.29
Control Delay	9.2	16.0	0.1	9.1	15.4	0.1	38.7	38.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	16.0	0.1	9.1	15.4	0.1	38.7	38.5	2.0
LOS	A	B	A	A	B	A	D	D	A
Approach Delay		14.3			14.5		38.7	15.9	
Approach LOS		B			B		D	B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 73.8	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

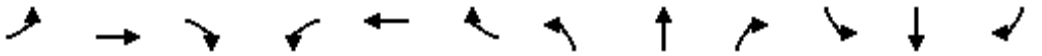
Splits and Phases: 2: S. Hummingbird Lane/N. Hummingbird Lane & College Street (US 70)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	40	480	44	72	743	20	128	64	104
v/c Ratio	0.09	0.25	0.05	0.12	0.37	0.02	0.54	0.30	0.29
Control Delay	9.2	16.0	0.1	9.1	15.4	0.1	38.7	38.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	16.0	0.1	9.1	15.4	0.1	38.7	38.5	2.0
Queue Length 50th (ft)	8	80	0	14	131	0	53	30	0
Queue Length 95th (ft)	20	132	0	27	216	0	38	57	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	662	1884	910	674	2013	984	386	389	496
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.25	0.05	0.11	0.37	0.02	0.33	0.16	0.21

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	408	39	47	661	15	41	9	29	22	26	76
Future Volume (vph)	29	408	39	47	661	15	41	9	29	22	26	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97			0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1746			1823	1583
Flt Permitted	0.34	1.00	1.00	0.45	1.00	1.00		0.97			0.98	1.00
Satd. Flow (perm)	635	3539	1583	836	3539	1583		1746			1823	1583
Peak-hour factor, PHF	0.73	0.85	0.89	0.65	0.89	0.75	0.60	0.38	0.81	0.79	0.72	0.73
Adj. Flow (vph)	40	480	44	72	743	20	68	24	36	28	36	104
RTOR Reduction (vph)	0	0	23	0	0	10	0	15	0	0	0	95
Lane Group Flow (vph)	40	480	21	72	743	10	0	113	0	0	64	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	41.1	38.0	38.0	44.7	39.8	39.8		7.6			6.5	6.5
Effective Green, g (s)	41.1	38.0	38.0	44.7	39.8	39.8		7.6			6.5	6.5
Actuated g/C Ratio	0.52	0.48	0.48	0.57	0.51	0.51		0.10			0.08	0.08
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0			3.0	3.0
Lane Grp Cap (vph)	377	1713	766	534	1794	802		169			150	131
v/s Ratio Prot	0.00	0.14		c0.01	c0.21			c0.06			c0.04	
v/s Ratio Perm	0.05		0.01	0.07		0.01						0.01
v/c Ratio	0.11	0.28	0.03	0.13	0.41	0.01		0.67			0.43	0.07
Uniform Delay, d1	9.2	12.1	10.6	7.6	12.1	9.6		34.2			34.2	33.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	0.0	0.4	0.1	0.0	0.7	0.0		7.5			1.9	0.2
Delay (s)	9.2	12.5	10.7	7.7	12.8	9.6		41.7			36.2	33.4
Level of Service	A	B	B	A	B	A		D			D	C
Approach Delay (s)		12.1			12.3			41.7			34.5	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	21.5
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

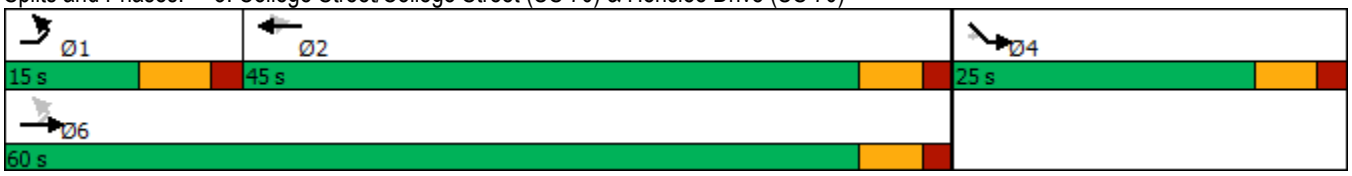
c Critical Lane Group

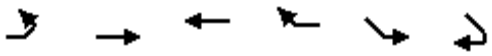
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	5	210	427	532	318	9
Future Volume (vph)	5	210	427	532	318	9
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	11.5	26.0	26.0	26.0	14.0	14.0
Total Split (s)	15.0	60.0	45.0	45.0	25.0	25.0
Total Split (%)	17.6%	70.6%	52.9%	52.9%	29.4%	29.4%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	26.1	26.6	25.1	25.1	11.7	11.7
Actuated g/C Ratio	0.51	0.52	0.49	0.49	0.23	0.23
v/c Ratio	0.03	0.15	0.28	0.62	0.48	0.05
Control Delay	6.2	6.5	9.0	3.8	21.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	6.5	9.0	3.8	21.0	10.8
LOS	A	A	A	A	C	B
Approach Delay		6.4	5.9		20.5	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 51.2	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

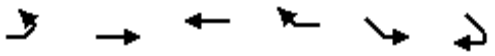
Splits and Phases: 3: College Street/College Street (US 70) & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	12	280	485	709	374	20
v/c Ratio	0.03	0.15	0.28	0.62	0.48	0.05
Control Delay	6.2	6.5	9.0	3.8	21.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	6.5	9.0	3.8	21.0	10.8
Queue Length 50th (ft)	1	18	34	0	39	0
Queue Length 95th (ft)	4	33	103	11	119	4
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	547	3301	2884	1421	1363	640
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.08	0.17	0.50	0.27	0.03

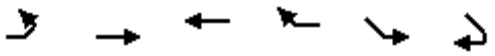
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	5	210	427	532	318	9
Future Volume (vph)	5	210	427	532	318	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.38	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	704	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.42	0.75	0.88	0.75	0.85	0.45
Adj. Flow (vph)	12	280	485	709	374	20
RTOR Reduction (vph)	0	0	0	392	0	16
Lane Group Flow (vph)	12	280	485	317	374	4
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Actuated Green, G (s)	32.3	32.3	25.1	25.1	11.8	11.8
Effective Green, g (s)	32.3	32.3	25.1	25.1	11.8	11.8
Actuated g/C Ratio	0.58	0.58	0.45	0.45	0.21	0.21
Clearance Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	4.5	4.5	4.5	3.5	3.5
Lane Grp Cap (vph)	418	2037	1583	708	722	332
v/s Ratio Prot	0.00	c0.08	0.14		c0.11	
v/s Ratio Perm	0.02			c0.20		0.00
v/c Ratio	0.03	0.14	0.31	0.45	0.52	0.01
Uniform Delay, d1	5.5	5.5	9.9	10.7	19.6	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	0.2	0.8	0.7	0.0
Delay (s)	5.5	5.5	10.1	11.5	20.4	17.6
Level of Service	A	A	B	B	C	B
Approach Delay (s)		5.5	10.9		20.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	18.5
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	5	210	427	532	318	9
Future Volume (veh/h)	5	210	427	532	318	9
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	280	485	0	374	0
Peak Hour Factor	0.42	0.75	0.88	0.75	0.85	0.45
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	482	2048	1504		587	
Arrive On Green	0.02	0.58	0.42	0.00	0.17	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	12	280	485	0	374	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.2	1.7	4.3	0.0	4.8	0.0
Cycle Q Clear(g_c), s	0.2	1.7	4.3	0.0	4.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	482	2048	1504		587	
V/C Ratio(X)	0.02	0.14	0.32		0.64	
Avail Cap(c_a), veh/h	775	4061	2933		1389	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.8	4.6	9.1	0.0	18.3	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	1.2	0.0	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.8	4.7	9.3	0.0	19.7	0.0
LnGrp LOS	A	A	A		B	
Approach Vol, veh/h		292	485	A	374	A
Approach Delay, s/veh		4.7	9.3		19.7	
Approach LOS		A	A		B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.2	26.0		14.0		33.2
Change Period (Y+Rc), s	6.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	8.5	39.0		19.0		54.0
Max Q Clear Time (g_c+I1), s	2.2	6.3		6.8		3.7
Green Ext Time (p_c), s	0.0	5.3		1.3		3.1

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NEL	NET	SWL	SWT	SWR
Lane Configurations									
Traffic Volume (vph)	11	339	4	477	10	11	15	10	25
Future Volume (vph)	11	339	4	477	10	11	15	10	25
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	5	2	1	6	8	8	4	4	4
Switch Phase									
Minimum Initial (s)	5.0	8.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	13.0	9.0	13.0	13.0	13.0	13.0	13.0	13.0
Total Split (s)	15.0	48.0	12.0	45.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	18.8%	60.0%	15.0%	56.3%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0		5.0		5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	Min	None	None	None	None	None
Act Effct Green (s)	21.0	14.2	24.7	25.9		6.5		6.6	6.6
Actuated g/C Ratio	0.59	0.40	0.69	0.73		0.18		0.18	0.18
v/c Ratio	0.03	0.35	0.02	0.25		0.20		0.15	0.08
Control Delay	3.3	8.3	3.2	5.0		15.0		17.6	0.8
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	3.3	8.3	3.2	5.0		15.0		17.6	0.8
LOS	A	A	A	A		B		B	A
Approach Delay		8.2		5.0		15.0		11.0	
Approach LOS		A		A		B		B	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 35.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 34.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Plaza Drive & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	16	485	12	632	60	44	28
v/c Ratio	0.03	0.35	0.02	0.25	0.20	0.15	0.08
Control Delay	3.3	8.3	3.2	5.0	15.0	17.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	8.3	3.2	5.0	15.0	17.6	0.8
Queue Length 50th (ft)	1	35	1	27	8	8	0
Queue Length 95th (ft)	4	58	2	80	13	18	2
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	885	3345	768	3335	753	762	777
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.14	0.02	0.19	0.08	0.06	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	11	339	43	4	477	24	10	11	7	15	10	25
Future Volume (vph)	11	339	43	4	477	24	10	11	7	15	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1770	3460		1770	3509			1772			1813	1583
Flt Permitted	0.41	1.00		0.39	1.00			0.89			0.88	1.00
Satd. Flow (perm)	767	3460		725	3509			1607			1645	1583
Peak-hour factor, PHF	0.69	0.82	0.60	0.33	0.80	0.67	0.63	0.39	0.44	0.63	0.50	0.89
Adj. Flow (vph)	16	413	72	12	596	36	16	28	16	24	20	28
RTOR Reduction (vph)	0	21	0	0	5	0	0	15	0	0	0	26
Lane Group Flow (vph)	16	464	0	12	627	0	0	45	0	0	44	2
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	18.9	18.1		27.7	22.9			3.5			3.5	3.5
Effective Green, g (s)	18.9	18.1		27.7	22.9			3.5			3.5	3.5
Actuated g/C Ratio	0.46	0.44		0.67	0.56			0.08			0.08	0.08
Clearance Time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	2.5	5.0		2.5	5.0			2.5			2.5	2.5
Lane Grp Cap (vph)	371	1520		629	1950			136			139	134
v/s Ratio Prot	0.00	0.13		c0.00	c0.18							
v/s Ratio Perm	0.02			0.01				c0.03			0.03	0.00
v/c Ratio	0.04	0.31		0.02	0.32			0.33			0.32	0.02
Uniform Delay, d1	6.1	7.5		2.4	4.9			17.8			17.7	17.3
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	0.2		0.0	0.2			1.1			1.0	0.0
Delay (s)	6.1	7.7		2.4	5.1			18.8			18.7	17.3
Level of Service	A	A		A	A			B			B	B
Approach Delay (s)		7.7			5.1			18.8			18.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	41.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	11	339	43	4	477	24	10	11	7	15	10	25
Future Volume (veh/h)	11	339	43	4	477	24	10	11	7	15	10	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	413	72	12	596	36	16	28	16	24	20	28
Peak Hour Factor	0.69	0.82	0.60	0.33	0.80	0.67	0.63	0.39	0.44	0.63	0.50	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	519	1041	180	686	1594	96	168	91	46	236	97	165
Arrive On Green	0.02	0.34	0.34	0.15	0.47	0.47	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3029	524	1781	3405	205	343	875	443	716	929	1585
Grp Volume(v), veh/h	16	241	244	12	311	321	60	0	0	44	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1833	1661	0	0	1645	0	1585
Q Serve(g_s), s	0.2	3.5	3.6	0.1	3.9	3.9	0.4	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.2	3.5	3.6	0.1	3.9	3.9	1.1	0.0	0.0	0.7	0.0	0.6
Prop In Lane	1.00		0.30	1.00		0.11	0.27		0.27	0.55		1.00
Lane Grp Cap(c), veh/h	519	610	610	686	832	859	306	0	0	333	0	165
V/C Ratio(X)	0.03	0.39	0.40	0.02	0.37	0.37	0.20	0.00	0.00	0.13	0.00	0.17
Avail Cap(c_a), veh/h	1052	2221	2220	841	2066	2132	846	0	0	849	0	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.0	8.6	8.6	4.0	5.9	5.9	14.3	0.0	0.0	14.1	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	0.6	0.6	0.2	0.0	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.0	0.0	0.9	0.9	0.4	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	9.5	9.5	4.0	6.5	6.5	14.5	0.0	0.0	14.3	0.0	14.4
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		501			644			60			72	
Approach Delay, s/veh		9.4			6.4			14.5			14.3	
Approach LOS		A			A			B			B	

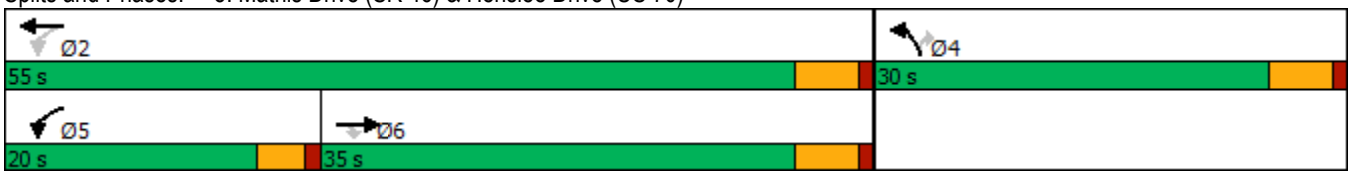
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	16.8		8.6	4.7	21.1		8.6				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	43.0		15.0	11.0	40.0		15.0				
Max Q Clear Time (g_c+I1), s	2.1	5.6		2.7	2.2	5.9		3.1				
Green Ext Time (p_c), s	0.0	6.2		0.1	0.0	8.3		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		8.4
HCM 6th LOS		A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	323	554	91	276	417	62
Future Volume (vph)	323	554	91	276	417	62
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	13.0	13.0	10.0	13.0	11.0	11.0
Total Split (s)	35.0	35.0	20.0	55.0	30.0	30.0
Total Split (%)	41.2%	41.2%	23.5%	64.7%	35.3%	35.3%
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Min	Min	None	Min	None	None
Act Effct Green (s)	23.5	23.5	34.3	33.2	16.1	16.1
Actuated g/C Ratio	0.39	0.39	0.57	0.55	0.27	0.27
v/c Ratio	0.25	0.62	0.17	0.16	0.57	0.19
Control Delay	14.6	4.7	6.8	6.8	23.6	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	4.7	6.8	6.8	23.6	10.7
LOS	B	A	A	A	C	B
Approach Delay	8.4			6.8	21.7	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 60.3	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Mathis Drive (SR 46) & Henslee Drive (US 70)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	351	609	108	317	521	89
v/c Ratio	0.25	0.62	0.17	0.16	0.57	0.19
Control Delay	14.6	4.7	6.8	6.8	23.6	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	4.7	6.8	6.8	23.6	10.7
Queue Length 50th (ft)	46	0	15	25	88	8
Queue Length 95th (ft)	93	63	38	50	136	28
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	1934	1141	760	2873	1564	753
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.53	0.14	0.11	0.33	0.12

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	323	554	91	276	417	62
Future Volume (vph)	323	554	91	276	417	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.46	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	862	3539	3433	1583
Peak-hour factor, PHF	0.92	0.91	0.84	0.87	0.80	0.70
Adj. Flow (vph)	351	609	108	317	521	89
RTOR Reduction (vph)	0	372	0	0	0	44
Lane Group Flow (vph)	351	237	108	317	521	45
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	23.5	23.5	34.2	34.2	16.1	16.1
Effective Green, g (s)	23.5	23.5	34.2	34.2	16.1	16.1
Actuated g/C Ratio	0.39	0.39	0.57	0.57	0.27	0.27
Clearance Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	6.0	6.0	2.5	6.0	4.0	4.0
Lane Grp Cap (vph)	1379	616	589	2007	916	422
v/s Ratio Prot	0.10		c0.02	0.09	c0.15	
v/s Ratio Perm		c0.15	0.08			0.03
v/c Ratio	0.25	0.39	0.18	0.16	0.57	0.11
Uniform Delay, d1	12.5	13.2	6.2	6.2	19.1	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.1	0.1	0.1	1.0	0.2
Delay (s)	12.7	14.3	6.3	6.3	20.1	16.8
Level of Service	B	B	A	A	C	B
Approach Delay (s)	13.8			6.3	19.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	323	554	91	276	417	62
Future Volume (veh/h)	323	554	91	276	417	62
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	351	0	108	317	521	0
Peak Hour Factor	0.92	0.91	0.84	0.87	0.80	0.70
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	952		573	1706	889	
Arrive On Green	0.27	0.00	0.11	0.48	0.26	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	351	0	108	317	521	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	3.1	0.0	1.4	1.9	5.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.4	1.9	5.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	952		573	1706	889	
V/C Ratio(X)	0.37		0.19	0.19	0.59	
Avail Cap(c_a), veh/h	2798		1130	4663	2267	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.3	0.0	7.0	5.7	12.4	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.1	0.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.4	0.5	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	0.0	7.1	5.8	13.2	0.0
LnGrp LOS	B		A	A	B	
Approach Vol, veh/h	351	A		425	521	A
Approach Delay, s/veh	12.2			6.2	13.2	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.3		14.8	8.1	15.2
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0
Max Green Setting (Gmax), s		50.0		25.0	16.0	30.0
Max Q Clear Time (g_c+I1), s		3.9		7.0	3.4	5.1
Green Ext Time (p_c), s		5.6		2.8	0.1	5.2

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

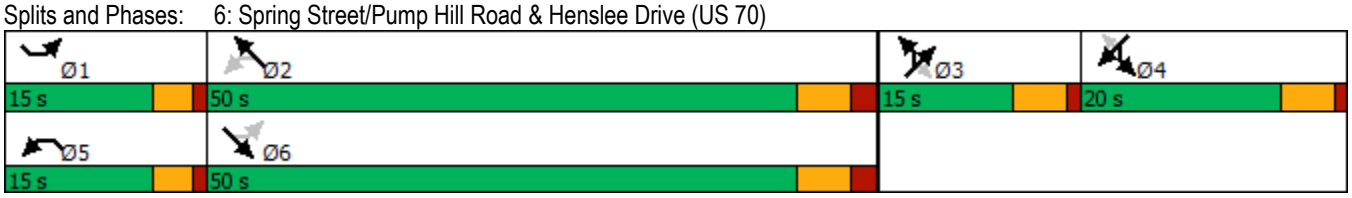
Notes

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

Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Configurations								
Traffic Volume (vph)	31	663	22	505	12	50	10	35
Future Volume (vph)	31	663	22	505	12	50	10	35
Turn Type	pm+pt	NA	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	1	6	5	2	3		4	
Permitted Phases	6		2			3		4
Detector Phase	1	6	5	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	4.0	15.0	4.0	8.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.0	21.0	10.0	14.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	50.0	15.0	50.0	15.0	15.0	20.0	20.0
Total Split (%)	15.0%	50.0%	15.0%	50.0%	15.0%	15.0%	20.0%	20.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	27.4	25.1	27.2	25.0	7.4	7.4	8.3	8.3
Actuated g/C Ratio	0.52	0.48	0.52	0.47	0.14	0.14	0.16	0.16
v/c Ratio	0.08	0.44	0.07	0.36	0.27	0.18	0.32	0.15
Control Delay	9.0	15.6	9.0	14.7	27.6	1.2	26.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	15.6	9.0	14.7	27.6	1.2	26.9	0.9
LOS	A	B	A	B	C	A	C	A
Approach Delay		15.2		14.4	15.2		17.2	
Approach LOS		B		B	B		B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 52.7	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Spring Street/Pump Hill Road & Henslee Drive (US 70)





Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	40	737	28	593	68	60	88	52
v/c Ratio	0.08	0.44	0.07	0.36	0.27	0.18	0.32	0.15
Control Delay	9.0	15.6	9.0	14.7	27.6	1.2	26.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	15.6	9.0	14.7	27.6	1.2	26.9	0.9
Queue Length 50th (ft)	6	83	5	62	18	0	22	0
Queue Length 95th (ft)	19	195	15	153	52	0	69	0
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	633	2975	583	2952	363	424	542	571
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.25	0.05	0.20	0.19	0.14	0.16	0.09

Intersection Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	31	663	9	22	505	33	37	12	50	69	10	35
Future Volume (vph)	31	663	9	22	505	33	37	12	50	69	10	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	3528		1770	3500			1794	1583		1786	1583
Flt Permitted	0.41	1.00		0.32	1.00			0.96	1.00		0.96	1.00
Satd. Flow (perm)	754	3528		596	3500			1794	1583		1786	1583
Peak-hour factor, PHF	0.78	0.92	0.56	0.79	0.92	0.75	0.71	0.75	0.83	0.91	0.83	0.67
Adj. Flow (vph)	40	721	16	28	549	44	52	16	60	76	12	52
RTOR Reduction (vph)	0	2	0	0	7	0	0	0	54	0	0	46
Lane Group Flow (vph)	40	735	0	28	586	0	0	68	6	0	88	6
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2					3			4
Actuated Green, G (s)	25.2	23.3		25.0	23.2			5.7	5.7		6.5	6.5
Effective Green, g (s)	25.2	23.3		25.0	23.2			5.7	5.7		6.5	6.5
Actuated g/C Ratio	0.44	0.41		0.44	0.40			0.10	0.10		0.11	0.11
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	4.0			2.0	2.0		2.5	2.5
Lane Grp Cap (vph)	365	1434		296	1417			178	157		202	179
v/s Ratio Prot	c0.00	c0.21		0.00	0.17			c0.04			c0.05	
v/s Ratio Perm	0.04			0.04					0.00			0.00
v/c Ratio	0.11	0.51		0.09	0.41			0.38	0.04		0.44	0.03
Uniform Delay, d1	9.2	12.7		9.3	12.2			24.2	23.3		23.7	22.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.1	0.3			0.5	0.0		1.1	0.1
Delay (s)	9.3	12.9		9.4	12.5			24.7	23.4		24.8	22.7
Level of Service	A	B		A	B			C	C		C	C
Approach Delay (s)		12.7			12.3			24.0			24.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	301	68	1	669	592	3
Future Volume (vph)	301	68	1	669	592	3
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	15.0	15.0	15.0
Minimum Split (s)	14.0	14.0	12.0	21.0	27.0	27.0
Total Split (s)	20.0	20.0	20.0	65.0	45.0	45.0
Total Split (%)	23.5%	23.5%	23.5%	76.5%	52.9%	52.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.3	10.3	23.1	23.1	21.5	21.5
Actuated g/C Ratio	0.22	0.22	0.50	0.50	0.47	0.47
v/c Ratio	0.46	0.20	0.01	0.45	0.42	0.01
Control Delay	19.4	7.1	5.0	7.9	9.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	7.1	5.0	7.9	9.8	5.7
LOS	B	A	A	A	A	A
Approach Delay	17.0			7.9	9.8	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 46.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 37.1%	ICU Level of Service A
Analysis Period (min) 15	

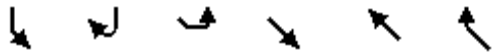
Splits and Phases: 7: Henslee Drive (US 70) & SR 48





Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	350	84	4	796	696	8
v/c Ratio	0.46	0.20	0.01	0.45	0.42	0.01
Control Delay	19.4	7.1	5.0	7.9	9.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	7.1	5.0	7.9	9.8	5.7
Queue Length 50th (ft)	37	0	1	58	50	0
Queue Length 95th (ft)	98	25	1	95	133	2
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	1096	562	661	3449	3061	1370
Starvation Cap Reductn	0	0	0	185	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.15	0.01	0.24	0.23	0.01

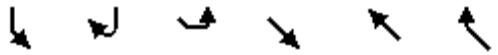
Intersection Summary



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	301	68	1	669	592	3
Future Volume (vph)	301	68	1	669	592	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.28	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	526	3539	3539	1583
Peak-hour factor, PHF	0.86	0.81	0.25	0.84	0.85	0.38
Adj. Flow (vph)	350	84	4	796	696	8
RTOR Reduction (vph)	0	67	0	0	0	5
Lane Group Flow (vph)	350	17	4	796	696	3
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Actuated Green, G (s)	10.3	10.3	28.3	28.3	21.5	21.5
Effective Green, g (s)	10.3	10.3	28.3	28.3	21.5	21.5
Actuated g/C Ratio	0.20	0.20	0.56	0.56	0.42	0.42
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	698	322	313	1979	1503	672
v/s Ratio Prot	c0.10		0.00	c0.22	c0.20	
v/s Ratio Perm		0.01	0.01			0.00
v/c Ratio	0.50	0.05	0.01	0.40	0.46	0.01
Uniform Delay, d1	17.9	16.2	5.5	6.3	10.4	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	0.0	0.3	0.5	0.0
Delay (s)	18.4	16.3	5.5	6.6	10.9	8.4
Level of Service	B	B	A	A	B	A
Approach Delay (s)	18.0			6.6	10.9	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	301	68	1	669	592	3
Future Volume (veh/h)	301	68	1	669	592	3
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	350	0	4	796	696	0
Peak Hour Factor	0.86	0.81	0.25	0.84	0.85	0.38
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	617		372	1955	1449	
Arrive On Green	0.18	0.00	0.01	0.55	0.41	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	350	0	4	796	696	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.1	0.0	0.1	5.7	6.4	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.1	5.7	6.4	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	617		372	1955	1449	
V/C Ratio(X)	0.57		0.01	0.41	0.48	
Avail Cap(c_a), veh/h	1095		924	4743	3135	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.6	0.0	7.3	5.8	9.6	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	1.3	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.4	0.0	7.3	6.1	10.2	0.0
LnGrp LOS	B		A	A	B	
Approach Vol, veh/h	350	A		800	696	A
Approach Delay, s/veh	17.4			6.1	10.2	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.3	24.0		13.9		30.3
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	14.0	39.0		14.0		59.0
Max Q Clear Time (g_c+I1), s	2.1	8.4		6.1		7.7
Green Ext Time (p_c), s	0.0	9.6		0.8		13.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

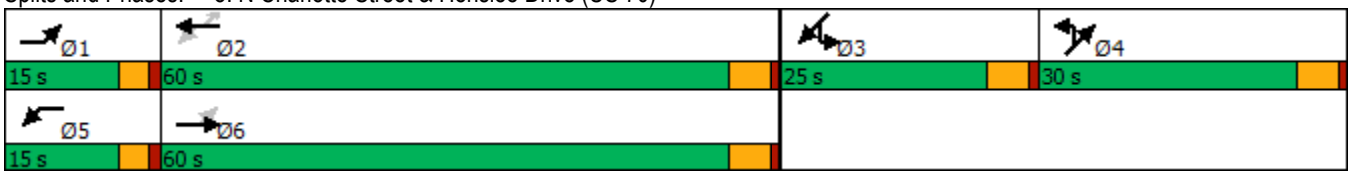
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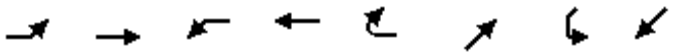
Unsignalized Delay for [NWR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	26	596	43	598	19	18	49	24
Future Volume (vph)	26	596	43	598	19	18	49	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Split	NA
Protected Phases	1	6	5	2		4	3	3
Permitted Phases	6		2		2			
Detector Phase	1	6	5	2	2	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	8.0	8.0	8.0
Minimum Split (s)	10.0	15.0	10.0	15.0	15.0	13.0	13.0	13.0
Total Split (s)	15.0	60.0	15.0	60.0	60.0	30.0	25.0	25.0
Total Split (%)	11.5%	46.2%	11.5%	46.2%	46.2%	23.1%	19.2%	19.2%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None
Act Effct Green (s)	34.5	30.5	35.6	31.0	31.0	13.1	10.3	10.3
Actuated g/C Ratio	0.48	0.43	0.50	0.43	0.43	0.18	0.14	0.14
v/c Ratio	0.08	0.54	0.15	0.46	0.04	0.48	0.21	0.33
Control Delay	10.6	19.1	11.0	17.6	0.1	35.1	36.8	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	19.1	11.0	17.6	0.1	35.1	36.8	22.0
LOS	B	B	B	B	A	D	D	C
Approach Delay		18.8		16.6		35.1		27.3
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 71.3	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 47.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: N Charlotte Street & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	32	804	52	704	28	160	53	96
v/c Ratio	0.08	0.54	0.15	0.46	0.04	0.48	0.21	0.33
Control Delay	10.6	19.1	11.0	17.6	0.1	35.1	36.8	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	19.1	11.0	17.6	0.1	35.1	36.8	22.0
Queue Length 50th (ft)	7	151	11	126	0	64	23	17
Queue Length 95th (ft)	21	228	30	204	0	102	69	44
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	508	2722	468	2756	1253	696	556	568
Starvation Cap Reductn	0	0	0	218	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.30	0.11	0.28	0.02	0.23	0.10	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	26	596	48	43	598	19	74	18	25	49	24	45
Future Volume (vph)	26	596	48	43	598	19	74	18	25	49	24	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.97		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3539	1583		1754		1770	1688	
Flt Permitted	0.32	1.00		0.25	1.00	1.00		0.97		0.95	1.00	
Satd. Flow (perm)	587	3494		467	3539	1583		1754		1770	1688	
Peak-hour factor, PHF	0.81	0.81	0.71	0.83	0.85	0.68	0.77	0.64	0.69	0.92	0.67	0.75
Adj. Flow (vph)	32	736	68	52	704	28	96	28	36	53	36	60
RTOR Reduction (vph)	0	5	0	0	0	16	0	8	0	0	50	0
Lane Group Flow (vph)	32	799	0	52	704	12	0	152	0	53	46	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases	6			2		2						
Actuated Green, G (s)	33.4	30.5		34.4	31.0	31.0		13.1		7.3	7.3	
Effective Green, g (s)	33.4	30.5		34.4	31.0	31.0		13.1		7.3	7.3	
Actuated g/C Ratio	0.46	0.42		0.47	0.42	0.42		0.18		0.10	0.10	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0		4.0	4.0	
Lane Grp Cap (vph)	314	1453		279	1496	669		313		176	168	
v/s Ratio Prot	0.00	c0.23		c0.01	0.20			c0.09		c0.03	0.03	
v/s Ratio Perm	0.04			0.08		0.01						
v/c Ratio	0.10	0.55		0.19	0.47	0.02		0.48		0.30	0.28	
Uniform Delay, d1	11.3	16.2		11.2	15.2	12.3		27.1		30.6	30.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.8		0.1	0.5	0.0		1.2		1.3	1.2	
Delay (s)	11.3	17.0		11.3	15.7	12.3		28.3		31.9	31.8	
Level of Service	B	B		B	B	B		C		C	C	
Approach Delay (s)		16.7			15.3			28.3			31.8	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	73.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	29

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	193	433	255	363	207	71
Future Vol, veh/h	193	433	255	363	207	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	375	145	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	64	92	87	60	69	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	302	471	293	605	300	108

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	898	0	-	0	1133	147
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	840	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	752	-	-	-	~ 197	873
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	384	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	752	-	-	-	~ 118	873
Mov Cap-2 Maneuver	-	-	-	-	~ 240	-
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	138
HCM LOS			F

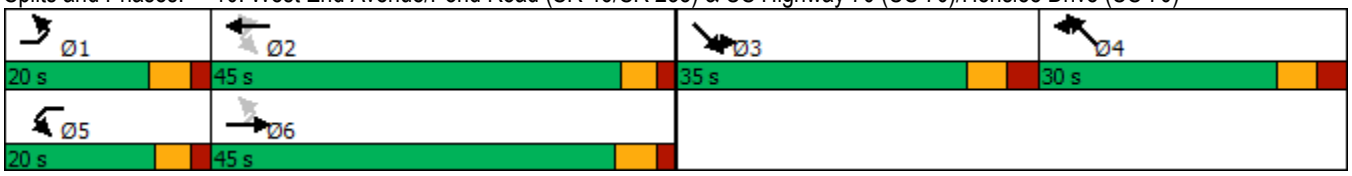
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	752	-	-	-	240	873
HCM Lane V/C Ratio	0.401	-	-	-	1.25	0.123
HCM Control Delay (s)	13	-	-	-	184	9.7
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	1.9	-	-	-	15	0.4

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

Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Configurations							
Traffic Volume (vph)	1	455	6	219	109	26	6
Future Volume (vph)	1	455	6	219	109	26	6
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA
Protected Phases	1	6	5	2		3	4
Permitted Phases	6		2		2		
Detector Phase	1	6	5	2	2	3	4
Switch Phase							
Minimum Initial (s)	6.0	20.0	6.0	20.0	20.0	10.0	10.0
Minimum Split (s)	12.0	26.0	11.5	25.5	25.5	17.0	33.0
Total Split (s)	20.0	45.0	20.0	45.0	45.0	35.0	30.0
Total Split (%)	15.4%	34.6%	15.4%	34.6%	34.6%	26.9%	23.1%
Yellow Time (s)	4.0	4.0	3.5	3.5	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	5.5	5.5	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None
Act Effct Green (s)	40.7	39.7	41.1	40.1	40.1	28.4	10.1
Actuated g/C Ratio	0.44	0.43	0.44	0.43	0.43	0.31	0.11
v/c Ratio	0.01	0.34	0.03	0.18	0.17	0.72	0.21
Control Delay	16.0	20.3	16.5	18.7	3.8	39.8	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	20.3	16.5	18.7	3.8	39.8	30.2
LOS	B	C	B	B	A	D	C
Approach Delay		20.3		14.0		39.8	30.2
Approach LOS		C		B		D	C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 92.6	
Natural Cycle: 100	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: West End Avenue/Pond Road (SR 46/SR 235) & US Highway 70 (US 70)/Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	4	520	12	277	131	393	44
v/c Ratio	0.01	0.34	0.03	0.18	0.17	0.72	0.21
Control Delay	16.0	20.3	16.5	18.7	3.8	39.8	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	20.3	16.5	18.7	3.8	39.8	30.2
Queue Length 50th (ft)	1	115	4	56	0	220	14
Queue Length 95th (ft)	2	188	8	88	25	220	22
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	587	1508	507	1532	766	546	449
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.34	0.02	0.18	0.17	0.72	0.10

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	1	455	11	6	219	109	290	26	4	7	6	14
Future Volume (vph)	1	455	11	6	219	109	290	26	4	7	6	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00			0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.99	
Satd. Flow (prot)	1770	3519		1770	3539	1583		1780			1725	
Flt Permitted	0.57	1.00		0.41	1.00	1.00		0.96			0.99	
Satd. Flow (perm)	1070	3519		764	3539	1583		1780			1725	
Peak-hour factor, PHF	0.25	0.91	0.55	0.50	0.79	0.83	0.85	0.59	0.50	0.58	0.50	0.70
Adj. Flow (vph)	4	500	20	12	277	131	341	44	8	12	12	20
RTOR Reduction (vph)	0	2	0	0	0	79	0	1	0	0	19	0
Lane Group Flow (vph)	4	518	0	12	277	52	0	392	0	0	25	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2		2						
Actuated Green, G (s)	41.1	40.1		41.1	40.1	40.1		28.4			5.5	
Effective Green, g (s)	41.1	40.1		41.1	40.1	40.1		28.4			5.5	
Actuated g/C Ratio	0.41	0.40		0.41	0.40	0.40		0.28			0.05	
Clearance Time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	444	1404		322	1412	631		503			94	
v/s Ratio Prot	0.00	c0.15		c0.00	0.08			c0.22			c0.01	
v/s Ratio Perm	0.00			0.01		0.03						
v/c Ratio	0.01	0.37		0.04	0.20	0.08		0.78			0.27	
Uniform Delay, d1	17.6	21.3		17.8	19.7	18.8		33.2			45.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.0	0.7		0.0	0.3	0.3		7.5			1.5	
Delay (s)	17.6	22.0		17.8	20.0	19.0		40.7			47.1	
Level of Service	B	C		B	C	B		D			D	
Approach Delay (s)		22.0			19.6			40.7			47.1	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	25.5
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

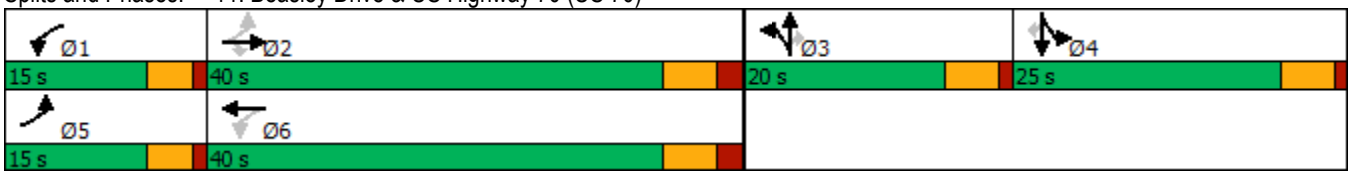
c Critical Lane Group

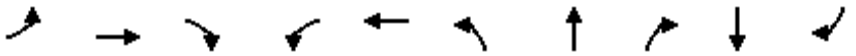
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	25	389	343	29	161	167	79	35	184	14
Future Volume (vph)	25	389	343	29	161	167	79	35	184	14
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	3	3		4	
Permitted Phases	2		2	6				3		4
Detector Phase	5	2	2	1	6	3	3	3	4	4
Switch Phase										
Minimum Initial (s)	4.0	3.0	3.0	4.0	3.0	6.0	6.0	6.0	10.0	10.0
Minimum Split (s)	12.5	14.0	14.0	12.5	14.0	13.0	13.0	13.0	15.0	15.0
Total Split (s)	15.0	40.0	40.0	15.0	40.0	20.0	20.0	20.0	25.0	25.0
Total Split (%)	15.0%	40.0%	40.0%	15.0%	40.0%	20.0%	20.0%	20.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	Min	Min
Act Effct Green (s)	39.9	34.7	34.7	40.7	35.1	12.6	12.6	12.6	16.6	16.6
Actuated g/C Ratio	0.46	0.40	0.40	0.47	0.40	0.15	0.15	0.15	0.19	0.19
v/c Ratio	0.05	0.31	0.49	0.10	0.17	0.59	0.58	0.17	0.70	0.06
Control Delay	13.0	20.9	4.4	13.3	18.8	47.3	46.7	1.1	45.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	20.9	4.4	13.3	18.8	47.3	46.7	1.1	45.6	0.3
LOS	B	C	A	B	B	D	D	A	D	A
Approach Delay		12.7			17.9		39.1		41.6	
Approach LOS		B			B		D		D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 86.8	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

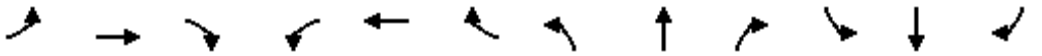
Splits and Phases: 11: Beasley Drive & US Highway 70 (US 70)





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	28	442	434	48	243	144	148	60	248	24
v/c Ratio	0.05	0.31	0.49	0.10	0.17	0.59	0.58	0.17	0.70	0.06
Control Delay	13.0	20.9	4.4	13.3	18.8	47.3	46.7	1.1	45.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	20.9	4.4	13.3	18.8	47.3	46.7	1.1	45.6	0.3
Queue Length 50th (ft)	8	100	0	14	49	85	87	0	138	0
Queue Length 95th (ft)	23	145	31	22	62	149	136	0	211	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	621	1415	893	532	1423	296	307	391	435	476
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.31	0.49	0.09	0.17	0.49	0.48	0.15	0.57	0.05

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	389	343	29	161	11	167	79	35	18	184	14
Future Volume (vph)	25	389	343	29	161	11	167	79	35	18	184	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.99	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3504		1681	1741	1583		1851	1583
Flt Permitted	0.60	1.00	1.00	0.46	1.00		0.95	0.98	1.00		0.99	1.00
Satd. Flow (perm)	1119	3539	1583	861	3504		1681	1741	1583		1851	1583
Peak-hour factor, PHF	0.89	0.88	0.79	0.60	0.71	0.69	0.87	0.79	0.58	0.56	0.85	0.58
Adj. Flow (vph)	28	442	434	48	227	16	192	100	60	32	216	24
RTOR Reduction (vph)	0	0	264	0	5	0	0	0	51	0	0	19
Lane Group Flow (vph)	28	442	170	48	238	0	144	148	9	0	248	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6					3			4
Actuated Green, G (s)	38.4	34.7	34.7	39.2	35.1		12.6	12.6	12.6		16.6	16.6
Effective Green, g (s)	38.4	34.7	34.7	39.2	35.1		12.6	12.6	12.6		16.6	16.6
Actuated g/C Ratio	0.43	0.39	0.39	0.44	0.40		0.14	0.14	0.14		0.19	0.19
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	512	1387	620	423	1389		239	247	225		347	296
v/s Ratio Prot	0.00	c0.12		c0.01	0.07		c0.09	0.08			c0.13	
v/s Ratio Perm	0.02		0.11	0.04					0.01			0.00
v/c Ratio	0.05	0.32	0.27	0.11	0.17		0.60	0.60	0.04		0.71	0.02
Uniform Delay, d1	14.4	18.7	18.3	14.1	17.3		35.6	35.6	32.7		33.7	29.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.6	1.1	0.1	0.3		4.9	4.5	0.1		7.3	0.0
Delay (s)	14.5	19.3	19.4	14.3	17.6		40.5	40.1	32.8		41.0	29.3
Level of Service	B	B	B	B	B		D	D	C		D	C
Approach Delay (s)		19.2			17.0			39.0			40.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	20.5
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

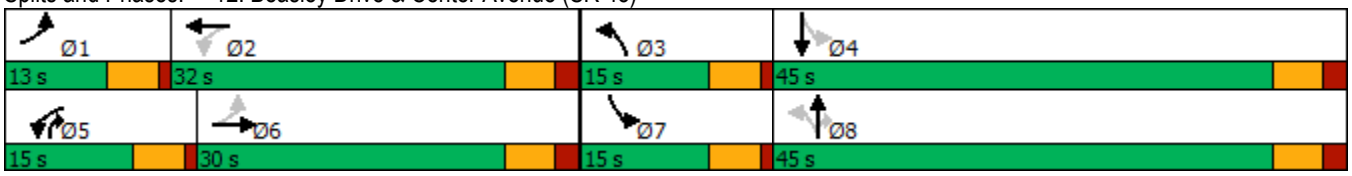
c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	92	204	26	66	73	183	6	2	520
Future Volume (vph)	92	204	26	66	73	183	6	2	520
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	1	6	5	2	3	8	5	7	4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	3	8	5	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	10.0	6.0	6.0	10.0
Minimum Split (s)	11.0	16.0	11.0	16.0	11.0	16.0	11.0	11.0	16.0
Total Split (s)	13.0	30.0	15.0	32.0	15.0	45.0	15.0	15.0	45.0
Total Split (%)	12.4%	28.6%	14.3%	30.5%	14.3%	42.9%	14.3%	14.3%	42.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	28.9	23.5	24.8	17.3	49.6	47.0	59.6	45.2	39.6
Actuated g/C Ratio	0.32	0.26	0.27	0.19	0.54	0.52	0.65	0.50	0.43
v/c Ratio	0.34	0.83	0.18	0.31	0.45	0.25	0.01	0.01	0.92
Control Delay	24.7	47.7	22.8	30.6	18.8	15.2	0.0	11.5	45.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	47.7	22.8	30.6	18.8	15.2	0.0	11.5	45.3
LOS	C	D	C	C	B	B	A	B	D
Approach Delay		41.8		28.5		15.8			45.1
Approach LOS		D		C		B			D

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 91.1	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 37.0	Intersection LOS: D
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Beasley Drive & Center Avenue (SR 48)

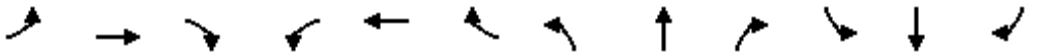




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	391	40	108	96	241	8	4	734
v/c Ratio	0.34	0.83	0.18	0.31	0.45	0.25	0.01	0.01	0.92
Control Delay	24.7	47.7	22.8	30.6	18.8	15.2	0.0	11.5	45.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	47.7	22.8	30.6	18.8	15.2	0.0	11.5	45.3
Queue Length 50th (ft)	56	216	16	49	28	79	0	1	443
Queue Length 95th (ft)	75	#396	28	84	46	133	0	4	#633
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	402	490	288	531	270	961	1124	672	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.80	0.14	0.20	0.36	0.25	0.01	0.01	0.92

Intersection Summary

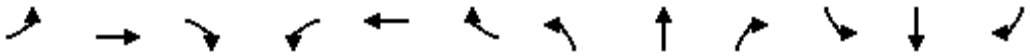
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	204	149	26	66	13	73	183	6	2	520	63
Future Volume (vph)	92	204	149	26	66	13	73	183	6	2	520	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1747		1770	1801		1770	1863	1583	1770	1825	
Flt Permitted	0.58	1.00		0.24	1.00		0.09	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	1073	1747		453	1801		168	1863	1583	1134	1825	
Peak-hour factor, PHF	0.68	0.89	0.92	0.65	0.79	0.54	0.76	0.76	0.75	0.50	0.82	0.63
Adj. Flow (vph)	135	229	162	40	84	24	96	241	8	4	634	100
RTOR Reduction (vph)	0	24	0	0	10	0	0	0	4	0	5	0
Lane Group Flow (vph)	135	367	0	40	98	0	96	241	4	4	729	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	31.0	23.5		23.4	19.7		52.5	47.0	50.7	43.7	42.6	
Effective Green, g (s)	31.0	23.5		23.4	19.7		52.5	47.0	50.7	43.7	42.6	
Actuated g/C Ratio	0.32	0.24		0.24	0.20		0.54	0.48	0.52	0.45	0.44	
Clearance Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.5	1.5	1.5	3.5	
Lane Grp Cap (vph)	395	421		159	364		181	899	824	516	799	
v/s Ratio Prot	c0.03	c0.21		0.01	0.05		c0.03	0.13	0.00	0.00	c0.40	
v/s Ratio Perm	0.08			0.05			0.26		0.00	0.00		
v/c Ratio	0.34	0.87		0.25	0.27		0.53	0.27	0.01	0.01	0.91	
Uniform Delay, d1	24.5	35.5		29.3	32.7		18.6	14.9	11.2	14.8	25.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	17.7		0.3	0.4		1.5	0.2	0.0	0.0	14.9	
Delay (s)	24.7	53.2		29.6	33.1		20.1	15.1	11.2	14.8	40.5	
Level of Service	C	D		C	C		C	B	B	B	D	
Approach Delay (s)		45.9			32.2			16.4			40.3	
Approach LOS		D			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	97.3	Sum of lost time (s)	22.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	204	149	26	66	13	73	183	6	2	520	63
Future Volume (veh/h)	92	204	149	26	66	13	73	183	6	2	520	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	229	162	40	84	24	96	241	8	4	634	100
Peak Hour Factor	0.68	0.89	0.92	0.65	0.79	0.54	0.76	0.76	0.75	0.50	0.82	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	249	176	177	292	83	202	879	811	532	658	104
Arrive On Green	0.08	0.24	0.24	0.04	0.21	0.21	0.06	0.47	0.47	0.01	0.42	0.42
Sat Flow, veh/h	1781	1019	721	1781	1399	400	1781	1870	1585	1781	1577	249
Grp Volume(v), veh/h	135	0	391	40	0	108	96	241	8	4	0	734
Grp Sat Flow(s),veh/h/ln	1781	0	1741	1781	0	1798	1781	1870	1585	1781	0	1826
Q Serve(g_s), s	5.4	0.0	20.3	1.6	0.0	4.7	2.7	7.3	0.2	0.1	0.0	36.3
Cycle Q Clear(g_c), s	5.4	0.0	20.3	1.6	0.0	4.7	2.7	7.3	0.2	0.1	0.0	36.3
Prop In Lane	1.00		0.41	1.00		0.22	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	419	0	426	177	0	376	202	879	811	532	0	762
V/C Ratio(X)	0.32	0.00	0.92	0.23	0.00	0.29	0.48	0.27	0.01	0.01	0.00	0.96
Avail Cap(c_a), veh/h	435	0	450	295	0	504	288	879	811	713	0	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	34.1	28.3	0.0	30.9	21.1	14.9	11.1	15.5	0.0	26.3
Incr Delay (d2), s/veh	0.2	0.0	23.1	0.2	0.0	0.4	0.6	0.2	0.0	0.0	0.0	23.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	10.8	0.7	0.0	2.1	1.0	2.8	0.1	0.0	0.0	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	57.3	28.5	0.0	31.3	21.7	15.1	11.1	15.5	0.0	50.1
LnGrp LOS	C	A	E	C	A	C	C	B	B	B	A	D
Approach Vol, veh/h		526			148			345			738	
Approach Delay, s/veh		49.2			30.5			16.9			49.9	
Approach LOS		D			C			B			D	

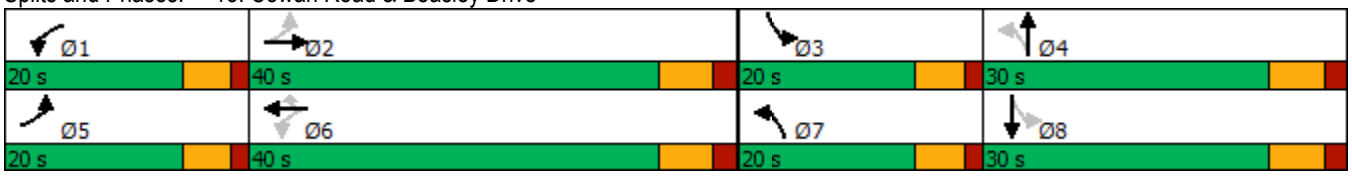
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	25.4	10.5	44.7	8.9	28.7	5.6	49.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	8.0	26.0	10.0	39.0	10.0	24.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	7.4	6.7	4.7	38.3	3.6	22.3	2.1	9.3
Green Ext Time (p_c), s	0.0	0.5	0.0	0.4	0.0	0.4	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	632	11	216	43	15	43	62	17
Future Volume (vph)	42	632	11	216	43	15	43	62	17
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6		7	4	3	8
Permitted Phases	2		6		6	4		8	
Detector Phase	5	2	1	6	6	7	4	3	8
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.5	16.5	10.5	16.5	16.5	10.5	12.5	10.5	12.5
Total Split (s)	20.0	40.0	20.0	40.0	40.0	20.0	30.0	20.0	30.0
Total Split (%)	18.2%	36.4%	18.2%	36.4%	36.4%	18.2%	27.3%	18.2%	27.3%
Yellow Time (s)	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.5	5.5	6.5	6.5	5.5	6.5	5.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	28.1	27.2	25.8	24.3	24.3	12.4	7.9	16.8	13.8
Actuated g/C Ratio	0.51	0.49	0.46	0.44	0.44	0.22	0.14	0.30	0.25
v/c Ratio	0.09	0.45	0.05	0.17	0.06	0.07	0.31	0.23	0.13
Control Delay	9.6	16.0	9.5	16.5	0.2	16.9	22.5	17.2	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	16.0	9.5	16.5	0.2	16.9	22.5	17.2	14.8
LOS	A	B	A	B	A	B	C	B	B
Approach Delay		15.6		13.7			21.2		16.2
Approach LOS		B		B			C		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 55.5	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 47.6%	ICU Level of Service A
Analysis Period (min) 15	

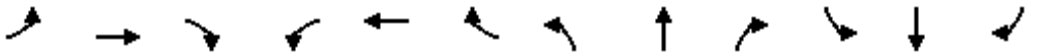
Splits and Phases: 13: Cowan Road & Beasley Drive





Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	56	784	20	267	48	24	84	89	60
v/c Ratio	0.09	0.45	0.05	0.17	0.06	0.07	0.31	0.23	0.13
Control Delay	9.6	16.0	9.5	16.5	0.2	16.9	22.5	17.2	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	16.0	9.5	16.5	0.2	16.9	22.5	17.2	14.8
Queue Length 50th (ft)	10	93	3	38	0	5	15	18	5
Queue Length 95th (ft)	24	199	9	67	0	16	65	48	30
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	755	2317	647	2329	1091	631	837	596	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.34	0.03	0.11	0.04	0.04	0.10	0.15	0.07

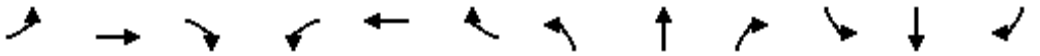
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	632	14	11	216	43	15	43	21	62	17	16
Future Volume (vph)	42	632	14	11	216	43	15	43	21	62	17	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3518		1770	3539	1583	1770	1743		1770	1695	
Flt Permitted	0.55	1.00		0.30	1.00	1.00	0.72	1.00		0.50	1.00	
Satd. Flow (perm)	1019	3518		563	3539	1583	1337	1743		928	1695	
Peak-hour factor, PHF	0.75	0.84	0.44	0.55	0.81	0.90	0.63	0.90	0.58	0.70	0.71	0.44
Adj. Flow (vph)	56	752	32	20	267	48	24	48	36	89	24	36
RTOR Reduction (vph)	0	2	0	0	0	31	0	27	0	0	29	0
Lane Group Flow (vph)	56	782	0	20	267	17	24	57	0	89	31	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	28.2	24.9		24.8	23.2	23.2	10.1	8.3		16.9	11.7	
Effective Green, g (s)	28.2	24.9		24.8	23.2	23.2	10.1	8.3		16.9	11.7	
Actuated g/C Ratio	0.44	0.39		0.39	0.36	0.36	0.16	0.13		0.26	0.18	
Clearance Time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	487	1368		248	1282	573	223	226		313	309	
v/s Ratio Prot	c0.01	c0.22		0.00	0.08		0.00	0.03		c0.02	0.02	
v/s Ratio Perm	0.04			0.03		0.01	0.01			c0.05		
v/c Ratio	0.11	0.57		0.08	0.21	0.03	0.11	0.25		0.28	0.10	
Uniform Delay, d1	10.4	15.4		12.2	14.1	13.1	23.0	25.1		18.3	21.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.1	0.1	0.0	0.1	0.4		0.2	0.1	
Delay (s)	10.4	15.9		12.3	14.1	13.2	23.1	25.5		18.5	21.9	
Level of Service	B	B		B	B	B	C	C		B	C	
Approach Delay (s)		15.6			13.9			25.0			19.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	632	14	11	216	43	15	43	21	62	17	16
Future Volume (veh/h)	42	632	14	11	216	43	15	43	21	62	17	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	752	32	20	267	48	24	48	36	89	24	36
Peak Hour Factor	0.75	0.84	0.44	0.55	0.81	0.90	0.63	0.90	0.58	0.70	0.71	0.44
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	485	1103	47	276	1023	456	340	107	81	353	102	153
Arrive On Green	0.05	0.32	0.32	0.02	0.29	0.29	0.03	0.11	0.11	0.07	0.15	0.15
Sat Flow, veh/h	1781	3473	148	1781	3554	1585	1781	992	744	1781	675	1013
Grp Volume(v), veh/h	56	385	399	20	267	48	24	0	84	89	0	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1585	1781	0	1736	1781	0	1688
Q Serve(g_s), s	1.1	9.4	9.5	0.4	2.9	1.1	0.6	0.0	2.3	2.2	0.0	1.6
Cycle Q Clear(g_c), s	1.1	9.4	9.5	0.4	2.9	1.1	0.6	0.0	2.3	2.2	0.0	1.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.43	1.00		0.60
Lane Grp Cap(c), veh/h	485	564	585	276	1023	456	340	0	188	353	0	254
V/C Ratio(X)	0.12	0.68	0.68	0.07	0.26	0.11	0.07	0.00	0.45	0.25	0.00	0.24
Avail Cap(c_a), veh/h	904	1188	1233	748	2377	1060	805	0	815	742	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	14.9	14.9	12.6	13.7	13.1	18.9	0.0	20.9	17.8	0.0	18.7
Incr Delay (d2), s/veh	0.0	1.5	1.4	0.0	0.1	0.1	0.0	0.0	1.2	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.1	3.3	0.1	1.0	0.4	0.2	0.0	0.9	0.8	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.3	16.3	16.3	12.7	13.9	13.2	19.0	0.0	22.2	18.0	0.0	19.1
LnGrp LOS	B	B	B	B	B	B	B	A	C	B	A	B
Approach Vol, veh/h		840			335			108			149	
Approach Delay, s/veh		16.0			13.7			21.5			18.4	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	22.4	9.1	11.9	8.2	20.9	6.9	14.1
Change Period (Y+Rc), s	5.5	6.5	5.5	6.5	5.5	6.5	5.5	6.5
Max Green Setting (Gmax), s	14.5	33.5	14.5	23.5	14.5	33.5	14.5	23.5
Max Q Clear Time (g_c+I1), s	2.4	11.5	4.2	4.3	3.1	4.9	2.6	3.6
Green Ext Time (p_c), s	0.0	4.5	0.1	0.3	0.0	1.9	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Lane Group	SEL	SET	NWT	SWL	SWR
Lane Configurations					
Traffic Volume (vph)	32	702	250	23	36
Future Volume (vph)	32	702	250	23	36
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	5	2	6	4	
Permitted Phases	2				4
Detector Phase	5	2	6	4	4
Switch Phase					
Minimum Initial (s)	7.0	20.0	20.0	7.0	7.0
Minimum Split (s)	12.5	25.5	25.5	13.0	13.0
Total Split (s)	13.0	42.0	30.0	15.0	15.0
Total Split (%)	22.4%	72.4%	51.7%	25.9%	25.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None
Act Effct Green (s)	28.6	32.1	26.0	8.0	8.0
Actuated g/C Ratio	0.70	0.78	0.63	0.19	0.19
v/c Ratio	0.07	0.30	0.16	0.09	0.15
Control Delay	3.7	3.7	8.7	20.0	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	3.7	8.7	20.0	8.6
LOS	A	A	A	B	A
Approach Delay		3.7	8.7	12.9	
Approach LOS		A	A	B	

Intersection Summary	
Cycle Length: 58	
Actuated Cycle Length: 41.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.30	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 42.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Beasley Drive & Thornton Drive





Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	56	816	351	32	52
v/c Ratio	0.07	0.30	0.16	0.09	0.15
Control Delay	3.7	3.7	8.7	20.0	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	3.7	8.7	20.0	8.6
Queue Length 50th (ft)	5	48	35	9	0
Queue Length 95th (ft)	9	71	48	22	14
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	759	2962	2362	435	428
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.07	0.28	0.15	0.07	0.12

Intersection Summary

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	32	702	250	8	23	36
Future Volume (vph)	32	702	250	8	23	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3526		1770	1583
Flt Permitted	0.44	1.00	1.00		0.95	1.00
Satd. Flow (perm)	810	3539	3526		1770	1583
Peak-hour factor, PHF	0.57	0.86	0.73	0.92	0.72	0.69
Adj. Flow (vph)	56	816	342	9	32	52
RTOR Reduction (vph)	0	0	3	0	0	48
Lane Group Flow (vph)	56	816	348	0	32	4
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	31.4	31.4	22.5		3.5	3.5
Effective Green, g (s)	31.4	31.4	22.5		3.5	3.5
Actuated g/C Ratio	0.68	0.68	0.48		0.08	0.08
Clearance Time (s)	5.5	5.5	5.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	618	2394	1709		133	119
v/s Ratio Prot	0.01	c0.23	0.10		c0.02	
v/s Ratio Perm	0.05					0.00
v/c Ratio	0.09	0.34	0.20		0.24	0.03
Uniform Delay, d1	2.8	3.2	6.8		20.2	19.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.1	0.1		0.9	0.1
Delay (s)	2.9	3.2	6.9		21.1	20.0
Level of Service	A	A	A		C	B
Approach Delay (s)		3.2	6.9		20.4	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	32	702	250	8	23	36
Future Volume (veh/h)	32	702	250	8	23	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	816	342	9	32	52
Peak Hour Factor	0.57	0.86	0.73	0.92	0.72	0.69
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	695	2288	1569	41	180	160
Arrive On Green	0.08	0.64	0.44	0.44	0.10	0.10
Sat Flow, veh/h	1781	3647	3631	93	1781	1585
Grp Volume(v), veh/h	56	816	171	180	32	52
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1854	1781	1585
Q Serve(g_s), s	0.6	4.8	2.7	2.7	0.7	1.4
Cycle Q Clear(g_c), s	0.6	4.8	2.7	2.7	0.7	1.4
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	695	2288	788	822	180	160
V/C Ratio(X)	0.08	0.36	0.22	0.22	0.18	0.32
Avail Cap(c_a), veh/h	852	2877	966	1007	356	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.6	3.7	7.7	7.7	18.5	18.8
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.1	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.8	0.8	0.3	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	3.8	7.9	7.9	19.0	20.0
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		872	351		84	
Approach Delay, s/veh		3.9	7.9		19.6	
Approach LOS		A	A		B	

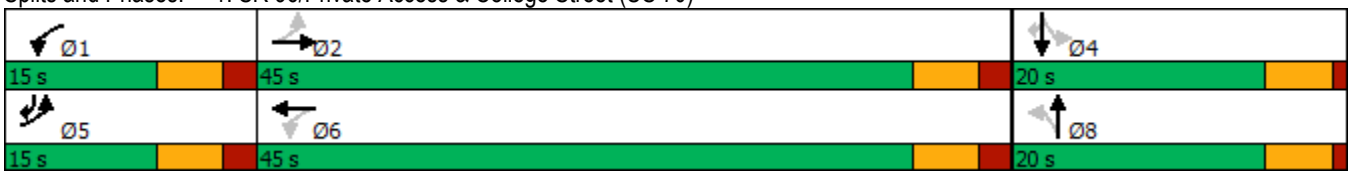
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.5		10.6	9.0	25.5
Change Period (Y+Rc), s		5.5		6.0	5.5	5.5
Max Green Setting (Gmax), s		36.5		9.0	7.5	24.5
Max Q Clear Time (g_c+I1), s		6.8		3.4	2.6	4.7
Green Ext Time (p_c), s		6.5		0.1	0.0	1.9

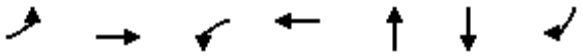
Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	10	273	16	231	186	3	3	9
Future Volume (vph)	10	273	16	231	186	3	3	9
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA	pm+ov
Protected Phases	5	2	1	6		8	4	5
Permitted Phases	2		6		8			4
Detector Phase	5	2	1	6	8	8	4	5
Switch Phase								
Minimum Initial (s)	6.0	25.0	6.0	25.0	8.0	8.0	8.0	6.0
Minimum Split (s)	12.0	31.0	12.0	31.0	13.0	13.0	13.0	12.0
Total Split (s)	15.0	45.0	15.0	45.0	20.0	20.0	20.0	15.0
Total Split (%)	18.8%	56.3%	18.8%	56.3%	25.0%	25.0%	25.0%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	28.9	27.9	27.9	25.8		14.8	14.8	25.9
Actuated g/C Ratio	0.52	0.50	0.50	0.46		0.26	0.26	0.46
v/c Ratio	0.03	0.30	0.04	0.15		0.67	0.02	0.03
Control Delay	5.8	5.8	6.0	10.3		31.8	18.7	2.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	5.8	5.8	6.0	10.3		31.8	18.7	2.2
LOS	A	A	A	B		C	B	A
Approach Delay		5.8		10.0		31.8	6.9	
Approach LOS		A		A		C	A	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 55.9	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

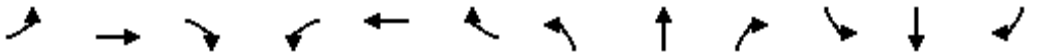
Splits and Phases: 1: SR 96/Private Access & College Street (US 70)





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	16	538	20	241	243	8	20
v/c Ratio	0.03	0.30	0.04	0.15	0.67	0.02	0.03
Control Delay	5.8	5.8	6.0	10.3	31.8	18.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	5.8	6.0	10.3	31.8	18.7	2.2
Queue Length 50th (ft)	2	25	3	18	60	2	0
Queue Length 95th (ft)	6	65	8	51	57	5	0
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	680	2414	587	2503	375	506	840
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.22	0.03	0.10	0.65	0.02	0.02

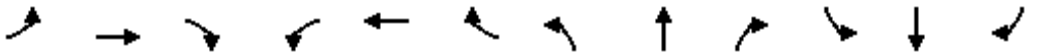
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	273	200	16	231	0	186	3	10	0	3	9
Future Volume (vph)	10	273	200	16	231	0	186	3	10	0	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.94		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			1.00	1.00
Satd. Flow (prot)	1770	3325		1770	3539			1767			1863	1583
Flt Permitted	0.58	1.00		0.45	1.00			0.74			1.00	1.00
Satd. Flow (perm)	1077	3325		841	3539			1369			1863	1583
Peak-hour factor, PHF	0.63	0.85	0.92	0.80	0.96	0.92	0.85	0.38	0.63	0.92	0.38	0.45
Adj. Flow (vph)	16	321	217	20	241	0	219	8	16	0	8	20
RTOR Reduction (vph)	0	117	0	0	0	0	0	3	0	0	0	14
Lane Group Flow (vph)	16	421	0	20	241	0	0	240	0	0	8	6
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA			NA	pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	30.0	27.9		27.8	26.8			14.8			14.8	16.9
Effective Green, g (s)	30.0	27.9		27.8	26.8			14.8			14.8	16.9
Actuated g/C Ratio	0.49	0.46		0.46	0.44			0.24			0.24	0.28
Clearance Time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Vehicle Extension (s)	2.5	8.0		2.5	8.0			3.0			3.0	2.5
Lane Grp Cap (vph)	556	1528		400	1562			333			454	440
v/s Ratio Prot	c0.00	c0.13		0.00	0.07						0.00	0.00
v/s Ratio Perm	0.01			0.02				c0.18				0.00
v/c Ratio	0.03	0.28		0.05	0.15			0.72			0.02	0.01
Uniform Delay, d1	7.8	10.1		9.0	10.2			21.1			17.4	15.9
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	0.4		0.0	0.2			7.5			0.0	0.0
Delay (s)	7.9	10.6		9.1	10.4			28.5			17.4	15.9
Level of Service	A	B		A	B			C			B	B
Approach Delay (s)		10.5			10.3			28.5			16.3	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	273	200	16	231	0	186	3	10	0	3	9
Future Volume (veh/h)	10	273	200	16	231	0	186	3	10	0	3	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	321	0	20	241	0	219	8	0	0	8	20
Peak Hour Factor	0.63	0.85	0.92	0.80	0.96	0.92	0.85	0.38	0.63	0.92	0.38	0.45
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	659	1633		613	1651	0	394	10		0	373	353
Arrive On Green	0.02	0.46	0.00	0.03	0.46	0.00	0.20	0.20	0.00	0.00	0.20	0.20
Sat Flow, veh/h	1781	3647	0	1781	3647	0	1323	48	0	0	1870	1585
Grp Volume(v), veh/h	16	321	0	20	241	0	227	0	0	0	8	20
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1371	0	0	0	1870	1585
Q Serve(g_s), s	0.3	2.9	0.0	0.3	2.1	0.0	8.5	0.0	0.0	0.0	0.2	0.5
Cycle Q Clear(g_c), s	0.3	2.9	0.0	0.3	2.1	0.0	8.7	0.0	0.0	0.0	0.2	0.5
Prop In Lane	1.00		0.00	1.00		0.00	0.96		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	659	1633		613	1651	0	403	0		0	373	353
V/C Ratio(X)	0.02	0.20		0.03	0.15	0.00	0.56	0.00		0.00	0.02	0.06
Avail Cap(c_a), veh/h	912	2547		857	2547	0	510	0		0	516	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	8.7	0.0	7.3	8.4	0.0	21.0	0.0	0.0	0.0	17.5	16.6
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9	0.0	0.1	0.6	0.0	2.3	0.0	0.0	0.0	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	9.0	0.0	7.3	8.6	0.0	22.2	0.0	0.0	0.0	17.5	16.7
LnGrp LOS	A	A		A	A	A	C	A		A	B	B
Approach Vol, veh/h		337	A		261			227	A		28	
Approach Delay, s/veh		8.9			8.5			22.2			16.9	
Approach LOS		A			A			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	31.0		15.8	7.3	31.3		15.8				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	9.0	39.0		15.0	9.0	39.0		15.0				
Max Q Clear Time (g_c+I1), s	2.3	4.9		2.5	2.3	4.1		10.7				
Green Ext Time (p_c), s	0.0	7.4		0.0	0.0	5.5		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		12.6
HCM 6th LOS		B

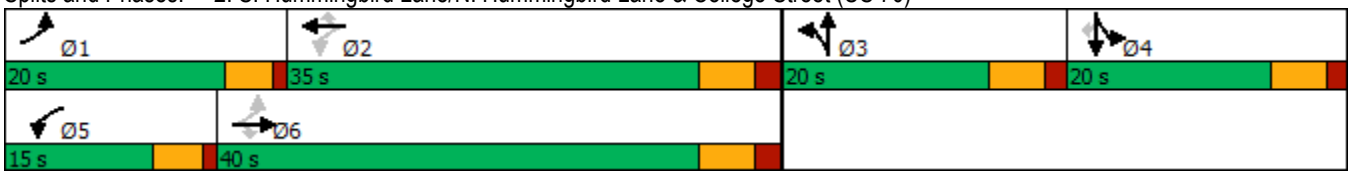
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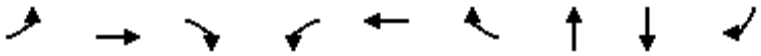
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	36	551	50	36	459	21	16	19	40
Future Volume (vph)	36	551	50	36	459	21	16	19	40
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	NA	Perm
Protected Phases	1	6		5	2		3	4	
Permitted Phases	6		6	2		2			4
Detector Phase	1	6	6	5	2	2	3	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	10.5	11.5	11.5
Total Split (s)	20.0	40.0	40.0	15.0	35.0	35.0	20.0	20.0	20.0
Total Split (%)	21.1%	42.1%	42.1%	15.8%	36.8%	36.8%	21.1%	21.1%	21.1%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None
Act Effct Green (s)	40.3	35.4	35.4	40.4	35.5	35.5	9.9	8.4	8.4
Actuated g/C Ratio	0.55	0.48	0.48	0.55	0.48	0.48	0.13	0.11	0.11
v/c Ratio	0.10	0.37	0.07	0.10	0.29	0.04	0.62	0.31	0.15
Control Delay	9.5	16.1	0.2	9.6	15.4	0.1	38.1	38.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	16.1	0.2	9.6	15.4	0.1	38.1	38.2	0.8
LOS	A	B	A	A	B	A	D	D	A
Approach Delay		14.4			14.1		38.1	21.4	
Approach LOS		B			B		D	C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 73.8	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

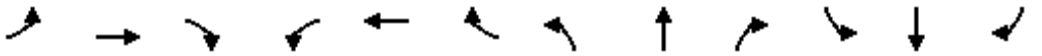
Splits and Phases: 2: S. Hummingbird Lane/N. Hummingbird Lane & College Street (US 70)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	52	626	56	48	499	32	160	64	52
v/c Ratio	0.10	0.37	0.07	0.10	0.29	0.04	0.62	0.31	0.15
Control Delay	9.5	16.1	0.2	9.6	15.4	0.1	38.1	38.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	16.1	0.2	9.6	15.4	0.1	38.1	38.2	0.8
Queue Length 50th (ft)	11	110	0	10	84	0	62	30	0
Queue Length 95th (ft)	23	178	0	24	144	0	87	45	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	693	1699	835	561	1702	862	376	372	484
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.37	0.07	0.09	0.29	0.04	0.43	0.17	0.11

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	551	50	36	459	21	51	16	43	20	19	40
Future Volume (vph)	36	551	50	36	459	21	51	16	43	20	19	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1723			1817	1583
Flt Permitted	0.46	1.00	1.00	0.38	1.00	1.00		0.98			0.98	1.00
Satd. Flow (perm)	850	3539	1583	699	3539	1583		1723			1817	1583
Peak-hour factor, PHF	0.69	0.88	0.89	0.75	0.92	0.66	0.71	0.67	0.67	0.63	0.59	0.77
Adj. Flow (vph)	52	626	56	48	499	32	72	24	64	32	32	52
RTOR Reduction (vph)	0	0	30	0	0	17	0	26	0	0	0	48
Lane Group Flow (vph)	52	626	26	48	499	15	0	134	0	0	64	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	38.7	35.4	35.4	38.9	35.5	35.5		9.9			6.6	6.6
Effective Green, g (s)	38.7	35.4	35.4	38.9	35.5	35.5		9.9			6.6	6.6
Actuated g/C Ratio	0.50	0.46	0.46	0.51	0.46	0.46		0.13			0.09	0.09
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0			3.0	3.0
Lane Grp Cap (vph)	467	1631	729	401	1635	731		222			156	136
v/s Ratio Prot	0.00	c0.18		c0.01	0.14			c0.08			c0.04	
v/s Ratio Perm	0.05		0.02	0.06		0.01						0.00
v/c Ratio	0.11	0.38	0.04	0.12	0.31	0.02		0.60			0.41	0.03
Uniform Delay, d1	9.7	13.6	11.3	9.7	12.9	11.2		31.6			33.3	32.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	0.0	0.7	0.1	0.0	0.5	0.1		3.1			1.8	0.1
Delay (s)	9.8	14.2	11.4	9.7	13.4	11.3		34.7			35.0	32.3
Level of Service	A	B	B	A	B	B		C			D	C
Approach Delay (s)		13.7			13.0			34.7			33.8	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	21.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

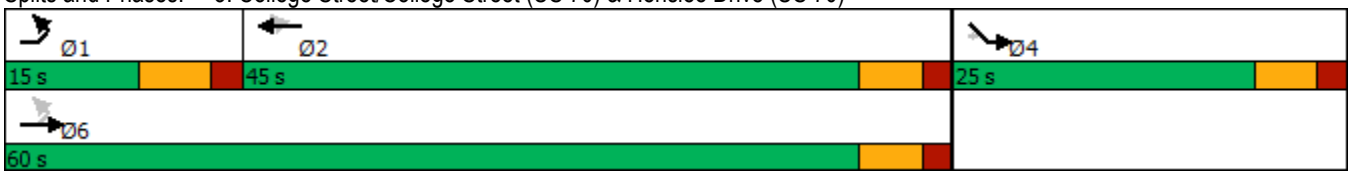
c Critical Lane Group

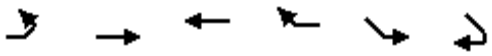
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	16	340	349	279	339	17
Future Volume (vph)	16	340	349	279	339	17
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	11.5	26.0	26.0	26.0	14.0	14.0
Total Split (s)	15.0	60.0	45.0	45.0	25.0	25.0
Total Split (%)	17.6%	70.6%	52.9%	52.9%	29.4%	29.4%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	24.7	25.2	21.0	21.0	11.5	11.5
Actuated g/C Ratio	0.50	0.51	0.43	0.43	0.23	0.23
v/c Ratio	0.07	0.20	0.25	0.38	0.47	0.06
Control Delay	6.7	6.8	11.5	3.6	19.4	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	6.8	11.5	3.6	19.4	9.1
LOS	A	A	B	A	B	A
Approach Delay		6.8	7.8		18.8	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 49.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 36.3%	ICU Level of Service A
Analysis Period (min) 15	

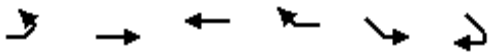
Splits and Phases: 3: College Street/College Street (US 70) & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	36	370	379	332	381	24
v/c Ratio	0.07	0.20	0.25	0.38	0.47	0.06
Control Delay	6.7	6.8	11.5	3.6	19.4	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	6.8	11.5	3.6	19.4	9.1
Queue Length 50th (ft)	5	26	27	0	39	0
Queue Length 95th (ft)	8	51	83	36	97	11
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	558	3399	2903	1358	1372	647
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.11	0.13	0.24	0.28	0.04

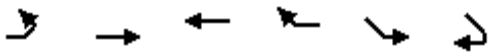
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	16	340	349	279	339	17
Future Volume (vph)	16	340	349	279	339	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.40	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	750	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.44	0.92	0.92	0.84	0.89	0.71
Adj. Flow (vph)	36	370	379	332	381	24
RTOR Reduction (vph)	0	0	0	200	0	19
Lane Group Flow (vph)	36	370	379	132	381	5
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Actuated Green, G (s)	29.5	29.5	21.0	21.0	11.5	11.5
Effective Green, g (s)	29.5	29.5	21.0	21.0	11.5	11.5
Actuated g/C Ratio	0.56	0.56	0.40	0.40	0.22	0.22
Clearance Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	4.5	4.5	4.5	3.5	3.5
Lane Grp Cap (vph)	455	1969	1402	627	744	343
v/s Ratio Prot	0.00	c0.10	c0.11		c0.11	
v/s Ratio Perm	0.04			0.08		0.00
v/c Ratio	0.08	0.19	0.27	0.21	0.51	0.02
Uniform Delay, d1	5.7	5.8	10.8	10.5	18.3	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	0.2	0.3	0.7	0.0
Delay (s)	5.8	5.9	11.0	10.8	19.0	16.3
Level of Service	A	A	B	B	B	B
Approach Delay (s)		5.9	10.9		18.8	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	16	340	349	279	339	17
Future Volume (veh/h)	16	340	349	279	339	17
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	370	379	0	381	0
Peak Hour Factor	0.44	0.92	0.92	0.84	0.89	0.71
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	560	2073	1459		589	
Arrive On Green	0.04	0.58	0.41	0.00	0.17	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	36	370	379	0	381	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.5	2.4	3.4	0.0	5.0	0.0
Cycle Q Clear(g_c), s	0.5	2.4	3.4	0.0	5.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	560	2073	1459		589	
V/C Ratio(X)	0.06	0.18	0.26		0.65	
Avail Cap(c_a), veh/h	800	3938	2844		1347	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.8	4.7	9.5	0.0	18.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	1.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.8	4.8	9.6	0.0	20.3	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		406	379	A	381	A
Approach Delay, s/veh		5.0	9.6		20.3	
Approach LOS		A	A		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.4	26.0		14.3		34.4
Change Period (Y+Rc), s	6.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	8.5	39.0		19.0		54.0
Max Q Clear Time (g_c+I1), s	2.5	5.4		7.0		4.4
Green Ext Time (p_c), s	0.0	4.0		1.3		4.3

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NEL	NET	SWL	SWT	SWR
Lane Configurations									
Traffic Volume (vph)	41	302	9	241	71	57	42	28	58
Future Volume (vph)	41	302	9	241	71	57	42	28	58
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	5	2	1	6	8	8	4	4	4
Switch Phase									
Minimum Initial (s)	5.0	8.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	13.0	9.0	13.0	13.0	13.0	13.0	13.0	13.0
Total Split (s)	15.0	48.0	12.0	45.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	18.8%	60.0%	15.0%	56.3%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0		5.0		5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	Min	None	None	None	None	None
Act Effct Green (s)	21.1	13.7	22.0	19.9		10.2		9.8	9.8
Actuated g/C Ratio	0.52	0.34	0.54	0.49		0.25		0.24	0.24
v/c Ratio	0.11	0.39	0.02	0.20		0.48		0.26	0.18
Control Delay	5.6	10.2	5.4	9.5		18.9		16.3	5.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	5.6	10.2	5.4	9.5		18.9		16.3	5.3
LOS	A	B	A	A		B		B	A
Approach Delay		9.6		9.4		18.9		11.2	
Approach LOS		A		A		B		B	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 40.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 42.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Plaza Drive & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	72	479	12	343	180	92	79
v/c Ratio	0.11	0.39	0.02	0.20	0.48	0.26	0.18
Control Delay	5.6	10.2	5.4	9.5	18.9	16.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	10.2	5.4	9.5	18.9	16.3	5.3
Queue Length 50th (ft)	7	35	1	26	35	18	0
Queue Length 95th (ft)	14	70	6	59	81	43	15
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	838	3231	661	3144	592	580	681
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.15	0.02	0.11	0.30	0.16	0.12

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	41	302	105	9	241	50	71	57	16	42	28	58
Future Volume (vph)	41	302	105	9	241	50	71	57	16	42	28	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.96		1.00	0.97			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1770	3397		1770	3428			1782			1808	1583
Flt Permitted	0.55	1.00		0.42	1.00			0.81			0.78	1.00
Satd. Flow (perm)	1016	3397		783	3428			1469			1454	1583
Peak-hour factor, PHF	0.57	0.86	0.82	0.75	0.89	0.69	0.85	0.84	0.57	0.75	0.78	0.73
Adj. Flow (vph)	72	351	128	12	271	72	84	68	28	56	36	79
RTOR Reduction (vph)	0	63	0	0	34	0	0	8	0	0	0	65
Lane Group Flow (vph)	72	416	0	12	309	0	0	172	0	0	92	14
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.4	16.0		23.8	18.2			7.9			7.9	7.9
Effective Green, g (s)	19.4	16.0		23.8	18.2			7.9			7.9	7.9
Actuated g/C Ratio	0.45	0.37		0.55	0.42			0.18			0.18	0.18
Clearance Time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	2.5	5.0		2.5	5.0			2.5			2.5	2.5
Lane Grp Cap (vph)	512	1249		555	1434			266			264	287
v/s Ratio Prot	c0.01	c0.12		c0.00	0.09							
v/s Ratio Perm	0.05			0.01				c0.12			0.06	0.01
v/c Ratio	0.14	0.33		0.02	0.22			0.65			0.35	0.05
Uniform Delay, d1	7.0	9.9		4.5	8.1			16.5			15.6	14.7
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	0.3		0.0	0.2			4.7			0.6	0.1
Delay (s)	7.1	10.2		4.6	8.2			21.2			16.1	14.8
Level of Service	A	B		A	A			C			B	B
Approach Delay (s)		9.8			8.1			21.2			15.5	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	41	302	105	9	241	50	71	57	16	42	28	58
Future Volume (veh/h)	41	302	105	9	241	50	71	57	16	42	28	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	351	128	12	271	72	84	68	28	56	36	79
Peak Hour Factor	0.57	0.86	0.82	0.75	0.89	0.69	0.85	0.84	0.57	0.75	0.78	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	640	828	297	616	1071	279	235	123	40	303	158	287
Arrive On Green	0.07	0.32	0.32	0.13	0.38	0.38	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	2562	920	1781	2789	727	536	679	224	839	873	1585
Grp Volume(v), veh/h	72	242	237	12	171	172	180	0	0	92	0	79
Grp Sat Flow(s),veh/h/ln	1781	1777	1705	1781	1777	1739	1439	0	0	1711	0	1585
Q Serve(g_s), s	1.0	4.1	4.2	0.1	2.5	2.6	3.0	0.0	0.0	0.0	0.0	1.6
Cycle Q Clear(g_c), s	1.0	4.1	4.2	0.1	2.5	2.6	4.6	0.0	0.0	1.6	0.0	1.6
Prop In Lane	1.00		0.54	1.00		0.42	0.47		0.16	0.61		1.00
Lane Grp Cap(c), veh/h	640	574	551	616	682	668	398	0	0	461	0	287
V/C Ratio(X)	0.11	0.42	0.43	0.02	0.25	0.26	0.45	0.00	0.00	0.20	0.00	0.28
Avail Cap(c_a), veh/h	1028	1995	1914	756	1856	1817	715	0	0	772	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	10.2	10.2	5.8	8.0	8.1	14.8	0.0	0.0	13.5	0.0	13.5
Incr Delay (d2), s/veh	0.1	1.0	1.1	0.0	0.4	0.4	0.6	0.0	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	1.3	0.0	0.7	0.7	1.3	0.0	0.0	0.6	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	11.2	11.3	5.9	8.5	8.5	15.4	0.0	0.0	13.7	0.0	13.9
LnGrp LOS	A	B	B	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		551			355			180			171	
Approach Delay, s/veh		10.8			8.4			15.4			13.8	
Approach LOS		B			A			B			B	

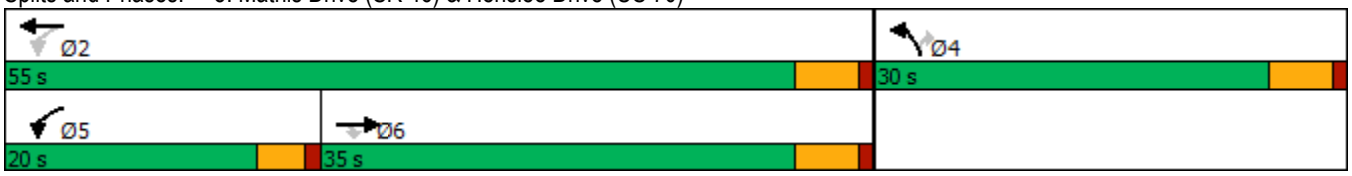
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	17.4		11.9	6.7	19.7		11.9				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	43.0		15.0	11.0	40.0		15.0				
Max Q Clear Time (g_c+I1), s	2.1	6.2		3.6	3.0	4.6		6.6				
Green Ext Time (p_c), s	0.0	6.2		0.4	0.1	4.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		11.2	
HCM 6th LOS		B	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	296	376	133	264	379	132
Future Volume (vph)	296	376	133	264	379	132
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	13.0	13.0	10.0	13.0	11.0	11.0
Total Split (s)	35.0	35.0	20.0	55.0	30.0	30.0
Total Split (%)	41.2%	41.2%	23.5%	64.7%	35.3%	35.3%
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Min	Min	None	Min	None	None
Act Effct Green (s)	19.8	19.8	31.9	30.8	14.2	14.2
Actuated g/C Ratio	0.35	0.35	0.57	0.55	0.25	0.25
v/c Ratio	0.26	0.50	0.25	0.16	0.48	0.29
Control Delay	15.1	4.4	6.4	6.0	22.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	4.4	6.4	6.0	22.3	8.7
LOS	B	A	A	A	C	A
Approach Delay	9.1			6.2	18.8	
Approach LOS	A			A	B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 56	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Mathis Drive (SR 46) & Henslee Drive (US 70)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	322	418	164	303	416	143
v/c Ratio	0.26	0.50	0.25	0.16	0.48	0.29
Control Delay	15.1	4.4	6.4	6.0	22.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	4.4	6.4	6.0	22.3	8.7
Queue Length 50th (ft)	40	0	21	21	61	6
Queue Length 95th (ft)	86	55	46	43	133	52
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	2089	1106	792	3039	1689	839
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.38	0.21	0.10	0.25	0.17

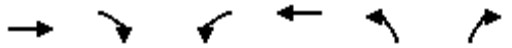
Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	296	376	133	264	379	132
Future Volume (vph)	296	376	133	264	379	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.46	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	863	3539	3433	1583
Peak-hour factor, PHF	0.92	0.90	0.81	0.87	0.91	0.92
Adj. Flow (vph)	322	418	164	303	416	143
RTOR Reduction (vph)	0	270	0	0	0	90
Lane Group Flow (vph)	322	148	164	303	416	53
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	19.8	19.8	31.8	31.8	14.2	14.2
Effective Green, g (s)	19.8	19.8	31.8	31.8	14.2	14.2
Actuated g/C Ratio	0.35	0.35	0.57	0.57	0.25	0.25
Clearance Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	6.0	6.0	2.5	6.0	4.0	4.0
Lane Grp Cap (vph)	1251	559	619	2009	870	401
v/s Ratio Prot	0.09		c0.04	0.09	c0.12	
v/s Ratio Perm		0.09	c0.11			0.03
v/c Ratio	0.26	0.26	0.26	0.15	0.48	0.13
Uniform Delay, d1	12.9	12.9	5.9	5.7	17.8	16.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.7	0.2	0.1	0.6	0.2
Delay (s)	13.2	13.6	6.1	5.8	18.3	16.4
Level of Service	B	B	A	A	B	B
Approach Delay (s)	13.4			5.9	17.8	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	296	376	133	264	379	132
Future Volume (veh/h)	296	376	133	264	379	132
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	0	164	303	416	0
Peak Hour Factor	0.92	0.90	0.81	0.87	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	921		634	1790	761	
Arrive On Green	0.26	0.00	0.13	0.50	0.22	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	322	0	164	303	416	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	2.7	0.0	2.0	1.7	3.9	0.0
Cycle Q Clear(g_c), s	2.7	0.0	2.0	1.7	3.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	921		634	1790	761	
V/C Ratio(X)	0.35		0.26	0.17	0.55	
Avail Cap(c_a), veh/h	2945		1182	4909	2387	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.9	0.0	6.4	4.9	12.5	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.2	0.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5	0.4	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	0.0	6.6	5.0	13.4	0.0
LnGrp LOS	B		A	A	B	
Approach Vol, veh/h	322	A		467	416	A
Approach Delay, s/veh	11.7			5.6	13.4	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.2		13.0	8.8	14.4
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0
Max Green Setting (Gmax), s		50.0		25.0	16.0	30.0
Max Q Clear Time (g_c+I1), s		3.7		5.9	4.0	4.7
Green Ext Time (p_c), s		5.3		2.2	0.2	4.7

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

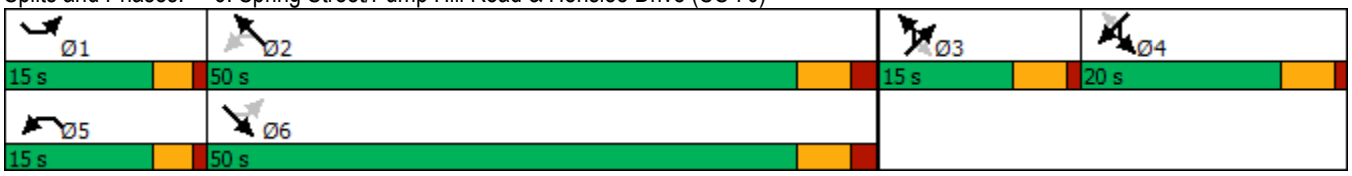
Notes

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

Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Configurations								
Traffic Volume (vph)	17	620	48	643	11	33	22	28
Future Volume (vph)	17	620	48	643	11	33	22	28
Turn Type	pm+pt	NA	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	1	6	5	2	3		4	
Permitted Phases	6		2			3		4
Detector Phase	1	6	5	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	4.0	15.0	4.0	8.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.0	21.0	10.0	14.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	50.0	15.0	50.0	15.0	15.0	20.0	20.0
Total Split (%)	15.0%	50.0%	15.0%	50.0%	15.0%	15.0%	20.0%	20.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	30.2	27.3	32.0	29.5	7.2	7.2	9.6	9.6
Actuated g/C Ratio	0.55	0.50	0.58	0.54	0.13	0.13	0.17	0.17
v/c Ratio	0.05	0.40	0.12	0.39	0.17	0.14	0.38	0.08
Control Delay	8.5	15.6	8.6	13.4	30.6	0.9	28.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	15.6	8.6	13.4	30.6	0.9	28.6	0.4
LOS	A	B	A	B	C	A	C	A
Approach Delay		15.3		13.0	15.1		22.7	
Approach LOS		B		B	B		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 55	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 46.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Spring Street/Pump Hill Road & Henslee Drive (US 70)





Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	24	702	60	735	40	44	120	32
v/c Ratio	0.05	0.40	0.12	0.39	0.17	0.14	0.38	0.08
Control Delay	8.5	15.6	8.6	13.4	30.6	0.9	28.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	15.6	8.6	13.4	30.6	0.9	28.6	0.4
Queue Length 50th (ft)	4	110	10	83	13	0	38	0
Queue Length 95th (ft)	12	191	26	194	47	0	87	0
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	639	2791	618	2789	365	425	546	573
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.25	0.10	0.26	0.11	0.10	0.22	0.06

Intersection Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	620	23	48	643	27	25	11	33	80	22	28
Future Volume (vph)	17	620	23	48	643	27	25	11	33	80	22	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1770	3518		1770	3513			1800	1583		1794	1583
Flt Permitted	0.35	1.00		0.32	1.00			0.97	1.00		0.96	1.00
Satd. Flow (perm)	657	3518		601	3513			1800	1583		1794	1583
Peak-hour factor, PHF	0.71	0.92	0.82	0.80	0.92	0.75	0.89	0.92	0.75	0.87	0.79	0.88
Adj. Flow (vph)	24	674	28	60	699	36	28	12	44	92	28	32
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	42	0	0	28
Lane Group Flow (vph)	24	699	0	60	731	0	0	40	2	0	120	4
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2					3			4
Actuated Green, G (s)	27.7	26.1		30.9	27.7			3.4	3.4		7.8	7.8
Effective Green, g (s)	27.7	26.1		30.9	27.7			3.4	3.4		7.8	7.8
Actuated g/C Ratio	0.46	0.43		0.51	0.46			0.06	0.06		0.13	0.13
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	4.0			2.0	2.0		2.5	2.5
Lane Grp Cap (vph)	330	1517		368	1608			101	88		231	204
v/s Ratio Prot	0.00	0.20		c0.01	c0.21			c0.02			c0.07	
v/s Ratio Perm	0.03			0.07					0.00			0.00
v/c Ratio	0.07	0.46		0.16	0.45			0.40	0.03		0.52	0.02
Uniform Delay, d1	9.0	12.2		7.7	11.2			27.6	27.0		24.6	23.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.1	0.3			0.9	0.0		1.5	0.0
Delay (s)	9.1	12.3		7.8	11.5			28.5	27.0		26.1	23.0
Level of Service	A	B		A	B			C	C		C	C
Approach Delay (s)		12.2			11.2			27.7			25.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	232	96	1	541	534	15
Future Volume (vph)	232	96	1	541	534	15
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	15.0	15.0	15.0
Minimum Split (s)	14.0	14.0	12.0	21.0	27.0	27.0
Total Split (s)	20.0	20.0	20.0	65.0	45.0	45.0
Total Split (%)	23.5%	23.5%	23.5%	76.5%	52.9%	52.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.2	9.2	19.3	19.3	17.7	17.7
Actuated g/C Ratio	0.22	0.22	0.47	0.47	0.43	0.43
v/c Ratio	0.33	0.24	0.01	0.35	0.38	0.03
Control Delay	16.3	6.5	5.0	7.2	9.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	6.5	5.0	7.2	9.6	4.9
LOS	B	A	A	A	A	A
Approach Delay	13.5			7.2	9.4	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 41.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 31.6%	ICU Level of Service A
Analysis Period (min) 15	

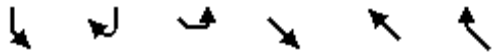
Splits and Phases: 7: Henslee Drive (US 70) & SR 48





Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	252	104	4	588	580	20
v/c Ratio	0.33	0.24	0.01	0.35	0.38	0.03
Control Delay	16.3	6.5	5.0	7.2	9.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	6.5	5.0	7.2	9.6	4.9
Queue Length 50th (ft)	21	0	1	36	36	0
Queue Length 95th (ft)	71	34	1	69	113	8
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	1222	630	699	3515	3283	1470
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.17	0.01	0.17	0.18	0.01

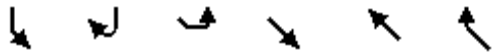
Intersection Summary



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	232	96	1	541	534	15
Future Volume (vph)	232	96	1	541	534	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.32	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	603	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.25	0.92	0.92	0.75
Adj. Flow (vph)	252	104	4	588	580	20
RTOR Reduction (vph)	0	83	0	0	0	12
Lane Group Flow (vph)	252	21	4	588	580	8
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Actuated Green, G (s)	9.2	9.2	24.5	24.5	17.7	17.7
Effective Green, g (s)	9.2	9.2	24.5	24.5	17.7	17.7
Actuated g/C Ratio	0.20	0.20	0.54	0.54	0.39	0.39
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	691	318	343	1897	1370	613
v/s Ratio Prot	c0.07		0.00	c0.17	c0.16	
v/s Ratio Perm		0.01	0.01			0.00
v/c Ratio	0.36	0.07	0.01	0.31	0.42	0.01
Uniform Delay, d1	15.7	14.8	5.3	5.9	10.3	8.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.0	0.2	0.4	0.0
Delay (s)	16.1	14.9	5.3	6.1	10.7	8.6
Level of Service	B	B	A	A	B	A
Approach Delay (s)	15.7			6.1	10.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	232	96	1	541	534	15
Future Volume (veh/h)	232	96	1	541	534	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	252	0	4	588	580	0
Peak Hour Factor	0.92	0.92	0.25	0.92	0.92	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	639		392	1852	1306	
Arrive On Green	0.18	0.00	0.01	0.52	0.37	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	252	0	4	588	580	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	2.6	0.0	0.1	3.9	5.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.1	3.9	5.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	639		392	1852	1306	
V/C Ratio(X)	0.39		0.01	0.32	0.44	
Avail Cap(c_a), veh/h	1186		991	5138	3396	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.6	0.0	7.4	5.6	9.8	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.9	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.0	0.0	7.4	5.8	10.3	0.0
LnGrp LOS	B		A	A	B	
Approach Vol, veh/h	252	A		592	580	A
Approach Delay, s/veh	15.0			5.8	10.3	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.3	21.0		13.5		27.3
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	14.0	39.0		14.0		59.0
Max Q Clear Time (g_c+I1), s	2.1	7.0		4.6		5.9
Green Ext Time (p_c), s	0.0	7.9		0.6		9.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

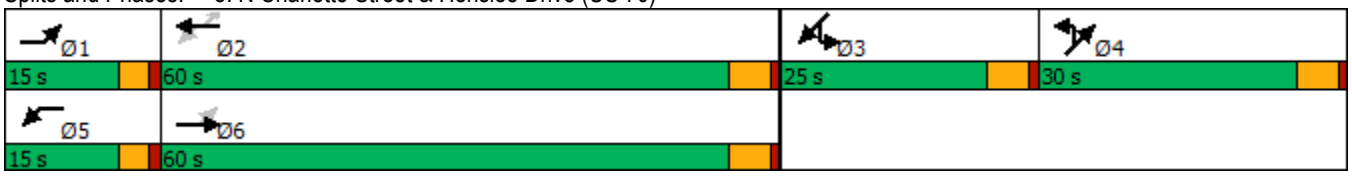
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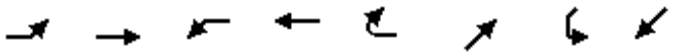
Unsignalized Delay for [NWR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	19	393	49	555	26	10	104	23
Future Volume (vph)	19	393	49	555	26	10	104	23
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Split	NA
Protected Phases	1	6	5	2		4	3	3
Permitted Phases	6		2		2			
Detector Phase	1	6	5	2	2	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	8.0	8.0	8.0
Minimum Split (s)	10.0	15.0	10.0	15.0	15.0	13.0	13.0	13.0
Total Split (s)	15.0	60.0	15.0	60.0	60.0	30.0	25.0	25.0
Total Split (%)	11.5%	46.2%	11.5%	46.2%	46.2%	23.1%	19.2%	19.2%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None
Act Effct Green (s)	26.4	22.6	28.6	25.2	25.2	10.1	11.7	11.7
Actuated g/C Ratio	0.42	0.36	0.46	0.41	0.41	0.16	0.19	0.19
v/c Ratio	0.05	0.35	0.13	0.42	0.05	0.37	0.37	0.17
Control Delay	11.2	18.5	11.5	17.0	0.1	25.8	29.8	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	18.5	11.5	17.0	0.1	25.8	29.8	18.2
LOS	B	B	B	B	A	C	C	B
Approach Delay		18.2		15.8		25.8		26.0
Approach LOS		B		B		C		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 62.2	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 43.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: N Charlotte Street & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	21	451	60	603	32	112	124	60
v/c Ratio	0.05	0.35	0.13	0.42	0.05	0.37	0.37	0.17
Control Delay	11.2	18.5	11.5	17.0	0.1	25.8	29.8	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	18.5	11.5	17.0	0.1	25.8	29.8	18.2
Queue Length 50th (ft)	4	74	12	77	0	28	41	10
Queue Length 95th (ft)	17	136	33	178	0	40	102	34
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	540	3005	561	3029	1368	757	611	616
Starvation Cap Reductn	0	0	0	60	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.15	0.11	0.20	0.02	0.15	0.20	0.10

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	19	393	17	49	555	26	28	10	45	104	23	23
Future Volume (vph)	19	393	17	49	555	26	28	10	45	104	23	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1770	3511		1770	3539	1583		1715		1770	1732	
Flt Permitted	0.39	1.00		0.43	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (perm)	729	3511		801	3539	1583		1715		1770	1732	
Peak-hour factor, PHF	0.92	0.92	0.71	0.82	0.92	0.81	0.70	0.50	0.87	0.84	0.72	0.82
Adj. Flow (vph)	21	427	24	60	603	32	40	20	52	124	32	28
RTOR Reduction (vph)	0	3	0	0	0	20	0	27	0	0	23	0
Lane Group Flow (vph)	21	448	0	60	603	12	0	85	0	124	37	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases	6			2		2						
Actuated Green, G (s)	25.2	23.4		28.8	25.2	25.2		7.6		11.7	11.7	
Effective Green, g (s)	25.2	23.4		28.8	25.2	25.2		7.6		11.7	11.7	
Actuated g/C Ratio	0.39	0.36		0.44	0.39	0.39		0.12		0.18	0.18	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0		4.0	4.0	
Lane Grp Cap (vph)	310	1258		406	1365	610		199		317	310	
v/s Ratio Prot	0.00	0.13		c0.01	c0.17			c0.05		c0.07	0.02	
v/s Ratio Perm	0.02			0.06		0.01						
v/c Ratio	0.07	0.36		0.15	0.44	0.02		0.43		0.39	0.12	
Uniform Delay, d1	12.5	15.4		10.6	14.8	12.4		26.8		23.7	22.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.4		0.1	0.5	0.0		1.5		1.1	0.2	
Delay (s)	12.5	15.8		10.7	15.3	12.4		28.3		24.7	22.7	
Level of Service	B	B		B	B	B		C		C	C	
Approach Delay (s)		15.6			14.8			28.3			24.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	483	446	52	25	6
Future Vol, veh/h	17	483	446	52	25	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	375	145	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	92	92	76	89	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	525	485	68	28	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	553	0	-	0	804	243
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	319	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1013	-	-	-	321	758
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	710	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1013	-	-	-	312	758
Mov Cap-2 Maneuver	-	-	-	-	427	-
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	710	-

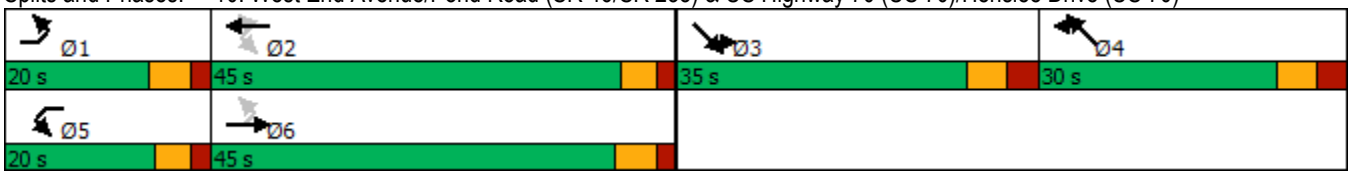
Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1013	-	-	-	427	758
HCM Lane V/C Ratio	0.028	-	-	-	0.066	0.016
HCM Control Delay (s)	8.7	-	-	-	14	9.8
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0

Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Configurations							
Traffic Volume (vph)	4	240	16	339	140	10	4
Future Volume (vph)	4	240	16	339	140	10	4
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA
Protected Phases	1	6	5	2		3	4
Permitted Phases	6		2		2		
Detector Phase	1	6	5	2	2	3	4
Switch Phase							
Minimum Initial (s)	1.0	20.0	6.0	20.0	20.0	10.0	10.0
Minimum Split (s)	12.0	26.0	11.5	25.5	25.5	17.0	33.0
Total Split (s)	20.0	45.0	20.0	45.0	45.0	35.0	30.0
Total Split (%)	15.4%	34.6%	15.4%	34.6%	34.6%	26.9%	23.1%
Yellow Time (s)	4.0	4.0	3.5	3.5	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	5.5	5.5	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None
Act Effct Green (s)	44.1	42.4	46.0	45.0	45.0	15.9	10.3
Actuated g/C Ratio	0.52	0.50	0.54	0.53	0.53	0.19	0.12
v/c Ratio	0.01	0.16	0.04	0.20	0.17	0.62	0.18
Control Delay	13.2	15.7	12.8	14.0	3.6	41.9	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	15.7	12.8	14.0	3.6	41.9	27.9
LOS	B	B	B	B	A	D	C
Approach Delay		15.6		11.1		41.9	27.9
Approach LOS		B		B		D	C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 84.7	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 44.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: West End Avenue/Pond Road (SR 46/SR 235) & US Highway 70 (US 70)/Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	8	284	24	377	156	207	40
v/c Ratio	0.01	0.16	0.04	0.20	0.17	0.62	0.18
Control Delay	13.2	15.7	12.8	14.0	3.6	41.9	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	15.7	12.8	14.0	3.6	41.9	27.9
Queue Length 50th (ft)	2	44	7	61	0	102	10
Queue Length 95th (ft)	6	95	16	124	40	129	19
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	672	1754	711	1878	913	607	494
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.16	0.03	0.20	0.17	0.34	0.08

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	4	240	14	16	339	140	161	10	6	7	4	13
Future Volume (vph)	4	240	14	16	339	140	161	10	6	7	4	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.99	
Satd. Flow (prot)	1770	3502		1770	3539	1583		1775			1711	
Flt Permitted	0.53	1.00		0.57	1.00	1.00		0.96			0.99	
Satd. Flow (perm)	984	3502		1059	3539	1583		1775			1711	
Peak-hour factor, PHF	0.50	0.91	0.70	0.67	0.90	0.90	0.88	0.63	0.75	0.58	0.50	0.65
Adj. Flow (vph)	8	264	20	24	377	156	183	16	8	12	8	20
RTOR Reduction (vph)	0	3	0	0	0	80	0	1	0	0	19	0
Lane Group Flow (vph)	8	281	0	24	377	76	0	206	0	0	21	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2		2						
Actuated Green, G (s)	44.7	43.8		47.1	45.0	45.0		15.9			5.3	
Effective Green, g (s)	44.7	43.8		47.1	45.0	45.0		15.9			5.3	
Actuated g/C Ratio	0.48	0.47		0.51	0.49	0.49		0.17			0.06	
Clearance Time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	482	1656		554	1719	769		304			97	
v/s Ratio Prot	0.00	0.08		c0.00	c0.11			c0.12			c0.01	
v/s Ratio Perm	0.01			0.02		0.05						
v/c Ratio	0.02	0.17		0.04	0.22	0.10		0.68			0.22	
Uniform Delay, d1	12.4	14.0		11.3	13.7	12.8		36.0			41.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.0	0.2		0.0	0.3	0.3		5.9			1.1	
Delay (s)	12.5	14.2		11.3	14.0	13.1		41.9			42.8	
Level of Service	B	B		B	B	B		D			D	
Approach Delay (s)		14.2			13.6			41.9			42.8	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	25.5
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

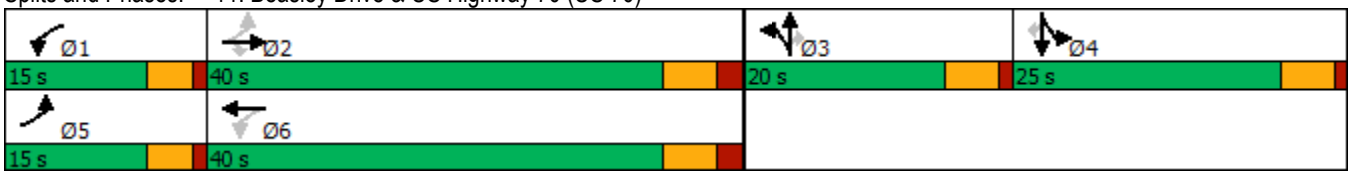
c Critical Lane Group

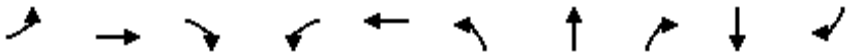
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	10	236	178	31	219	127	100	37	92	4
Future Volume (vph)	10	236	178	31	219	127	100	37	92	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	3	3		4	
Permitted Phases	2		2	6				3		4
Detector Phase	5	2	2	1	6	3	3	3	4	4
Switch Phase										
Minimum Initial (s)	4.0	3.0	3.0	4.0	3.0	6.0	6.0	6.0	10.0	10.0
Minimum Split (s)	12.5	14.0	14.0	12.5	14.0	13.0	13.0	13.0	15.0	15.0
Total Split (s)	15.0	40.0	40.0	15.0	40.0	20.0	20.0	20.0	25.0	25.0
Total Split (%)	15.0%	40.0%	40.0%	15.0%	40.0%	20.0%	20.0%	20.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	Min	Min
Act Effct Green (s)	39.5	34.6	34.6	41.7	38.9	12.3	12.3	12.3	12.7	12.7
Actuated g/C Ratio	0.48	0.42	0.42	0.51	0.47	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.03	0.17	0.27	0.06	0.16	0.55	0.56	0.12	0.46	0.02
Control Delay	11.3	17.5	4.0	11.3	13.7	42.8	42.7	0.7	39.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	17.5	4.0	11.3	13.7	42.8	42.7	0.7	39.0	0.0
LOS	B	B	A	B	B	D	D	A	D	A
Approach Delay		11.4			13.4		37.1		36.8	
Approach LOS		B			B		D		D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 82.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 35.6%	ICU Level of Service A
Analysis Period (min) 15	

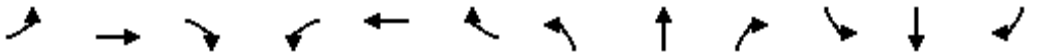
Splits and Phases: 11: Beasley Drive & US Highway 70 (US 70)





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	259	212	36	262	138	146	44	131	8
v/c Ratio	0.03	0.17	0.27	0.06	0.16	0.55	0.56	0.12	0.46	0.02
Control Delay	11.3	17.5	4.0	11.3	13.7	42.8	42.7	0.7	39.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	17.5	4.0	11.3	13.7	42.8	42.7	0.7	39.0	0.0
Queue Length 50th (ft)	4	47	0	9	35	73	77	0	67	0
Queue Length 95th (ft)	10	84	36	25	81	124	133	0	105	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	647	1490	789	625	1658	312	325	404	458	494
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.17	0.27	0.06	0.16	0.44	0.45	0.11	0.29	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	236	178	31	219	13	127	100	37	8	92	4
Future Volume (vph)	10	236	178	31	219	13	127	100	37	8	92	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3491		1681	1756	1583		1854	1583
Flt Permitted	0.59	1.00	1.00	0.55	1.00		0.95	0.99	1.00		1.00	1.00
Satd. Flow (perm)	1099	3539	1583	1028	3491		1681	1756	1583		1854	1583
Peak-hour factor, PHF	0.63	0.91	0.84	0.86	0.92	0.54	0.79	0.81	0.84	0.67	0.77	0.50
Adj. Flow (vph)	16	259	212	36	238	24	161	123	44	12	119	8
RTOR Reduction (vph)	0	0	122	0	6	0	0	0	38	0	0	7
Lane Group Flow (vph)	16	259	90	36	256	0	138	146	6	0	131	1
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6					3			4
Actuated Green, G (s)	37.5	36.3	36.3	42.7	38.9		12.4	12.4	12.4		12.7	12.7
Effective Green, g (s)	37.5	36.3	36.3	42.7	38.9		12.4	12.4	12.4		12.7	12.7
Actuated g/C Ratio	0.44	0.42	0.42	0.50	0.45		0.14	0.14	0.14		0.15	0.15
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	490	1499	670	545	1584		243	254	229		274	234
v/s Ratio Prot	0.00	c0.07		c0.00	0.07		0.08	c0.08			c0.07	
v/s Ratio Perm	0.01		0.06	0.03					0.00			0.00
v/c Ratio	0.03	0.17	0.13	0.07	0.16		0.57	0.57	0.03		0.48	0.01
Uniform Delay, d1	13.7	15.4	15.1	11.1	13.8		34.2	34.2	31.5		33.5	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.3	0.4	0.1	0.2		3.7	3.7	0.1		1.8	0.0
Delay (s)	13.7	15.6	15.5	11.1	14.0		37.8	37.9	31.5		35.3	31.1
Level of Service	B	B	B	B	B		D	D	C		D	C
Approach Delay (s)		15.5			13.7			37.0			35.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	20.5
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

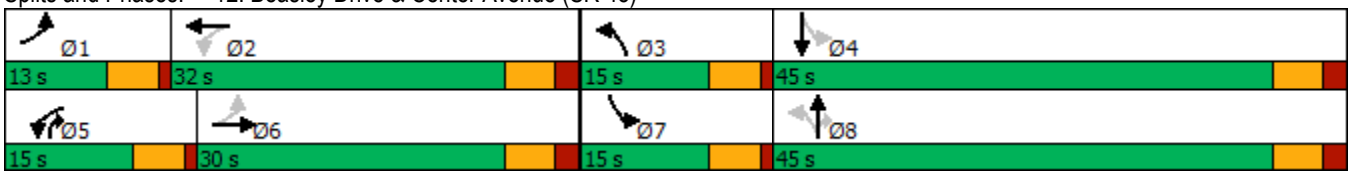
c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	39	124	16	135	130	190	13	15	222
Future Volume (vph)	39	124	16	135	130	190	13	15	222
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	1	6	5	2	3	8	5	7	4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	3	8	5	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	10.0	6.0	6.0	10.0
Minimum Split (s)	11.0	16.0	11.0	16.0	11.0	16.0	11.0	11.0	16.0
Total Split (s)	13.0	30.0	15.0	32.0	15.0	45.0	15.0	15.0	45.0
Total Split (%)	12.4%	28.6%	14.3%	30.5%	14.3%	42.9%	14.3%	14.3%	42.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	20.0	15.7	19.6	15.5	26.4	24.5	31.9	24.0	18.3
Actuated g/C Ratio	0.32	0.25	0.31	0.25	0.42	0.39	0.51	0.38	0.29
v/c Ratio	0.12	0.58	0.05	0.34	0.34	0.28	0.02	0.04	0.60
Control Delay	15.9	26.5	15.6	26.2	13.5	17.8	0.1	11.9	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	26.5	15.6	26.2	13.5	17.8	0.1	11.9	26.9
LOS	B	C	B	C	B	B	A	B	C
Approach Delay		24.8		25.0		15.3			26.0
Approach LOS		C		C		B			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 62.6	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

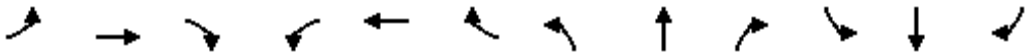
Splits and Phases: 12: Beasley Drive & Center Avenue (SR 48)





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	271	20	155	144	207	16	20	326
v/c Ratio	0.12	0.58	0.05	0.34	0.34	0.28	0.02	0.04	0.60
Control Delay	15.9	26.5	15.6	26.2	13.5	17.8	0.1	11.9	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	26.5	15.6	26.2	13.5	17.8	0.1	11.9	26.9
Queue Length 50th (ft)	13	87	5	55	34	51	0	4	117
Queue Length 95th (ft)	33	186	18	125	78	140	0	14	201
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	483	781	472	948	502	1246	957	614	1222
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.35	0.04	0.16	0.29	0.17	0.02	0.03	0.27

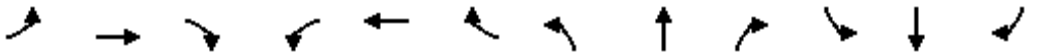
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	124	119	16	135	4	130	190	13	15	222	44
Future Volume (vph)	39	124	119	16	135	4	130	190	13	15	222	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1727		1770	1848		1770	1863	1583	1770	1822	
Flt Permitted	0.65	1.00		0.50	1.00		0.36	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	1211	1727		928	1848		665	1863	1583	1170	1822	
Peak-hour factor, PHF	0.75	0.89	0.90	0.80	0.92	0.50	0.90	0.92	0.81	0.75	0.80	0.92
Adj. Flow (vph)	52	139	132	20	147	8	144	207	16	20	278	48
RTOR Reduction (vph)	0	32	0	0	2	0	0	0	10	0	6	0
Lane Group Flow (vph)	52	239	0	20	153	0	144	207	6	20	320	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	18.8	15.7		18.4	15.5		27.9	22.2	25.1	20.1	18.3	
Effective Green, g (s)	18.8	15.7		18.4	15.5		27.9	22.2	25.1	20.1	18.3	
Actuated g/C Ratio	0.29	0.24		0.28	0.24		0.43	0.34	0.39	0.31	0.28	
Clearance Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.5	1.5	1.5	3.5	
Lane Grp Cap (vph)	379	419		302	443		384	640	615	380	516	
v/s Ratio Prot	c0.01	c0.14		0.00	0.08		c0.03	0.11	0.00	0.00	c0.18	
v/s Ratio Perm	0.03			0.02			0.13		0.00	0.01		
v/c Ratio	0.14	0.57		0.07	0.35		0.38	0.32	0.01	0.05	0.62	
Uniform Delay, d1	16.7	21.5		16.8	20.4		11.9	15.7	12.1	15.5	20.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.9		0.0	0.5		0.2	0.3	0.0	0.0	2.3	
Delay (s)	16.8	23.4		16.8	20.8		12.2	16.0	12.1	15.5	22.5	
Level of Service	B	C		B	C		B	B	B	B	C	
Approach Delay (s)		22.3			20.4			14.3			22.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	64.6	Sum of lost time (s)	22.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	124	119	16	135	4	130	190	13	15	222	44
Future Volume (veh/h)	39	124	119	16	135	4	130	190	13	15	222	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	139	132	20	147	8	144	207	16	20	278	48
Peak Hour Factor	0.75	0.89	0.90	0.80	0.92	0.50	0.90	0.92	0.81	0.75	0.80	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	193	183	266	329	18	392	584	541	449	376	65
Arrive On Green	0.06	0.22	0.22	0.03	0.19	0.19	0.10	0.31	0.31	0.03	0.24	0.24
Sat Flow, veh/h	1781	882	838	1781	1757	96	1781	1870	1585	1781	1554	268
Grp Volume(v), veh/h	52	0	271	20	0	155	144	207	16	20	0	326
Grp Sat Flow(s),veh/h/ln	1781	0	1720	1781	0	1853	1781	1870	1585	1781	0	1822
Q Serve(g_s), s	1.2	0.0	7.8	0.5	0.0	4.0	3.0	4.6	0.4	0.4	0.0	8.8
Cycle Q Clear(g_c), s	1.2	0.0	7.8	0.5	0.0	4.0	3.0	4.6	0.4	0.4	0.0	8.8
Prop In Lane	1.00		0.49	1.00		0.05	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	381	0	376	266	0	347	392	584	541	449	0	441
V/C Ratio(X)	0.14	0.00	0.72	0.08	0.00	0.45	0.37	0.35	0.03	0.04	0.00	0.74
Avail Cap(c_a), veh/h	540	0	772	548	0	901	549	1364	1202	730	0	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	19.4	17.0	0.0	19.3	13.1	14.2	11.7	14.4	0.0	18.7
Incr Delay (d2), s/veh	0.1	0.0	2.6	0.0	0.0	0.9	0.2	0.4	0.0	0.0	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.9	0.2	0.0	1.6	1.0	1.6	0.1	0.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	22.0	17.0	0.0	20.2	13.3	14.7	11.7	14.4	0.0	21.6
LnGrp LOS	B	A	C	B	A	C	B	B	B	B	A	C
Approach Vol, veh/h		323			175			367			346	
Approach Delay, s/veh		21.0			19.8			14.0			21.2	
Approach LOS		C			B			B			C	

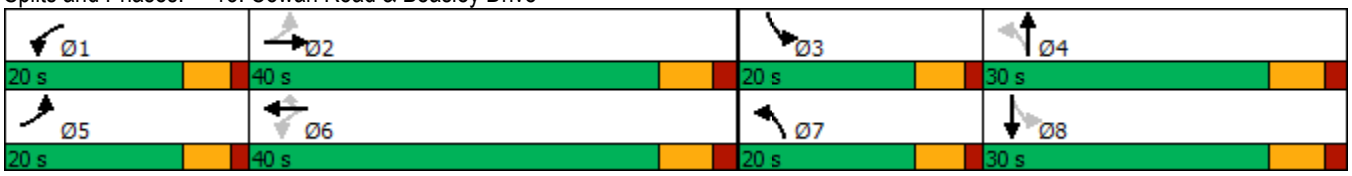
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	16.0	10.3	18.9	6.5	17.7	6.5	22.7
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	8.0	26.0	10.0	39.0	10.0	24.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	3.2	6.0	5.0	10.8	2.5	9.8	2.4	6.6
Green Ext Time (p_c), s	0.0	0.8	0.0	2.2	0.0	1.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	27	341	21	307	94	22	38	102	23
Future Volume (vph)	27	341	21	307	94	22	38	102	23
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6		7	4	3	8
Permitted Phases	2		6		6	4		8	
Detector Phase	5	2	1	6	6	7	4	3	8
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.5	16.5	10.5	16.5	16.5	10.5	12.5	10.5	12.5
Total Split (s)	20.0	40.0	20.0	40.0	40.0	20.0	30.0	20.0	30.0
Total Split (%)	18.2%	36.4%	18.2%	36.4%	36.4%	18.2%	27.3%	18.2%	27.3%
Yellow Time (s)	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.5	5.5	6.5	6.5	5.5	6.5	5.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	20.5	19.4	20.1	19.2	19.2	10.6	8.0	15.0	13.1
Actuated g/C Ratio	0.44	0.42	0.43	0.41	0.41	0.23	0.17	0.32	0.28
v/c Ratio	0.08	0.27	0.06	0.24	0.15	0.07	0.28	0.32	0.13
Control Delay	11.1	16.1	11.1	16.5	3.0	12.3	20.7	13.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	16.1	11.1	16.5	3.0	12.3	20.7	13.6	10.3
LOS	B	B	B	B	A	B	C	B	B
Approach Delay		15.6		13.2			18.9		12.5
Approach LOS		B		B			B		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 46.4	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 41.5%	ICU Level of Service A
Analysis Period (min) 15	

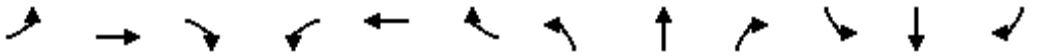
Splits and Phases: 13: Cowan Road & Beasley Drive





Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	391	32	353	108	24	88	128	68
v/c Ratio	0.08	0.27	0.06	0.24	0.15	0.07	0.28	0.32	0.13
Control Delay	11.1	16.1	11.1	16.5	3.0	12.3	20.7	13.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	16.1	11.1	16.5	3.0	12.3	20.7	13.6	10.3
Queue Length 50th (ft)	8	41	6	37	0	3	15	17	4
Queue Length 95th (ft)	17	108	15	97	19	19	41	58	34
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	775	2691	771	2706	1244	735	1013	681	981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.15	0.04	0.13	0.09	0.03	0.09	0.19	0.07

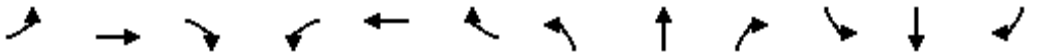
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	341	7	21	307	94	22	38	22	102	23	27
Future Volume (vph)	27	341	7	21	307	94	22	38	22	102	23	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.95		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3517		1770	3539	1583	1770	1774		1770	1698	
Flt Permitted	0.53	1.00		0.52	1.00	1.00	0.71	1.00		0.37	1.00	
Satd. Flow (perm)	995	3517		970	3539	1583	1328	1774		686	1698	
Peak-hour factor, PHF	0.61	0.91	0.44	0.66	0.87	0.87	0.92	0.63	0.79	0.80	0.82	0.68
Adj. Flow (vph)	44	375	16	32	353	108	24	60	28	128	28	40
RTOR Reduction (vph)	0	3	0	0	0	74	0	17	0	0	32	0
Lane Group Flow (vph)	44	388	0	32	353	34	24	71	0	128	36	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	19.4	17.5		19.0	17.3	17.3	6.8	6.0		17.6	11.4	
Effective Green, g (s)	19.4	17.5		19.0	17.3	17.3	6.8	6.0		17.6	11.4	
Actuated g/C Ratio	0.35	0.32		0.34	0.31	0.31	0.12	0.11		0.32	0.21	
Clearance Time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	375	1110		357	1105	494	169	192		339	349	
v/s Ratio Prot	c0.00	c0.11		0.00	0.10		0.00	0.04		c0.04	0.02	
v/s Ratio Perm	0.04			0.03		0.02	0.02			c0.08		
v/c Ratio	0.12	0.35		0.09	0.32	0.07	0.14	0.37		0.38	0.10	
Uniform Delay, d1	12.0	14.6		12.2	14.6	13.4	21.6	22.9		14.2	17.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.0	0.2	0.1	0.1	0.9		0.3	0.1	
Delay (s)	12.0	14.8		12.2	14.7	13.4	21.8	23.8		14.5	17.9	
Level of Service	B	B		B	B	B	C	C		B	B	
Approach Delay (s)		14.5			14.3			23.4			15.7	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	24.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	341	7	21	307	94	22	38	22	102	23	27
Future Volume (veh/h)	27	341	7	21	307	94	22	38	22	102	23	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	375	16	32	353	108	24	60	28	128	28	40
Peak Hour Factor	0.61	0.91	0.44	0.66	0.87	0.87	0.92	0.63	0.79	0.80	0.82	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	799	34	359	781	348	367	143	67	409	124	177
Arrive On Green	0.05	0.23	0.23	0.04	0.22	0.22	0.03	0.12	0.12	0.09	0.18	0.18
Sat Flow, veh/h	1781	3473	148	1781	3554	1585	1781	1206	563	1781	696	995
Grp Volume(v), veh/h	44	191	200	32	353	108	24	0	88	128	0	68
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1585	1781	0	1769	1781	0	1691
Q Serve(g_s), s	0.8	4.2	4.3	0.6	3.9	2.6	0.5	0.0	2.1	2.8	0.0	1.6
Cycle Q Clear(g_c), s	0.8	4.2	4.3	0.6	3.9	2.6	0.5	0.0	2.1	2.8	0.0	1.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.32	1.00		0.59
Lane Grp Cap(c), veh/h	366	409	424	359	781	348	367	0	209	409	0	300
V/C Ratio(X)	0.12	0.47	0.47	0.09	0.45	0.31	0.07	0.00	0.42	0.31	0.00	0.23
Avail Cap(c_a), veh/h	850	1307	1357	861	2615	1166	883	0	913	820	0	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	15.1	15.1	13.0	15.4	14.9	16.8	0.0	18.6	15.5	0.0	16.0
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.0	0.4	0.5	0.0	0.0	1.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.4	1.5	0.2	1.4	0.9	0.2	0.0	0.8	1.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	16.0	15.9	13.0	15.8	15.4	16.8	0.0	19.6	15.7	0.0	16.3
LnGrp LOS	B	B	B	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		435			493			112			196	
Approach Delay, s/veh		15.6			15.5			19.0			15.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	17.0	9.5	11.9	7.6	16.5	6.8	14.6
Change Period (Y+Rc), s	5.5	6.5	5.5	6.5	5.5	6.5	5.5	6.5
Max Green Setting (Gmax), s	14.5	33.5	14.5	23.5	14.5	33.5	14.5	23.5
Max Q Clear Time (g_c+I1), s	2.6	6.3	4.8	4.1	2.8	5.9	2.5	3.6
Green Ext Time (p_c), s	0.0	2.1	0.1	0.3	0.0	2.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Lane Group	SEL	SET	NWT	SWL	SWR
Lane Configurations					
Traffic Volume (vph)	82	411	348	135	112
Future Volume (vph)	82	411	348	135	112
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	5	2	6	4	
Permitted Phases	2				4
Detector Phase	5	2	6	4	4
Switch Phase					
Minimum Initial (s)	7.0	20.0	20.0	7.0	7.0
Minimum Split (s)	12.5	25.5	25.5	13.0	13.0
Total Split (s)	13.0	42.0	30.0	15.0	15.0
Total Split (%)	22.4%	72.4%	51.7%	25.9%	25.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None
Act Effct Green (s)	31.1	33.1	23.9	9.0	9.0
Actuated g/C Ratio	0.65	0.69	0.50	0.19	0.19
v/c Ratio	0.19	0.18	0.27	0.49	0.34
Control Delay	5.0	4.4	10.3	26.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	4.4	10.3	26.3	7.3
LOS	A	A	B	C	A
Approach Delay		4.5	10.3	17.6	
Approach LOS		A	B	B	

Intersection Summary	
Cycle Length: 58	
Actuated Cycle Length: 47.8	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Beasley Drive & Thornton Drive





Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	124	452	470	165	140
v/c Ratio	0.19	0.18	0.27	0.49	0.34
Control Delay	5.0	4.4	10.3	26.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	4.4	10.3	26.3	7.3
Queue Length 50th (ft)	14	27	46	49	0
Queue Length 95th (ft)	20	43	77	88	29
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	646	2698	1951	363	436
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.17	0.24	0.45	0.32

Intersection Summary

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	82	411	348	66	135	112
Future Volume (vph)	82	411	348	66	135	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3440		1770	1583
Flt Permitted	0.39	1.00	1.00		0.95	1.00
Satd. Flow (perm)	718	3539	3440		1770	1583
Peak-hour factor, PHF	0.66	0.91	0.91	0.75	0.82	0.80
Adj. Flow (vph)	124	452	382	88	165	140
RTOR Reduction (vph)	0	0	34	0	0	122
Lane Group Flow (vph)	124	452	436	0	165	18
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	32.6	32.6	21.8		6.4	6.4
Effective Green, g (s)	32.6	32.6	21.8		6.4	6.4
Actuated g/C Ratio	0.65	0.65	0.43		0.13	0.13
Clearance Time (s)	5.5	5.5	5.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	573	2284	1484		224	200
v/s Ratio Prot	0.02	c0.13	c0.13		c0.09	
v/s Ratio Perm	0.12					0.01
v/c Ratio	0.22	0.20	0.29		0.74	0.09
Uniform Delay, d1	3.8	3.6	9.3		21.2	19.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0	0.1		11.9	0.2
Delay (s)	3.9	3.7	9.5		33.1	19.7
Level of Service	A	A	A		C	B
Approach Delay (s)		3.7	9.5		26.9	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	17.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

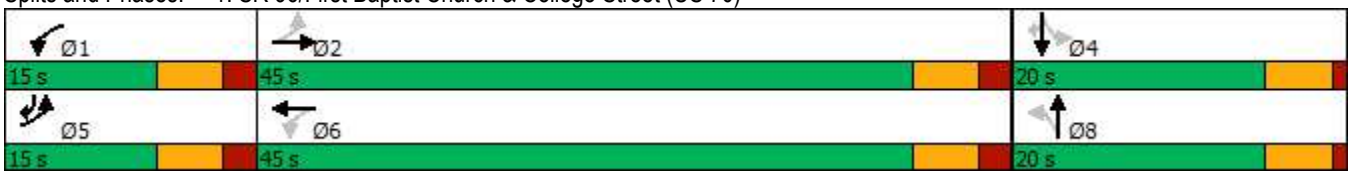


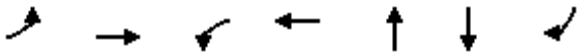
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	82	411	348	66	135	112
Future Volume (veh/h)	82	411	348	66	135	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	452	382	88	165	140
Peak Hour Factor	0.66	0.91	0.91	0.75	0.82	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	637	2236	1157	264	248	220
Arrive On Green	0.12	0.63	0.40	0.40	0.14	0.14
Sat Flow, veh/h	1781	3647	2968	655	1781	1585
Grp Volume(v), veh/h	124	452	235	235	165	140
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1752	1781	1585
Q Serve(g_s), s	1.6	2.7	4.5	4.6	4.4	4.1
Cycle Q Clear(g_c), s	1.6	2.7	4.5	4.6	4.4	4.1
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	637	2236	715	706	248	220
V/C Ratio(X)	0.19	0.20	0.33	0.33	0.67	0.64
Avail Cap(c_a), veh/h	701	2615	878	866	323	288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.9	10.2	10.2	20.3	20.2
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.3	3.3	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	1.5	1.5	1.9	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.8	4.0	10.5	10.5	23.6	23.2
LnGrp LOS	A	A	B	B	C	C
Approach Vol, veh/h		576	470		305	
Approach Delay, s/veh		4.4	10.5		23.4	
Approach LOS		A	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.7		12.9	11.2	25.5
Change Period (Y+Rc), s		5.5		6.0	5.5	5.5
Max Green Setting (Gmax), s		36.5		9.0	7.5	24.5
Max Q Clear Time (g_c+I1), s		4.7		6.4	3.6	6.6
Green Ext Time (p_c), s		3.3		0.3	0.1	2.7
Intersection Summary						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	24	400	18	355	282	13	16	29
Future Volume (vph)	24	400	18	355	282	13	16	29
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA	pm+ov
Protected Phases	5	2	1	6		8	4	5
Permitted Phases	2		6		8			4
Detector Phase	5	2	1	6	8	8	4	5
Switch Phase								
Minimum Initial (s)	6.0	25.0	6.0	25.0	8.0	8.0	8.0	6.0
Minimum Split (s)	12.0	31.0	12.0	31.0	13.0	13.0	13.0	12.0
Total Split (s)	15.0	45.0	15.0	45.0	20.0	20.0	20.0	15.0
Total Split (%)	18.8%	56.3%	18.8%	56.3%	25.0%	25.0%	25.0%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	33.7	31.7	32.5	29.3		15.4	15.4	26.8
Actuated g/C Ratio	0.54	0.51	0.52	0.47		0.25	0.25	0.43
v/c Ratio	0.05	0.41	0.06	0.24		1.16	0.07	0.06
Control Delay	5.3	6.7	5.4	11.0		127.9	23.4	6.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	5.3	6.7	5.4	11.0		127.9	23.4	6.1
LOS	A	A	A	B		F	C	A
Approach Delay		6.6		10.6		127.9	13.4	
Approach LOS		A		B		F	B	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 62.5	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 36.4	Intersection LOS: D
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SR 96/First Baptist Church & College Street (US 70)



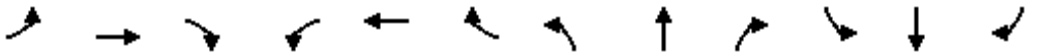


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	32	745	28	398	392	32	44
v/c Ratio	0.05	0.41	0.06	0.24	1.16	0.07	0.06
Control Delay	5.3	6.7	5.4	11.0	127.9	23.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	6.7	5.4	11.0	127.9	23.4	6.1
Queue Length 50th (ft)	5	38	4	52	~187	10	0
Queue Length 95th (ft)	10	98	8	77	#200	19	11
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	640	2236	513	2267	338	459	778
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.33	0.05	0.18	1.16	0.07	0.06

Intersection Summary

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

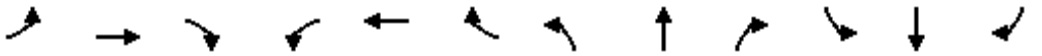
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	400	274	18	355	1	282	13	30	0	16	29
Future Volume (vph)	24	400	274	18	355	1	282	13	30	0	16	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.94		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			1.00	1.00
Satd. Flow (prot)	1770	3325		1770	3534			1765			1863	1583
Flt Permitted	0.50	1.00		0.34	1.00			0.74			1.00	1.00
Satd. Flow (perm)	927	3325		633	3534			1354			1863	1583
Peak-hour factor, PHF	0.75	0.90	0.91	0.64	0.90	0.25	0.85	0.54	0.83	0.92	0.50	0.66
Adj. Flow (vph)	32	444	301	28	394	4	332	24	36	0	32	44
RTOR Reduction (vph)	0	151	0	0	1	0	0	5	0	0	0	32
Lane Group Flow (vph)	32	594	0	28	397	0	0	387	0	0	32	12
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA			NA	pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	35.0	31.7		32.6	30.5			15.4			15.4	18.7
Effective Green, g (s)	35.0	31.7		32.6	30.5			15.4			15.4	18.7
Actuated g/C Ratio	0.53	0.48		0.49	0.46			0.23			0.23	0.28
Clearance Time (s)	6.0	6.0		6.0	6.0			5.0			5.0	6.0
Vehicle Extension (s)	2.5	8.0		2.5	8.0			3.0			3.0	2.5
Lane Grp Cap (vph)	532	1592		347	1628			314			433	447
v/s Ratio Prot	c0.00	c0.18		0.00	0.11						0.02	0.00
v/s Ratio Perm	0.03			0.04				c0.29				0.01
v/c Ratio	0.06	0.37		0.08	0.24			1.23			0.07	0.03
Uniform Delay, d1	7.5	10.9		8.7	10.8			25.4			19.8	17.2
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	0.6		0.1	0.3			129.7			0.1	0.0
Delay (s)	7.5	11.6		8.8	11.2			155.1			19.9	17.2
Level of Service	A	B		A	B			F			B	B
Approach Delay (s)		11.4			11.0			155.1			18.3	
Approach LOS		B			B			F			B	

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	17.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	400	274	18	355	1	282	13	30	0	16	29
Future Volume (veh/h)	24	400	274	18	355	1	282	13	30	0	16	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	444	0	28	394	4	332	24	0	0	32	44
Peak Hour Factor	0.75	0.90	0.91	0.64	0.90	0.25	0.85	0.54	0.83	0.92	0.50	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	539	1509		511	1515	15	418	22		0	472	466
Arrive On Green	0.04	0.42	0.00	0.04	0.42	0.42	0.25	0.25	0.00	0.00	0.25	0.25
Sat Flow, veh/h	1781	3647	0	1781	3604	37	1194	86	0	0	1870	1585
Grp Volume(v), veh/h	32	444	0	28	194	204	356	0	0	0	32	44
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1864	1280	0	0	0	1870	1585
Q Serve(g_s), s	0.6	4.9	0.0	0.5	4.2	4.2	14.2	0.0	0.0	0.0	0.8	1.2
Cycle Q Clear(g_c), s	0.6	4.9	0.0	0.5	4.2	4.2	15.0	0.0	0.0	0.0	0.8	1.2
Prop In Lane	1.00		0.00	1.00		0.02	0.93		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	539	1509		511	747	784	440	0		0	472	466
V/C Ratio(X)	0.06	0.29		0.05	0.26	0.26	0.81	0.00		0.00	0.07	0.09
Avail Cap(c_a), veh/h	735	2331		714	1165	1222	440	0		0	472	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	11.3	0.0	9.1	11.2	11.2	23.3	0.0	0.0	0.0	16.9	15.3
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.8	0.8	10.8	0.0	0.0	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	0.0	0.2	1.5	1.5	5.5	0.0	0.0	0.0	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	11.8	0.0	9.1	12.1	12.0	34.1	0.0	0.0	0.0	17.0	15.3
LnGrp LOS	A	B		A	B	B	C	A		A	B	B
Approach Vol, veh/h		476	A		426			356	A		76	
Approach Delay, s/veh		11.6			11.8			34.1			16.0	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	31.2		20.0	8.5	31.0		20.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	9.0	39.0		15.0	9.0	39.0		15.0				
Max Q Clear Time (g_c+I1), s	2.5	6.9		3.2	2.6	6.2		17.0				
Green Ext Time (p_c), s	0.0	10.3		0.2	0.0	8.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

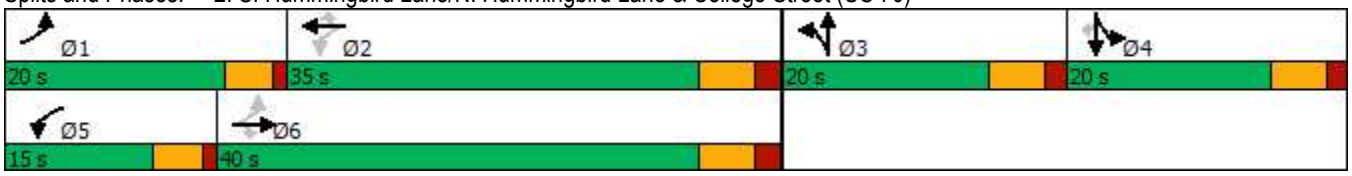
Notes

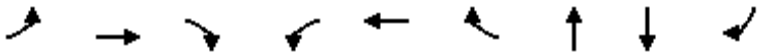
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	50	681	94	58	663	30	17	21	38
Future Volume (vph)	50	681	94	58	663	30	17	21	38
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	NA	Perm
Protected Phases	1	6		5	2		3	4	
Permitted Phases	6		6	2		2			4
Detector Phase	1	6	6	5	2	2	3	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	10.5	11.5	11.5
Total Split (s)	20.0	40.0	40.0	15.0	35.0	35.0	20.0	20.0	20.0
Total Split (%)	21.1%	42.1%	42.1%	15.8%	36.8%	36.8%	21.1%	21.1%	21.1%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None
Act Effct Green (s)	41.5	35.2	35.2	42.4	35.7	35.7	13.1	8.7	8.7
Actuated g/C Ratio	0.52	0.44	0.44	0.53	0.45	0.45	0.16	0.11	0.11
v/c Ratio	0.17	0.48	0.13	0.20	0.49	0.04	0.78	0.35	0.16
Control Delay	10.8	20.0	1.8	11.0	19.6	0.1	49.1	41.0	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	20.0	1.8	11.0	19.6	0.1	49.1	41.0	1.0
LOS	B	B	A	B	B	A	D	D	A
Approach Delay		17.3			18.0		49.1	22.9	
Approach LOS		B			B		D	C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 79.7	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

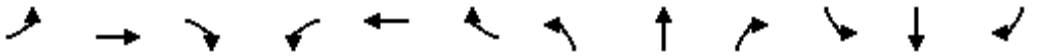
Splits and Phases: 2: S. Hummingbird Lane/N. Hummingbird Lane & College Street (US 70)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	64	757	102	76	771	36	240	68	56
v/c Ratio	0.17	0.48	0.13	0.20	0.49	0.04	0.78	0.35	0.16
Control Delay	10.8	20.0	1.8	11.0	19.6	0.1	49.1	41.0	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	20.0	1.8	11.0	19.6	0.1	49.1	41.0	1.0
Queue Length 50th (ft)	15	157	0	18	160	0	108	35	0
Queue Length 95th (ft)	31	236	15	34	222	0	147	63	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	553	1563	780	467	1584	816	348	340	461
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.48	0.13	0.16	0.49	0.04	0.69	0.20	0.12

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	681	94	58	663	30	107	17	64	26	21	38
Future Volume (vph)	50	681	94	58	663	30	107	17	64	26	21	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.97	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1719			1810	1583
Flt Permitted	0.29	1.00	1.00	0.29	1.00	1.00		0.98			0.97	1.00
Satd. Flow (perm)	537	3539	1583	531	3539	1583		1719			1810	1583
Peak-hour factor, PHF	0.78	0.90	0.92	0.76	0.86	0.83	0.89	0.71	0.67	0.65	0.75	0.68
Adj. Flow (vph)	64	757	102	76	771	36	120	24	96	40	28	56
RTOR Reduction (vph)	0	0	58	0	0	20	0	25	0	0	0	51
Lane Group Flow (vph)	64	757	44	76	771	16	0	215	0	0	68	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	39.9	35.2	35.2	40.9	35.7	35.7		13.1			6.9	6.9
Effective Green, g (s)	39.9	35.2	35.2	40.9	35.7	35.7		13.1			6.9	6.9
Actuated g/C Ratio	0.49	0.43	0.43	0.50	0.44	0.44		0.16			0.08	0.08
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		5.5			5.5	5.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0			3.0	3.0
Lane Grp Cap (vph)	332	1521	680	343	1542	690		274			152	133
v/s Ratio Prot	0.01	0.21		c0.01	c0.22			c0.12			c0.04	
v/s Ratio Perm	0.08		0.03	0.10		0.01						0.00
v/c Ratio	0.19	0.50	0.06	0.22	0.50	0.02		0.78			0.45	0.04
Uniform Delay, d1	11.5	16.9	13.7	11.1	16.7	13.2		33.0			35.7	34.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	0.1	1.2	0.2	0.1	1.2	0.1		12.7			2.1	0.1
Delay (s)	11.6	18.1	13.9	11.3	17.8	13.2		45.7			37.8	34.6
Level of Service	B	B	B	B	B	B		D			D	C
Approach Delay (s)		17.2			17.1			45.7			36.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	81.9	Sum of lost time (s)	21.5
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

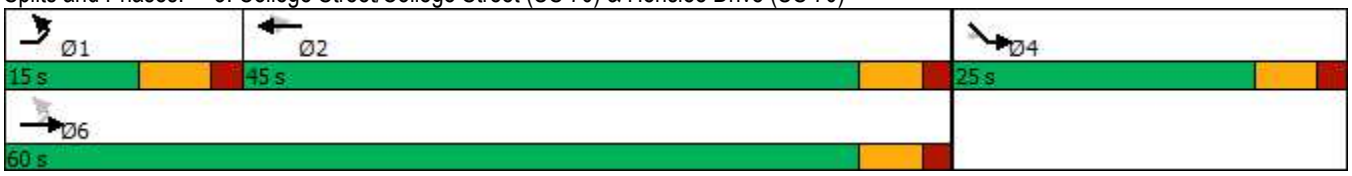
c Critical Lane Group

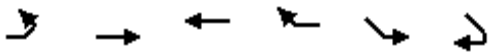
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	27	415	355	526	502	19
Future Volume (vph)	27	415	355	526	502	19
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	11.5	26.0	26.0	26.0	14.0	14.0
Total Split (s)	15.0	60.0	45.0	45.0	25.0	25.0
Total Split (%)	17.6%	70.6%	52.9%	52.9%	29.4%	29.4%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	27.1	27.6	23.6	23.6	15.1	15.1
Actuated g/C Ratio	0.49	0.50	0.43	0.43	0.27	0.27
v/c Ratio	0.08	0.27	0.28	0.58	0.61	0.06
Control Delay	7.6	8.3	12.5	4.2	22.4	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	8.3	12.5	4.2	22.4	9.3
LOS	A	A	B	A	C	A
Approach Delay		8.2	7.7		21.8	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 55.4	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

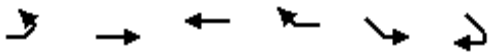
Splits and Phases: 3: College Street/College Street (US 70) & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	36	472	423	591	570	28
v/c Ratio	0.08	0.27	0.28	0.58	0.61	0.06
Control Delay	7.6	8.3	12.5	4.2	22.4	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	8.3	12.5	4.2	22.4	9.3
Queue Length 50th (ft)	6	42	37	0	63	0
Queue Length 95th (ft)	14	70	90	53	175	12
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	528	3192	2644	1332	1249	593
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.15	0.16	0.44	0.46	0.05

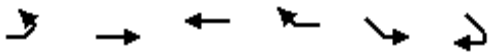
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	27	415	355	526	502	19
Future Volume (vph)	27	415	355	526	502	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.40	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	738	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.75	0.88	0.84	0.89	0.88	0.68
Adj. Flow (vph)	36	472	423	591	570	28
RTOR Reduction (vph)	0	0	0	355	0	21
Lane Group Flow (vph)	36	472	423	236	570	7
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Actuated Green, G (s)	32.0	32.0	23.6	23.6	15.1	15.1
Effective Green, g (s)	32.0	32.0	23.6	23.6	15.1	15.1
Actuated g/C Ratio	0.54	0.54	0.40	0.40	0.26	0.26
Clearance Time (s)	6.5	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	4.5	4.5	4.5	3.5	3.5
Lane Grp Cap (vph)	432	1916	1413	632	877	404
v/s Ratio Prot	0.00	c0.13	0.12		c0.17	
v/s Ratio Perm	0.04			c0.15		0.00
v/c Ratio	0.08	0.25	0.30	0.37	0.65	0.02
Uniform Delay, d1	6.7	7.2	12.1	12.5	19.6	16.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	0.2	0.6	1.7	0.0
Delay (s)	6.8	7.3	12.3	13.2	21.4	16.5
Level of Service	A	A	B	B	C	B
Approach Delay (s)		7.2	12.8		21.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	18.5
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	27	415	355	526	502	19
Future Volume (veh/h)	27	415	355	526	502	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	472	423	0	570	0
Peak Hour Factor	0.75	0.88	0.84	0.89	0.88	0.68
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	494	1936	1357		782	
Arrive On Green	0.04	0.54	0.38	0.00	0.23	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	36	472	423	0	570	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.6	3.7	4.4	0.0	8.0	0.0
Cycle Q Clear(g_c), s	0.6	3.7	4.4	0.0	8.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	494	1936	1357		782	
V/C Ratio(X)	0.07	0.24	0.31		0.73	
Avail Cap(c_a), veh/h	714	3663	2645		1253	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	8.2	6.3	11.4	0.0	18.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	1.3	0.0	3.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.3	6.4	11.6	0.0	20.4	0.0
LnGrp LOS	A	A	B		C	
Approach Vol, veh/h		508	423	A	570	A
Approach Delay, s/veh		6.5	11.6		20.4	
Approach LOS		A	B		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.5	26.0		17.9		34.5
Change Period (Y+Rc), s	6.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	8.5	39.0		19.0		54.0
Max Q Clear Time (g_c+I1), s	2.6	6.4		10.0		5.7
Green Ext Time (p_c), s	0.0	4.5		1.9		5.7

Intersection Summary	
HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NEL	NET	SWL	SWT	SWR
Lane Configurations									
Traffic Volume (vph)	47	452	21	444	73	52	69	29	82
Future Volume (vph)	47	452	21	444	73	52	69	29	82
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	5	2	1	6	8	8	4	4	4
Switch Phase									
Minimum Initial (s)	5.0	8.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	13.0	9.0	13.0	13.0	13.0	13.0	13.0	13.0
Total Split (s)	15.0	48.0	12.0	45.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	18.8%	60.0%	15.0%	56.3%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0		5.0		5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	Min	None	None	None	None	None
Act Effct Green (s)	27.1	20.3	28.4	24.3		10.8		10.8	10.8
Actuated g/C Ratio	0.53	0.40	0.56	0.48		0.21		0.21	0.21
v/c Ratio	0.10	0.51	0.06	0.35		0.57		0.39	0.23
Control Delay	5.0	12.1	5.0	10.2		26.6		23.2	6.8
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	5.0	12.1	5.0	10.2		26.6		23.2	6.8
LOS	A	B	A	B		C		C	A
Approach Delay		11.7		10.0		26.6		15.8	
Approach LOS		B		A		C		B	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 50.9	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 45.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Plaza Drive & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	52	711	28	594	176	112	92
v/c Ratio	0.10	0.51	0.06	0.35	0.57	0.39	0.23
Control Delay	5.0	12.1	5.0	10.2	26.6	23.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	12.1	5.0	10.2	26.6	23.2	6.8
Queue Length 50th (ft)	5	72	3	60	45	28	0
Queue Length 95th (ft)	17	103	9	103	76	78	30
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	699	2933	522	2795	445	407	543
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.24	0.05	0.21	0.40	0.28	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	47	452	104	21	444	75	73	52	8	69	29	82
Future Volume (vph)	47	452	104	21	444	75	73	52	8	69	29	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.97		1.00	0.98			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1770	3441		1770	3464			1803			1799	1583
Flt Permitted	0.43	1.00		0.30	1.00			0.79			0.72	1.00
Satd. Flow (perm)	797	3441		560	3464			1462			1344	1583
Peak-hour factor, PHF	0.90	0.78	0.79	0.75	0.87	0.89	0.87	0.65	0.67	0.86	0.91	0.89
Adj. Flow (vph)	52	579	132	28	510	84	84	80	12	80	32	92
RTOR Reduction (vph)	0	31	0	0	18	0	0	3	0	0	0	73
Lane Group Flow (vph)	52	680	0	28	576	0	0	173	0	0	112	19
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	25.4	22.1		29.8	24.3			10.8			10.8	10.8
Effective Green, g (s)	25.4	22.1		29.8	24.3			10.8			10.8	10.8
Actuated g/C Ratio	0.48	0.42		0.57	0.46			0.21			0.21	0.21
Clearance Time (s)	4.0	5.0		4.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	2.5	5.0		2.5	5.0			2.5			2.5	2.5
Lane Grp Cap (vph)	447	1451		445	1606			301			277	326
v/s Ratio Prot	c0.01	c0.20		c0.01	0.17							
v/s Ratio Perm	0.05			0.03				c0.12			0.08	0.01
v/c Ratio	0.12	0.47		0.06	0.36			0.57			0.40	0.06
Uniform Delay, d1	7.2	10.9		5.2	9.0			18.7			18.0	16.7
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	0.5		0.0	0.3			2.2			0.7	0.1
Delay (s)	7.3	11.4		5.3	9.3			20.9			18.7	16.8
Level of Service	A	B		A	A			C			B	B
Approach Delay (s)		11.1			9.1			20.9			17.8	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	47	452	104	21	444	75	73	52	8	69	29	82
Future Volume (veh/h)	47	452	104	21	444	75	73	52	8	69	29	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	579	132	28	510	84	84	80	12	80	32	92
Peak Hour Factor	0.90	0.78	0.79	0.75	0.87	0.89	0.87	0.65	0.67	0.86	0.91	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	540	1163	264	537	1406	231	204	138	17	313	104	290
Arrive On Green	0.05	0.40	0.40	0.11	0.46	0.46	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	2876	654	1781	3056	501	485	754	91	978	568	1585
Grp Volume(v), veh/h	52	357	354	28	296	298	176	0	0	112	0	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1753	1781	1777	1780	1330	0	0	1546	0	1585
Q Serve(g_s), s	0.8	6.9	6.9	0.3	5.0	5.0	3.3	0.0	0.0	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.8	6.9	6.9	0.3	5.0	5.0	6.1	0.0	0.0	2.8	0.0	2.3
Prop In Lane	1.00		0.37	1.00		0.28	0.48		0.07	0.71		1.00
Lane Grp Cap(c), veh/h	540	719	709	537	818	819	359	0	0	417	0	290
V/C Ratio(X)	0.10	0.50	0.50	0.05	0.36	0.36	0.49	0.00	0.00	0.27	0.00	0.32
Avail Cap(c_a), veh/h	871	1658	1635	653	1542	1545	574	0	0	620	0	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.1	10.2	10.2	5.9	8.1	8.1	18.0	0.0	0.0	16.4	0.0	16.3
Incr Delay (d2), s/veh	0.1	1.1	1.2	0.0	0.6	0.6	0.8	0.0	0.0	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.3	2.2	0.1	1.5	1.5	1.6	0.0	0.0	0.9	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	11.4	11.4	5.9	8.6	8.6	18.7	0.0	0.0	16.7	0.0	16.8
LnGrp LOS	A	B	B	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		763			622			176			204	
Approach Delay, s/veh		11.1			8.5			18.7			16.7	
Approach LOS		B			A			B			B	

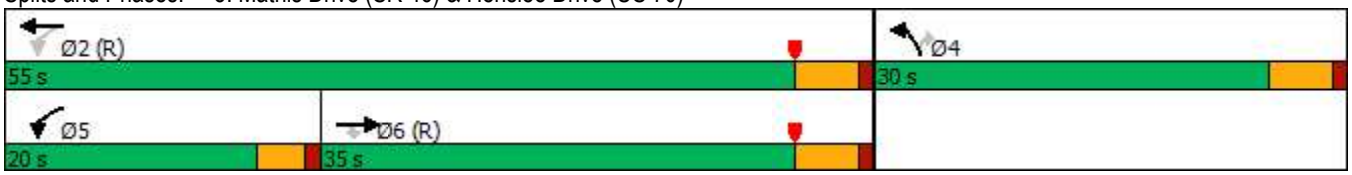
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	23.6		13.4	6.4	26.2		13.4				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	43.0		15.0	11.0	40.0		15.0				
Max Q Clear Time (g_c+I1), s	2.3	8.9		4.8	2.8	7.0		8.1				
Green Ext Time (p_c), s	0.0	9.7		0.5	0.0	7.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		11.6	
HCM 6th LOS		B	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	557	628	132	476	585	143
Future Volume (vph)	557	628	132	476	585	143
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	13.0	13.0	10.0	13.0	11.0	11.0
Total Split (s)	35.0	35.0	20.0	55.0	30.0	30.0
Total Split (%)	41.2%	41.2%	23.5%	64.7%	35.3%	35.3%
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	40.7	40.7	53.8	52.8	22.2	22.2
Actuated g/C Ratio	0.48	0.48	0.63	0.62	0.26	0.26
v/c Ratio	0.38	0.65	0.30	0.24	0.72	0.34
Control Delay	15.8	4.4	8.6	7.9	33.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	4.4	8.6	7.9	33.4	13.8
LOS	B	A	A	A	C	B
Approach Delay	9.7			8.1	29.4	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Mathis Drive (SR 46) & Henslee Drive (US 70)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	640	739	148	517	650	164
v/c Ratio	0.38	0.65	0.30	0.24	0.72	0.34
Control Delay	15.8	4.4	8.6	7.9	33.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	4.4	8.6	7.9	33.4	13.8
Queue Length 50th (ft)	112	0	30	61	159	31
Queue Length 95th (ft)	162	45	56	90	211	74
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	1695	1143	601	2196	1009	527
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.65	0.25	0.24	0.64	0.31

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	557	628	132	476	585	143
Future Volume (vph)	557	628	132	476	585	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.33	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	606	3539	3433	1583
Peak-hour factor, PHF	0.87	0.85	0.89	0.92	0.90	0.87
Adj. Flow (vph)	640	739	148	517	650	164
RTOR Reduction (vph)	0	384	0	0	0	65
Lane Group Flow (vph)	640	355	148	517	650	99
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	40.8	40.8	52.8	52.8	22.2	22.2
Effective Green, g (s)	40.8	40.8	52.8	52.8	22.2	22.2
Actuated g/C Ratio	0.48	0.48	0.62	0.62	0.26	0.26
Clearance Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	6.0	6.0	2.5	6.0	4.0	4.0
Lane Grp Cap (vph)	1698	759	485	2198	896	413
v/s Ratio Prot	0.18		c0.03	0.15	c0.19	
v/s Ratio Perm		c0.22	0.16			0.06
v/c Ratio	0.38	0.47	0.31	0.24	0.73	0.24
Uniform Delay, d1	14.0	14.8	7.3	7.1	28.6	24.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	2.1	0.3	0.3	3.1	0.4
Delay (s)	14.7	16.9	7.5	7.4	31.8	25.2
Level of Service	B	B	A	A	C	C
Approach Delay (s)	15.9			7.4	30.4	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	557	628	132	476	585	143
Future Volume (veh/h)	557	628	132	476	585	143
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	640	0	148	517	650	0
Peak Hour Factor	0.87	0.85	0.89	0.92	0.90	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1909		550	2319	794	
Arrive On Green	0.54	0.00	0.07	0.65	0.23	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	640	0	148	517	650	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	8.6	0.0	2.9	5.0	15.2	0.0
Cycle Q Clear(g_c), s	8.6	0.0	2.9	5.0	15.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1909		550	2319	794	
V/C Ratio(X)	0.34		0.27	0.22	0.82	
Avail Cap(c_a), veh/h	1909		763	2319	1016	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.00	0.95	0.95	1.00	0.00
Uniform Delay (d), s/veh	11.1	0.0	7.2	6.0	31.1	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.2	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.9	1.6	6.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	0.0	7.4	6.2	35.9	0.0
LnGrp LOS	B		A	A	D	
Approach Vol, veh/h	640	A		665	650	A
Approach Delay, s/veh	11.5			6.5	35.9	
Approach LOS	B			A	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.5		24.5	9.8	50.7
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0
Max Green Setting (Gmax), s		50.0		25.0	16.0	30.0
Max Q Clear Time (g_c+I1), s		7.0		17.2	4.9	10.6
Green Ext Time (p_c), s		9.6		2.4	0.2	8.6

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

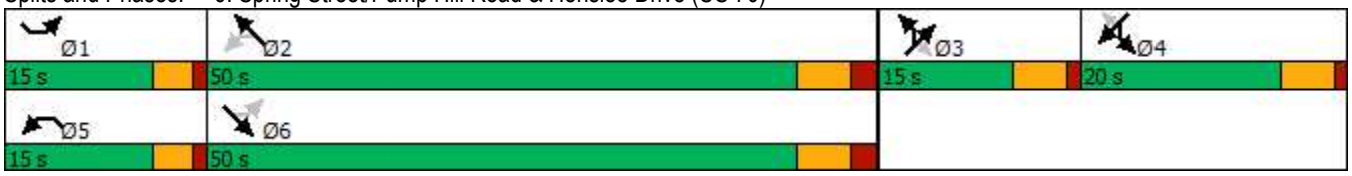
Notes

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

Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Configurations								
Traffic Volume (vph)	18	794	58	787	20	56	18	72
Future Volume (vph)	18	794	58	787	20	56	18	72
Turn Type	pm+pt	NA	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	1	6	5	2	3		4	
Permitted Phases	6		2			3		4
Detector Phase	1	6	5	2	3	3	4	4
Switch Phase								
Minimum Initial (s)	4.0	15.0	4.0	8.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.0	21.0	10.0	14.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	50.0	15.0	50.0	15.0	15.0	20.0	20.0
Total Split (%)	15.0%	50.0%	15.0%	50.0%	15.0%	15.0%	20.0%	20.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	37.3	33.5	40.4	38.1	8.4	8.4	10.0	10.0
Actuated g/C Ratio	0.56	0.50	0.60	0.57	0.13	0.13	0.15	0.15
v/c Ratio	0.08	0.53	0.20	0.46	0.39	0.22	0.42	0.27
Control Delay	8.7	18.7	9.5	14.7	38.5	1.9	36.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	18.7	9.5	14.7	38.5	1.9	36.1	4.7
LOS	A	B	A	B	D	A	D	A
Approach Delay		18.4		14.4	22.6		22.0	
Approach LOS		B		B	C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 66.9	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

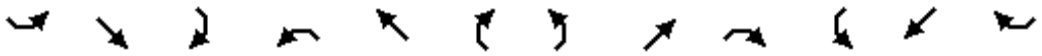
Splits and Phases: 6: Spring Street/Pump Hill Road & Henslee Drive (US 70)





Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	32	931	72	923	88	68	112	92
v/c Ratio	0.08	0.53	0.20	0.46	0.39	0.22	0.42	0.27
Control Delay	8.7	18.7	9.5	14.7	38.5	1.9	36.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	18.7	9.5	14.7	38.5	1.9	36.1	4.7
Queue Length 50th (ft)	6	174	13	125	35	0	43	0
Queue Length 95th (ft)	12	278	32	265	74	0	90	9
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	539	2399	491	2399	298	371	445	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.39	0.15	0.38	0.30	0.18	0.25	0.19

Intersection Summary



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	18	794	54	58	787	50	51	20	56	75	18	72
Future Volume (vph)	18	794	54	58	787	50	51	20	56	75	18	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1770	3500		1770	3500			1801	1583		1792	1583
Flt Permitted	0.27	1.00		0.21	1.00			0.97	1.00		0.96	1.00
Satd. Flow (perm)	503	3500		389	3500			1801	1583		1792	1583
Peak-hour factor, PHF	0.56	0.92	0.79	0.81	0.92	0.74	0.85	0.71	0.82	0.85	0.75	0.78
Adj. Flow (vph)	32	863	68	72	855	68	60	28	68	88	24	92
RTOR Reduction (vph)	0	5	0	0	5	0	0	0	62	0	0	82
Lane Group Flow (vph)	32	926	0	72	918	0	0	88	6	0	112	10
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2					3			4
Actuated Green, G (s)	34.7	32.9		40.7	35.9			6.2	6.2		7.7	7.7
Effective Green, g (s)	34.7	32.9		40.7	35.9			6.2	6.2		7.7	7.7
Actuated g/C Ratio	0.48	0.46		0.57	0.50			0.09	0.09		0.11	0.11
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	4.0			2.0	2.0		2.5	2.5
Lane Grp Cap (vph)	275	1608		313	1754			155	137		192	170
v/s Ratio Prot	0.00	c0.26		c0.02	0.26			c0.05			c0.06	
v/s Ratio Perm	0.05			0.12					0.00			0.01
v/c Ratio	0.12	0.58		0.23	0.52			0.57	0.04		0.58	0.06
Uniform Delay, d1	9.8	14.2		8.0	12.1			31.4	30.0		30.4	28.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.3		0.1	0.4			2.8	0.0		3.7	0.1
Delay (s)	9.9	14.5		8.1	12.4			34.2	30.0		34.1	28.8
Level of Service	A	B		A	B			C	C		C	C
Approach Delay (s)		14.4			12.1			32.4			31.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	287	64	3	653	744	20
Future Volume (vph)	287	64	3	653	744	20
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	8.0	8.0	6.0	15.0	15.0	15.0
Minimum Split (s)	14.0	14.0	12.0	21.0	27.0	27.0
Total Split (s)	20.0	20.0	20.0	65.0	45.0	45.0
Total Split (%)	23.5%	23.5%	23.5%	76.5%	52.9%	52.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.4	10.4	24.4	24.4	22.9	22.9
Actuated g/C Ratio	0.22	0.22	0.51	0.51	0.48	0.48
v/c Ratio	0.42	0.18	0.01	0.39	0.48	0.03
Control Delay	20.2	7.9	5.0	7.3	9.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	7.9	5.0	7.3	9.9	4.2
LOS	C	A	A	A	A	A
Approach Delay	17.9			7.3	9.7	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 47.7	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 38.8%	ICU Level of Service A
Analysis Period (min) 15	

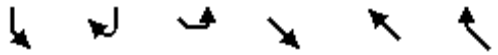
Splits and Phases: 7: Henslee Drive (US 70) & SR 48





Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	312	72	4	710	809	24
v/c Ratio	0.42	0.18	0.01	0.39	0.48	0.03
Control Delay	20.2	7.9	5.0	7.3	9.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	7.9	5.0	7.3	9.9	4.2
Queue Length 50th (ft)	34	0	1	51	60	0
Queue Length 95th (ft)	102	31	3	90	168	10
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	1077	546	643	3400	3001	1346
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.13	0.01	0.21	0.27	0.02

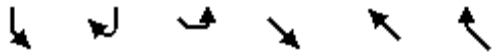
Intersection Summary



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	287	64	3	653	744	20
Future Volume (vph)	287	64	3	653	744	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	443	3539	3539	1583
Peak-hour factor, PHF	0.92	0.89	0.75	0.92	0.92	0.83
Adj. Flow (vph)	312	72	4	710	809	24
RTOR Reduction (vph)	0	58	0	0	0	13
Lane Group Flow (vph)	312	14	4	710	809	11
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4	6			2
Actuated Green, G (s)	10.4	10.4	29.7	29.7	22.9	22.9
Effective Green, g (s)	10.4	10.4	29.7	29.7	22.9	22.9
Actuated g/C Ratio	0.20	0.20	0.57	0.57	0.44	0.44
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	685	315	272	2017	1555	695
v/s Ratio Prot	c0.09		0.00	c0.20	c0.23	
v/s Ratio Perm		0.01	0.01			0.01
v/c Ratio	0.46	0.05	0.01	0.35	0.52	0.02
Uniform Delay, d1	18.4	16.8	5.6	6.0	10.6	8.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.0	0.2	0.6	0.0
Delay (s)	18.8	16.9	5.6	6.2	11.2	8.3
Level of Service	B	B	A	A	B	A
Approach Delay (s)	18.5			6.2	11.1	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	287	64	3	653	744	20
Future Volume (veh/h)	287	64	3	653	744	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	0	4	710	809	0
Peak Hour Factor	0.92	0.89	0.75	0.92	0.92	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	576		354	2057	1582	
Arrive On Green	0.17	0.00	0.01	0.58	0.45	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	312	0	4	710	809	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	3.9	0.0	0.1	5.0	7.7	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.1	5.0	7.7	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	576		354	2057	1582	
V/C Ratio(X)	0.54		0.01	0.35	0.51	
Avail Cap(c_a), veh/h	1025		871	4444	2938	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	7.1	5.2	9.4	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.1	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.8	0.0	7.1	5.4	9.9	0.0
LnGrp LOS	B		A	A	A	
Approach Vol, veh/h	312	A		714	809	A
Approach Delay, s/veh	18.8			5.4	9.9	
Approach LOS	B			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.3	27.0		13.9		33.3
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	14.0	39.0		14.0		59.0
Max Q Clear Time (g_c+I1), s	2.1	9.7		5.9		7.0
Green Ext Time (p_c), s	0.0	11.3		0.7		11.5

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

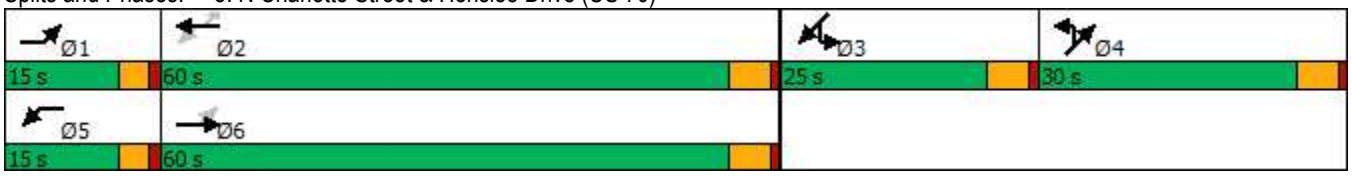
Notes

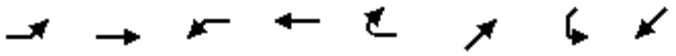
Unsignalized Delay for [NWR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	20	584	53	722	109	38	55	17
Future Volume (vph)	20	584	53	722	109	38	55	17
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Split	NA
Protected Phases	1	6	5	2		4	3	3
Permitted Phases	6		2		2			
Detector Phase	1	6	5	2	2	4	3	3
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	8.0	8.0	8.0
Minimum Split (s)	10.0	15.0	10.0	15.0	15.0	13.0	13.0	13.0
Total Split (s)	15.0	60.0	15.0	60.0	60.0	30.0	25.0	25.0
Total Split (%)	11.5%	46.2%	11.5%	46.2%	46.2%	23.1%	19.2%	19.2%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None
Act Effct Green (s)	43.5	38.2	45.9	41.3	41.3	14.3	11.0	11.0
Actuated g/C Ratio	0.52	0.46	0.55	0.50	0.50	0.17	0.13	0.13
v/c Ratio	0.11	0.41	0.15	0.58	0.15	0.54	0.28	0.22
Control Delay	10.6	17.9	10.6	18.8	3.8	41.8	44.6	25.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	10.6	17.9	10.6	18.9	3.8	41.8	44.6	25.8
LOS	B	B	B	B	A	D	D	C
Approach Delay		17.6		16.9		41.8		35.8
Approach LOS		B		B		D		D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 83.4	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: N Charlotte Street & Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	32	667	64	1017	124	168	64	56
v/c Ratio	0.11	0.41	0.15	0.58	0.15	0.54	0.28	0.22
Control Delay	10.6	17.9	10.6	18.8	3.8	41.8	44.6	25.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	10.6	17.9	10.6	18.9	3.8	41.8	44.6	25.8
Queue Length 50th (ft)	7	129	15	220	1	82	34	12
Queue Length 95th (ft)	16	216	37	252	31	151	84	39
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	418	2441	511	2457	1136	604	480	485
Starvation Cap Reductn	0	0	0	464	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.27	0.13	0.51	0.11	0.28	0.13	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	20	584	23	53	722	109	62	38	37	55	17	22
Future Volume (vph)	20	584	23	53	722	109	62	38	37	55	17	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.96		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1770	3514		1770	3539	1583		1757		1770	1703	
Flt Permitted	0.20	1.00		0.32	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (perm)	371	3514		593	3539	1583		1757		1770	1703	
Peak-hour factor, PHF	0.63	0.92	0.72	0.83	0.71	0.88	0.82	0.79	0.84	0.86	0.71	0.69
Adj. Flow (vph)	32	635	32	64	1017	124	76	48	44	64	24	32
RTOR Reduction (vph)	0	3	0	0	0	63	0	10	0	0	29	0
Lane Group Flow (vph)	32	664	0	64	1017	61	0	158	0	64	27	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases	6			2		2						
Actuated Green, G (s)	42.0	39.2		46.2	41.3	41.3		14.3		7.9	7.9	
Effective Green, g (s)	42.0	39.2		46.2	41.3	41.3		14.3		7.9	7.9	
Actuated g/C Ratio	0.49	0.46		0.54	0.48	0.48		0.17		0.09	0.09	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0		4.0	4.0	
Lane Grp Cap (vph)	228	1614		388	1713	766		294		163	157	
v/s Ratio Prot	0.00	0.19		c0.01	c0.29			c0.09		c0.04	0.02	
v/s Ratio Perm	0.06			0.08		0.04						
v/c Ratio	0.14	0.41		0.16	0.59	0.08		0.54		0.39	0.17	
Uniform Delay, d1	12.0	15.4		9.7	15.9	11.8		32.5		36.4	35.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.1	0.8	0.1		1.9		2.1	0.7	
Delay (s)	12.1	15.7		9.8	16.8	11.9		34.4		38.6	36.4	
Level of Service	B	B		A	B	B		C		D	D	
Approach Delay (s)		15.6			15.9			34.4			37.6	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	85.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	58.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	473	667	116	247	90
Future Vol, veh/h	48	473	667	116	247	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	375	145	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	88	91	74	55	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	538	733	157	449	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	890	0	-	0	1122	367
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	757	-	-	-	~ 200	630
Stage 1	-	-	-	-	~ 436	-
Stage 2	-	-	-	-	654	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	757	-	-	-	~ 184	630
Mov Cap-2 Maneuver	-	-	-	-	~ 304	-
Stage 1	-	-	-	-	~ 402	-
Stage 2	-	-	-	-	654	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	202.9
HCM LOS			F

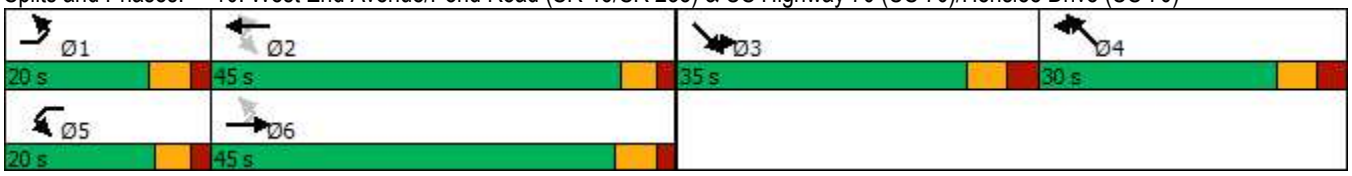
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	757	-	-	-	304	630
HCM Lane V/C Ratio	0.079	-	-	-	1.477	0.227
HCM Control Delay (s)	10.2	-	-	-	263.5	12.4
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	24.9	0.9

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

Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Configurations							
Traffic Volume (vph)	6	293	14	542	358	10	37
Future Volume (vph)	6	293	14	542	358	10	37
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	NA
Protected Phases	1	6	5	2		3	4
Permitted Phases	6		2		2		
Detector Phase	1	6	5	2	2	3	4
Switch Phase							
Minimum Initial (s)	6.0	20.0	6.0	20.0	20.0	10.0	10.0
Minimum Split (s)	12.0	26.0	11.5	25.5	25.5	17.0	33.0
Total Split (s)	20.0	45.0	20.0	45.0	45.0	35.0	30.0
Total Split (%)	15.4%	34.6%	15.4%	34.6%	34.6%	26.9%	23.1%
Yellow Time (s)	4.0	4.0	3.5	3.5	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	5.5	5.5	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None
Act Effct Green (s)	41.7	39.6	43.2	42.2	42.2	14.1	11.2
Actuated g/C Ratio	0.47	0.44	0.48	0.47	0.47	0.16	0.13
v/c Ratio	0.02	0.21	0.04	0.35	0.41	0.61	0.43
Control Delay	13.5	17.5	13.1	17.1	3.5	45.5	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	17.5	13.1	17.1	3.5	45.5	35.9
LOS	B	B	B	B	A	D	D
Approach Delay		17.4		11.7		45.5	35.9
Approach LOS		B		B		D	D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 89.3	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 50.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: West End Avenue/Pond Road (SR 46/SR 235) & US Highway 70 (US 70)/Henslee Drive (US 70)





Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	8	326	20	589	389	172	104
v/c Ratio	0.02	0.21	0.04	0.35	0.41	0.61	0.43
Control Delay	13.5	17.5	13.1	17.1	3.5	45.5	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	17.5	13.1	17.1	3.5	45.5	35.9
Queue Length 50th (ft)	2	48	5	94	0	82	38
Queue Length 95th (ft)	9	113	15	207	60	115	84
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	516	1565	628	1671	953	566	475
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.21	0.03	0.35	0.41	0.30	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	293	7	14	542	358	135	10	6	10	37	28
Future Volume (vph)	6	293	7	14	542	358	135	10	6	10	37	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.99	
Satd. Flow (prot)	1770	3526		1770	3539	1583		1775			1746	
Flt Permitted	0.38	1.00		0.55	1.00	1.00		0.96			0.99	
Satd. Flow (perm)	709	3526		1019	3539	1583		1775			1746	
Peak-hour factor, PHF	0.75	0.92	0.88	0.70	0.92	0.92	0.91	0.63	0.75	0.83	0.77	0.64
Adj. Flow (vph)	8	318	8	20	589	389	148	16	8	12	48	44
RTOR Reduction (vph)	0	1	0	0	0	214	0	2	0	0	22	0
Lane Group Flow (vph)	8	325	0	20	589	175	0	170	0	0	82	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6			2		2						
Actuated Green, G (s)	42.1	41.1		44.3	42.2	42.2		14.1			11.2	
Effective Green, g (s)	42.1	41.1		44.3	42.2	42.2		14.1			11.2	
Actuated g/C Ratio	0.45	0.44		0.47	0.45	0.45		0.15			0.12	
Clearance Time (s)	6.0	6.0		5.5	5.5	5.5		7.0			7.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	328	1541		497	1588	710		266			208	
v/s Ratio Prot	0.00	0.09		c0.00	c0.17			c0.10			c0.05	
v/s Ratio Perm	0.01			0.02		0.11						
v/c Ratio	0.02	0.21		0.04	0.37	0.25		0.64			0.39	
Uniform Delay, d1	14.5	16.4		13.3	17.1	16.0		37.6			38.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.0	0.3		0.0	0.7	0.8		5.2			1.2	
Delay (s)	14.5	16.7		13.3	17.8	16.9		42.7			39.5	
Level of Service	B	B		B	B	B		D			D	
Approach Delay (s)		16.7			17.3			42.7			39.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

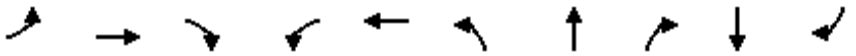
HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	276	197	62	422	327	136	33	106	31
Future Volume (vph)	13	276	197	62	422	327	136	33	106	31
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	3	3		4	
Permitted Phases	2		2	6				3		4
Detector Phase	5	2	2	1	6	3	3	3	4	4
Switch Phase										
Minimum Initial (s)	4.0	3.0	3.0	4.0	3.0	6.0	6.0	6.0	10.0	10.0
Minimum Split (s)	12.5	14.0	14.0	12.5	14.0	13.0	13.0	13.0	15.0	15.0
Total Split (s)	15.0	40.0	40.0	15.0	40.0	20.0	20.0	20.0	25.0	25.0
Total Split (%)	15.0%	40.0%	40.0%	15.0%	40.0%	20.0%	20.0%	20.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	Min	Min
Act Effct Green (s)	41.6	34.1	34.1	48.4	43.0	15.1	15.1	15.1	15.6	15.6
Actuated g/C Ratio	0.44	0.36	0.36	0.52	0.46	0.16	0.16	0.16	0.17	0.17
v/c Ratio	0.04	0.25	0.33	0.21	0.33	1.04	1.03	0.11	0.64	0.11
Control Delay	12.6	22.4	4.5	13.4	17.9	107.1	103.7	0.6	46.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	22.4	4.5	13.4	17.9	107.1	103.7	0.6	46.7	0.6
LOS	B	C	A	B	B	F	F	A	D	A
Approach Delay		14.6			17.1		98.5		38.9	
Approach LOS		B			B		F		D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 93.9	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 42.8	Intersection LOS: D
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Beasley Drive & US Highway 70 (US 70)



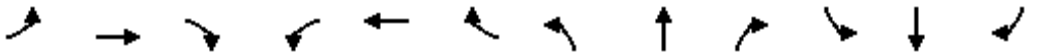


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	317	243	117	531	280	286	40	196	40
v/c Ratio	0.04	0.25	0.33	0.21	0.33	1.04	1.03	0.11	0.64	0.11
Control Delay	12.6	22.4	4.5	13.4	17.9	107.1	103.7	0.6	46.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	22.4	4.5	13.4	17.9	107.1	103.7	0.6	46.7	0.6
Queue Length 50th (ft)	4	68	0	35	90	~193	~195	0	110	0
Queue Length 95th (ft)	14	107	35	39	169	#341	#320	0	133	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	520	1285	729	573	1598	269	277	368	394	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.25	0.33	0.20	0.33	1.04	1.03	0.11	0.50	0.09

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	276	197	62	422	33	327	136	33	23	106	31
Future Volume (vph)	13	276	197	62	422	33	327	136	33	23	106	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.99	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3467		1681	1735	1583		1844	1583
Flt Permitted	0.45	1.00	1.00	0.50	1.00		0.95	0.98	1.00		0.99	1.00
Satd. Flow (perm)	847	3539	1583	927	3467		1681	1735	1583		1844	1583
Peak-hour factor, PHF	0.81	0.87	0.81	0.53	0.92	0.46	0.83	0.79	0.83	0.58	0.68	0.78
Adj. Flow (vph)	16	317	243	117	459	72	394	172	40	40	156	40
RTOR Reduction (vph)	0	0	150	0	11	0	0	0	34	0	0	34
Lane Group Flow (vph)	16	317	93	117	520	0	280	286	6	0	196	6
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6					3			4
Actuated Green, G (s)	39.5	37.0	37.0	50.0	43.0		15.0	15.0	15.0		15.6	15.6
Effective Green, g (s)	39.5	37.0	37.0	50.0	43.0		15.0	15.0	15.0		15.6	15.6
Actuated g/C Ratio	0.41	0.38	0.38	0.52	0.45		0.16	0.16	0.16		0.16	0.16
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	370	1355	606	553	1543		261	269	245		297	255
v/s Ratio Prot	0.00	0.09		c0.02	c0.15		c0.17	0.16			c0.11	
v/s Ratio Perm	0.02		0.06	0.09					0.00			0.00
v/c Ratio	0.04	0.23	0.15	0.21	0.34		1.07	1.06	0.03		0.66	0.03
Uniform Delay, d1	17.0	20.2	19.5	12.2	17.5		40.8	40.8	34.6		38.0	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.4	0.5	0.2	0.6		76.4	72.6	0.1		5.8	0.1
Delay (s)	17.1	20.6	20.1	12.4	18.1		117.2	113.4	34.7		43.8	34.2
Level of Service	B	C	C	B	B		F	F	C		D	C
Approach Delay (s)		20.3			17.1			109.9			42.2	
Approach LOS		C			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	48.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	96.6	Sum of lost time (s)	20.5
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

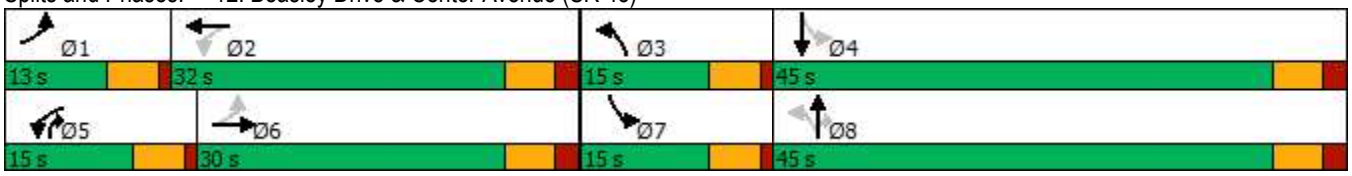
c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	84	128	23	162	118	341	36	15	241
Future Volume (vph)	84	128	23	162	118	341	36	15	241
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	1	6	5	2	3	8	5	7	4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	3	8	5	7	4
Switch Phase									
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	10.0	6.0	6.0	10.0
Minimum Split (s)	11.0	16.0	11.0	16.0	11.0	16.0	11.0	11.0	16.0
Total Split (s)	13.0	30.0	15.0	32.0	15.0	45.0	15.0	15.0	45.0
Total Split (%)	12.4%	28.6%	14.3%	30.5%	14.3%	42.9%	14.3%	14.3%	42.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	24.1	19.1	21.5	15.9	33.8	31.2	45.1	29.1	23.6
Actuated g/C Ratio	0.34	0.27	0.30	0.22	0.47	0.44	0.63	0.41	0.33
v/c Ratio	0.25	0.58	0.08	0.50	0.34	0.47	0.04	0.03	0.70
Control Delay	19.8	29.0	18.7	32.9	13.7	17.8	0.6	11.3	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	29.0	18.7	32.9	13.7	17.8	0.6	11.3	28.5
LOS	B	C	B	C	B	B	A	B	C
Approach Delay		26.6		31.3		15.5			27.9
Approach LOS		C		C		B			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 71.3	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

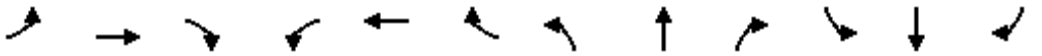
Splits and Phases: 12: Beasley Drive & Center Avenue (SR 48)





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	100	285	28	208	133	383	44	16	425
v/c Ratio	0.25	0.58	0.08	0.50	0.34	0.47	0.04	0.03	0.70
Control Delay	19.8	29.0	18.7	32.9	13.7	17.8	0.6	11.3	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	29.0	18.7	32.9	13.7	17.8	0.6	11.3	28.5
Queue Length 50th (ft)	29	103	8	83	32	111	0	4	160
Queue Length 95th (ft)	73	216	27	184	71	259	2	15	307
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	425	693	450	768	450	1134	1126	555	1063
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.41	0.06	0.27	0.30	0.34	0.04	0.03	0.40

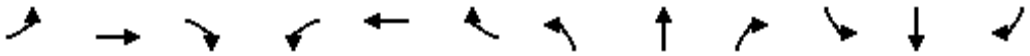
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	128	122	23	162	21	118	341	36	15	241	147
Future Volume (vph)	84	128	122	23	162	21	118	341	36	15	241	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1729		1770	1825		1770	1863	1583	1770	1756	
Flt Permitted	0.50	1.00		0.49	1.00		0.28	1.00	1.00	0.50	1.00	
Satd. Flow (perm)	934	1729		919	1825		530	1863	1583	937	1756	
Peak-hour factor, PHF	0.84	0.86	0.90	0.82	0.90	0.75	0.89	0.89	0.82	0.92	0.92	0.90
Adj. Flow (vph)	100	149	136	28	180	28	133	383	44	16	262	163
RTOR Reduction (vph)	0	31	0	0	5	0	0	0	24	0	22	0
Lane Group Flow (vph)	100	254	0	28	203	0	133	383	20	16	403	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	24.3	19.1		20.1	17.0		36.7	31.2	34.3	27.5	26.6	
Effective Green, g (s)	24.3	19.1		20.1	17.0		36.7	31.2	34.3	27.5	26.6	
Actuated g/C Ratio	0.32	0.25		0.26	0.22		0.48	0.41	0.45	0.36	0.35	
Clearance Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.5	1.5	1.5	3.5	
Lane Grp Cap (vph)	354	432		276	406		344	761	711	347	612	
v/s Ratio Prot	c0.02	c0.15		0.00	0.11		c0.03	c0.21	0.00	0.00	c0.23	
v/s Ratio Perm	0.07			0.02			0.16		0.01	0.02		
v/c Ratio	0.28	0.59		0.10	0.50		0.39	0.50	0.03	0.05	0.66	
Uniform Delay, d1	18.9	25.1		21.1	25.9		12.6	16.8	11.7	15.8	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	2.1		0.1	1.0		0.3	0.6	0.0	0.0	2.7	
Delay (s)	19.0	27.2		21.1	26.9		12.9	17.4	11.7	15.8	23.7	
Level of Service	B	C		C	C		B	B	B	B	C	
Approach Delay (s)		25.1			26.2			15.9			23.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	22.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	128	122	23	162	21	118	341	36	15	241	147
Future Volume (veh/h)	84	128	122	23	162	21	118	341	36	15	241	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	149	136	28	180	28	133	383	44	16	262	163
Peak Hour Factor	0.84	0.86	0.90	0.82	0.90	0.75	0.89	0.89	0.82	0.92	0.92	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	330	188	172	242	262	41	354	691	645	359	329	205
Arrive On Green	0.08	0.21	0.21	0.04	0.17	0.17	0.09	0.37	0.37	0.02	0.31	0.31
Sat Flow, veh/h	1781	900	822	1781	1580	246	1781	1870	1585	1781	1079	671
Grp Volume(v), veh/h	100	0	285	28	0	208	133	383	44	16	0	425
Grp Sat Flow(s),veh/h/ln	1781	0	1722	1781	0	1826	1781	1870	1585	1781	0	1750
Q Serve(g_s), s	2.7	0.0	9.6	0.8	0.0	6.5	2.9	9.9	1.0	0.4	0.0	13.6
Cycle Q Clear(g_c), s	2.7	0.0	9.6	0.8	0.0	6.5	2.9	9.9	1.0	0.4	0.0	13.6
Prop In Lane	1.00		0.48	1.00		0.13	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	330	0	360	242	0	303	354	691	645	359	0	534
V/C Ratio(X)	0.30	0.00	0.79	0.12	0.00	0.69	0.38	0.55	0.07	0.04	0.00	0.80
Avail Cap(c_a), veh/h	421	0	678	467	0	778	489	1196	1072	609	0	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	22.9	20.1	0.0	23.9	13.5	15.2	11.0	14.2	0.0	19.5
Incr Delay (d2), s/veh	0.2	0.0	3.9	0.1	0.0	2.7	0.2	0.8	0.1	0.0	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	3.7	0.3	0.0	2.9	0.9	3.6	0.3	0.1	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	26.8	20.2	0.0	26.7	13.8	16.1	11.1	14.2	0.0	22.8
LnGrp LOS	B	A	C	C	A	C	B	B	B	B	A	C
Approach Vol, veh/h		385			236			560			441	
Approach Delay, s/veh		24.7			25.9			15.1			22.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	16.1	10.4	24.6	7.3	18.8	6.4	28.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	8.0	26.0	10.0	39.0	10.0	24.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	4.7	8.5	4.9	15.6	2.8	11.6	2.4	11.9
Green Ext Time (p_c), s	0.0	1.0	0.0	3.0	0.0	1.2	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	14	401	28	518	132	41	50	134	50
Future Volume (vph)	14	401	28	518	132	41	50	134	50
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6		7	4	3	8
Permitted Phases	2		6		6	4		8	
Detector Phase	5	2	1	6	6	7	4	3	8
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	6.0	5.0	6.0
Minimum Split (s)	10.5	16.5	10.5	16.5	16.5	10.5	12.5	10.5	12.5
Total Split (s)	20.0	40.0	20.0	40.0	40.0	20.0	30.0	20.0	30.0
Total Split (%)	18.2%	36.4%	18.2%	36.4%	36.4%	18.2%	27.3%	18.2%	27.3%
Yellow Time (s)	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.5	5.5	6.5	6.5	5.5	6.5	5.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	19.5	16.6	19.7	16.7	16.7	13.6	8.4	20.0	13.5
Actuated g/C Ratio	0.36	0.30	0.36	0.31	0.31	0.25	0.15	0.37	0.25
v/c Ratio	0.06	0.46	0.10	0.52	0.27	0.16	0.33	0.45	0.25
Control Delay	11.9	19.2	12.1	19.8	5.3	14.7	23.4	16.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	19.2	12.1	19.8	5.3	14.7	23.4	16.7	17.1
LOS	B	B	B	B	A	B	C	B	B
Approach Delay		18.8		16.4			20.0		16.8
Approach LOS		B		B			C		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 54.7	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 48.0%	ICU Level of Service A
Analysis Period (min) 15	

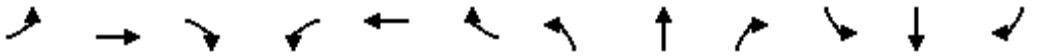
Splits and Phases: 13: Cowan Road & Beasley Drive





Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	493	40	563	159	60	96	203	116
v/c Ratio	0.06	0.46	0.10	0.52	0.27	0.16	0.33	0.45	0.25
Control Delay	11.9	19.2	12.1	19.8	5.3	14.7	23.4	16.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	19.2	12.1	19.8	5.3	14.7	23.4	16.7	17.1
Queue Length 50th (ft)	5	57	8	67	0	9	17	33	17
Queue Length 95th (ft)	12	138	21	173	33	31	74	82	72
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	619	2354	631	2364	1110	678	871	632	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.21	0.06	0.24	0.14	0.09	0.11	0.32	0.13

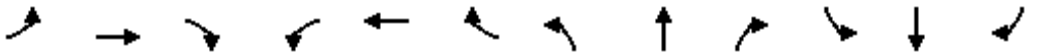
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	401	10	28	518	132	41	50	30	134	50	47
Future Volume (vph)	14	401	10	28	518	132	41	50	30	134	50	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3522		1770	3539	1583	1770	1746		1770	1718	
Flt Permitted	0.39	1.00		0.45	1.00	1.00	0.68	1.00		0.39	1.00	
Satd. Flow (perm)	732	3522		837	3539	1583	1271	1746		729	1718	
Peak-hour factor, PHF	0.58	0.84	0.63	0.70	0.92	0.83	0.68	0.89	0.75	0.66	0.89	0.78
Adj. Flow (vph)	24	477	16	40	563	159	60	56	40	203	56	60
RTOR Reduction (vph)	0	2	0	0	0	114	0	26	0	0	35	0
Lane Group Flow (vph)	24	491	0	40	563	45	60	70	0	203	81	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	18.4	16.7		18.6	16.8	16.8	10.6	7.1		22.5	13.5	
Effective Green, g (s)	18.4	16.7		18.6	16.8	16.8	10.6	7.1		22.5	13.5	
Actuated g/C Ratio	0.31	0.28		0.31	0.28	0.28	0.18	0.12		0.38	0.23	
Clearance Time (s)	5.5	6.5		5.5	6.5	6.5	5.5	6.5		5.5	6.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0	2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	256	988		289	999	446	255	208		448	389	
v/s Ratio Prot	0.00	0.14		c0.00	c0.16		0.01	0.04		c0.08	0.05	
v/s Ratio Perm	0.03			0.04		0.03	0.03			c0.10		
v/c Ratio	0.09	0.50		0.14	0.56	0.10	0.24	0.33		0.45	0.21	
Uniform Delay, d1	14.4	17.9		14.4	18.2	15.8	20.8	24.0		13.3	18.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.1	0.7	0.1	0.2	0.7		0.3	0.2	
Delay (s)	14.5	18.3		14.5	19.0	15.9	21.0	24.7		13.6	18.9	
Level of Service	B	B		B	B	B	C	C		B	B	
Approach Delay (s)		18.1			18.1			23.3			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	401	10	28	518	132	41	50	30	134	50	47
Future Volume (veh/h)	14	401	10	28	518	132	41	50	30	134	50	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	477	16	40	563	159	60	56	40	203	56	60
Peak Hour Factor	0.58	0.84	0.63	0.70	0.92	0.83	0.68	0.89	0.75	0.66	0.89	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	880	29	334	941	420	383	115	82	452	156	167
Arrive On Green	0.03	0.25	0.25	0.04	0.26	0.26	0.06	0.11	0.11	0.13	0.19	0.19
Sat Flow, veh/h	1781	3509	118	1781	3554	1585	1781	1015	725	1781	826	885
Grp Volume(v), veh/h	24	241	252	40	563	159	60	0	96	203	0	116
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1585	1781	0	1740	1781	0	1711
Q Serve(g_s), s	0.5	6.1	6.1	0.8	7.2	4.3	1.5	0.0	2.7	5.0	0.0	3.1
Cycle Q Clear(g_c), s	0.5	6.1	6.1	0.8	7.2	4.3	1.5	0.0	2.7	5.0	0.0	3.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.42	1.00		0.52
Lane Grp Cap(c), veh/h	282	446	464	334	941	420	383	0	197	452	0	322
V/C Ratio(X)	0.09	0.54	0.54	0.12	0.60	0.38	0.16	0.00	0.49	0.45	0.00	0.36
Avail Cap(c_a), veh/h	729	1148	1195	757	2296	1024	782	0	788	717	0	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	16.8	16.8	13.6	16.6	15.6	18.5	0.0	21.6	16.5	0.0	18.3
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.1	0.6	0.6	0.1	0.0	1.4	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.1	2.2	0.3	2.7	1.4	0.6	0.0	1.1	1.8	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	17.9	17.8	13.7	17.3	16.1	18.6	0.0	22.9	16.8	0.0	18.8
LnGrp LOS	B	B	B	B	B	B	B	A	C	B	A	B
Approach Vol, veh/h		517			762			156			319	
Approach Delay, s/veh		17.7			16.8			21.3			17.5	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	19.5	12.3	12.4	7.0	20.2	8.4	16.3
Change Period (Y+Rc), s	5.5	6.5	5.5	6.5	5.5	6.5	5.5	6.5
Max Green Setting (Gmax), s	14.5	33.5	14.5	23.5	14.5	33.5	14.5	23.5
Max Q Clear Time (g_c+I1), s	2.8	8.1	7.0	4.7	2.5	9.2	3.5	5.1
Green Ext Time (p_c), s	0.0	2.6	0.2	0.4	0.0	4.6	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Lane Group	SEL	SET	NWT	SWL	SWR
Lane Configurations					
Traffic Volume (vph)	92	507	528	92	175
Future Volume (vph)	92	507	528	92	175
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	5	2	6	4	
Permitted Phases	2				4
Detector Phase	5	2	6	4	4
Switch Phase					
Minimum Initial (s)	7.0	20.0	20.0	7.0	7.0
Minimum Split (s)	12.5	25.5	25.5	13.0	13.0
Total Split (s)	13.0	43.0	30.0	15.0	15.0
Total Split (%)	22.4%	74.1%	51.7%	25.9%	25.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None
Act Effct Green (s)	31.6	33.7	24.5	8.8	8.8
Actuated g/C Ratio	0.66	0.70	0.51	0.18	0.18
v/c Ratio	0.18	0.25	0.40	0.39	0.44
Control Delay	4.9	4.5	11.9	24.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	4.5	11.9	24.9	7.6
LOS	A	A	B	C	A
Approach Delay		4.5	11.9	14.4	
Approach LOS		A	B	B	

Intersection Summary	
Cycle Length: 58	
Actuated Cycle Length: 48.1	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 42.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Beasley Drive & Thornton Drive





Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	100	618	708	128	199
v/c Ratio	0.18	0.25	0.40	0.39	0.44
Control Delay	4.9	4.5	11.9	24.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	4.5	11.9	24.9	7.6
Queue Length 50th (ft)	11	40	84	37	0
Queue Length 95th (ft)	24	52	115	65	44
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	555	2683	1949	362	482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.23	0.36	0.35	0.41

Intersection Summary



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	92	507	528	58	92	175
Future Volume (vph)	92	507	528	58	92	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3480		1770	1583
Flt Permitted	0.28	1.00	1.00		0.95	1.00
Satd. Flow (perm)	522	3539	3480		1770	1583
Peak-hour factor, PHF	0.92	0.82	0.84	0.73	0.72	0.88
Adj. Flow (vph)	100	618	629	79	128	199
RTOR Reduction (vph)	0	0	16	0	0	175
Lane Group Flow (vph)	100	618	692	0	128	24
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	33.2	33.2	22.4		6.2	6.2
Effective Green, g (s)	33.2	33.2	22.4		6.2	6.2
Actuated g/C Ratio	0.65	0.65	0.44		0.12	0.12
Clearance Time (s)	5.5	5.5	5.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	470	2308	1531		215	192
v/s Ratio Prot	0.02	c0.17	c0.20		c0.07	
v/s Ratio Perm	0.12					0.02
v/c Ratio	0.21	0.27	0.45		0.60	0.13
Uniform Delay, d1	3.9	3.7	10.0		21.2	19.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2		4.4	0.3
Delay (s)	4.1	3.8	10.2		25.5	20.2
Level of Service	A	A	B		C	C
Approach Delay (s)		3.8	10.2		22.3	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

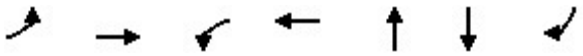


Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	92	507	528	58	92	175
Future Volume (veh/h)	92	507	528	58	92	175
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	618	629	79	128	199
Peak Hour Factor	0.92	0.82	0.84	0.73	0.72	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	513	2171	1261	158	286	255
Arrive On Green	0.10	0.61	0.40	0.40	0.16	0.16
Sat Flow, veh/h	1781	3647	3271	398	1781	1585
Grp Volume(v), veh/h	100	618	351	357	128	199
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1799	1781	1585
Q Serve(g_s), s	1.4	4.1	7.5	7.5	3.3	6.1
Cycle Q Clear(g_c), s	1.4	4.1	7.5	7.5	3.3	6.1
Prop In Lane	1.00			0.22	1.00	1.00
Lane Grp Cap(c), veh/h	513	2171	705	714	286	255
V/C Ratio(X)	0.19	0.28	0.50	0.50	0.45	0.78
Avail Cap(c_a), veh/h	592	2646	864	875	318	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.7	4.6	11.4	11.4	19.1	20.3
Incr Delay (d2), s/veh	0.2	0.1	0.5	0.5	1.1	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	2.5	2.6	1.3	6.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.8	4.7	12.0	12.0	20.2	32.3
LnGrp LOS	A	A	B	B	C	C
Approach Vol, veh/h		718	708		327	
Approach Delay, s/veh		5.0	12.0		27.5	
Approach LOS		A	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.3		14.1	10.8	25.5
Change Period (Y+Rc), s		5.5		6.0	5.5	5.5
Max Green Setting (Gmax), s		37.5		9.0	7.5	24.5
Max Q Clear Time (g_c+I1), s		6.1		8.1	3.4	9.5
Green Ext Time (p_c), s		4.7		0.1	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

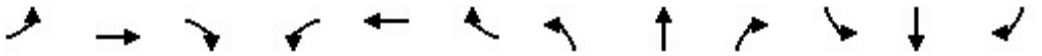
CAPACITY ANALYSIS
POST-CONDITION



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	44	577	44	507	407	24	80
v/c Ratio	0.10	0.40	0.11	0.40	0.89	0.07	0.17
Control Delay	5.0	10.8	10.5	19.5	46.0	18.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	10.8	10.5	19.5	46.0	18.7	3.2
Queue Length 50th (ft)	6	96	9	90	158	10	0
Queue Length 95th (ft)	4	114	23	102	#249	11	5
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	483	1452	473	1265	472	638	531
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.40	0.09	0.40	0.86	0.04	0.15

Intersection Summary

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



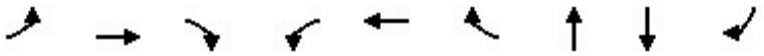
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	211	210	37	360	0	298	19	16	0	11	45
Future Volume (veh/h)	29	211	210	37	360	0	298	19	16	0	11	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	285	0	44	507	0	347	24	0	0	24	80
Peak Hour Factor	0.66	0.74	0.72	0.84	0.71	0.92	0.86	0.79	0.44	0.92	0.46	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	426	1360		536	1360	0	481	26		0	597	571
Arrive On Green	0.04	0.38	0.00	0.04	0.38	0.00	0.32	0.32	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1781	3647	0	1781	3647	0	1197	83	0	0	1870	1585
Grp Volume(v), veh/h	44	285	0	44	507	0	371	0	0	0	24	80
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1280	0	0	0	1870	1585
Q Serve(g_s), s	1.0	3.8	0.0	1.0	7.2	0.0	18.9	0.0	0.0	0.0	0.6	2.4
Cycle Q Clear(g_c), s	1.0	3.8	0.0	1.0	7.2	0.0	19.6	0.0	0.0	0.0	0.6	2.4
Prop In Lane	1.00		0.00	1.00		0.00	0.94		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	426	1360		536	1360	0	508	0		0	597	571
V/C Ratio(X)	0.10	0.21		0.08	0.37	0.00	0.73	0.00		0.00	0.04	0.14
Avail Cap(c_a), veh/h	582	1360		692	1360	0	539	0		0	641	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	14.5	0.0	12.0	15.6	0.0	23.2	0.0	0.0	0.0	16.4	15.1
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.0	0.8	0.0	6.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.4	0.0	0.4	2.6	0.0	5.7	0.0	0.0	0.0	0.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	14.8	0.0	12.1	16.3	0.0	29.3	0.0	0.0	0.0	16.5	15.2
LnGrp LOS	B	B		B	B	A	C	A		A	B	B
Approach Vol, veh/h		329	A		551			371	A		104	
Approach Delay, s/veh		14.5			16.0			29.3			15.5	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	32.8		28.3	8.9	32.8		28.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	19.0		24.0	9.0	19.0		24.0				
Max Q Clear Time (g_c+I1), s	3.0	5.8		4.4	3.0	9.2		21.6				
Green Ext Time (p_c), s	0.0	3.8		0.3	0.0	5.3		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		19.2
HCM 6th LOS		B

Notes

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

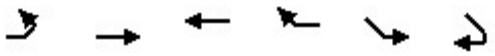


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	40	480	44	72	743	20	128	64	104
v/c Ratio	0.10	0.28	0.05	0.13	0.40	0.02	0.54	0.30	0.28
Control Delay	9.8	19.3	2.1	7.8	14.8	0.1	31.7	31.8	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	19.3	2.1	7.8	14.8	0.1	31.7	31.8	1.9
Queue Length 50th (ft)	12	104	1	8	143	0	43	26	0
Queue Length 95th (ft)	26	145	8	m13	m193	m0	29	46	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	496	1704	863	600	1843	918	282	260	406
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.28	0.05	0.12	0.40	0.02	0.45	0.25	0.26

Intersection Summary

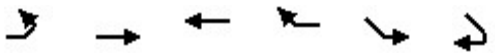
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	12	280	485	709	374	20
v/c Ratio	0.02	0.12	0.22	0.57	0.57	0.06
Control Delay	5.2	5.1	3.9	4.6	24.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	5.1	3.9	4.6	24.0	8.9
Queue Length 50th (ft)	2	20	17	62	88	1
Queue Length 95th (ft)	3	31	36	43	121	9
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	629	2310	2192	1250	980	466
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.12	0.22	0.57	0.38	0.04

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	5	210	427	532	318	9
Future Volume (veh/h)	5	210	427	532	318	9
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	280	485	0	374	0
Peak Hour Factor	0.42	0.75	0.88	0.75	0.85	0.45
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	637	2464	2107		516	
Arrive On Green	0.01	0.69	0.79	0.00	0.15	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	12	280	485	0	374	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.2	1.8	2.5	0.0	7.2	0.0
Cycle Q Clear(g_c), s	0.2	1.8	2.5	0.0	7.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	637	2464	2107		516	
V/C Ratio(X)	0.02	0.11	0.23		0.72	
Avail Cap(c_a), veh/h	840	2464	2107		987	
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.00	0.99	0.00
Uniform Delay (d), s/veh	4.8	3.6	3.3	0.0	28.4	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.7	0.0	3.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	3.7	3.5	0.0	30.7	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		292	485	A	374	A
Approach Delay, s/veh		3.7	3.5		30.7	
Approach LOS		A	A		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.0	47.5		15.5		54.5
Change Period (Y+Rc), s	6.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	24.0		20.0		39.0
Max Q Clear Time (g_c+I1), s	2.2	4.5		9.2		3.8
Green Ext Time (p_c), s	0.0	4.4		1.2		3.0

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	16	485	12	632	60	44	28
v/c Ratio	0.02	0.21	0.02	0.22	0.31	0.24	0.10
Control Delay	1.5	2.1	3.2	3.8	26.9	31.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	2.1	3.2	3.8	26.9	31.4	0.7
Queue Length 50th (ft)	1	12	1	30	18	18	0
Queue Length 95th (ft)	2	14	2	67	17	24	0
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	752	2347	807	2865	368	369	441
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.21	0.01	0.22	0.16	0.12	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	11	339	43	4	477	24	10	11	7	15	10	25
Future Volume (veh/h)	11	339	43	4	477	24	10	11	7	15	10	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	413	72	12	596	36	16	28	16	24	20	28
Peak Hour Factor	0.69	0.82	0.60	0.33	0.80	0.67	0.63	0.39	0.44	0.63	0.50	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	634	1957	339	767	2354	142	88	68	33	132	75	119
Arrive On Green	0.02	0.65	0.65	0.07	0.69	0.69	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	3029	524	1781	3405	205	305	904	439	695	992	1585
Grp Volume(v), veh/h	16	241	244	12	311	321	60	0	0	44	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1833	1648	0	0	1687	0	1585
Q Serve(g_s), s	0.2	3.9	3.9	0.1	4.6	4.6	0.8	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	0.2	3.9	3.9	0.1	4.6	4.6	2.4	0.0	0.0	1.6	0.0	1.2
Prop In Lane	1.00		0.30	1.00		0.11	0.27		0.27	0.55		1.00
Lane Grp Cap(c), veh/h	634	1148	1147	767	1228	1267	189	0	0	207	0	119
V/C Ratio(X)	0.03	0.21	0.21	0.02	0.25	0.25	0.32	0.00	0.00	0.21	0.00	0.23
Avail Cap(c_a), veh/h	842	1148	1147	894	1228	1267	427	0	0	434	0	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.81	0.81	0.81	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.0	5.1	5.1	2.9	4.0	4.0	31.0	0.0	0.0	30.6	0.0	30.5
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.0	0.4	0.4	0.7	0.0	0.0	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	1.2	0.0	1.2	1.3	1.0	0.0	0.0	0.7	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	5.5	5.5	2.9	4.4	4.4	31.7	0.0	0.0	31.0	0.0	31.2
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	C
Approach Vol, veh/h		501			644			60			72	
Approach Delay, s/veh		5.4			4.4			31.7			31.1	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	50.2		9.8	6.8	53.4		9.8				
Change Period (Y+Rc), s	5.0	5.0		4.5	5.5	5.0		4.5				
Max Green Setting (Gmax), s	10.0	30.0		15.5	9.5	30.0		15.5				
Max Q Clear Time (g_c+I1), s	2.1	5.9		3.6	2.2	6.6		4.4				
Green Ext Time (p_c), s	0.0	5.4		0.1	0.0	7.2		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		7.6	
HCM 6th LOS		A	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	351	609	108	317	521	89
v/c Ratio	0.20	0.55	0.17	0.14	0.70	0.23
Control Delay	9.1	7.7	3.7	3.0	31.0	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	7.7	3.7	3.0	31.0	11.0
Queue Length 50th (ft)	54	100	9	11	102	8
Queue Length 95th (ft)	51	290	40	49	134	26
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	1785	1100	678	2312	778	409
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.55	0.16	0.14	0.67	0.22

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	323	554	91	276	417	62
Future Volume (veh/h)	323	554	91	276	417	62
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	351	0	108	317	521	0
Peak Hour Factor	0.92	0.91	0.84	0.87	0.80	0.70
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1905		714	2407	646	
Arrive On Green	0.54	0.00	0.06	0.68	0.19	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	351	0	108	317	521	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	3.6	0.0	1.7	2.2	10.1	0.0
Cycle Q Clear(g_c), s	3.6	0.0	1.7	2.2	10.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1905		714	2407	646	
V/C Ratio(X)	0.18		0.15	0.13	0.81	
Avail Cap(c_a), veh/h	1905		844	2407	765	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.00	0.99	0.99	1.00	0.00
Uniform Delay (d), s/veh	8.4	0.0	5.4	4.0	27.2	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	6.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.5	0.6	4.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	0.0	5.5	4.1	33.3	0.0
LnGrp LOS	A		A	A	C	
Approach Vol, veh/h	351	A		425	521	A
Approach Delay, s/veh	8.6			4.5	33.3	
Approach LOS	A			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		52.4		17.6	9.9	42.5
Change Period (Y+Rc), s		5.0		4.5	5.5	5.0
Max Green Setting (Gmax), s		45.0		15.5	9.5	30.0
Max Q Clear Time (g_c+I1), s		4.2		12.1	3.7	5.6
Green Ext Time (p_c), s		5.4		1.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

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



Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	40	737	28	593	68	60	88	52
v/c Ratio	0.08	0.37	0.06	0.32	0.34	0.17	0.42	0.14
Control Delay	11.5	15.0	16.5	20.6	33.2	1.0	34.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	15.0	16.5	20.6	33.2	1.0	34.6	0.8
Queue Length 50th (ft)	11	105	6	93	28	0	36	0
Queue Length 95th (ft)	m20	135	m19	174	50	0	69	0
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	568	1986	524	1860	256	406	243	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.37	0.05	0.32	0.27	0.15	0.36	0.13

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	350	84	4	796	696	8
v/c Ratio	0.58	0.24	0.01	0.33	0.30	0.01
Control Delay	30.2	8.0	4.0	4.1	2.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	8.0	4.0	4.1	2.3	0.3
Queue Length 50th (ft)	72	0	1	69	20	0
Queue Length 95th (ft)	98	25	m0	26	16	0
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	684	383	586	2461	2328	1044
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.22	0.01	0.32	0.30	0.01

Intersection Summary

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



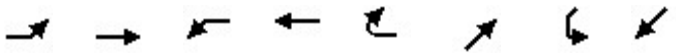
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	301	68	1	669	592	3
Future Volume (veh/h)	301	68	1	669	592	3
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	350	0	4	796	696	0
Peak Hour Factor	0.86	0.81	0.25	0.84	0.85	0.38
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	463		539	2596	2323	
Arrive On Green	0.13	0.00	0.01	0.73	0.65	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	350	0	4	796	696	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.8	0.0	0.0	5.4	5.9	0.0
Cycle Q Clear(g_c), s	6.8	0.0	0.0	5.4	5.9	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	463		539	2596	2323	
V/C Ratio(X)	0.76		0.01	0.31	0.30	
Avail Cap(c_a), veh/h	666		784	2596	2323	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.87	0.87	0.96	0.00
Uniform Delay (d), s/veh	29.2	0.0	3.9	3.3	5.2	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	1.2	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.2	0.0	3.9	3.5	5.5	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	350	A		800	696	A
Approach Delay, s/veh	32.2			3.5	5.5	
Approach LOS	C			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.4	50.8		13.9		56.1
Change Period (Y+Rc), s	5.0	5.0		4.5		5.0
Max Green Setting (Gmax), s	10.0	32.0		13.5		47.0
Max Q Clear Time (g_c+I1), s	2.0	7.9		8.8		7.4
Green Ext Time (p_c), s	0.0	8.7		0.6		12.4

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

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



Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	32	804	52	704	28	160	53	96
v/c Ratio	0.08	0.50	0.15	0.40	0.03	0.63	0.25	0.38
Control Delay	13.4	20.9	6.2	7.8	0.1	37.2	30.4	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	20.9	6.2	7.8	0.1	37.2	30.4	17.7
Queue Length 50th (ft)	8	157	4	31	0	57	21	14
Queue Length 95th (ft)	m24	214	14	59	0	76	50	32
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	467	1622	430	1750	885	273	252	292
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.50	0.12	0.40	0.03	0.59	0.21	0.33

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	302	471	293	605	3	210	198
v/c Ratio	0.57	0.27	0.32	0.70	0.04	0.65	0.44
Control Delay	23.4	12.8	17.4	14.9	27.3	35.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	12.8	17.4	14.9	27.3	35.7	7.9
Queue Length 50th (ft)	104	67	57	115	1	88	4
Queue Length 95th (ft)	111	m96	103	135	8	109	54
Internal Link Dist (ft)		4343	979		170		322
Turn Bay Length (ft)	200			375		145	
Base Capacity (vph)	543	1749	940	864	78	374	499
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.27	0.31	0.70	0.04	0.56	0.40

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.

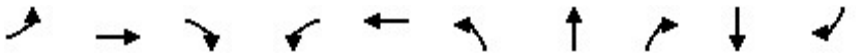


Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	4	520	12	277	131	393	44
v/c Ratio	0.01	0.34	0.03	0.18	0.16	0.90	0.22
Control Delay	3.0	4.3	6.5	6.4	0.5	52.4	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	4.3	6.5	6.4	0.5	52.4	21.8
Queue Length 50th (ft)	0	17	1	13	0	164	10
Queue Length 95th (ft)	m1	m28	4	30	0	152	16
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	560	1531	449	1542	822	437	214
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.34	0.03	0.18	0.16	0.90	0.21

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	28	442	434	48	243	144	148	60	248	24
v/c Ratio	0.06	0.38	0.53	0.11	0.19	0.55	0.55	0.14	0.79	0.05
Control Delay	12.3	21.2	5.4	1.8	2.4	35.7	35.2	0.7	49.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	21.2	5.4	1.8	2.4	35.7	35.2	0.7	49.1	0.2
Queue Length 50th (ft)	7	86	0	1	2	60	61	0	105	0
Queue Length 95th (ft)	20	125	36	m2	m2	111	101	0	#199	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	503	1170	814	426	1295	288	298	458	313	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.38	0.53	0.11	0.19	0.50	0.50	0.13	0.79	0.05

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.

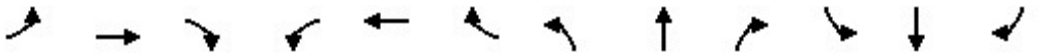


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	391	40	108	96	241	8	4	734
v/c Ratio	0.33	0.79	0.17	0.31	0.46	0.26	0.01	0.01	0.98
Control Delay	20.8	39.8	17.8	26.7	30.7	10.6	0.0	15.0	60.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	39.8	17.8	26.7	30.7	10.6	0.0	15.0	60.1
Queue Length 50th (ft)	49	187	14	43	12	32	0	1	~520
Queue Length 95th (ft)	59	278	22	71	63	64	0	4	#681
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	420	517	322	492	211	920	1107	565	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.76	0.12	0.22	0.45	0.26	0.01	0.01	0.98

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	204	149	26	66	13	73	183	6	2	520	63
Future Volume (veh/h)	92	204	149	26	66	13	73	183	6	2	520	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	229	162	40	84	24	96	241	8	4	634	100
Peak Hour Factor	0.68	0.89	0.92	0.65	0.79	0.54	0.76	0.76	0.75	0.50	0.82	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	251	178	170	276	79	176	846	772	509	642	101
Arrive On Green	0.08	0.25	0.25	0.04	0.20	0.20	0.05	0.45	0.45	0.01	0.41	0.41
Sat Flow, veh/h	1781	1019	721	1781	1399	400	1781	1870	1585	1781	1577	249
Grp Volume(v), veh/h	135	0	391	40	0	108	96	241	8	4	0	734
Grp Sat Flow(s),veh/h/ln	1781	0	1741	1781	0	1798	1781	1870	1585	1781	0	1826
Q Serve(g_s), s	5.3	0.0	19.7	1.6	0.0	4.6	2.8	7.3	0.2	0.1	0.0	35.9
Cycle Q Clear(g_c), s	5.3	0.0	19.7	1.6	0.0	4.6	2.8	7.3	0.2	0.1	0.0	35.9
Prop In Lane	1.00		0.41	1.00		0.22	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	408	0	429	170	0	354	176	846	772	509	0	743
V/C Ratio(X)	0.33	0.00	0.91	0.23	0.00	0.30	0.55	0.28	0.01	0.01	0.00	0.99
Avail Cap(c_a), veh/h	465	0	464	316	0	354	205	846	772	618	0	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	33.0	28.5	0.0	30.9	21.4	15.5	11.9	15.6	0.0	26.5
Incr Delay (d2), s/veh	0.2	0.0	21.3	0.3	0.0	0.5	1.0	0.8	0.0	0.0	0.0	30.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	10.2	0.7	0.0	2.0	1.1	3.0	0.1	0.0	0.0	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	54.3	28.7	0.0	31.3	22.4	16.3	11.9	15.6	0.0	56.7
LnGrp LOS	C	A	D	C	A	C	C	B	B	B	A	E
Approach Vol, veh/h		526			148			345			738	
Approach Delay, s/veh		46.9			30.6			17.9			56.5	
Approach LOS		D			C			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	23.7	10.5	42.6	8.7	28.2	6.5	46.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	5.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0	14.0	6.0	26.0	10.5	24.0	6.0	26.0
Max Q Clear Time (g_c+I1), s	7.3	6.6	4.8	37.9	3.6	21.7	2.1	9.3
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.5	0.0	1.3

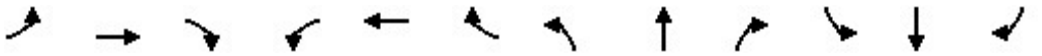
Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	56	784	20	267	48	24	84	89	60
v/c Ratio	0.08	0.34	0.04	0.13	0.05	0.12	0.44	0.34	0.20
Control Delay	13.4	17.0	5.5	9.3	1.7	26.7	31.7	30.3	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	17.0	5.5	9.3	1.7	26.7	31.7	30.3	18.8
Queue Length 50th (ft)	22	175	3	20	0	11	27	41	11
Queue Length 95th (ft)	m16	m160	3	70	1	19	69	56	32
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	768	2290	535	2104	1010	268	229	287	318
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.34	0.04	0.13	0.05	0.09	0.37	0.31	0.19

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	632	14	11	216	43	15	43	21	62	17	16
Future Volume (veh/h)	42	632	14	11	216	43	15	43	21	62	17	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	752	32	20	267	48	24	48	36	89	24	36
Peak Hour Factor	0.75	0.84	0.44	0.55	0.81	0.90	0.63	0.90	0.58	0.70	0.71	0.44
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	725	2072	88	454	2029	905	224	76	57	227	72	108
Arrive On Green	0.04	0.60	0.60	0.02	0.57	0.57	0.03	0.08	0.08	0.06	0.11	0.11
Sat Flow, veh/h	1781	3473	148	1781	3554	1585	1781	992	744	1781	675	1013
Grp Volume(v), veh/h	56	385	399	20	267	48	24	0	84	89	0	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1585	1781	0	1736	1781	0	1688
Q Serve(g_s), s	1.1	10.0	10.0	0.4	3.1	1.2	1.1	0.0	4.2	4.1	0.0	3.0
Cycle Q Clear(g_c), s	1.1	10.0	10.0	0.4	3.1	1.2	1.1	0.0	4.2	4.1	0.0	3.0
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.43	1.00		0.60
Lane Grp Cap(c), veh/h	725	1060	1100	454	2029	905	224	0	133	227	0	180
V/C Ratio(X)	0.08	0.36	0.36	0.04	0.13	0.05	0.11	0.00	0.63	0.39	0.00	0.33
Avail Cap(c_a), veh/h	829	1060	1100	603	2029	905	357	0	193	307	0	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.0	9.3	9.4	7.9	9.0	8.5	36.8	0.0	40.3	35.4	0.0	37.2
Incr Delay (d2), s/veh	0.0	1.0	0.9	0.0	0.1	0.1	0.1	0.0	3.6	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.5	3.6	0.1	1.2	0.4	0.5	0.0	1.9	1.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	10.3	10.3	7.9	9.1	8.7	36.9	0.0	44.0	35.8	0.0	38.0
LnGrp LOS	A	B	B	A	A	A	D	A	D	D	A	D
Approach Vol, veh/h		840			335			108			149	
Approach Delay, s/veh		10.1			9.0			42.4			36.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	59.7	11.0	11.9	9.8	57.4	8.3	14.6
Change Period (Y+Rc), s	5.5	6.0	5.5	5.0	6.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.5	39.0	9.5	10.0	9.0	39.0	9.0	10.0
Max Q Clear Time (g_c+I1), s	2.4	12.0	6.1	6.2	3.1	5.1	3.1	5.0
Green Ext Time (p_c), s	0.0	4.7	0.0	0.1	0.0	2.0	0.0	0.1

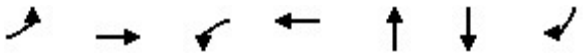
Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B



Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	56	816	351	32	52
v/c Ratio	0.07	0.27	0.13	0.21	0.29
Control Delay	1.4	2.4	4.5	41.5	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.4	2.4	4.5	41.5	15.5
Queue Length 50th (ft)	6	52	29	17	0
Queue Length 95th (ft)	0	1	38	36	19
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	884	2994	2648	196	222
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.06	0.27	0.13	0.16	0.23

Intersection Summary

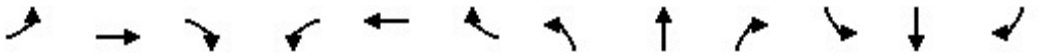
HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	16	538	20	241	243	8	20
v/c Ratio	0.02	0.28	0.04	0.13	0.71	0.02	0.03
Control Delay	6.0	4.1	8.2	12.7	38.2	20.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	4.1	8.2	12.7	38.2	20.3	1.9
Queue Length 50th (ft)	3	25	4	35	107	3	0
Queue Length 95th (ft)	m4	7	12	63	60	5	0
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	717	1901	589	1822	413	558	712
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.28	0.03	0.13	0.59	0.01	0.03

Intersection Summary

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



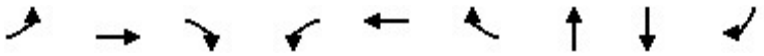
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	273	200	16	231	0	186	3	10	0	3	9
Future Volume (veh/h)	10	273	200	16	231	0	186	3	10	0	3	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	321	0	20	241	0	219	8	0	0	8	20
Peak Hour Factor	0.63	0.85	0.92	0.80	0.96	0.92	0.85	0.38	0.63	0.92	0.38	0.45
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	721	1965		668	1978	0	352	10		0	373	346
Arrive On Green	0.02	0.55	0.00	0.02	0.56	0.00	0.20	0.20	0.00	0.00	0.20	0.20
Sat Flow, veh/h	1781	3647	0	1781	3647	0	1323	48	0	0	1870	1585
Grp Volume(v), veh/h	16	321	0	20	241	0	227	0	0	0	8	20
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1371	0	0	0	1870	1585
Q Serve(g_s), s	0.3	3.6	0.0	0.4	2.6	0.0	12.5	0.0	0.0	0.0	0.3	0.8
Cycle Q Clear(g_c), s	0.3	3.6	0.0	0.4	2.6	0.0	12.8	0.0	0.0	0.0	0.3	0.8
Prop In Lane	1.00		0.00	1.00		0.00	0.96		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	721	1965		668	1978	0	362	0		0	373	346
V/C Ratio(X)	0.02	0.16		0.03	0.12	0.00	0.63	0.00		0.00	0.02	0.06
Avail Cap(c_a), veh/h	888	1965		829	1978	0	502	0		0	561	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	8.8	0.0	7.4	8.4	0.0	30.9	0.0	0.0	0.0	25.7	24.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.1	0.0	3.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	0.0	0.1	0.8	0.0	4.1	0.0	0.0	0.0	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	9.0	0.0	7.4	8.6	0.0	34.7	0.0	0.0	0.0	25.8	24.8
LnGrp LOS	A	A		A	A	A	C	A		A	C	C
Approach Vol, veh/h		337	A		261			227	A		28	
Approach Delay, s/veh		8.9			8.5			34.7			25.1	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.2		22.0	7.5	50.5		22.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	29.0		24.0	9.0	29.0		24.0				
Max Q Clear Time (g_c+I1), s	2.4	5.6		2.8	2.3	4.6		14.8				
Green Ext Time (p_c), s	0.0	6.2		0.0	0.0	4.7		1.2				

Intersection Summary		
HCM 6th Ctrl Delay	16.1	
HCM 6th LOS	B	

Notes

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

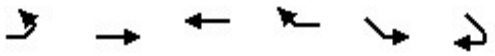


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	52	626	56	48	499	32	160	64	52
v/c Ratio	0.09	0.34	0.06	0.10	0.27	0.04	0.69	0.34	0.16
Control Delay	6.8	9.2	0.5	8.9	15.0	0.1	42.4	37.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	9.2	0.5	8.9	15.0	0.1	42.4	37.9	1.0
Queue Length 50th (ft)	5	49	0	12	109	0	60	30	0
Queue Length 95th (ft)	17	108	0	m19	111	m0	81	42	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	606	1858	911	539	1855	910	256	227	358
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.34	0.06	0.09	0.27	0.04	0.63	0.28	0.15

Intersection Summary

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

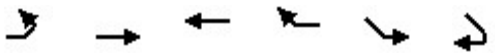
HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	36	370	379	332	381	24
v/c Ratio	0.06	0.15	0.18	0.31	0.61	0.08
Control Delay	5.1	5.1	17.3	11.2	30.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	5.1	17.3	11.2	30.6	8.6
Queue Length 50th (ft)	5	29	79	77	89	0
Queue Length 95th (ft)	7	52	104	73	141	m7
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	691	2410	2092	1071	858	413
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.15	0.18	0.31	0.44	0.06

Intersection Summary

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



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	16	340	349	279	339	17
Future Volume (veh/h)	16	340	349	279	339	17
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	370	379	0	381	0
Peak Hour Factor	0.44	0.92	0.92	0.84	0.89	0.71
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	761	2547	2159		503	
Arrive On Green	0.03	0.72	1.00	0.00	0.15	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	36	370	379	0	381	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.5	2.6	0.0	0.0	8.5	0.0
Cycle Q Clear(g_c), s	0.5	2.6	0.0	0.0	8.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	761	2547	2159		503	
V/C Ratio(X)	0.05	0.15	0.18		0.76	
Avail Cap(c_a), veh/h	900	2547	2159		864	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.00	0.98	0.00
Uniform Delay (d), s/veh	4.6	3.6	0.0	0.0	32.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.1	0.0	3.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.6	3.7	0.2	0.0	35.6	0.0
LnGrp LOS	A	A	A		D	
Approach Vol, veh/h		406	379	A	381	A
Approach Delay, s/veh		3.8	0.2		35.6	
Approach LOS		A	A		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.8	54.6		16.7		63.3
Change Period (Y+Rc), s	6.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	34.0		20.0		49.0
Max Q Clear Time (g_c+I1), s	2.5	2.0		10.5		4.6
Green Ext Time (p_c), s	0.0	4.0		1.2		4.2

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	72	479	12	343	180	92	79
v/c Ratio	0.10	0.24	0.02	0.17	0.68	0.41	0.22
Control Delay	9.2	12.0	3.8	6.1	41.5	33.3	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	12.0	3.8	6.1	41.5	33.3	5.1
Queue Length 50th (ft)	16	53	1	33	80	41	0
Queue Length 95th (ft)	28	115	4	41	123	66	10
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	787	2005	721	2058	312	270	408
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.02	0.17	0.58	0.34	0.19

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	41	302	105	9	241	50	71	57	16	42	28	58
Future Volume (veh/h)	41	302	105	9	241	50	71	57	16	42	28	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	351	128	12	271	72	84	68	28	56	36	79
Peak Hour Factor	0.57	0.86	0.82	0.75	0.89	0.69	0.85	0.84	0.57	0.75	0.78	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	747	1502	539	677	1653	431	145	99	33	194	108	270
Arrive On Green	0.05	0.59	0.59	0.06	0.59	0.59	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	2562	920	1781	2789	727	466	582	193	712	634	1585
Grp Volume(v), veh/h	72	242	237	12	171	172	180	0	0	92	0	79
Grp Sat Flow(s),veh/h/ln	1781	1777	1705	1781	1777	1739	1241	0	0	1347	0	1585
Q Serve(g_s), s	1.2	5.2	5.4	0.2	3.5	3.6	7.2	0.0	0.0	0.0	0.0	3.5
Cycle Q Clear(g_c), s	1.2	5.2	5.4	0.2	3.5	3.6	11.7	0.0	0.0	4.6	0.0	3.5
Prop In Lane	1.00		0.54	1.00		0.42	0.47		0.16	0.61		1.00
Lane Grp Cap(c), veh/h	747	1042	999	677	1053	1031	277	0	0	301	0	270
V/C Ratio(X)	0.10	0.23	0.24	0.02	0.16	0.17	0.65	0.00	0.00	0.31	0.00	0.29
Avail Cap(c_a), veh/h	870	1042	999	788	1053	1031	313	0	0	336	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.97	0.97	0.97	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.6	7.9	8.0	5.2	7.3	7.4	33.0	0.0	0.0	29.3	0.0	29.0
Incr Delay (d2), s/veh	0.0	0.5	0.5	0.0	0.3	0.3	3.4	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	1.8	0.1	1.2	1.2	3.6	0.0	0.0	1.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.6	8.4	8.5	5.2	7.7	7.7	36.4	0.0	0.0	29.7	0.0	29.4
LnGrp LOS	A	A	A	A	A	A	D	A	A	C	A	C
Approach Vol, veh/h		551			355			180			171	
Approach Delay, s/veh		8.1			7.6			36.4			29.6	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	51.9		18.1	9.5	52.4		18.1				
Change Period (Y+Rc), s	5.0	5.0		4.5	5.5	5.0		4.5				
Max Green Setting (Gmax), s	10.0	40.0		15.5	9.5	40.0		15.5				
Max Q Clear Time (g_c+I1), s	2.2	7.4		6.6	3.2	5.6		13.7				
Green Ext Time (p_c), s	0.0	6.0		0.4	0.0	4.1		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	322	418	164	303	416	143
v/c Ratio	0.18	0.41	0.23	0.13	0.60	0.35
Control Delay	7.7	3.7	3.8	2.8	32.1	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	3.7	3.8	2.8	32.1	10.5
Queue Length 50th (ft)	23	9	11	10	97	13
Queue Length 95th (ft)	44	20	31	28	131	55
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	1880	1037	718	2478	741	429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.40	0.23	0.12	0.56	0.33

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	296	376	133	264	379	132
Future Volume (veh/h)	296	376	133	264	379	132
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	0	164	303	416	0
Peak Hour Factor	0.92	0.90	0.81	0.87	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2130		790	2591	526	
Arrive On Green	0.60	0.00	0.06	0.73	0.15	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	322	0	164	303	416	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	3.2	0.0	2.6	2.0	9.3	0.0
Cycle Q Clear(g_c), s	3.2	0.0	2.6	2.0	9.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2130		790	2591	526	
V/C Ratio(X)	0.15		0.21	0.12	0.79	
Avail Cap(c_a), veh/h	2130		893	2591	670	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.99	0.99	1.00	0.00
Uniform Delay (d), s/veh	7.1	0.0	4.6	3.2	32.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.7	0.5	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.2	0.0	4.7	3.3	38.5	0.0
LnGrp LOS	A		A	A	D	
Approach Vol, veh/h	322	A		467	416	A
Approach Delay, s/veh	7.2			3.8	38.5	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		63.3		16.7	10.4	52.9
Change Period (Y+Rc), s		5.0		4.5	5.5	5.0
Max Green Setting (Gmax), s		55.0		15.5	9.5	40.0
Max Q Clear Time (g_c+I1), s		4.0		11.3	4.6	5.2
Green Ext Time (p_c), s		5.4		0.9	0.1	5.3

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

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



Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	24	702	60	735	40	44	120	32
v/c Ratio	0.05	0.36	0.13	0.34	0.24	0.14	0.56	0.09
Control Delay	10.7	17.2	4.8	9.5	37.4	0.9	42.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	17.2	4.8	9.5	37.4	0.9	42.9	0.5
Queue Length 50th (ft)	7	101	8	51	19	0	57	0
Queue Length 95th (ft)	m15	172	m14	208	48	0	93	0
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	543	1928	517	2136	224	358	232	359
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.36	0.12	0.34	0.18	0.12	0.52	0.09

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	252	104	4	588	580	20
v/c Ratio	0.53	0.34	0.01	0.22	0.23	0.02
Control Delay	35.8	9.8	3.0	3.7	1.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	9.8	3.0	3.7	1.5	0.1
Queue Length 50th (ft)	61	0	0	37	1	0
Queue Length 95th (ft)	92	40	1	49	3	0
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	523	329	673	2658	2532	1138
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.32	0.01	0.22	0.23	0.02

Intersection Summary



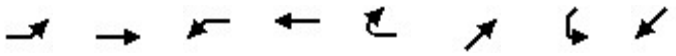
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	232	96	1	541	534	15
Future Volume (veh/h)	232	96	1	541	534	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	252	0	4	588	580	0
Peak Hour Factor	0.92	0.92	0.25	0.92	0.92	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	343		649	2779	2538	
Arrive On Green	0.10	0.00	0.01	0.78	0.71	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	252	0	4	588	580	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	5.7	0.0	0.0	3.5	4.5	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	3.5	4.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	343		649	2779	2538	
V/C Ratio(X)	0.73		0.01	0.21	0.23	
Avail Cap(c_a), veh/h	497		862	2779	2538	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.96	0.96	0.95	0.00
Uniform Delay (d), s/veh	35.0	0.0	2.9	2.3	3.9	0.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.2	0.0	2.9	2.4	4.1	0.0
LnGrp LOS	D		A	A	A	
Approach Vol, veh/h	252	A		592	580	A
Approach Delay, s/veh	38.2			2.4	4.1	
Approach LOS	D			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.4	62.1		12.4		67.6
Change Period (Y+Rc), s	5.0	5.0		4.5		5.0
Max Green Setting (Gmax), s	10.0	44.0		11.5		59.0
Max Q Clear Time (g_c+I1), s	2.0	6.5		7.7		5.5
Green Ext Time (p_c), s	0.0	8.3		0.3		9.0

Intersection Summary		
HCM 6th Ctrl Delay		9.5
HCM 6th LOS		A

Notes

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



Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	21	451	60	603	32	112	124	60
v/c Ratio	0.04	0.24	0.10	0.29	0.03	0.50	0.52	0.23
Control Delay	6.9	11.3	3.4	4.4	0.1	29.3	40.2	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	11.3	3.4	4.4	0.1	29.3	40.2	21.4
Queue Length 50th (ft)	4	68	4	18	0	32	58	14
Queue Length 95th (ft)	10	52	10	37	0	32	103	35
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	566	1865	626	2080	1003	254	248	267
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.24	0.10	0.29	0.03	0.44	0.50	0.22

Intersection Summary

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	28	525	485	68	3	21	19
v/c Ratio	0.06	0.26	0.27	0.08	0.02	0.05	0.03
Control Delay	6.3	6.5	4.3	0.2	30.3	24.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	6.5	4.3	0.2	30.3	24.6	0.1
Queue Length 50th (ft)	2	25	13	0	1	7	0
Queue Length 95th (ft)	m9	60	37	1	9	29	0
Internal Link Dist (ft)		4343	979		151		322
Turn Bay Length (ft)	200			375		145	
Base Capacity (vph)	501	1990	1783	885	178	458	547
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.26	0.27	0.08	0.02	0.05	0.03

Intersection Summary

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

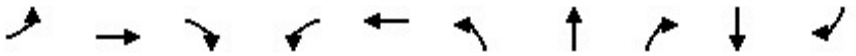
HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	8	284	24	377	156	207	40
v/c Ratio	0.01	0.16	0.04	0.20	0.16	0.65	0.23
Control Delay	3.2	4.4	7.2	7.3	0.9	39.8	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	4.4	7.2	7.3	0.9	39.8	24.2
Queue Length 50th (ft)	1	10	3	21	0	94	9
Queue Length 95th (ft)	1	13	5	32	0	107	16
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	633	1784	665	1909	948	340	210
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.16	0.04	0.20	0.16	0.61	0.19

Intersection Summary

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	259	212	36	262	138	146	44	131	8
v/c Ratio	0.03	0.16	0.25	0.06	0.14	0.68	0.69	0.12	0.49	0.02
Control Delay	10.7	16.3	4.0	3.1	3.4	51.6	51.6	0.7	37.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	16.3	4.0	3.1	3.4	51.6	51.6	0.7	37.3	0.0
Queue Length 50th (ft)	4	45	0	5	15	70	74	0	61	0
Queue Length 95th (ft)	10	78	36	m2	1	#114	#129	0	92	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	660	1643	849	646	1854	210	219	371	335	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.16	0.25	0.06	0.14	0.66	0.67	0.12	0.39	0.02

Intersection Summary

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

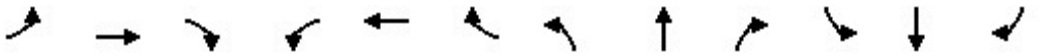
HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	271	20	155	144	207	16	20	326
v/c Ratio	0.17	0.67	0.07	0.50	0.29	0.21	0.01	0.03	0.44
Control Delay	17.2	28.4	15.3	31.1	5.6	7.2	1.0	10.9	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	28.4	15.3	31.1	5.6	7.2	1.0	10.9	22.3
Queue Length 50th (ft)	15	68	6	61	26	38	0	4	112
Queue Length 95th (ft)	29	#162	16	109	13	148	3	13	179
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	318	444	292	372	523	976	1154	665	735
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.61	0.07	0.42	0.28	0.21	0.01	0.03	0.44

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	124	119	16	135	4	130	190	13	15	222	44
Future Volume (veh/h)	39	124	119	16	135	4	130	190	13	15	222	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	139	132	20	147	8	144	207	16	20	278	48
Peak Hour Factor	0.75	0.89	0.90	0.80	0.92	0.50	0.90	0.92	0.81	0.75	0.80	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	162	154	178	271	15	496	812	725	565	598	103
Arrive On Green	0.05	0.18	0.18	0.02	0.15	0.15	0.07	0.43	0.43	0.02	0.38	0.38
Sat Flow, veh/h	1781	882	838	1781	1757	96	1781	1870	1585	1781	1554	268
Grp Volume(v), veh/h	52	0	271	20	0	155	144	207	16	20	0	326
Grp Sat Flow(s),veh/h/ln	1781	0	1720	1781	0	1853	1781	1870	1585	1781	0	1822
Q Serve(g_s), s	1.7	0.0	10.7	0.7	0.0	5.4	3.3	4.9	0.4	0.5	0.0	9.4
Cycle Q Clear(g_c), s	1.7	0.0	10.7	0.7	0.0	5.4	3.3	4.9	0.4	0.5	0.0	9.4
Prop In Lane	1.00		0.49	1.00		0.05	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	279	0	316	178	0	286	496	812	725	565	0	701
V/C Ratio(X)	0.19	0.00	0.86	0.11	0.00	0.54	0.29	0.25	0.02	0.04	0.00	0.46
Avail Cap(c_a), veh/h	351	0	344	303	0	371	596	812	725	753	0	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	0.0	27.7	24.5	0.0	27.3	11.9	12.6	10.4	12.4	0.0	16.1
Incr Delay (d2), s/veh	0.1	0.0	17.8	0.1	0.0	1.6	0.1	0.8	0.1	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	5.5	0.3	0.0	2.4	1.1	1.9	0.1	0.2	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	45.5	24.6	0.0	28.9	12.1	13.3	10.5	12.4	0.0	18.3
LnGrp LOS	C	A	D	C	A	C	B	B	B	B	A	B
Approach Vol, veh/h		323			175			367			346	
Approach Delay, s/veh		41.9			28.4			12.7			18.0	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	16.8	11.1	32.9	7.1	18.9	7.6	36.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	5.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	6.0	14.0	9.0	17.0	6.5	14.0	9.0	17.0
Max Q Clear Time (g_c+I1), s	3.7	7.4	5.3	11.4	2.7	12.7	2.5	6.9
Green Ext Time (p_c), s	0.0	0.4	0.1	1.0	0.0	0.2	0.0	0.8

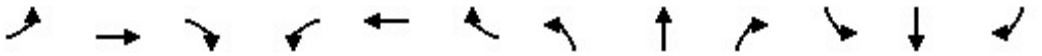
Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	391	32	353	108	24	88	128	68
v/c Ratio	0.07	0.20	0.05	0.20	0.12	0.10	0.38	0.38	0.17
Control Delay	7.6	9.8	7.6	10.9	0.4	17.2	25.7	21.0	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	9.8	7.6	10.9	0.4	17.2	25.7	21.0	13.5
Queue Length 50th (ft)	7	31	5	33	0	7	24	42	9
Queue Length 95th (ft)	m11	94	10	47	0	20	38	62	34
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	658	1932	673	1807	915	339	280	366	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.20	0.05	0.20	0.12	0.07	0.31	0.35	0.17

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	341	7	21	307	94	22	38	22	102	23	27
Future Volume (veh/h)	27	341	7	21	307	94	22	38	22	102	23	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	375	16	32	353	108	24	60	28	128	28	40
Peak Hour Factor	0.61	0.91	0.44	0.66	0.87	0.87	0.92	0.63	0.79	0.80	0.82	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	544	1635	70	566	1620	722	280	117	55	319	103	147
Arrive On Green	0.04	0.47	0.47	0.03	0.46	0.46	0.03	0.10	0.10	0.08	0.15	0.15
Sat Flow, veh/h	1781	3473	148	1781	3554	1585	1781	1206	563	1781	696	995
Grp Volume(v), veh/h	44	191	200	32	353	108	24	0	88	128	0	68
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1585	1781	0	1769	1781	0	1691
Q Serve(g_s), s	0.9	4.5	4.5	0.7	4.2	2.8	0.8	0.0	3.3	4.4	0.0	2.5
Cycle Q Clear(g_c), s	0.9	4.5	4.5	0.7	4.2	2.8	0.8	0.0	3.3	4.4	0.0	2.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.32	1.00		0.59
Lane Grp Cap(c), veh/h	544	837	868	566	1620	722	280	0	172	319	0	250
V/C Ratio(X)	0.08	0.23	0.23	0.06	0.22	0.15	0.09	0.00	0.51	0.40	0.00	0.27
Avail Cap(c_a), veh/h	700	837	868	748	1620	722	461	0	253	410	0	250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.2	11.0	11.0	9.4	11.5	11.1	27.2	0.0	30.0	25.3	0.0	26.5
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.0	0.3	0.4	0.0	0.0	1.8	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.6	1.7	0.2	1.6	1.0	0.4	0.0	1.5	1.8	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	11.6	11.6	9.4	11.8	11.6	27.3	0.0	31.8	25.6	0.0	26.9
LnGrp LOS	A	B	B	A	B	B	C	A	C	C	A	C
Approach Vol, veh/h		435			493			112			196	
Approach Delay, s/veh		11.4			11.6			30.8			26.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	39.0	11.4	11.8	8.9	37.9	7.9	15.4
Change Period (Y+Rc), s	5.5	6.0	5.5	5.0	6.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.5	19.0	9.5	10.0	9.0	19.0	9.0	10.0
Max Q Clear Time (g_c+I1), s	2.7	6.5	6.4	5.3	2.9	6.2	2.8	4.5
Green Ext Time (p_c), s	0.0	1.6	0.0	0.1	0.0	2.1	0.0	0.1

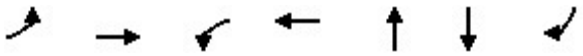
Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B



Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	124	452	470	165	140
v/c Ratio	0.19	0.18	0.24	0.57	0.37
Control Delay	3.4	3.1	8.6	34.3	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.4	3.1	8.6	34.3	8.0
Queue Length 50th (ft)	15	28	46	66	0
Queue Length 95th (ft)	9	17	85	104	30
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	702	2479	1958	379	449
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.18	0.24	0.44	0.31

Intersection Summary

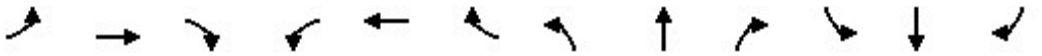
HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	32	745	28	398	392	32	44
v/c Ratio	0.06	0.46	0.08	0.29	0.86	0.09	0.10
Control Delay	8.6	6.4	11.4	19.0	43.4	21.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	6.4	11.4	19.0	43.4	21.6	3.7
Queue Length 50th (ft)	5	43	7	76	169	15	0
Queue Length 95th (ft)	m13	73	14	115	133	15	8
Internal Link Dist (ft)		5843		1088	831	458	
Turn Bay Length (ft)	160		230				140
Base Capacity (vph)	539	1621	412	1395	495	675	486
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.46	0.07	0.29	0.79	0.05	0.09

Intersection Summary

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



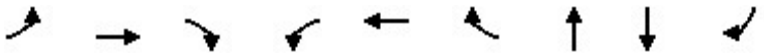
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	400	274	18	355	1	282	13	30	0	16	29
Future Volume (veh/h)	24	400	274	18	355	1	282	13	30	0	16	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	444	0	28	394	4	332	24	0	0	32	44
Peak Hour Factor	0.75	0.90	0.91	0.64	0.90	0.25	0.85	0.54	0.83	0.92	0.50	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	1554		479	1566	16	460	27		0	577	540
Arrive On Green	0.03	0.44	0.00	0.03	0.43	0.43	0.31	0.31	0.00	0.00	0.31	0.31
Sat Flow, veh/h	1781	3647	0	1781	3604	37	1210	87	0	0	1870	1585
Grp Volume(v), veh/h	32	444	0	28	194	204	356	0	0	0	32	44
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1864	1297	0	0	0	1870	1585
Q Serve(g_s), s	0.8	6.4	0.0	0.7	5.5	5.6	20.2	0.0	0.0	0.0	1.0	1.5
Cycle Q Clear(g_c), s	0.8	6.4	0.0	0.7	5.5	5.6	21.1	0.0	0.0	0.0	1.0	1.5
Prop In Lane	1.00		0.00	1.00		0.02	0.93		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	507	1554		479	772	810	487	0		0	577	540
V/C Ratio(X)	0.06	0.29		0.06	0.25	0.25	0.73	0.00		0.00	0.06	0.08
Avail Cap(c_a), veh/h	651	1554		628	772	810	560	0		0	678	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	14.5	0.0	11.9	14.4	14.4	26.9	0.0	0.0	0.0	19.5	17.9
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.8	0.7	5.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	0.0	0.2	2.1	2.2	6.4	0.0	0.0	0.0	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	14.9	0.0	12.0	15.1	15.1	32.7	0.0	0.0	0.0	19.5	18.0
LnGrp LOS	B	B		B	B	B	C	A		A	B	B
Approach Vol, veh/h		476	A		426			356	A		76	
Approach Delay, s/veh		14.7			14.9			32.7			18.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	41.0		30.7	8.5	40.8		30.7				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	24.0		29.0	9.0	24.0		29.0				
Max Q Clear Time (g_c+I1), s	2.7	8.4		3.5	2.8	7.6		23.1				
Green Ext Time (p_c), s	0.0	6.7		0.2	0.0	6.0		1.6				

Intersection Summary			
HCM 6th Ctrl Delay		19.8	
HCM 6th LOS		B	

Notes

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

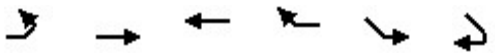


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	64	757	102	76	771	36	240	68	56
v/c Ratio	0.17	0.47	0.13	0.20	0.48	0.04	0.82	0.36	0.17
Control Delay	9.2	13.6	1.6	9.1	15.9	0.1	51.1	38.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	13.6	1.6	9.1	15.9	0.1	51.1	38.4	1.1
Queue Length 50th (ft)	6	54	0	18	122	0	98	32	0
Queue Length 95th (ft)	25	133	5	m26	152	m0	128	57	0
Internal Link Dist (ft)		2602			5843		427	327	
Turn Bay Length (ft)	230		180	235		200			110
Base Capacity (vph)	427	1602	809	430	1613	814	320	226	358
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.47	0.13	0.18	0.48	0.04	0.75	0.30	0.16

Intersection Summary

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

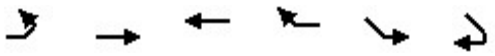
HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Group Flow (vph)	36	472	423	591	570	28
v/c Ratio	0.06	0.21	0.22	0.53	0.69	0.07
Control Delay	7.3	7.4	24.6	17.4	21.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	7.4	24.6	17.4	21.3	2.4
Queue Length 50th (ft)	6	47	103	206	148	3
Queue Length 95th (ft)	16	81	152	295	57	m1
Internal Link Dist (ft)		739	2602		832	
Turn Bay Length (ft)	225			440		190
Base Capacity (vph)	616	2205	1883	1119	1072	513
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.21	0.22	0.53	0.53	0.05

Intersection Summary

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



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	27	415	355	526	502	19
Future Volume (veh/h)	27	415	355	526	502	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	472	423	0	570	0
Peak Hour Factor	0.75	0.88	0.84	0.89	0.88	0.68
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	665	2330	1941		715	
Arrive On Green	0.03	0.66	0.91	0.00	0.21	0.00
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	36	472	423	0	570	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.7	4.2	1.0	0.0	12.5	0.0
Cycle Q Clear(g_c), s	0.7	4.2	1.0	0.0	12.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	665	2330	1941		715	
V/C Ratio(X)	0.05	0.20	0.22		0.80	
Avail Cap(c_a), veh/h	805	2330	1941		1080	
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.89	0.00	0.94	0.00
Uniform Delay (d), s/veh	6.4	5.5	1.6	0.0	30.1	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	0.3	0.0	5.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.4	5.7	1.9	0.0	32.9	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		508	423	A	570	A
Approach Delay, s/veh		5.7	1.9		32.9	
Approach LOS		A	A		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.8	49.7		21.5		58.5
Change Period (Y+Rc), s	6.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	29.0		25.0		44.0
Max Q Clear Time (g_c+I1), s	2.7	3.0		14.5		6.2
Green Ext Time (p_c), s	0.0	4.3		2.0		5.5

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NET	SWT	SWR
Lane Group Flow (vph)	52	711	28	594	176	112	92
v/c Ratio	0.09	0.36	0.06	0.28	0.68	0.53	0.26
Control Delay	1.9	6.1	4.0	7.6	42.4	38.3	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	6.1	4.0	7.6	42.4	38.3	6.8
Queue Length 50th (ft)	1	6	3	68	81	51	0
Queue Length 95th (ft)	2	180	m6	89	90	93	29
Internal Link Dist (ft)		1093		832	411	246	
Turn Bay Length (ft)	175		175				50
Base Capacity (vph)	655	2001	579	2165	306	251	409
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.36	0.05	0.27	0.58	0.45	0.22

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	47	452	104	21	444	75	73	52	8	69	29	82
Future Volume (veh/h)	47	452	104	21	444	75	73	52	8	69	29	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	579	132	28	510	84	84	80	12	80	32	92
Peak Hour Factor	0.90	0.78	0.79	0.75	0.87	0.89	0.87	0.65	0.67	0.86	0.91	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	580	1646	374	544	1790	294	141	117	14	225	78	292
Arrive On Green	0.04	0.57	0.57	0.06	0.59	0.59	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	2876	654	1781	3056	501	405	633	76	805	424	1585
Grp Volume(v), veh/h	52	357	354	28	296	298	176	0	0	112	0	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1753	1781	1777	1780	1114	0	0	1228	0	1585
Q Serve(g_s), s	0.9	8.6	8.7	0.5	6.6	6.7	6.5	0.0	0.0	0.0	0.0	4.0
Cycle Q Clear(g_c), s	0.9	8.6	8.7	0.5	6.6	6.7	13.0	0.0	0.0	6.4	0.0	4.0
Prop In Lane	1.00		0.37	1.00		0.28	0.48		0.07	0.71		1.00
Lane Grp Cap(c), veh/h	580	1017	1003	544	1041	1043	271	0	0	303	0	292
V/C Ratio(X)	0.09	0.35	0.35	0.05	0.28	0.29	0.65	0.00	0.00	0.37	0.00	0.32
Avail Cap(c_a), veh/h	715	1017	1003	655	1041	1043	286	0	0	317	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.86	0.86	0.86	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.3	9.2	9.2	5.9	8.2	8.2	32.7	0.0	0.0	29.1	0.0	28.3
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	0.6	0.6	4.2	0.0	0.0	0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.1	3.1	0.1	2.3	2.4	3.6	0.0	0.0	1.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	10.0	10.1	5.9	8.8	8.8	36.9	0.0	0.0	29.6	0.0	28.7
LnGrp LOS	A	B	B	A	A	A	D	A	A	C	A	C
Approach Vol, veh/h		763			622			176			204	
Approach Delay, s/veh		9.8			8.7			36.9			29.2	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	50.8		19.2	8.9	51.9		19.2				
Change Period (Y+Rc), s	5.0	5.0		4.5	5.5	5.0		4.5				
Max Green Setting (Gmax), s	10.0	40.0		15.5	9.5	40.0		15.5				
Max Q Clear Time (g_c+I1), s	2.5	10.7		8.4	2.9	8.7		15.0				
Green Ext Time (p_c), s	0.0	9.2		0.4	0.0	7.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	640	739	148	517	650	164
v/c Ratio	0.40	0.66	0.32	0.24	0.72	0.34
Control Delay	17.5	10.8	9.2	8.4	31.4	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	10.8	9.2	8.4	31.4	12.4
Queue Length 50th (ft)	153	137	61	113	147	26
Queue Length 95th (ft)	211	273	19	27	200	67
Internal Link Dist (ft)	1103			1093	835	
Turn Bay Length (ft)		150	220			50
Base Capacity (vph)	1598	1120	489	2185	1008	531
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.66	0.30	0.24	0.64	0.31

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	557	628	132	476	585	143
Future Volume (veh/h)	557	628	132	476	585	143
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	640	0	148	517	650	0
Peak Hour Factor	0.87	0.85	0.89	0.92	0.90	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1852		525	2310	799	
Arrive On Green	0.52	0.00	0.06	0.65	0.23	0.00
Sat Flow, veh/h	3647	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	640	0	148	517	650	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1728	1585
Q Serve(g_s), s	8.4	0.0	2.9	4.8	14.2	0.0
Cycle Q Clear(g_c), s	8.4	0.0	2.9	4.8	14.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1852		525	2310	799	
V/C Ratio(X)	0.35		0.28	0.22	0.81	
Avail Cap(c_a), veh/h	1852		630	2310	1015	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.00	0.97	0.97	1.00	0.00
Uniform Delay (d), s/veh	11.2	0.0	7.6	5.7	29.1	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.2	0.2	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.9	1.5	6.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.6	0.0	7.8	5.9	33.8	0.0
LnGrp LOS	B		A	A	C	
Approach Vol, veh/h	640	A		665	650	A
Approach Delay, s/veh	11.6			6.4	33.8	
Approach LOS	B			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		57.0		23.0	10.3	46.7
Change Period (Y+Rc), s		5.0		4.5	5.5	5.0
Max Green Setting (Gmax), s		47.0		23.5	9.5	32.0
Max Q Clear Time (g_c+I1), s		6.8		16.2	4.9	10.4
Green Ext Time (p_c), s		9.5		2.2	0.1	9.1

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

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



Lane Group	SEL	SET	NWL	NWT	NET	NER	SWT	SWR
Lane Group Flow (vph)	32	931	72	923	88	68	112	92
v/c Ratio	0.09	0.49	0.20	0.44	0.47	0.21	0.57	0.28
Control Delay	9.9	16.3	15.9	21.8	41.7	1.4	45.2	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	16.3	15.9	21.8	41.7	1.4	45.2	2.1
Queue Length 50th (ft)	7	104	27	130	42	0	53	0
Queue Length 95th (ft)	13	322	m44	251	65	0	85	0
Internal Link Dist (ft)		1586		1103	438		403	
Turn Bay Length (ft)	170		200			100		100
Base Capacity (vph)	456	1898	416	2113	225	358	215	345
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.49	0.17	0.44	0.39	0.19	0.52	0.27

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Group Flow (vph)	312	72	4	710	809	24
v/c Ratio	0.58	0.23	0.01	0.28	0.33	0.02
Control Delay	35.6	9.6	4.0	5.6	2.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	9.6	4.0	5.6	2.6	0.1
Queue Length 50th (ft)	75	0	1	94	19	0
Queue Length 95th (ft)	109	32	m1	36	17	m0
Internal Link Dist (ft)	429			327	1586	
Turn Bay Length (ft)		120	150			330
Base Capacity (vph)	601	336	549	2590	2472	1112
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	14	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.21	0.01	0.27	0.33	0.02

Intersection Summary

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



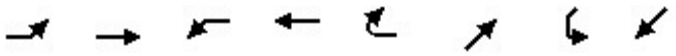
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	287	64	3	653	744	20
Future Volume (veh/h)	287	64	3	653	744	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	0	4	710	809	0
Peak Hour Factor	0.92	0.89	0.75	0.92	0.92	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	408		508	2712	2471	
Arrive On Green	0.12	0.00	0.01	0.76	0.70	0.00
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	312	0	4	710	809	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	7.0	0.0	0.0	4.7	7.2	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	4.7	7.2	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	408		508	2712	2471	
V/C Ratio(X)	0.76		0.01	0.26	0.33	
Avail Cap(c_a), veh/h	583		721	2712	2471	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.93	0.93	0.91	0.00
Uniform Delay (d), s/veh	34.2	0.0	3.5	2.8	4.8	0.0
Incr Delay (d2), s/veh	3.7	0.0	0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	1.0	2.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.9	0.0	3.6	3.0	5.1	0.0
LnGrp LOS	D		A	A	A	
Approach Vol, veh/h	312	A		714	809	A
Approach Delay, s/veh	37.9			3.0	5.1	
Approach LOS	D			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.4	60.6		14.0		66.0
Change Period (Y+Rc), s	5.0	5.0		4.5		5.0
Max Green Setting (Gmax), s	10.0	42.0		13.5		57.0
Max Q Clear Time (g_c+I1), s	2.0	9.2		9.0		6.7
Green Ext Time (p_c), s	0.0	11.9		0.5		11.4

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

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



Lane Group	EBL	EBT	WBL	WBT	WBR	NET	SWL	SWT
Lane Group Flow (vph)	32	667	64	1017	124	168	64	56
v/c Ratio	0.11	0.38	0.15	0.52	0.13	0.73	0.33	0.26
Control Delay	7.8	10.6	6.0	10.1	0.5	49.7	37.2	20.9
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	7.8	10.6	6.0	10.3	0.5	49.7	37.2	20.9
Queue Length 50th (ft)	2	85	7	104	0	72	30	11
Queue Length 95th (ft)	9	144	17	85	1	#127	63	31
Internal Link Dist (ft)		979		327		529		480
Turn Bay Length (ft)	200		150				70	
Base Capacity (vph)	374	1734	494	1946	950	241	221	240
Starvation Cap Reductn	0	0	0	251	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.38	0.13	0.60	0.13	0.70	0.29	0.23

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	60	538	733	157	3	305	287
v/c Ratio	0.21	0.30	0.51	0.21	0.02	0.54	0.45
Control Delay	13.5	12.4	15.8	4.6	30.3	28.2	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	12.4	15.8	4.6	30.3	28.2	12.4
Queue Length 50th (ft)	12	71	48	0	1	123	44
Queue Length 95th (ft)	25	79	142	18	9	133	136
Internal Link Dist (ft)		4343	979		174		322
Turn Bay Length (ft)	200			375		145	
Base Capacity (vph)	336	1769	1432	746	178	563	644
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.30	0.51	0.21	0.02	0.54	0.45

Intersection Summary

HCM 6th Edition methodology expects strict NEMA phasing.

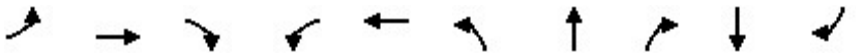


Lane Group	EBL	EBT	WBL	WBT	WBR	SET	NWT
Lane Group Flow (vph)	8	326	20	589	389	172	104
v/c Ratio	0.02	0.20	0.04	0.33	0.39	0.56	0.48
Control Delay	4.3	5.8	4.9	6.1	1.8	36.2	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	5.8	4.9	6.1	1.8	36.2	30.5
Queue Length 50th (ft)	1	13	2	26	0	78	32
Queue Length 95th (ft)	m3	22	m4	115	0	85	63
Internal Link Dist (ft)		2285		4343		890	889
Turn Bay Length (ft)	125		320		310		
Base Capacity (vph)	499	1665	610	1777	988	424	235
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.20	0.03	0.33	0.39	0.41	0.44

Intersection Summary

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

HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	317	243	117	531	280	286	40	196	40
v/c Ratio	0.04	0.26	0.35	0.23	0.33	1.33	1.32	0.11	0.58	0.09
Control Delay	13.2	22.3	5.2	4.0	3.2	210.6	206.2	0.6	36.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	22.3	5.2	4.0	3.2	210.6	206.2	0.6	36.5	0.4
Queue Length 50th (ft)	4	63	0	4	5	~194	~197	0	90	0
Queue Length 95th (ft)	14	102	38	4	10	#312	#295	0	103	0
Internal Link Dist (ft)		1054			2285		885		792	
Turn Bay Length (ft)	140		105	140		110		60		250
Base Capacity (vph)	468	1205	699	514	1587	210	216	371	449	530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.26	0.35	0.23	0.33	1.33	1.32	0.11	0.44	0.08

Intersection Summary

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

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

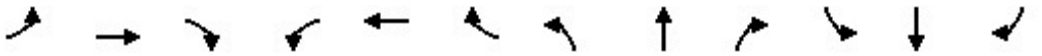
HCM 6th Edition methodology expects strict NEMA phasing.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	100	285	28	208	133	383	44	16	425
v/c Ratio	0.32	0.68	0.10	0.67	0.34	0.40	0.04	0.03	0.62
Control Delay	20.9	32.1	17.5	40.8	14.1	19.9	4.6	11.7	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	32.1	17.5	40.8	14.1	19.9	4.6	11.7	26.4
Queue Length 50th (ft)	34	109	9	93	54	176	0	4	165
Queue Length 95th (ft)	60	178	22	160	74	294	17	14	#325
Internal Link Dist (ft)		792		647		1136			871
Turn Bay Length (ft)	230		160		300			240	
Base Capacity (vph)	334	440	345	351	413	958	1157	573	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.65	0.08	0.59	0.32	0.40	0.04	0.03	0.62

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	128	122	23	162	21	118	341	36	15	241	147
Future Volume (veh/h)	84	128	122	23	162	21	118	341	36	15	241	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	149	136	28	180	28	133	383	44	16	262	163
Peak Hour Factor	0.84	0.86	0.90	0.82	0.90	0.75	0.89	0.89	0.82	0.92	0.92	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	168	153	169	229	36	437	883	794	446	461	287
Arrive On Green	0.06	0.19	0.19	0.03	0.14	0.14	0.06	0.47	0.47	0.02	0.43	0.43
Sat Flow, veh/h	1781	900	822	1781	1580	246	1781	1870	1585	1781	1079	671
Grp Volume(v), veh/h	100	0	285	28	0	208	133	383	44	16	0	425
Grp Sat Flow(s),veh/h/ln	1781	0	1722	1781	0	1826	1781	1870	1585	1781	0	1750
Q Serve(g_s), s	3.8	0.0	12.9	1.1	0.0	8.8	3.3	10.9	1.1	0.4	0.0	14.7
Cycle Q Clear(g_c), s	3.8	0.0	12.9	1.1	0.0	8.8	3.3	10.9	1.1	0.4	0.0	14.7
Prop In Lane	1.00		0.48	1.00		0.13	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	246	0	321	169	0	264	437	883	794	446	0	748
V/C Ratio(X)	0.41	0.00	0.89	0.17	0.00	0.79	0.30	0.43	0.06	0.04	0.00	0.57
Avail Cap(c_a), veh/h	331	0	323	329	0	342	525	883	794	613	0	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	31.7	28.3	0.0	33.0	12.8	14.0	10.2	12.7	0.0	17.3
Incr Delay (d2), s/veh	0.4	0.0	24.3	0.2	0.0	8.9	0.1	1.6	0.1	0.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	7.1	0.4	0.0	4.4	1.1	4.3	0.4	0.1	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	56.0	28.5	0.0	41.9	12.9	15.6	10.4	12.7	0.0	20.4
LnGrp LOS	C	A	E	C	A	D	B	B	B	B	A	C
Approach Vol, veh/h		385			236			560			441	
Approach Delay, s/veh		48.6			40.3			14.5			20.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.6	11.1	40.2	7.8	20.9	7.5	43.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	5.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	15.0	9.0	23.0	9.5	15.0	9.0	23.0
Max Q Clear Time (g_c+I1), s	5.8	10.8	5.3	16.7	3.1	14.9	2.4	12.9
Green Ext Time (p_c), s	0.0	0.4	0.0	1.5	0.0	0.0	0.0	1.9

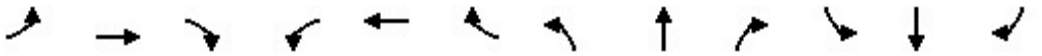
Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	493	40	563	159	60	96	203	116
v/c Ratio	0.05	0.28	0.08	0.30	0.17	0.25	0.45	0.60	0.38
Control Delay	9.9	14.7	7.4	10.4	0.7	22.5	29.2	29.9	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	14.7	7.4	10.4	0.7	22.5	29.2	29.9	20.7
Queue Length 50th (ft)	4	58	7	50	0	22	28	79	27
Queue Length 95th (ft)	m7	146	11	117	1	34	70	88	70
Internal Link Dist (ft)		2658		1308			530		609
Turn Bay Length (ft)	225		210		140	150		120	
Base Capacity (vph)	552	1760	591	1860	922	293	250	345	311
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.28	0.07	0.30	0.17	0.20	0.38	0.59	0.37

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	401	10	28	518	132	41	50	30	134	50	47
Future Volume (veh/h)	14	401	10	28	518	132	41	50	30	134	50	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	477	16	40	563	159	60	56	40	203	56	60
Peak Hour Factor	0.58	0.84	0.63	0.70	0.92	0.83	0.68	0.89	0.75	0.66	0.89	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1692	57	518	1730	772	283	89	63	346	127	136
Arrive On Green	0.03	0.48	0.48	0.04	0.49	0.49	0.05	0.09	0.09	0.12	0.15	0.15
Sat Flow, veh/h	1781	3509	118	1781	3554	1585	1781	1015	725	1781	826	885
Grp Volume(v), veh/h	24	241	252	40	563	159	60	0	96	203	0	116
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1585	1781	0	1740	1781	0	1711
Q Serve(g_s), s	0.5	6.5	6.5	0.9	7.7	4.6	2.4	0.0	4.3	7.9	0.0	4.9
Cycle Q Clear(g_c), s	0.5	6.5	6.5	0.9	7.7	4.6	2.4	0.0	4.3	7.9	0.0	4.9
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.42	1.00		0.52
Lane Grp Cap(c), veh/h	421	857	892	518	1730	772	283	0	152	346	0	263
V/C Ratio(X)	0.06	0.28	0.28	0.08	0.33	0.21	0.21	0.00	0.63	0.59	0.00	0.44
Avail Cap(c_a), veh/h	576	857	892	664	1730	772	402	0	217	346	0	263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	12.4	12.4	9.7	12.5	11.7	31.1	0.0	35.3	27.1	0.0	30.7
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	0.5	0.6	0.1	0.0	3.2	1.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.4	2.5	0.3	3.0	1.6	1.0	0.0	1.9	3.4	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	13.2	13.2	9.8	13.0	12.3	31.2	0.0	38.5	28.9	0.0	31.6
LnGrp LOS	B	B	B	A	B	B	C	A	D	C	A	C
Approach Vol, veh/h		517			762			156			319	
Approach Delay, s/veh		13.1			12.7			35.7			29.9	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	44.6	15.0	12.0	8.1	44.9	9.7	17.3
Change Period (Y+Rc), s	5.5	6.0	5.5	5.0	6.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.5	29.0	9.5	10.0	9.0	29.0	9.0	10.0
Max Q Clear Time (g_c+I1), s	2.9	8.5	9.9	6.3	2.5	9.7	4.4	6.9
Green Ext Time (p_c), s	0.0	2.5	0.0	0.1	0.0	4.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B



Lane Group	SEL	SET	NWT	SWL	SWR
Lane Group Flow (vph)	100	618	708	128	199
v/c Ratio	0.18	0.24	0.32	0.52	0.51
Control Delay	2.8	3.2	8.5	39.0	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	3.2	8.5	39.0	9.6
Queue Length 50th (ft)	26	101	80	60	0
Queue Length 95th (ft)	m6	12	124	83	50
Internal Link Dist (ft)		1308	792	386	
Turn Bay Length (ft)	155			110	
Base Capacity (vph)	602	2627	2185	442	545
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.24	0.32	0.29	0.37

Intersection Summary

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

HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.

APPENDIX L
EXISTING CONDITIONS REPORT

SIGNAL TIMING OPTIMIZATION STUDY

EXISTING CONDITIONS REPORT

US 70 FROM STATE ROUTE 96 TO BEASLEY DRIVE
BEASLEY DRIVE FROM CENTER AVENUE (SR-48) TO THORNTON DRIVE

DICKSON, TENNESSEE



KCI

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SIGNAL TIMING OPTIMIZATION STUDY
EXISTING CONDITIONS REPORT
US 70 FROM STATE ROUTE 96 TO BEASLEY DRIVE
BEASLEY DRIVE FROM CENTER AVENUE (STATE ROUTE 48) TO THORNTON DRIVE
DICKSON, TENNESSEE

PREPARED FOR:

THE CITY OF DICKSON, TN



PREPARED BY:

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1. INTRODUCTION

The principal purpose of this project is to develop optimized traffic signal timings for two corridors within the City of Dickson for immediate implementation, US 70 and Beasley Drive. To accomplish this, the traffic simulation and modeling software Synchro and SimTraffic are being used to aid the development of signal timings and identification of needed improvements. To ensure that the traffic simulation model accurately reflects existing conditions its components were calibrated with SimTraffic using field observations and exiting travel time measurements. The following report summarizes the data collection and analysis of existing conditions utilized for this purpose.

2. ROADWAY NETWORK

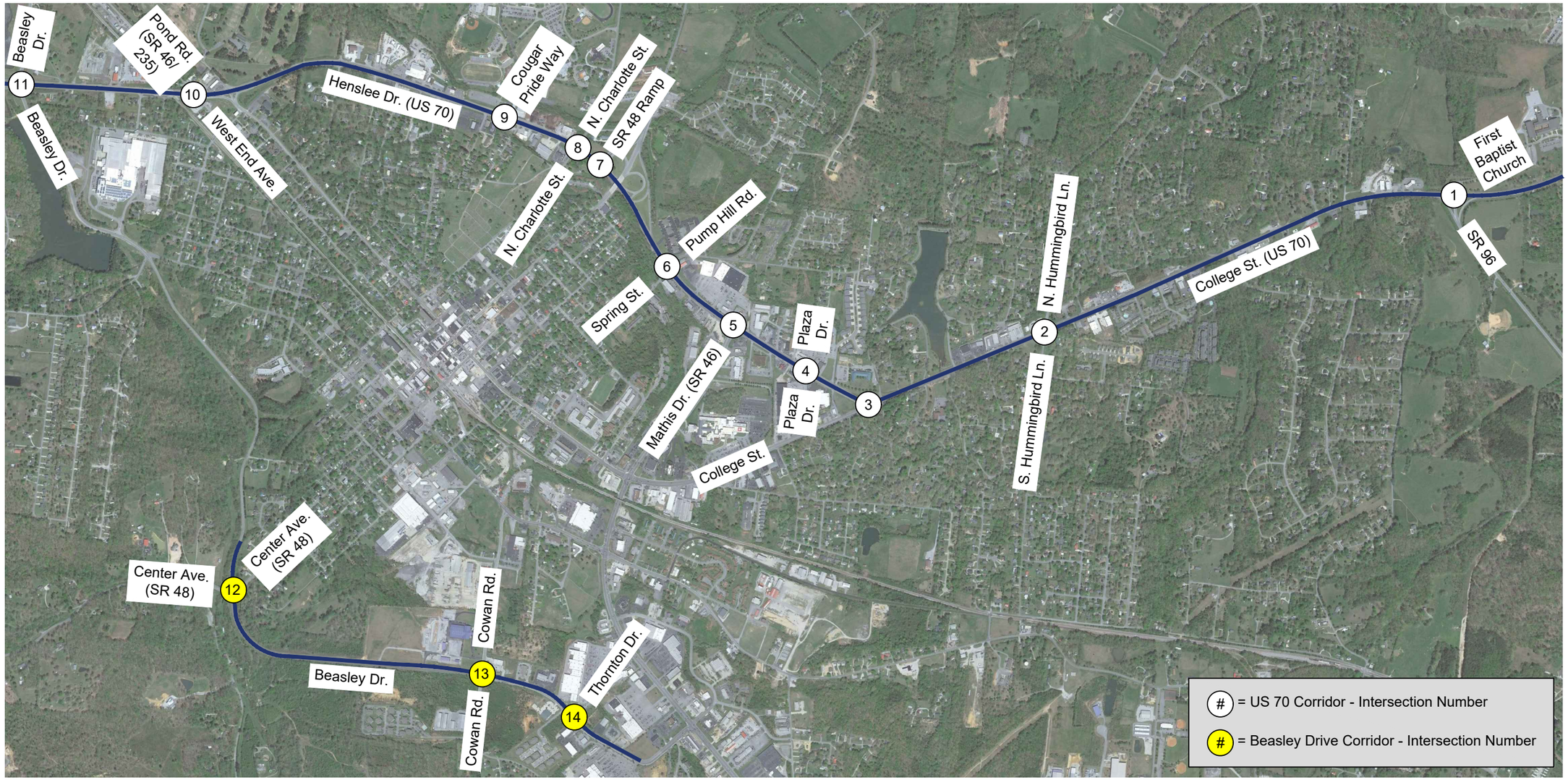
The study area for the project includes two focus corridors, one 4.1-mile principal arterial segment of US 70 extending from State Route 96 on the eastern end to Beasley Drive on the western end and one 1.0-mile major collector segment of Beasley Drive extending from Center Avenue on the western end to Thornton Drive on the eastern end. For the US 70 corridor, the study focuses on the 11 intersections that have existing traffic signals or are planned to be signalized, as illustrated in Figure 1. For the Beasley Drive corridor, the study focuses on the 3 intersections that have existing traffic signals, as illustrated in Figure 1. Auxiliary laneage at each intersection is illustrated in Figure 2A, Figure 2B, and Figure 2C, while the functional classification and speed limit of the study roadways can be found in Table 1A and Table 1B. Two school zones are present on US 70 within the study segment where the speed limit drops to 15 miles per hour. These include a 1,500-foot segment that runs from east of the intersection of College Street and Henslee Drive to north of the intersection of College Street and Henslee Drive and a 1,200-foot segment at Cougar Pride Way.

TABLE 1A. STUDY ROADWAYS – FUNCTIONAL CLASSIFICATION AND SPEEDS – US 70

NO.	INTERSECTING ROADWAY	FUNCTIONAL CLASSIFICATION	SPEED LIMIT (mph)
1	First Baptist Church/SR 96	Local/Principal Arterial	30/55
2	Hummingbird Lane	Local	30
3	College Street	Minor Arterial	40
4	Plaza Drive	Local	30
5	Mathis Drive (SR 46)	Principal Arterial	30
6	Pump Hill Road/Spring Street	Major Collector	30/20
7	SR 48 Ramp	Principal Arterial	30
8	North Charlotte Street	Major Collector	30
9	Cougar Pride Way (Planned Signal)	Local	15
10	Pond Road (SR 46/SR 235)/West End Avenue	Principal Arterial/Local	35/30
11	Beasley Drive (North/South)	Major Collector/Minor Arterial	30/40

TABLE 1B. STUDY ROADWAYS – FUNCTIONAL CLASSIFICATION AND SPEEDS – BEASLEY DRIVE

NO.	INTERSECTING ROADWAY	FUNCTIONAL CLASSIFICATION	SPEED LIMIT (mph)
12	Center Avenue (SR 48) (West/East)	Minor Arterial	45/30
13	Cowan Road (North/South)	Major Collector	30/25
14	Thornton Drive	Local	15



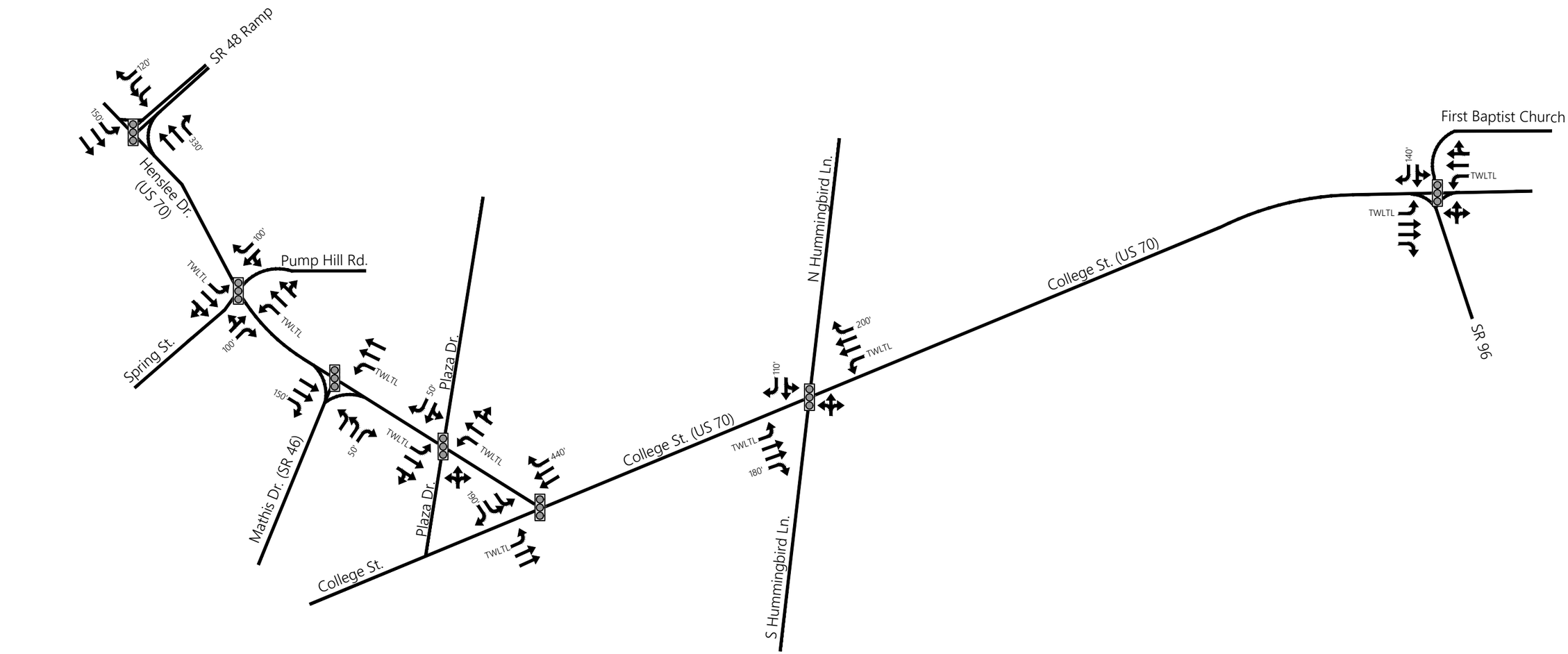
US 70 CORRIDOR

1	College Street (US 70) and First Baptist Church/SR 96	7	Henslee Drive (US 70) and SR 48 Ramp	12	Beasley Drive and Center Avenue (SR 48)
2	College Street (US 70) and Hummingbird Lane	8	Henslee Drive (US 70) and North Charlotte Street	13	Beasley Drive and Cowan Road
3	College Street (US 70) and College Street	9	Henslee Drive (US 70) and Cougar Pride Way	14	Beasley Drive and Thornton Drive
4	Henslee Drive (US 70) and Plaza Drive	10	Henslee Drive (US 70) and Pond Road (SR 46/SR 235)/West End Avenue		
5	Henslee Drive (US 70) and Mathis Drive (SR 46)	11	Henslee Drive (US 70) and Beasley Drive		
6	Henslee Drive (US 70) and Pump Hill Road/Spring Street				

BEASLEY DRIVE CORRIDOR

US 70 and Beasley Drive Study Area
(Not to Scale)

Figure 1.

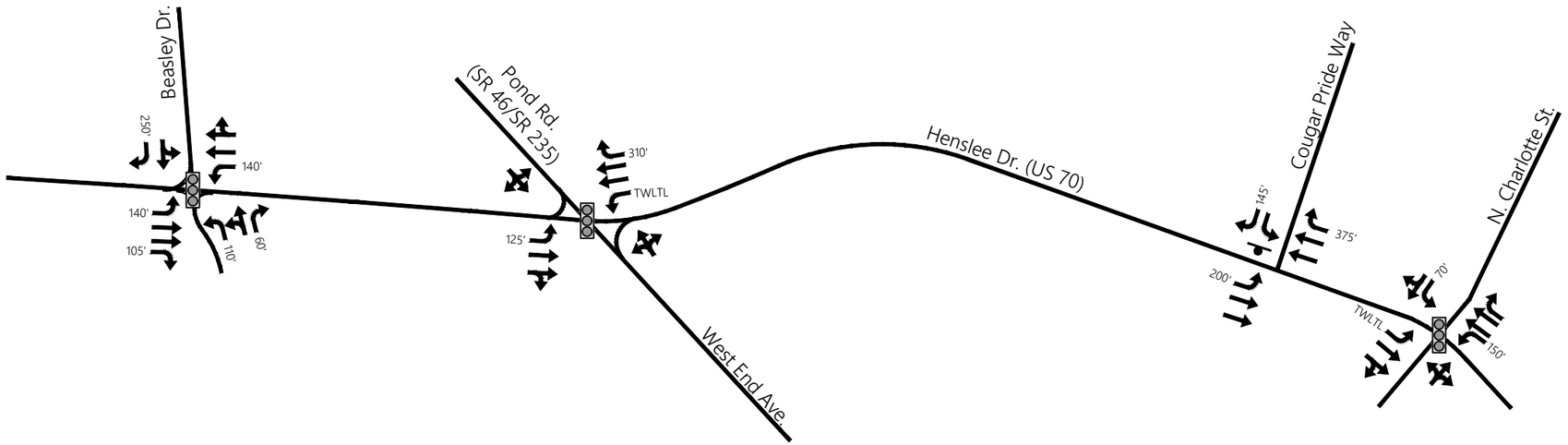


T - Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2A.

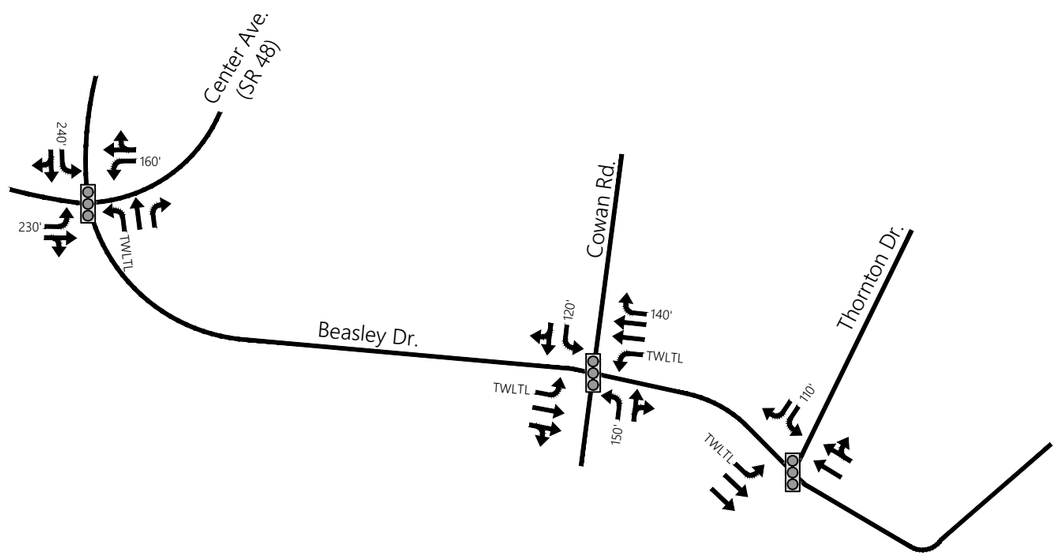


- Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2B.



- Stop Sign
- Traffic Signal
XX' - Storage Length
TWLTL - Two-Way Left Turn Lane

N

Existing Laneage
(Not to Scale)

Figure 2C.

3. TRAFFIC

In order to provide data for the project, vehicle count data was collected for the corridors. Both manual and automated count data was collected. Manual turning movement counts were collected at each of the fourteen study area intersections for typical AM, Midday, and PM peak hour conditions. Specifically, manual turning movement counts were collected on a typical weekday in February 2021 while schools were in session from 6-9 AM, 11 AM – 1 PM, and 2-7 PM. Peak hour turning movement counts for each study area intersection on US 70 can be found in Figure 3A and Figure 3B, and the peak hour turning movement counts for each study area intersection on Beasley Drive can be found in Figure 3C. Detailed turning movement counts for each study intersection are presented in Appendix A

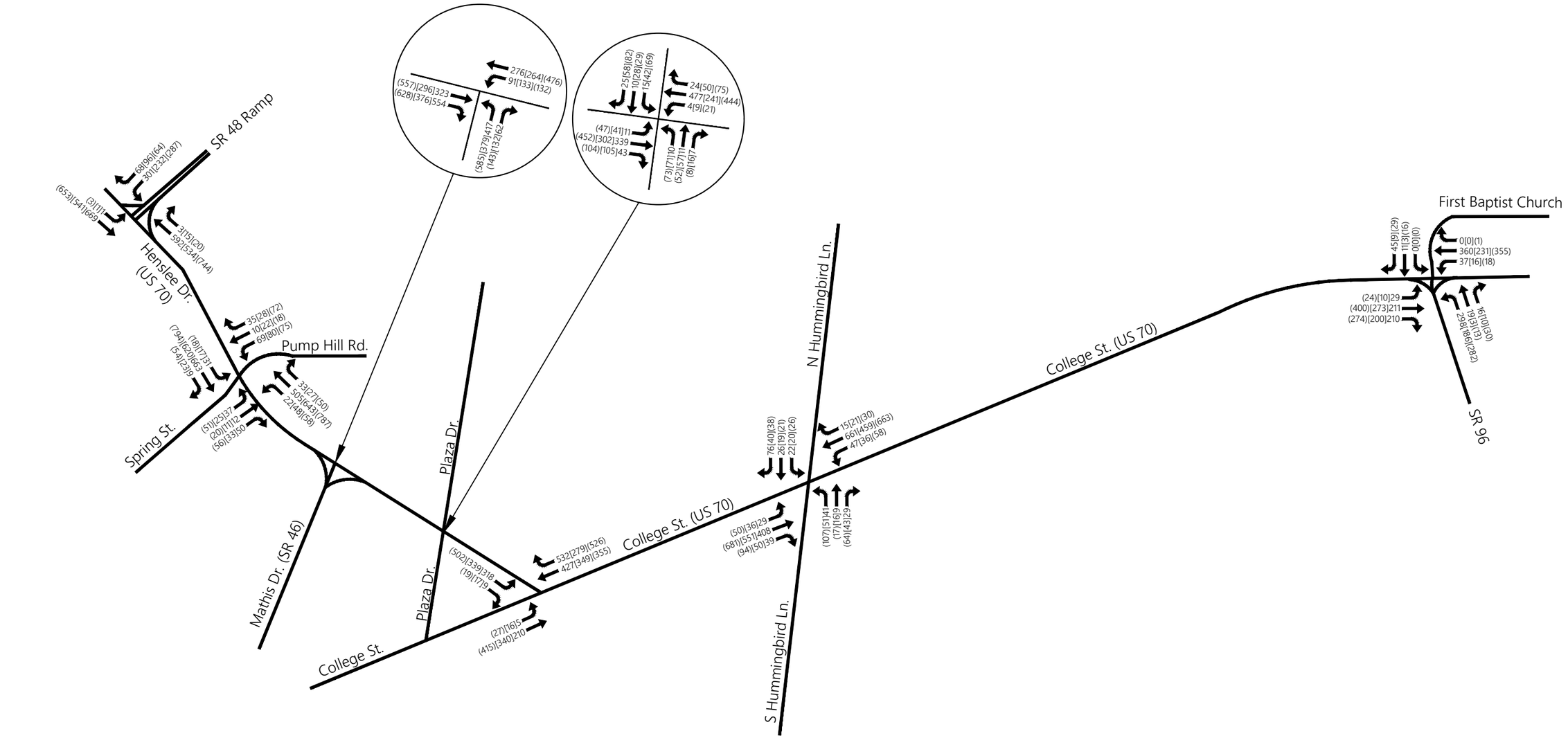
From this data, the peak hour for each intersection under each condition was determined. For each condition, peak hours varied somewhat across intersections. This segregated data is valuable in determining when traffic flows are conducive to coordination. The peak hour volume for each intersection during AM, Midday, and PM periods is presented below in Table 2A and Table 2B along with the time of the start of the peak hour.

TABLE 2A. PEAK HOUR VOLUME AND START TIME – US 70

HIGHWAY 70 INTERSECTION	AM	Midday	PM
First Baptist Church/SR 96	1,236 (7:00)	941 (12:00)	1,442 (4:15)
Hummingbird Lane	1,402 (7:15)	1,342 (12:00)	1,849 (3:00)
College Street	1,501 (7:15)	1,340 (12:00)	1,844 (3:00)
Plaza Drive	976 (7:00)	1,020 (12:00)	1,456 (3:00)
Mathis Drive (SR 46)	1,723 (7:15)	1,580 (11:00)	2,521 (3:00)
Pump Hill Road/Spring Street	1,476 (7:15)	1,577 (11:45)	2,053 (3:45)
SR 48 Ramp	1,634 (7:00)	1,419 (11:45)	1,771 (3:30)
North Charlotte Street	1,565 (7:00)	1,292 (11:45)	1,742 (3:45)
Cougar Pride Way (Planned Signal)	1,522 (7:00)	1,029 (11:45)	1,641 (3:00)
Pond Road (SR 46/SR 235)/West End Avenue	1,148 (7:00)	954 (11:00)	1,446 (4:15)
Beasley Drive	1,455 (7:00)	1,055 (12:00)	1,659 (3:00)

TABLE 2B. PEAK HOUR VOLUME AND START TIME – BEASLEY DRIVE

BEASLEY DRIVE INTERSECTION	AM	Midday	PM
Center Avenue (SR 48)	1,397 (7:00)	1,051 (12:00)	1,438 (4:00)
Cowan Road	1,132 (7:00)	1,031 (12:00)	1,455 (3:15)
Thornton Drive	1,051 (7:00)	1,154 (12:00)	1,452 (3:15)

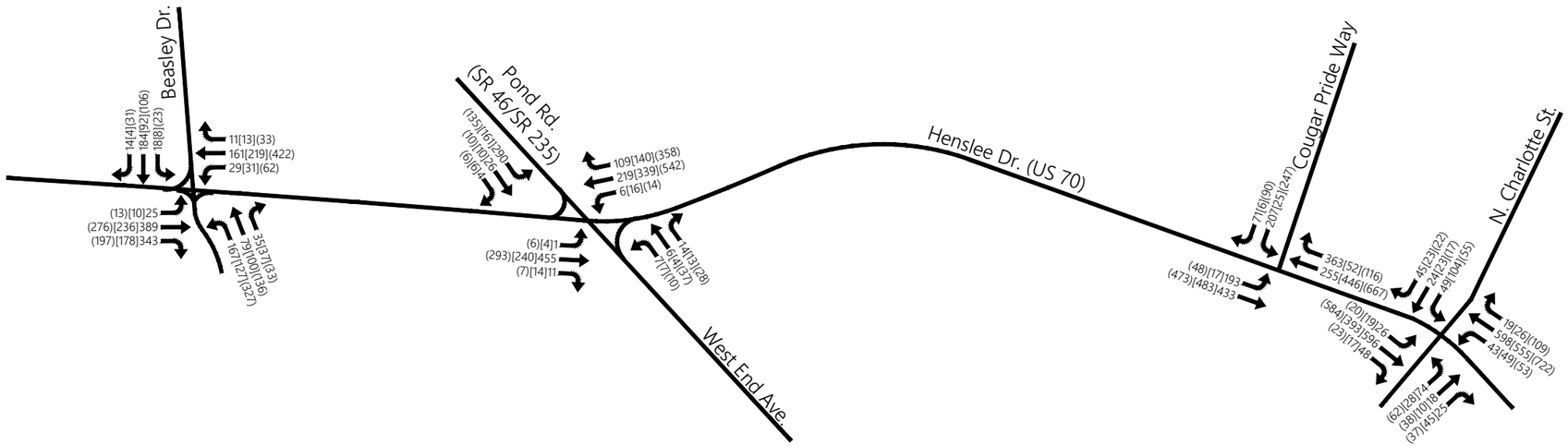


XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

N

Existing Peak Hour Traffic Volumes on the Eastern Side of US 70
(Not to Scale)

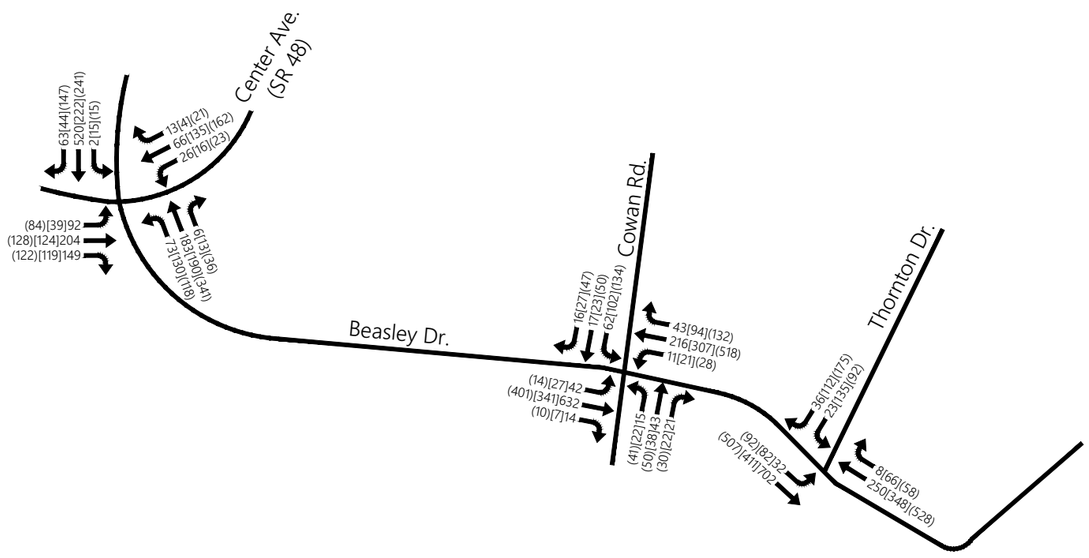
Figure 3A.



XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

Existing Peak Hour Traffic Volumes on the Western Side of US 70
(Not to Scale)

Figure 3B.



XXX - AM Peak Hour Traffic Volumes
[XXX] - Midday Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

Existing Peak Hour Traffic Volumes on Beasley Drive
(Not to Scale)

Figure 3C.

Automated counts were collected at four locations along the US 70 corridor and two locations along the Beasley Drive corridor for typical weekday conditions. These locations and the associated annual average daily traffic (AADT) volumes are depicted in Figure 4. Typical conditions included the collection of bi-directional count data for two consecutive 24-hour periods, between February 3rd through February 10th, while schools were in session. Figure 5 illustrates the weekday hourly variation in traffic flow for reference purposes at one of the six automated bi-directional count locations.

In addition to the above information, AADT volumes were obtained from the Tennessee Department of Transportation (TDOT). There are five TDOT count stations on US 70 in or near the study area and three TDOT count stations on Beasley Drive in or near the study area. The TDOT AADT station, location, and counts for the year of 2019 are shown in Table 3A and Table 3B below.

TABLE 3A. TDOT COUNT STATION DATA – US 70

LOCATION	STATION NO.	2019 AADT (vpd)
Between Ridgecrest Drive and Woodmont Drive	86	9,138
Between Forrest Hills Circle and Village Circle	65	16,722
Between Mathis Drive (SR 46) and Villa Circle	83	11,343
Between Oak Drive and Taylor Street	84	12,760
Between Silver Leaf Circle and Oak Leaf Drive	59	14,069

TABLE 3B. TDOT COUNT STATION DATA – BEASLEY DRIVE

LOCATION	STATION NO.	2019 AADT (vpd)
Between W Walnut Street and Patterson Street	159	10,762
Between Center Avenue (SR 48) and Cowan Road	158	13,237
Between Remington Drive and Archway Drive	149	12,736

FIGURE 4. AUTOMATED COUNT LOCATIONS AND ASSOCIATED AADT

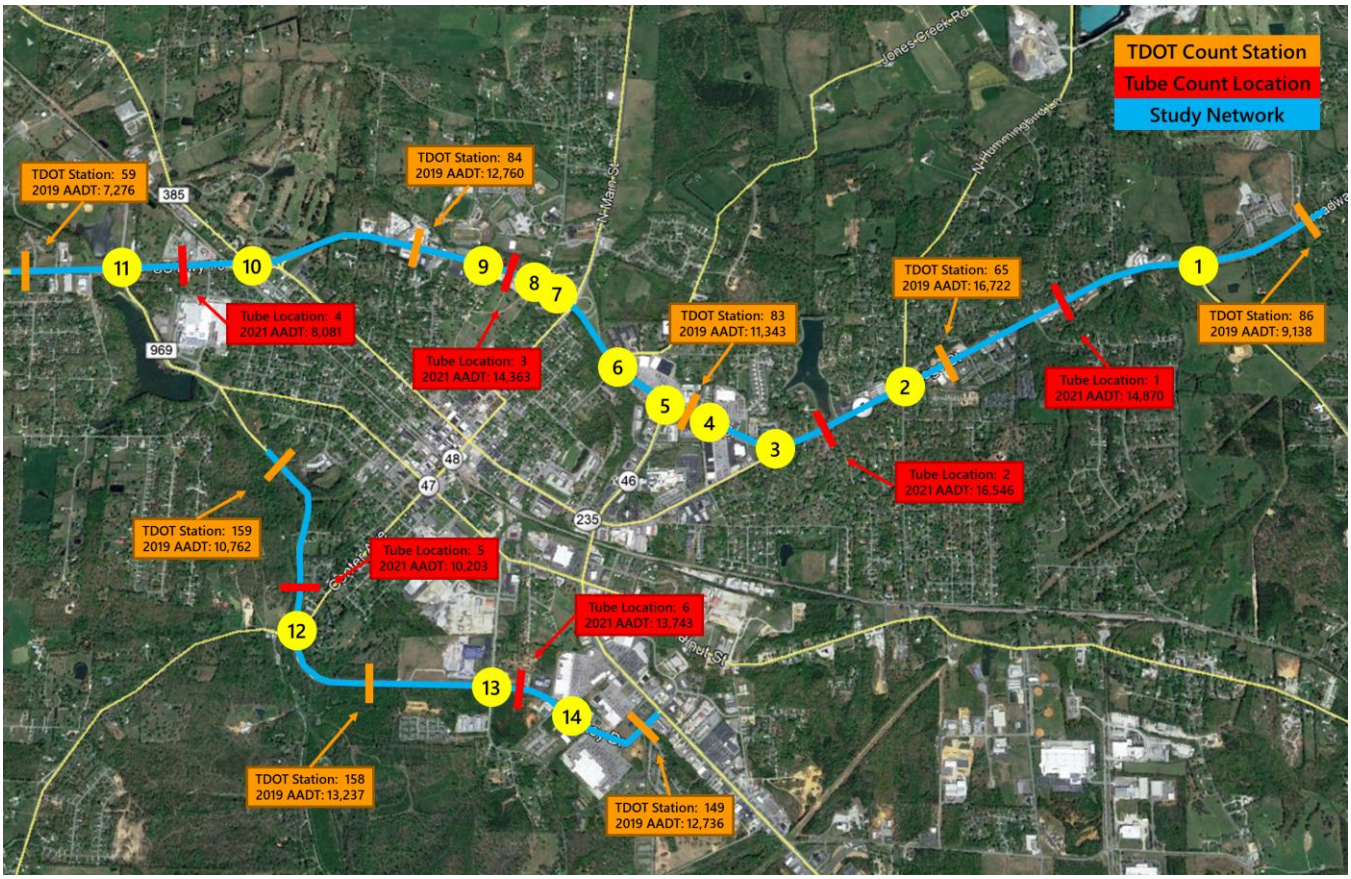
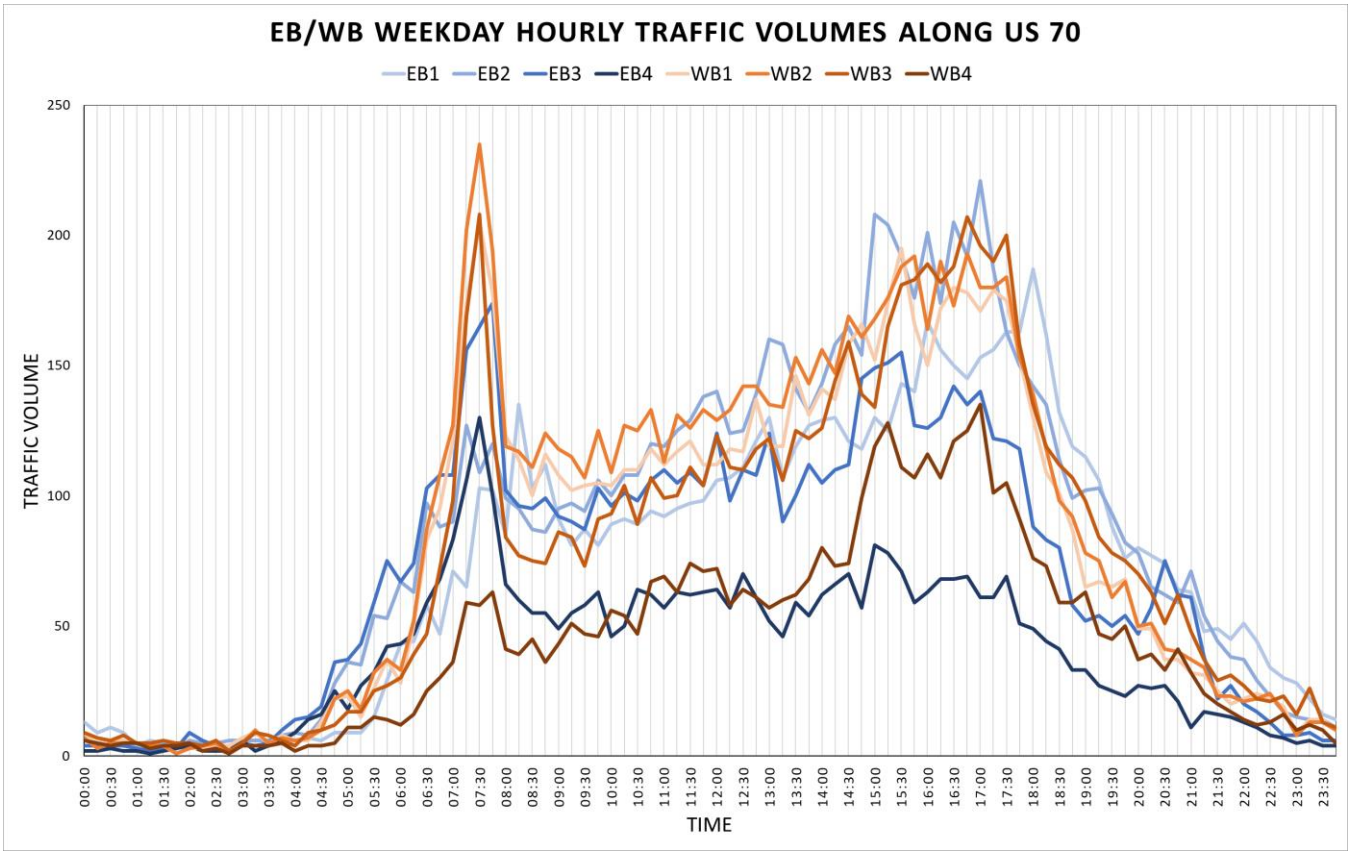


FIGURE 5. HOURLY TRAFFIC VOLUMES (TYPICAL WEEKDAY)



4. SIGNAL SYSTEM – SIGNAL TIMING

As part of the detailed field inventory, the current signal timings were obtained from each local traffic signal controller along the project corridors. Based on the existing signal timing, all of the signalized study intersections along both study corridors currently operate uncoordinated, or "Free". Detailed phasing and timing plan data from each intersection can be found in Appendix B.

Existing timings at each signalized intersection were then compared to national standards such as the Institute of Transportation Engineers (ITE) *Manual of Traffic Signal Design* and the *Manual on Uniform Traffic Control Devices* (MUTCD). In addition, Tennessee industry best practices such as the TDOT *Traffic Design Manual*, which includes minimum parameters for signal timing were applied. The following includes detailed evaluations for minimum vehicular green time, maximum vehicular green time, yellow and all-red clearance intervals, and pedestrian clearance intervals.

4.1 Minimum Vehicular Green Time

The minimum green times to satisfy driver expectancy based on the ITE *Manual of Traffic Signal Design* and the TDOT *Traffic Design Manual* are presented in Table 4. Based on the values presented in Table 4, left-turn phases were chosen to have a minimum green time of 5 seconds, through movements from the minor street were chosen to have minimum green times of 7 seconds, and major street through movements were chosen to have a minimum green time of 10 seconds. Some existing timings have minimum green times that do not meet the values chosen above. These will be adjusted for the new timing plans to reflect the recommendations set forth by ITE and TDOT guidelines. The existing minimum vehicular green time for each signalized intersection can be found in the detailed phasing and timing plan data found in Appendix B.

TABLE 4. MINIMUM GREEN TIME TO SATISFY DRIVER EXPECTATIONS

Phase Type	Facility Type	Recommended Minimum Green Values (sec)	
		ITE	TDOT
Through	Major Arterial (speed limit exceeds 40 mph)	10 to 15	10 to 15
	Major Arterial (speed limit is 40 mph or less)	7 to 15	7 to 15
	Minor Arterial	4 to 10	5 to 10
	Collector, Local, Driveway	2 to 10	5 to 10
Left-Turn	Any	2 to 5	5

Source: *ITE Manual of Traffic Signal Design, 2016; TDOT Traffic Design Manual, 2018*

4.2 Yellow and All-Red Clearance Intervals

Yellow and all-red clearance intervals were calculated for all phases at each intersection using the methodology from ITE and TDOT. The clearance interval calculation includes reaction time, a deceleration time, and an intersection clearance time. This method is intended to eliminate the "dilemma zone" in which a driver has difficulty deciding to stop or continue through the intersection. The following is the ITE recommended equation used to calculate Yellow Clearance time:

$$Y = t + \frac{1.47V}{2a + 2Gg}$$

Where,

Y = length of the yellow change interval (sec)
V = 85th percentile approach speed (mph)
t = perception-reaction time, generally assumed as 1.0 sec
a = average deceleration rate, generally assumed as 10 ft/sec/sec
G = 32.2 ft/sec/sec
g = approach grade (percent divided by 100, negative for downgrade)

The TDOT *Traffic Signal Design Manual* provides an equation that mimics the one presented above. The following is the ITE recommended equation used to calculate the All-Red Clearance Time:

$$R = \frac{W + L}{1.47V}$$

Where,

R = Red Clearance interval (sec)
V = 85th percentile approach speed (mph)
L = vehicle length generally assumed to be 20 ft
W = intersection width (ft)

The TDOT *Traffic Signal Design Manual* provides an equation that mimics the one presented above. The existing and recommended yellow and all-read clearance intervals are shown in Table 5A and Table 5B. In developing proposed signal timing in the next project task, yellow and all-red clearance intervals will be modified to match these recommended values where they differ.

TABLE 5A. VEHICULAR CLEARANCE INTERVALS – US 70

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	EXISTING CLEARANCE (s)			RECOMMENDED CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
College Street (US 70) and First Baptist Church/SR 96	1	WBL	45	70	4.0	2.0	6.0	4.0	2.0	6.0
	2	EB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	4	SB	30	90	4.0	1.0	5.0	5.0	1.0	6.0
	5	EBL	45	90	4.0	2.0	6.0	4.0	2.0	6.0
	6	WB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	8	NB	55	90	4.0	1.0	5.0	5.0	1.0	6.0
College Street (US 70) and Hummingbird Lane	1	EBL	45	110	3.5	1.0	4.5	3.5	2.5	6.0
	2	WB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	3	NB	30	90	4.0	1.5	5.5	3.5	1.0	4.5
	4	SB	30	110	4.0	1.5	5.5	3.5	1.5	5.0
	5	WBL	45	110	3.5	1.0	4.5	3.5	2.5	6.0
	6	EB	45	80	4.0	2.0	6.0	5.0	1.0	6.0
College Street (US 70) and Henslee Drive (US 70)	1	EBL	40	110	4.5	2.0	6.5	3.5	2.5	6.0
	2	WB	45	100	4.0	2.0	6.0	5.0	1.0	6.0
	4	SB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
	6	EB	40	100	4.0	2.0	6.0	5.0	1.0	6.0
Henslee Drive (US 70) and Plaza Drive	1	WBL	35	70	3.0	1.0	4.0	3.0	2.0	5.0
	2	EB	35	90	4.0	1.0	5.0	4.0	1.0	5.0
	4	SB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
	5	EBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	WB	35	90	4.0	1.0	5.0	4.0	1.0	5.0
	8	NB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
Henslee Drive (US 70) and Mathis Drive (SR 46)	2	WB	35	80	4.0	1.0	5.0	4.0	1.0	5.0
	4	NB	30	90	4.0	1.0	5.0	3.5	1.0	4.5
	5	WBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	70	4.0	1.0	5.0	4.0	1.0	5.0
Henslee Drive (US 70) and Pump Hill Road/Spring Street	1	EBL	35	90	3.0	1.0	4.0	3.0	2.5	5.5
	2	WB	35	120	4.0	2.0	6.0	4.0	1.5	5.5
	3	NB	30	120	4.0	1.0	5.0	3.5	1.5	5.0
	4	SB	20	110	4.0	1.0	5.0	3.0	2.5	5.5
	5	WBL	35	90	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	120	4.0	2.0	6.0	4.0	1.5	5.5
Henslee Drive (US 70) and SR 48 Ramp	1	EBL	35	70	4.0	2.0	6.0	3.0	2.0	5.0
	2	WB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
	4	SB	30	80	4.0	2.0	6.0	3.5	1.0	4.5
	6	EB	35	70	4.0	2.0	6.0	4.0	1.0	5.0
Henslee Drive (US 70) and North Charlotte Street	1	EBL	35	100	3.0	1.0	4.0	3.0	3.0	6.0
	2	WB	35	70	4.0	1.0	5.0	4.0	1.0	5.0
	3	SB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	4	NB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	5	WBL	35	80	3.0	1.0	4.0	3.0	2.5	5.5
	6	EB	35	80	4.0	1.0	5.0	4.0	1.0	5.0

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	EXISTING CLEARANCE (s)			RECOMMENDED CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
Henslee Drive (US 70) and Cougar Pride Way	1	EBL	35	100	0.0	0.0	0.0	3.0	3.0	6.0
	2	WB	35	110	0.0	0.0	0.0	4.0	1.0	5.0
	4	SB	15	110	0.0	0.0	0.0	3.0	3.0	6.0
	6	EB	35	100	0.0	0.0	0.0	4.0	1.0	5.0
Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	1	EBL	45	90	4.0	2.0	6.0	4.0	2.0	6.0
	2	WB	45	120	3.5	2.0	5.5	5.0	1.0	6.0
	3	SB	35	160	4.0	3.0	7.0	4.0	2.0	6.0
	4	NB	30	160	4.0	3.0	7.0	3.5	2.5	6.0
	5	WBL	45	90	3.5	2.0	5.5	4.0	2.0	6.0
	6	EB	45	110	4.0	2.0	6.0	5.0	1.0	6.0
Highway 70 West (US 70) and Beasley Drive	1	WBL	45	90	3.5	1.0	4.5	4.0	2.0	6.0
	2	EB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	3	SB	30	110	4.0	1.0	5.0	3.5	1.5	5.0
	4	NB	40	120	4.0	1.0	5.0	4.5	1.0	5.5
	5	WBL	45	100	3.5	1.0	4.5	4.0	2.0	6.0
	6	EB	45	110	4.0	2.0	6.0	5.0	1.0	6.0

TABLE 5B. VEHICULAR CLEARANCE INTERVALS – BEASLEY DRIVE

INTERSECTION	PHASE	DIR.	SPEED (mph)	WIDTH (ft)	EXISTING CLEARANCE (s)			RECOMMENDED CLEARANCE (s)		
					YELLOW	RED	TOTAL	YELLOW	RED	TOTAL
Beasley Drive and Center Avenue (SR 48)	1	EBL	45	90	4.0	1.0	5.0	4.0	2.0	6.0
	2	WB	30	80	4.0	2.0	6.0	5.0	1.0	6.0
	3	NBL	45	70	4.0	1.0	5.0	4.0	2.0	6.0
	4	SB	45	70	4.0	2.0	6.0	5.0	1.0	6.0
	5	WBL	30	80	4.0	1.0	5.0	3.0	2.5	5.5
	6	EB	45	90	4.0	2.0	6.0	5.0	1.0	6.0
	7	SBL	45	70	4.0	1.0	5.0	4.0	2.0	6.0
	8	NB	45	60	4.0	2.0	6.0	5.0	1.0	6.0
Beasley Drive and Cowan Road	1	WBL	30	80	4.0	1.5	5.5	3.0	2.5	5.5
	2	EB	45	70	4.5	2.0	6.5	5.0	1.0	6.0
	3	SBL	30	80	4.0	1.5	5.5	3.0	2.5	5.5
	4	NB	25	100	4.5	2.0	6.5	3.5	1.5	5.0
	5	EBL	45	80	4.0	1.5	5.5	4.0	2.0	6.0
	6	WB	30	70	4.5	2.0	6.5	5.0	1.0	6.0
	7	NBL	25	100	4.0	1.5	5.5	3.0	3.0	6.0
	8	SB	30	90	4.5	2.0	6.5	3.5	1.5	5.0
Beasley Drive and Thornton Drive	2	SB	30	60	3.5	2.0	5.5	3.5	1.0	4.5
	4	WB	15	80	3.5	2.5	6.0	3.0	2.0	5.0
	5	SBL	30	60	3.5	2.0	5.5	3.0	1.5	4.5
	6	NB	30	70	3.5	2.0	5.5	3.5	1.0	4.5

4.3 Pedestrian Clearance Intervals

Pedestrian clearance intervals were calculated at each intersection for all legs of the intersection that had crosswalks or for which pedestrians were likely to cross (Table 6). Where pedestrian signals exist, the Walk interval provides the pedestrian time to leave the curb and begin crossing the street. The MUTCD recommends a minimum Walk Interval of seven seconds followed by a Flashing Don't Walk (FDW) clearance interval long enough to allow a pedestrian to cross the roadway walking at a speed of 3.5 feet per second. According to the MUTCD, a buffer interval of 3 seconds may be used during the Yellow and Red Clearance time of the concurrent vehicular phase resulting in a 3-second reduction to the minimum FDW time. Some signalized intersections without pedestrian signals have pedestrian phasing entered under the current timing plans. Where there is no pedestrian signal, the pedestrian phasing will be removed from the controller settings. Where the Walk or FDW intervals differ from the duration recommended by the MUTCD, the value will be changed in the proposed timing plan.

TABLE 6. PEDESTRIAN CLEARANCE INTERVALS

INTERSECTION	SIDE	WIDTH (ft)	EXISTING		RECOMMENDED	
			WALK (s)	FDW (s)	WALK (s)	FDW (s)
Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	S	100	5	10	7	26
	E	110	5	21	7	29

5. SIGNAL SYSTEM – SIGNAL INFRASTRUCTURE

In order to develop calibrated models of the US 70 and Beasley Drive corridors, a detailed inventory of the existing signal system was performed using data obtained from the City of Dickson and field observations performed by KCI. Tables 7A and 7B summarize the equipment type for each intersection. Detailed field inventory sheets for each study intersection are provided in Appendix C. Additionally, field inventory photos are provided in Appendix D.

Existing traffic signals include Peek or McCain local controllers, conflict monitors from Reno A&E or Peek, and Sonem emergency vehicle preemption. Vehicle detection is accomplished by loop or radar detectors with a mix of models from Wavetronix (radar), EDI, Northstar, and Sarasota.

TABLE 7A. SIGNAL CABINET EQUIPMENT – US 70

NO.	INTERSECTION	CONTROLLER MODEL	CONFLICT MONITOR	EVP SYSTEM
1	College Street (US 70) and First Baptist Church/SR 96	PEEK 3000E	RENO A&E MMU-1600G	N/A
2	College Street (US 70) and Hummingbird Lane	PEEK TRANSYT 3000	RENO A&E MMU-1600G	N/A
3	College Street (US 70) and Henslee Drive (US 70)	McCain ATCeX	RENO A&E MMU-1600G	SONEM 2000
4	Henslee Drive (US 70) and Plaza Drive	PEEK TRANSYT 3000	PEEK TRANSYT 12ELRA	N/A
5	Henslee Drive (US 70) and Mathis Drive (SR 46)	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
6	Henslee Drive (US 70) and Pump Hill Road/Spring Street	PEEK TRANSYT 3000	RENO A&E MMU-1600G	N/A
7	Henslee Drive (US 70) and SR 48 Ramp	TRANSYT 1880EL	PEEK DOUBLE DIAMOND	N/A
8	Henslee Drive (US 70) and North Charlotte Street	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
9	Henslee Drive (US 70) and Cougar Pride Way	N/A	N/A	N/A
10	Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue	PEEK 3000E	PEEK DOUBLE DIAMOND	N/A
11	Highway 70 West (US 70) and Beasley Drive	PEEK 3000	RENO A&E MMU-1600G	N/A

TABLE 7B. SIGNAL CABINET EQUIPMENT – BEASLEY DRIVE

NO.	INTERSECTION	CONTROLLER MODEL	CONFLICT MONITOR	EVP SYSTEM
12	Beasley Drive and Center Avenue (SR 48)	McCain ATCeX	PEEK DOUBLE DIAMOND	N/A
13	Beasley Drive and Cowan Road	PEEK 3000E	iDC GUARDIAN LCD-12P	N/A
14	Beasley Drive and Thornton Drive	PEEK ATC-1000	EDI SSM-12LE	N/A

During the field inventory, it was noted that certain signal system infrastructure items were not currently provided or were not operating properly. Those findings are summarized below.

5.1 Signal Controller Clock Synchronization

When reviewing the signal control cabinets, it was found that the intersections did not have the capability to synchronize signal controller clocks. The installation of GPS units, at each intersection, that can accurately synchronize clocks would be the quickest and most cost effective way to achieve this capability. Other options could include cellular modems installed at each intersection or the installation of traffic signal interconnect cable with clock synchronization provided by a master controller or central signal control system. In order to maintain consistent time settings within each local controller required for proper traffic signal coordination, the installation of GPS units or another method to synchronize signal controller clocks is recommended. Without the capability to synchronize signal controller clocks, slight variations in seconds can result in poor coordination between adjacent intersections.

5.2 Detector Faults

College Street (US 70) and Hummingbird Lane

- The eastbound left-turn detector monitor showed that there was a fault in the detector. The left-turn call was always active, and the phase was called even when no vehicles were present.

6. TRAVEL TIME

Travel time and delay data was used to validate the base condition traffic simulation model of existing traffic on US 70 and Beasley Drive. The project team collected travel data on typical weekdays in February and March 2021 while schools were in session during the AM, Midday, and PM peak periods using the average vehicle method, where the driver of the data collection vehicle travels according to the driver's judgement of the average speed of the traffic stream to determine the average travel time from one point to another on the study corridor. The travel time and delay analysis included four routes: 1) eastbound US 70 between Beasley Drive and First Baptist Church/SR 96; 2) westbound US 70 between First Baptist Church/SR 96 and Beasley Drive; 3) eastbound Beasley Drive between Center Avenue (SR 48) and Thornton Drive; and 4) westbound Beasley drive between Thornton Drive and Center Avenue (SR 48). The average weekday peak hour travel time summary can be found in Tables 8A, 8B, 9A, 9B, and 10. Detailed travel time inventory sheets are provided in Appendix E.

TABLE 8A. EASTBOUND FIELD TRAVEL TIME RUNS – US 70

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Beasley Drive	Pond Road (SR 46/SR 235)/West End Avenue	60	46	56	27	35	29	17	5	12
Pond Road (SR 46/SR 235)/West End Avenue	Cougar Pride Way	84	67	75	36	45	40	0	0	0
Cougar Pride Way	North Charlotte Street	41	28	30	17	25	24	7	7	5
North Charlotte Street	SR 48 Ramp	16	21	10	18	14	29	3	6	0
SR 48 Ramp	Pump Hill Road/Spring Street	36	43	47	31	26	23	0	6	9
Pump Hill Road/Spring Street	Mathis Drive (SR 46)	56	48	50	15	18	17	25	15	15
Mathis Drive (SR 46)	Plaza Drive	36	31	39	22	25	20	6	4	5
Plaza Drive	Henslee Drive (US 70)	40	33	51	16	19	12	5	7	21
Henslee Drive (US 70)	Hummingbird Lane	54	51	53	34	36	34	2	2	2
Hummingbird Lane	First Baptist Church/SR 96	99	94	93	41	43	44	5	3	2

TABLE 8B. WESTBOUND FIELD TRAVEL TIME RUNS – US 70

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
First Baptist Church/SR 96	Hummingbird Lane	97	100	105	42	41	39	5	9	10
Hummingbird Lane	Henslee Drive (US 70)	58	50	48	32	37	38	1	0	0
Henslee Drive (US 70)	Plaza Drive	31	28	37	20	21	16	0	4	7
Plaza Drive	Mathis Drive (SR 46)	46	38	40	17	21	20	17	10	7
Mathis Drive (SR 46)	Pump Hill Road/Spring Street	46	35	49	17	23	16	16	4	13
Pump Hill Road/Spring Street	SR 48 Ramp	41	37	41	28	31	29	8	4	4
SR 48 Ramp	North Charlotte Street	22	22	18	13	13	16	7	7	4
North Charlotte Street	Cougar Pride Way	60	20	57	12	36	12	16	0	30
Cougar Pride Way	Pond Road (SR 46/SR 235)/West End Avenue	96	64	80	31	47	37	17	0	2
Pond Road (SR 46/SR 235)/West End Avenue	Beasley Drive	66	59	47	25	28	34	15	16	4

TABLE 9A. EASTBOUND FIELD TRAVEL TIME RUNS – BEASLEY DRIVE

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Center Avenue (SR 48)	Cowan Road	82	91	83	33	30	33	12	19	17
Cowan Road	Thornton Drive	33	28	26	29	34	37	1	0	0

TABLE 9B. WESTBOUND FIELD TRAVEL TIME RUNS – BEASLEY DRIVE

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Thornton Drive	Cowan Road	31	33	38	31	29	25	2	2	5
Cowan Road	Center Avenue (SR 48)	65	71	82	42	38	33	0	1	16

TABLE 10. FIELD TRAVEL TIME RUNS TOTAL ROUTE SUMMARY

ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound US 70	521	462	503	28	32	29	69	54	72
Westbound US 70	562	452	521	26	33	28	101	54	82
Eastbound Beasley Drive	115	119	109	35	38	32	13	20	17
Westbound Beasley Drive	96	104	120	38	39	32	2	3	21

In order to evaluate existing conditions as well as identify needed improvements, a base model representing existing conditions was established through the development and calibration of a simulation model of the roadway network. This base model of the roadway network was constructed using the traffic simulation and modeling software Synchro and SimTraffic. Base model calibration to simulate the existing conditions of the roadway network was based on field observations, existing signal timings, and field-run travel times. The base model was coded with the existing geometric, volume, phasing, and timing information collected as part of the field inventory. The base traffic operations were then calibrated for each time-period studied (AM, Midday, and PM) to establish a point of reference to which future modifications will be compared. The base model average weekday travel time data can be found in Tables 11A, 11B, 12A, 12B, and 13. Detailed SimTraffic travel time reports are included in Appendix F.

TABLE 11A. EASTBOUND MODEL TRAVEL TIME RUNS – US 70

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Beasley Drive	Pond Road (SR 46/SR 235)/West End Avenue	51	42	45	32	38	36	18	10	13
Pond Road (SR 46/SR 235)/West End Avenue	Cougar Pride Way	72	71	68	42	42	44	5	3	3
Cougar Pride Way	North Charlotte Street	30	29	24	24	25	30	11	10	7
North Charlotte Street	SR 48 Ramp	15	15	14	18	19	20	8	7	6
SR 48 Ramp	Pump Hill Road/Spring Street	34	39	42	34	29	27	8	10	13
Pump Hill Road/Spring Street	Mathis Drive (SR 46)	33	30	39	25	27	21	12	10	19
Mathis Drive (SR 46)	Plaza Drive	28	30	33	29	27	24	8	11	11
Plaza Drive	Henslee Drive (US 70)	36	33	41	17	19	15	17	14	21
Henslee Drive (US 70)	Hummingbird Lane	78	53	53	39	35	35	7	10	13
Hummingbird Lane	First Baptist Church/SR 96	88	78	88	46	52	46	13	10	14

TABLE 11B. WESTBOUND MODEL TRAVEL TIME RUNS – US 70

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
First Baptist Church/SR 96	Hummingbird Lane	84	73	79	48	55	51	12	9	13
Hummingbird Lane	Henslee Drive (US 70)	48	45	53	39	42	35	10	7	13
Henslee Drive (US 70)	Plaza Drive	28	32	32	22	20	19	5	8	9
Plaza Drive	Mathis Drive (SR 46)	23	28	33	35	28	24	4	7	12
Mathis Drive (SR 46)	Pump Hill Road/Spring Street	25	28	29	32	29	28	6	8	10
Pump Hill Road/Spring Street	SR 48 Ramp	38	35	35	30	32	33	8	7	7
SR 48 Ramp	North Charlotte Street	21	19	16	13	14	18	13	12	9
North Charlotte Street	Cougar Pride Way	21	21	21	34	34	35	2	2	2
Cougar Pride Way	Pond Road (SR 46/SR 235)/West End Avenue	74	67	72	41	45	42	10	7	13
Pond Road (SR 46/SR 235)/West End Avenue	Beasley Drive	49	40	52	33	41	31	15	10	18

TABLE 12A. EASTBOUND MODEL TRAVEL TIME RUNS – BEASLEY DRIVE

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Center Avenue (SR 48)	Cowan Road	72	71	70	38	39	39	14	15	15
Cowan Road	Thornton Drive	36	38	43	27	25	22	5	10	12

TABLE 12B. WESTBOUND MODEL TRAVEL TIME RUNS – BEASLEY DRIVE

FROM	TO	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM
Thornton Drive	Cowan Road	78	83	86	37	36	34	10	13	17
Cowan Road	Center Avenue (SR 48)	32	36	30	26	23	28	14	19	14

TABLE 13. MODEL TRAVEL TIME RUNS TOTAL ROUTE SUMMARY

ROUTE	AVERAGE TRAVEL TIME (sec)			AVERAGE TRAVEL SPEED (mph)			AVERAGE DELAY (sec)		
	AM	MID	PM	AM	MID	PM	AM	MID	PM
Eastbound US 70	434	420	446	35	37	36	107	95	121
Westbound US 70	411	388	421	37	41	37	87	79	105
Eastbound Beasley Drive	107	109	112	35	34	34	19	24	27
Westbound Beasley Drive	110	119	116	35	33	33	24	32	30

For the most part, modeled travel times closely resemble those collected in the field. However, it should be noted that there are a few limitations to consider when comparing travel times observed in the field to those calculated in the Synchro models. For example, Synchro does not consider the impact of temporary school zones or turning vehicles at driveways between intersections observed during KCI travel time runs. Additionally, variances are expected specifically in the modeling of existing conditions due to limitations in Synchro in terms of evaluating free running traffic signals. One other factor to consider is the limited sample of travel time runs collected in the field. With limited field samples, greater variances in arrivals can be expected at each traffic signal, especially under non-coordinated signal timings. Therefore, although in some cases the field travel times in Table 10 do not closely match model travel times in Table 13, the Synchro files have been coded to accurately reflect field conditions and intersections where travel times do not match closely will be monitored during field implementation to ensure the signal timing is programmed appropriately.

7. LEVEL OF SERVICE

To determine the current operation of the study intersections, capacity analyses were performed for the AM, Midday, and PM peak hours. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual*, 6th Edition. However, it should be noted that due to the limitations of HCM 6th Edition regarding intersections with non-NEMA phasing, some of the signalized intersections were analyzed using HCM 2000 methodologies. The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area. For stop-controlled intersections, a LOS is presented for each critical turning movement. For signalized intersections, a LOS is presented for the overall intersection. Table 14 presents the descriptions of LOS for signalized and unsignalized intersections.

TABLE 14. DESCRIPTIONS OF LEVEL OF SERVICE

LEVEL OF SERVICE	DESCRIPTION	UNSIGNALIZED CONTROL DELAY (sec/veh)	SIGNALIZED CONTROL DELAY (sec/veh)
A	Little or no delay	≤ 10.0	≤ 10.0
B	Short traffic delay	>10 and ≤ 15	>10 and ≤ 20
C	Average traffic delay	>15 and ≤ 25	>20 and ≤ 35
D	Long traffic delay	>25 and ≤ 35	>35 and ≤ 55
E	Very long traffic delay	>35 and ≤ 50	>55 and ≤ 80
F	Extreme traffic delay	> 50.0	> 80.0

Source: *Highway Capacity Manual*, 6th Edition

The results of capacity analyses for base conditions at the study area intersections are presented in Tables 15A and 15B for the US 70 and Beasley Drive segments, respectively. Results indicate that each signalized intersection on the study segments of US 70 and Beasley Drive operate at LOS D or better during the weekday AM, midday, and PM peak hours. The minor stop-controlled approach of Cougar Pride Way at US 70 operates at LOS F during the AM and PM peak hours. However, this likely does not reflect peak conditions during school arrival and dismissal in which traffic is controlled by a police officer. Additionally, this performance is common for unsignalized approaches to high-volume roadways such as US 70, and the study intersection is scheduled for future signalization. It should be noted that upon signalization, this intersection will include an additional approach, laneage changes including a shared left/through/right lane plus an exclusive left turn lane, and pedestrian infrastructure and phasing. Signal timing being developed for the future traffic signal will accommodate all these features.

This evaluation of the study intersections establishes the base condition to which all future modifications will be compared. In addition, these capacity analyses will be used to evaluate the need for roadway and traffic control improvements at the project area intersections. Detailed capacity analysis results are provided in Appendix G.

TABLE 15A. EXISTING PEAK HOUR LEVELS OF SERVICE – US 70

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE AM PEAK HOUR	Average Delay (sec/veh)	MID PEAK HOUR	Average Delay (sec/veh)	PM PEAK HOUR	Average Delay (sec/veh)
College Street (US 70) and First Baptist Church/SR 96	Overall Intersection	B	19.8	B	12.6	B	17.9
College Street (US 70) and Hummingbird Lane[1]	Overall Intersection	B	16.6	B	17.0	C	21.4
College Street (US 70) and Henslee Drive (US 70)	Overall Intersection	B	11.5	B	11.5	B	13.2
Henslee Drive (US 70) and Plaza Drive	Overall Intersection	A	8.4	B	11.2	B	11.6
Henslee Drive (US 70) and Mathis Drive (SR 46)	Overall Intersection	B	10.6	A	9.9	B	17.9
Henslee Drive (US 70) and Pump Hill Road/Spring Street[1]	Overall Intersection	B	14.4	B	13.6	B	16.2
Henslee Drive (US 70) and SR 48 Ramp	Overall Intersection	A	9.8	A	9.3	A	9.7
Henslee Drive (US 70) and North Charlotte Street[1]	Overall Intersection	B	18.3	B	17.3	B	18.4
Henslee Drive (US 70) and Cougar Pride Way	Eastbound Left-Turn	B	13.0	A	8.7	B	10.2
	Southbound Left-Turn	F	184.0	B	14.0	F	263.5
	Southbound Right-Turn	A	9.7	A	9.8	B	12.4
Highway 70 West (US 70) and Pond Road (SR 46/SR 235)/West End Avenue[1]	Overall Intersection	C	27.4	C	20.2	C	21.3
Highway 70 West (US 70) and Beasley Drive[1]	Overall Intersection	C	25.8	C	22.9	D	48.1

Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6th Edition methods.

TABLE 15B. EXISTING PEAK HOUR LEVELS OF SERVICE – BEASLEY DRIVE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE AM PEAK HOUR	Average Delay (sec/veh)	MID PEAK HOUR	Average Delay (sec/veh)	PM PEAK HOUR	Average Delay (sec/veh)
Beasley Drive and Center Avenue (SR 48)	Overall Intersection	D	41.6	B	18.8	C	21.0
Beasley Drive and Cowan Road	Overall Intersection	B	16.1	B	15.9	B	17.6
Beasley Drive and Thornton Drive	Overall Intersection	A	5.9	B	10.8	B	12.0

8. CONCLUSION

The principal purpose of this project is to develop optimized traffic signal timings for two corridors within the City of Dickson for immediate implementation, US 70 and Beasley Drive. Additionally, recommendations for short, mid, and long-term improvements will be developed. Strategies will consider access management, modified signal phasing, signal timing, intersection laneage, vehicle detection, Intelligent Transportation Systems (ITS), and technologies such as adaptive signal control.

At the conclusion of the project, a system of optimized signal timing plans will be in place and operational, tailored for peak conditions and time of day. A recommended path for next step improvements and future technologies will be identified, and an analysis of infrastructure in place will be provided to ensure continued maintenance of timings and operations.

In order to develop new signal timing plans for the corridors, the existing conditions of the corridor were reviewed. The first step was to complete a field inventory of each of the signalized intersections within the corridors. Next, the existing conditions were evaluated by inputting field collected turning movement counts and signal timing data in the simulation modeling software Synchro and SimTraffic. Travel times were collected in the field using the average vehicle method and later compared to SimTraffic results for the existing conditions. In addition to evaluating existing conditions, base findings were reported in regard to recommended minimum vehicular green time, yellow and red clearance intervals, and pedestrian clearance intervals. This report detailed the findings of the existing conditions inventory, as well as the base findings from the existing conditions Synchro model.

It was concluded that the developed Synchro model reflects the existing conditions of the corridor and can be used to develop new signal timing plans.