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An Analysis of the Protected-Permitted Left Turn at Intersections with a Varying Number of Opposing Through Lanes

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AN ANALYSIS OF THE PROTECTED-PERMITTED LEFT TURN AT INTERSECTIONS WITH A VARYING NUMBER OF OPPOSING THROUGH LANES

by

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ABSTRACT

The Flashing Yellow Arrow Left Turn signal is quickly becoming prominent in Central Florida as a new method of handling left turns at traffic signals. While the concept of a protected-permitted left turn is not groundbreaking, the departure from the typical display of a five-section signal head is, for this type of operation. The signal head introduced is a four-section head with a flashing yellow arrow between the yellow and green arrows. With this signal head quickly becoming the standard, there is a need to re-evaluate the operational characteristics of the left turning vehicle and advance the knowledge of the significant parameters that may affect the ability for a driver to make a left turn at a signalized intersection.

With previous research into the behavioral and operational characteristics of the flashing yellow arrow conducted, there is more information becoming available about the differences between this signal and the previously accepted method of allowing left turns at an intersection. The protected-permitted signal is typically displayed at an intersection with up to two through lanes and generally a protected signal is installed when the number of through lanes increases above two unless specific criteria is met. With the advent of larger arterials and more traffic on the highway networks, the push to operate these intersections at their maximum efficiency has resulted in more of these protected-permitted signals being present at these larger intersections, including the flashing yellow arrow.

The core of the research that follows is a comparative analysis of the operation and parameters that affect the left turn movement of the intersection with larger geometry to that of

the smaller geometry. The significant parameters of the left turn movement were examined through means of collecting, organizing and analyzing just over 68 hours of field data. This research details the determining of the significant parameters based on the generation of a simulation model of the protected left turn using Synchro, a traffic simulation package, and regression models using field driven data to determine the significant parameters for predicting the number of left turns that can be made in the permitted phase under specific operating conditions. Intuitively, there is an expectation that a larger intersection will not allow for as many permitted lefts as a smaller intersection with all conditions remaining the same. The conclusions drawn from this analysis provide the framework to understanding the similarities and the differences that are encountered when the intersection geometry differs and help to more efficiently manage traffic at signalized intersections.

The work of this field promises to enhance the operations of the left turning movement for traffic control devices. With an understanding of the statistical models generated, a broader base of knowledge is gained as to the significant parameters that affect a driver's ability to make the left turn. A discussion of the statistical differences and between the models generated from the small and large geometry intersections is critical to drive further research into standards being developed for the highway transportation network and the treatment of these large signalized intersections. The exploration of specific parameters to predict the number of permitted left turns will yield results as to if there is more to be considered with larger intersections moving forward as they become a standard sight on the roadway network.

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CHAPTER ONE: INTRODUCTION

One of the most critical components of the roadway transportation network is the signalized intersection. Signalized intersections have been the method of choice for traffic management in the United States and these locations require attention to ensure that they are operating to their fullest potential. It is crucial that these signals are optimized for the reduction of control delay while maintaining a strong balance with an acceptable level of safety.

One of the more recent signal displays to be introduced is the flashing yellow arrow left turn signal. The flashing yellow arrow signal head for left turning vehicles is rapidly appearing across Florida and the United States as an operational method for allowing permitted left turns through an intersection. The most vital aspect of signal design and timing at an intersection is the development of an appropriate phasing plan. Signal design and timing at intersections are typically bounded by the constraints of the left turning vehicles when their volumes are great. Permitted left turns are those in which the driver needs to adequately determine when there is an appropriate gap in the through traffic to proceed with their movement through the intersection. This signal mode configuration is traditionally applied to intersections where there is no compelling reason to allow for a left turn only phase. These permitted turns were seldom combined with an additional indication signal; rather the turn was able to be made when the through traffic had a green ball. Conversely, the protected left turn is a signal designated specifically for left turning vehicles. This type of movement requires that a dedicated phase is implemented for left turning vehicles, protecting them for other conflicting movements in the

intersection. This is traditionally a mitigation method for intersections where the permitted phase is not effective in the operation of the signal.

This signal display for the flashing yellow arrow left turn signal is most commonly a four-section signal with arrows displaying a solid red, solid yellow, flashing yellow and solid green indication. The solid arrows are used for the protected left turn movement while the flashing arrow is used to show that a left turn is permitted using caution due to the oncoming traffic having the right-of-way. In the four-section form of the signal, the typical operation can be used in either a protected or protected-permitted left turn mode. The protected mode does not use the flashing yellow arrow at all, allocating a specific amount of green time for the movement and a traditional yellow and red time while other traffic is passing. The protected-permitted mode functions by giving an allocated amount of time to protect the left turn movement with a green arrow and an allocated amount of time that the left turn will be permitted with caution, this is when the flashing yellow is in use. With a protected-permitted mode in use, the yellow time will occur twice when the signal is in a lead operation, just as the current protected-permitted sequence would warrant. The yellow time occurs once at the end of the protected time period and again at the end of the permitted period. The operational mode of the signal is dependent on the characteristics of the intersection and an engineering analysis of the operation, safety and restrictions present each specific intersection.

Protected left turn phases are very common to see on the roadway network, especially with many areas of Florida experiencing rapid growth. It is a growing challenge to cycle vehicles through efficiently even with plentiful availability of exclusive left turn lanes, as an

attempt to minimize the impact on left turning vehicles. The struggle with the left turning vehicles is to balance the capacity of an intersection with an appropriate level of safety; these are two conflicting goals in the operation of a signalized intersection that are mitigated through signal phasing techniques as mentioned in a previous study conducted by the University of Central Florida on the flashing yellow arrow (Abou-Senna et al., 2014). The cycle length of the signal typically has to increase and the addition of extra time for the through phases is normally sacrificed. This shift in the signal timing distribution can contribute to an increase in control delays for the vehicles traversing the intersection and a decrease in the operational performance at these intersections. According to traffic operations research the most effective mode to operate a left turn will be the protected-permitted phase (Noyce et al., 2007). This operation typically reduces the control delay of the intersections, resulting in a higher capacity for the left turn movement.

The operational efficiencies of a permitted left turn were combined with the safety benefits of the protected left turn to create the protected-permitted left turn. This signal phasing scheme gives a portion of the green time as a protected left turn while providing the remaining green time for the through movement as a permitted left turn. It is a type of control that is most effective in the compromise between efficiency and safety, thus far. This signal head has traditionally been a five section signal head for both the through and left movements with each movement sharing the red signal. The standard of using a four section head for the left turn lane only with a flashing yellow indication has been deemed to be the new standard for signalization in the 2009 edition of the Manual for Uniform Traffic Control Devices (MUTCD). This signal head minimizes driver confusion as to where the left turn signal indication is at the intersection.

With the advent of this new signal configuration there was the opportunity to enhance the current method of phasing the protected-permitted left turn.

The configuration of having the flashing yellow indication on the left turn signal head provides the opportunity to change the operation throughout the day from fully protected to completely permitted and combinations of the protected-permitted signal phasing as well. The issue with the typical current protected-permitted five-section head is that it is not able to protect the left turn movement when the green ball is given for the through traffic. The ability for drivers to make a left turn runs concurrently with the through movement. It can only be fully protected if the through movement is the same time allocation as the left turn and operates as such, known as a split phase. This creates the operational issue of the opposing through not being able to run concurrently with the through movement without releasing the protection of the left turn movement. The signal is able to run fully permitted and partially protected but cannot run fully protected without a split phase. The new four-section head allows for the red arrow to be present concurrently while through traffic is moving, a concept that is not possible with the 5-section head protected-permitted signal. This ensures a higher level of safety when the conditions on the opposing approaches diminish the ability to make a left turn.

The purpose of this investigation is to outline the significant parameters for the determination between the most effective operation of the permitted left turn. There is a need to develop an interactive and efficient framework to serve as a decision support system for the evaluation of left turn phasing alternative based on intersection conditions (Abou-Senna et al., 2014). In the previous study at the University of Central Florida, a decision support system

(DSS) was developed to choose which mode the controller will select for the left turn. The data with the left turn in question is fed into a generated model with specific thresholds that will warrant the requirement of the protection of the movement. The study determined the significant parameters and established a framework for the decision making process by the time-of-day and takes into account the operating conditions present at the intersection. This project continues the research goals and groundwork laid by the previous work, taking the variety of wide geometry intersections into account.

Specifically, this analysis focuses on the effects of larger intersections and their ability to maintain operational efficiencies in the differing modes of left turn phasing. This was accomplished by gathering field data for protected-permitted and protected only intersections that had more than two opposing through lanes. The field protected-permitted data was modeled to determine the significant parameters, validated and then compared to the parameters and modeled data at intersections with no more than two opposing through lanes. The goal was to determine if there is a difference between them and show the significance of the difference. Although models were generated, they are not to be used to predict the number of permitted left turns but rather a guide to show the significant parameters that effect the determination of the number of permitted left turns. Data at protected left turn intersections was gathered to validate the use of Synchro and SimTraffic (traffic simulation software programs) as a means to predict the potential number of permitted left turns at protected intersections. Since the processing of the collected data was limited to the number of left turners, it did not include delay estimate. The use of simulation software was considered a key in validating the decrease in stop control delay for protected-permitted left turns versus protected left turns.

The previous study at the University of Central Florida (Abou-Senna et al., 2014) produced on the topic of the flashing yellow left turn arrow was a broad measure of left turning conditions where the left turning distances were relatively similar, with the number of lanes crossed ranging from 1 to 3 only. Because of the continuing expansion of the arterial network in Central Florida, it was deemed necessary that non-traditional and wide intersections were critical to investigate as intersections become more complex. Wide intersections are becoming testing grounds for the left turn flashing yellow arrow, locations that traditionally were protected only because of an increased number of lanes to cross. As these intersections become more prominent in the community, it is important to show the operational differences that these intersections have and how to best handle their operation in comparison to more traditional intersections.

The scope of this work focuses on intersections where the left turning vehicle has to cross at least three lanes of through vehicle traffic, which are inherently very heavily traveled routes. The fact that the number of acceptable gaps needed to allow left turners to perform the permitted left turn movement diminishes as the number of opposing number of lanes increases necessitated the assessment of safety and efficiency at large intersections, with the purpose of showing that there is a fundamental difference in the treatment and parameters of large intersections that contribute to significant changes in the prediction model for the amount of permitted left turns that can be made. The models are being used as a tool to compare the factors involved in each of the equations and are not generated to predict specific values of the permitted left turns. With more lanes to cross, there is a challenge accepting that the same methodology for the protected phase warrants can be used. The objective of this study is to outline the differences between the significant parameters in the smaller and larger intersections along with analyzing their

importance and function in each type of intersection based on generated models. While the models are not to be used to specifically predict the number of permitted left turns, the intent is to provide a detailed synopsis of the parameters that influence these intersections based on field data. Additionally, intersections currently operating as a protected left movement will also have a generated model based on validated simulation data resulting in a method of checking current larger intersections that are operating in the protected mode. This is supported by the validation of the properly calibrated intersection criteria being input to the simulation software.

In the design of left turn signal phasing, traffic engineers face the critical decisions of determining mode, sequence and display. Various guidelines have been developed in previous studies but there is no specified approach for scanning and flagging potential intersections that could benefit from improvements to the left turn phasing scheme, especially with more than two opposing through lanes. The potential is that this data could be fed to the Traffic Management Center in real-time to provide attention to congested intersections that would benefit from implementing a change in mode or sequence for the left turn, while taking all factors into account. In addition to providing new thresholds pertaining to many of the different parameters for an intersection, this determination can be used in a decision support system that can determine the recommended change of the operation of the signal in real time. The guidelines would provide traffic engineers with the tools to utilize the efficiency of a permitted left turn at off peak times and reduce the delay at approaches when there are low volumes on the roadways.

Currently, there are no clear and uniform standards available to traffic engineers in the State of Florida to make the determination in the mode or sequence of the left turn, especially for

geometrically wider intersections. There is also no clear warrant addressing the issue of changing the signal mode by the time of day, or variable mode, employing fewer restrictions during the overnight and off-peak hours for left turn phasing. The research will ensure that left turn signals are balancing the efficiency and operation with safety and ultimately recommend phasing modes by the time of day for larger intersections. It is important to note that the model parameters generated for this determination will be compared to the traditional intersection model generated in the previous study to see what considerations have to be taken into account when more lanes are crossed. Just as the protected-permitted phase was an innovation in its time, the new signal head arrangement of the four-section head provides the opportunity to be a fully adjustable system.

CHAPTER TWO: LITERATURE REVIEW

Several references were examined in the process of determining the pertinent background information and justification for and that motivates the research of the flashing yellow arrow signal. Literature findings were derived from several different sources and will be expanded upon in their relation to research in this field. It is of interest to note that the specific topic of large geometry intersections was not a specific focus of any of the research findings; however it was covered briefly as a parameter in some of the literature that was reviewed.

The Florida Department of Transportation Traffic Engineering Manual stipulates that "…a protected/permissive mode should be provided for all intersection approaches that require a left turn phase unless there is a compelling reason for using another type of left turn phasing (Florida Department of Transportation, 2012)." It further reads, "…if the decision between providing protected/permissive or protected only mode is not obvious, the traffic engineer should initially operate the left turn phase as protected/permissive mode on a trial basis (Florida Department of Transportation, 2012)." It issues a standard that without a compelling reason against it, there is an acceptance of the permitted left turn. These statements also leave flexibility regarding the implementation of the four-section signal head as a standard. The signal can be simply integrated because of its ability to be used in either the protected or protected-permitted mode operation after its installation. This explains the prominence of the signal head being placed at newly constructed or improved signalized intersections. The potential outcome of using this signal display is to move toward the ability to change function of the signal throughout the day based on fixed time basis or even based on specific traffic conditions that could be

obtained through real-time data. In either case, the current standard requires proof in the way of supporting data or conditions to change from a protected-permitted scheme to a protected scheme. Roadways with three through lanes are not restricted from running a protected-permitted mode but the data must justify the need in this case, which motivates the investigation as to whether these intersections should be analyzed differently.

The Manual for Uniform Traffic Control Devices published in 2009 recommends the flashing yellow arrow for left turn signals. However, there is no nationally accepted methodology for determining the left turn phase operation by the time of day in the United States. The Minnesota Department of Transportation is a progressive state in this field of study. Florida has used Minnesota's Traffic Signal Timing and Coordination Manual, published in May 2011, to determine allowable periods for a protected-permitted signal in Florida because of the lack of a national standard (Minnesota Department of Transportation, 2013). The use of another state's manual shows that a system and regulations need to be in place so that there is a framework for detailed guidelines to be adopted by states and municipalities.

One of the deficiencies in the current warrant standards is how and when can a protected-permitted phase be justified for larger intersections and if they should be treated differently. Does the standard continue to be based on the opposing traffic or are there other factors to consider? Currently the warrants are based on a fixed operation for the left turn but struggle to be relevant in a situation where many variables are in play. NCHRP Report 457 provides decision making flow chart for determining the mode of a left turn phase (Transportation Research Board, 2001). It is of interest to note that there is the flexibility with this chart to have

three opposing through lanes with four opposing through lanes warranting a protected phase. The determination to add the permitted phase to a protected arrow is dominated by the criteria of delay and traffic volumes as indicated on the flow chart presented below.

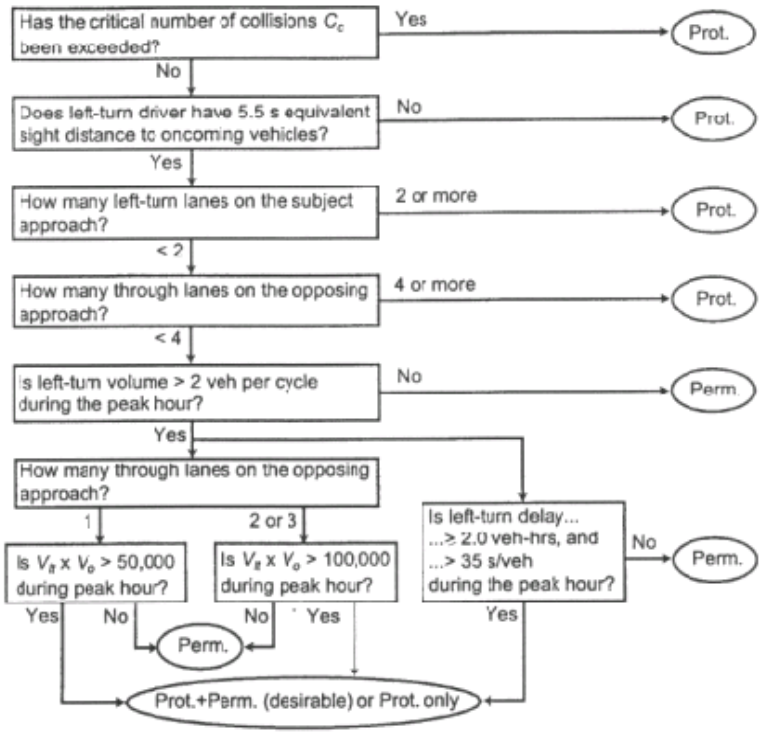


Figure 1: Guidelines for Determining the Need for Separate Left Turn Phase

Source: NCHRP Report 457 (Transportation Research Board, 2001)

Kenneth R. Agent of the Kentucky Transportation Research Program of the Federal Highway Administration developed guidelines for the use of protected-permitted left turn phasing based on accident analysis. The phasing scheme is recommended not to be used when any of the following conditions exist due to the potential for an increase in crashes:

1. Speed limit is over 45 mph,
2. Protected-only phasing currently in operation and speed limit over 35 mph,
3. Left-turn movement must cross three or more opposing through lanes,

4. Intersection geometries force the left turn lane to have a separate signal head,
5. Double left-turn only lanes on the approach,
6. A left-turn accident problem exists (four or more left-turn accidents in one year or six or more left-turn accidents in two years on an approach),
7. A potential left-turn problem exists as documented by a traffic conflicts study.

It is of note that the above guideline for crossing opposing through lanes is lower than the NCHRP 457 standard of four opposing through lanes being a protected phase versus the above recommendation of three or more opposing through lanes. This shows that there is certainly disagreement about what phasing should be present at these large intersections. With this as a known factor it alludes to the assumption that these intersections most likely have further justification as when they are installed based on the parameters that the municipalities feel are significant.

Research presented by Al-Kaisy and Stewart developed warrants for the protected left turn at signalized intersections (Al-Kaisy et al., 2001). This research indicated that the volume of opposing through traffic may have little impact on when a protected left turn phase is warranted. The framework of Al-Kaisy and Stewart's work determined that the mode was not to be determined by traffic volumes alone but is rather a combination of multiple traffic variables as alluded to previously in the seven parameters deemed by Agent as reasons to protect a left turn movement. Most of the studies in regards to left turning vehicles consistently use the methodology of taking the cross product of the left turn and opposing through volumes. A cross

product is generally accepted as a signal warrant but lacks the ability to be inclusive of all intersections.

A more comprehensive approach is necessary to continue the advancement of the understanding for how other parameters affect and interact with each other to provide a more efficient traffic operation while maintaining safety at these intersections. While there is a significant amount of behavioral research on the flashing yellow arrow the operations research is still fairly limited and does not cover the topic of the increasing sizes of arterials and alternative intersection designs. Hence this research is motivated to increase the understanding of the critical parameters that drive the decision to allow a permitted left turn and the ability to make the movement, with a focus on the large intersection.

CHAPTER THREE: DATA COLLECTION

The process of obtaining the data parameters that were identified as significant to the research of the flashing yellow arrow left turn signals required several different methods of data collection techniques. As previously noted, there were several factors that required obtaining data through databases, visual inspection or live data capture in the field. Basic location information was required to describe each intersection that data was collected from. The requirements of the research were for the left turning traffic to cross at least three through lanes of traffic and the signals to have a five-section signal head where the protected-permitted phase was used or a flashing yellow light already installed. Five intersections were selected for new data collection at protected-permitted approaches. An intersection from the previous study that adheres to the guidelines was included in the data set. In addition, one intersection was chosen as a sample case to demonstrate the potential operational benefit of a protected-permitted mode and the flashing yellow arrow signal head at a location that run in a protected-only mode.

Because of the limited availability of the selected geometry requirement of three opposing through lanes and the flashing yellow arrow signal in these cases as well, the data collected included two intersections where the flashing yellow arrow was not operational and operated as a protected signal during the data collection period. The goal was for this sample of intersections to be scattered around the area to obtain a fair sampling of sites. This was accomplished with signals in Clermont, Altamonte Springs, Longwood, Orlando, Lake Buena Vista and two signals in East Orange County. The site of the intersection of International Drive and Vineland Avenue was collected as part of the earlier study of the Flashing Yellow Arrow by

the University of Central Florida (Abou-Senna et al., 2014) and the data collected was viable for use on this study as well. Figure 2**Error! Reference source not found.** below shows the intersection sites that were chosen to be part of this study.

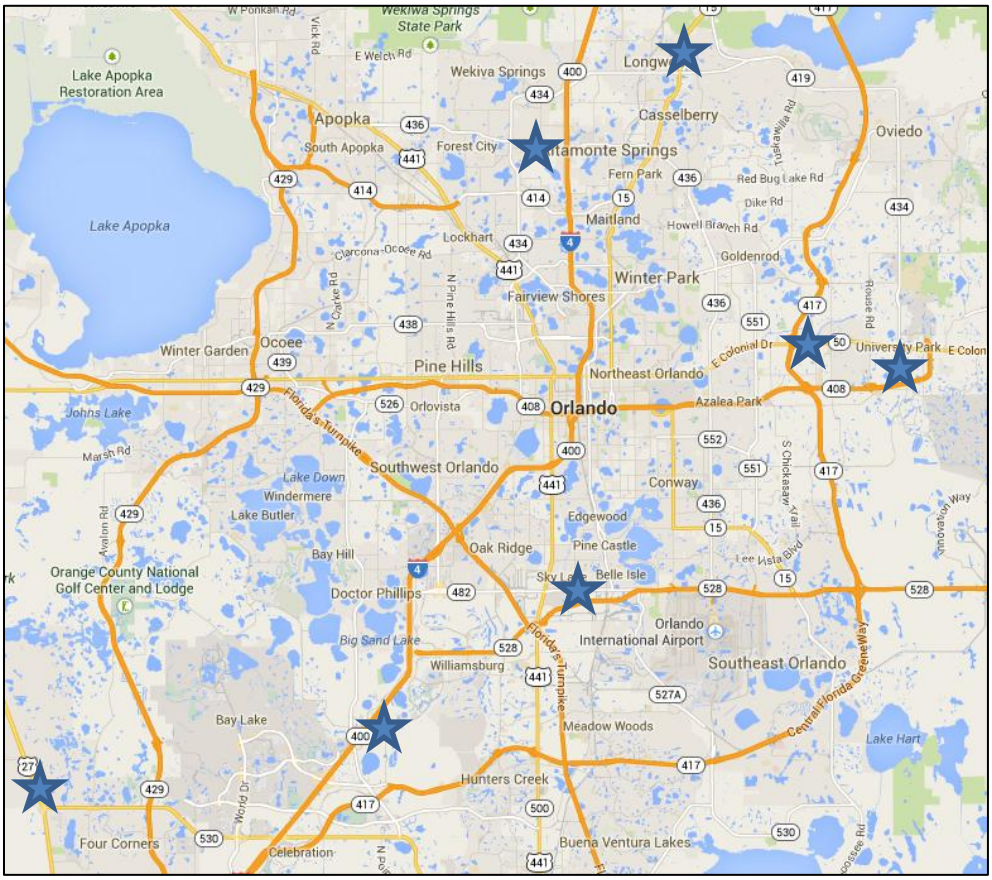


Figure 2: Data Collection Sites

Source: Google Maps

https://maps.google.com/

In total for this study, six intersections had data collected for them with one of the intersections viable enough to support a data set for each of the major approaches to the traffic signal. Due to the parameters and requirements of this particular study all of the major

approaches were on arterials with one of them serving an on-ramp to SR 417, which is a limited access facility.

The data collection process began with identifying the intersections and corresponding approaches that would fit within the given specifications of the research being conducted. The schedule of data collection was also determined to include all days of the week based on traffic patterns in each particular area. At an absolute minimum, each intersection approach had two hours of morning data, one hour of midday data and two hours of evening data. In total just over 68 hours of data were used in the study of the larger intersections and 48 hours of data was newly collected for this particular research. Additionally, there were 42 hours from the previous study that were used for the comparative analysis between the small and large intersections. A summary table provides the breakdown of each of the large intersection's data collection dates and times on the next page followed by the small intersection data summary table.

Table 1: Large Intersection Field Data Collection Summary

Flashing Yellow Arrow 6+ Data Collection Summary							
Date of Collection	**Start Time**	**End Time**	**Hours**	**Date of Collection**	**Start Time**	**End Time**	**Hours**
Intersection #1: US 27 at Cagan Crossings Blvd **Approach:** Northbound Left Turn				**Intersection #5:** US 17-92 at Church Avenue **Approach:** Northbound Left Turn			
Tuesday, May 14, 2013	07:00	07:59	**1:00**	Wednesday, June 19, 2013	07:00	07:59	**1:00**
Tuesday, May 14, 2013	08:00	08:59	**1:00**	Wednesday, June 19, 2013	08:00	08:59	**1:00**
Tuesday, May 14, 2013	12:00	12:59	**1:00**	Wednesday, June 19, 2013	12:00	12:59	**1:00**
Tuesday, May 14, 2013	13:00	13:59	**1:00**	Wednesday, June 19, 2013	13:00	13:59	**1:00**
Tuesday, May 14, 2013	16:00	16:59	**1:00**	Tuesday, June 18, 2013	17:25	18:24	**1:00**
Thursday, May 16, 2013	17:19	17:59	**0:41**	Tuesday, June 18, 2013	18:25	19:24	**1:00**
Thursday, May 16, 2013	18:00	18:59	**1:00**	Tuesday, June 18, 2013	19:25	20:24	**1:00**
		Total Hours	**6:41**			**Total Hours**	**7:00**
Intersection #2: Alafaya Trail at Ashton Manor Way **Approach:** Southbound Left Turn				**Intersection #6:** SR 50 at SR 417 Northbound Ramp **Approach:** Eastbound Left Turn			
Wednesday, May 22, 2013	06:40	07:39	**1:00**	Wednesday, June 26, 2013	07:00	07:59	**1:00**
Wednesday, May 22, 2013	07:40	08:39	**1:00**	Wednesday, June 26, 2013	08:00	08:59	**1:00**
Wednesday, May 22, 2013	12:00	12:13	**0:13**	Thursday, June 27, 2013	12:20	12:59	**0:40**
Wednesday, May 22, 2013	12:20	13:19	**1:00**	Thursday, June 27, 2013	13:00	13:59	**1:00**
Thursday, May 23, 2013	16:00	16:59	**1:00**	Thursday, June 27, 2013	16:00	16:59	**1:00**
Thursday, May 23, 2013	17:00	17:59	**1:00**	Thursday, June 27, 2013	17:00	17:59	**1:00**
Thursday, May 23, 2013	18:00	18:59	**1:00**	Thursday, June 27, 2013	18:00	18:59	**1:00**
Thursday, May 23, 2013	19:00	19:59	**1:00**	Tuesday, June 18, 2013	19:00	19:59	**1:00**
		Total Hours	**7:13**			**Total Hours**	**7:40**
Intersection #2: Alafaya Trail at Ashton Manor Way **Approach:** Northbound Left Turn				**Intersection #7:** International Drive at Vineland Road **Approach:** Northbound Left Turn			
Wednesday, May 22, 2013	06:40	07:39	**1:00**	Sunday, November 18, 2012	06:00	06:59	**1:00**
Wednesday, May 22, 2013	07:40	08:39	**1:00**	Sunday, November 18, 2012	07:00	07:59	**1:00**
Wednesday, May 22, 2013	12:00	12:13	**0:13**	Sunday, November 18, 2012	08:00	08:59	**1:00**
Wednesday, May 22, 2013	12:20	13:19	**1:00**	Sunday, November 18, 2012	09:00	09:59	**1:00**
Thursday, May 23, 2013	16:00	16:59	**1:00**	Sunday, November 18, 2012	12:00	12:59	**1:00**
Thursday, May 23, 2013	17:00	17:59	**1:00**	Sunday, November 18, 2012	13:00	13:59	**1:00**
Thursday, May 23, 2013	18:00	18:59	**1:00**	Sunday, November 18, 2012	14:00	14:59	**1:00**
Thursday, May 23, 2013	19:00	19:59	**1:00**	Sunday, November 18, 2012	16:00	16:59	**1:00**
		Total Hours	**7:13**	Sunday, November 18, 2012	17:00	17:59	**1:00**
Intersection #3: SR 436 at Orange Avenue **Approach:** Westbound Left Turn				Sunday, November 18, 2012	18:00	18:59	**1:00**
Wednesday, June 05, 2013	06:45	07:44	**1:00**	Sunday, November 18, 2012	19:00	19:59	**1:00**
Wednesday, June 05, 2013	07:45	08:44	**1:00**	Sunday, November 18, 2012	20:00	20:59	**1:00**
Wednesday, June 05, 2013	12:00	12:59	**1:00**	Sunday, November 18, 2012	21:00	21:59	**1:00**
Tuesday, June 04, 2013	15:45	16:44	**1:00**			**Total Hours**	**13:00**
Tuesday, June 04, 2013	16:45	17:44	**1:00**	**Intersection #7:** International Drive at Vineland Road **Approach:** Southbound Left Turn			
Tuesday, June 04, 2013	17:45	18:44	**1:00**	Sunday, November 18, 2012	08:00	08:59	**1:00**
Tuesday, June 04, 2013	18:45	19:30	**0:46**	Sunday, November 18, 2012	09:00	09:59	**1:00**
		Total Hours	**6:46**	Sunday, November 18, 2012	12:00	12:59	**1:00**
Intersection #4: Sand Lake Road at Winegard Road **Approach:** Eastbound Left Turn				Sunday, November 18, 2012	13:00	13:59	**1:00**
Monday, December 23, 2013	06:53	07:52	**1:00**	Sunday, November 18, 2012	14:00	14:59	**1:00**
Monday, December 23, 2013	07:53	08:52	**1:00**	Sunday, November 18, 2012	16:00	16:59	**1:00**
Friday, June 14, 2013	13:00	13:59	**1:00**	Sunday, November 18, 2012	17:00	17:59	**1:00**
Thursday, June 13, 2013	16:00	16:59	**1:00**			**Total Hours**	**7:00**
Thursday, June 13, 2013	17:00	17:59	**1:00**				
Thursday, June 13, 2013	19:00	19:59	**1:00**	**Data Collection Totals**	*Newly Collected*	*Previously Collected*	**Total Data Hours**
		Total Hours	**6:00**		48:33	20:00	**68:33**

Table 2: Small Intersection Field Database Summary

Flashing Yellow Arrow 6+ Small Intersection Data Collection Summary			
Date of Collection	**Start Time**	**End Time**	**Hours**
FYA Intersection #2: SR 50 at Rouse Lake Road **Approach:** Westbound Left Turn			
Saturday, November 17, 2012	13:30	14:29	**1:00**
Saturday, November 17, 2012	14:30	15:29	**1:00**
Saturday, November 17, 2012	15:30	16:29	**1:00**
Saturday, November 17, 2012	16:30	17:29	**1:00**
Saturday, November 17, 2012	17:30	18:29	**1:00**
Saturday, November 17, 2012	18:30	19:29	**1:00**
Saturday, November 17, 2012	19:30	20:29	**1:00**
Saturday, November 17, 2012	20:30	21:29	**1:00**
Saturday, November 17, 2012	21:30	22:29	**1:00**
		Total Hours	**9:00**
FYA Intersection #5: Curry Ford Road at Chickasaw Trail **Approach:** Northbound Left Turn			
Thursday, November 15, 2012	07:00	07:59	**1:00**
Thursday, November 15, 2012	08:00	08:59	**1:00**
Thursday, November 15, 2012	09:00	09:59	**1:00**
Thursday, November 15, 2012	12:00	12:59	**1:00**
Thursday, November 15, 2012	13:00	13:59	**1:00**
Thursday, November 15, 2012	14:00	14:59	**1:00**
Thursday, November 15, 2012	16:00	16:59	**1:00**
Thursday, November 15, 2012	17:00	17:59	**1:00**
Thursday, November 15, 2012	18:00	18:59	**1:00**
		Total Hours	**9:00**
FYA Intersection #6: Chickasaw Trail at Valencia College Lane **Approach:** Eastbound Left Turn			
Tuesday, November 13, 2012	15:00	15:59	**1:00**
Tuesday, November 13, 2012	16:00	16:59	**1:00**
Tuesday, November 13, 2012	17:00	17:59	**1:00**
Tuesday, November 13, 2012	18:00	18:59	**1:00**
Tuesday, November 13, 2012	19:00	19:59	**1:00**
		Total Hours	**5:00**

Date of Collection	**Start Time**	**End Time**	**Hours**
FYA Intersection #8: Lake Underhill Road at Woodbury Road **Approach:** Southbound Left Turn			
Monday, November 12, 2012	07:59	08:58	**1:00**
Monday, November 12, 2012	08:59	09:58	**1:00**
Monday, November 12, 2012	09:59	10:58	**1:00**
Monday, November 12, 2012	10:59	11:58	**1:00**
Monday, November 12, 2012	11:59	12:58	**1:00**
Monday, November 12, 2012	12:59	13:58	**1:00**
Monday, November 12, 2012	13:59	14:58	**1:00**
Monday, November 12, 2012	14:59	15:58	**1:00**
Monday, November 12, 2012	15:59	16:58	**1:00**
Monday, November 12, 2012	16:59	17:58	**1:00**
Monday, November 12, 2012	17:59	18:58	**1:00**
		Total Hours	**11:00**
FYA Intersection #5: Curry Ford Road at Chickasaw Trail **Approach:** Northbound Left Turn			
Monday, November 19, 2012	08:00	08:59	**1:00**
Monday, November 19, 2012	09:00	09:59	**1:00**
Monday, November 19, 2012	12:00	12:59	**1:00**
Monday, November 19, 2012	13:00	13:59	**1:00**
Monday, November 19, 2012	14:00	14:59	**1:00**
Monday, November 19, 2012	16:00	16:59	**1:00**
Monday, November 19, 2012	17:00	17:59	**1:00**
Monday, November 19, 2012	18:00	18:59	**1:00**
		Total Hours	**8:00**
Data Collection Totals			**Total Data Hours 42:00**

The categorical data was determined by aerial views and site observations at the intersections to determine the proper classification that was deemed to be appropriate. Signal timing sheets and turning movement counts, when available, were garnished by the jurisdictions where each intersection was located. The data that was collected as part of the previous research on this topic employed the use of a Video Collection Unit (VCU). The VCU for that project was supplied by Miovision Technologies. The VCU was affixed on a signal mast arm or utility pole at a location where the intersection is clearly visible for data collection purposes. The camera was extended approximately 20 feet above the traffic for a wide range of vision of the entire intersection. The data was collected to be analyzed for the specific parameters that were needed for the study. The use of a standard video recording device was employed for the documentation required and placed at vehicle eye-level for the newly collected data. The video angle positioning ensured that the signal heads and all lanes of traffic for the selected approach were clearly visible.

All of the intersection movements and other parameters that were recorded on the master data collection sheet. An example of this sheet is provided on the next page and all of the data sheets can be found in Appendix C. The parameters related to the volume during the permitted green time and the extents of these periods were extracted by watching the videos as these specific parameters would not be able to logically processed by an automated procedure.

Table 3: Sample Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 5/14/13	07:00	07:59	**19:17**	**17**	**18**	**1542**	**1850**	**9**	**14**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:10	1:21	1:11	1	1	22	34	1	1
2	2:33	3:33	1:00	0	0	29	48	0	0
3	4:25	5:20	0:55	1	1	30	43	0	0
4	6:20	7:20	1:00	0	0	35	47	0	0
5	7:55	9:20	1:25	1	1	50	50	0	0
6	10:10	11:34	1:24	0	0	43	59	0	0
7	12:10	13:40	1:30	0	0	51	63	0	0
8	14:00	15:34	1:34	0	0	55	66	0	0
9	16:06	17:20	1:14	1	1	50	62	0	0
10	18:12	19:34	1:22	0	0	41	58	0	1
11	20:25	21:25	1:00	1	1	73	73	0	0
12	22:14	23:34	1:20	0	0	73	73	0	0
13	24:11	25:21	1:10	3	3	63	76	1	1
14	26:10	27:20	1:10	0	0	57	57	0	0
15	27:57	29:34	1:37	0	0	62	78	0	0
16	30:59	31:24	0:25	2	3	42	56	0	0
17	32:23	33:27	1:04	0	0	69	69	0	0
18	33:56	35:20	1:24	2	2	60	72	0	0
19	36:10	37:34	1:24	0	0	50	50	0	0
20	37:55	39:25	1:30	1	1	49	61	0	0
21	40:33	41:21	0:48	1	1	30	42	1	1
22	43:05	43:42	0:37	0	0	53	71	1	1
23	44:32	45:36	1:04	0	0	80	88	0	0
24	46:25	47:20	0:55	1	1	51	62	1	3
25	48:10	49:20	1:10	1	1	68	80	1	1
26	50:33	51:34	1:01	0	0	43	44	0	0
27	51:56	53:34	1:38	0	0	40	60	0	0
28	55:06	55:42	0:36	0	0	66	84	1	1
29	56:54	57:29	0:35	1	1	50	67	1	2
30	58:28	59:33	1:05	0	0	57	57	1	2

Left turns were also timed from start to finish on the selected approaches by hand along with the calculation of the critical gap as explained in the previous chapter. The VCU was able to extract traffic movement counts and conduct a gap analysis on the intersection automatically, through a proprietary process. The turning movement counts were obtained by the VCU and the newly collected data that was not available from local jurisdictions were manually counted.

The final step of the data collection process was to model the intersections that were operating in a protected mode, as field data would not be able to determine the number of permitted left turns. Synchro was chosen to model these intersections with the signal timing sheets (Appendix A), turning movement counts (Appendix B) and intersection characteristics obtained to input the parameters necessary into the simulation software. Each intersection was able to be calibrated to accurately simulate field conditions based on the full spectrum of data that was collected. The only difference that was introduced into the Synchro simulation was the operation of the protected left turn to be a protected-permitted left turn. Intersections that were already operating in a protected-permitted mode had validation runs produced to ensure that Synchro could be used to accurately model the number of permitted left turns. Screenshots of the Synchro input interface and simulation run screen are available in Appendix G. The data extraction was an essential part of the process of developing the model parameters for the permitted left turn movement.

CHAPTER FOUR: DATA PARAMETERS

The data collection required by a study of the left turn flashing yellow arrow signal has to reflect the nature of the standards that are being developed. Several parameters that describe the intersection are necessary for a comprehensive assessment of the location such as the geometry, safety and operational aspects of the intersection. These parameters are critical to being able to classify the intersection appropriately. In line with the collection of categorical data, the specific parameters chosen were specifically sought out because it is possible that they could be statistically significant enough to affect the characteristics of the traffic flow. This is a dramatic departure from the volume based approach that has dominated the past when determining the warrant for a protected left turn. With more items to consider, the goal is to improve the depth of knowledge regarding the operation of this movement under differing geometric conditions. The data recommended to be collected for this study are listed as follows:

- Time of Day- In order to categorize the peak direction at within the time period, this value is measured in seconds.
- Geometry- To show the number of approaches and any special characteristics that need to be taken into consideration. The intersection geometry can be an indicator as to if the intersection will be dangerous by design, even with proper operational safety techniques applied.
- Land Use- This will directly affect the type of user that may be present at the intersection. It is also used for traffic characterization to ensure that the facility users are accounted for.

- Criteria- The criteria notes any special considerations such as facilities nearby and takes the classification of the land use into account. This parameter also defines the design environment that the roadway is in.
- Opposing Lanes- Similar to previous left turning studies and warrant determinations, the number of opposing lanes is vital to have a perspective on how many lanes the left turning driver has to cross and therefore focus their attention on.
- Speed Limit- Taking into account the speed of the left turn that will occur and the need for larger gaps for the driver to accept a left turn because of the faster moving opposing traffic.

Several field parameters are also necessary to provide a snap shot of the typical operation at the intersections. These parameters provide for a solid foundation of understanding and the expectations for the characteristics of each intersection. The time allocation for permitted left turns is crucial to understanding how the timing shifts hourly throughout the course of the day and how effective this timing is to allow vehicles to make the left turn with opposing traffic. Inherently, this specific measure starts to be collected from the moment where no left turn indications are present on the signal head and through traffic has the green ball. The time continues and includes the yellow phase and is stopped at the moment where the through or left traffic has been given the red ball or indication. Similarly, it is important that the left turns occurring during the permitted phase were the only ones to be accounted for. The study is not to include left turning vehicles which have a protected signal, the exception is the procedure performed to analyze the parameters that correspond to the prediction the number of permitted lefts at a currently protected left turn. This measure is to be used as a relative volume to other

crucial data parameters. The higher the left turning vehicles during the permitted phase to the permitted green time given ratio, the more efficient the left turn signal is at running the permitted phase. The percentage of the drivers able to make the permitted left turn and the permitted time given tend to have a positive relationship according to field data was collected. The following are accounts of the field data set where the protected-permitted mode was active for the left turn on Figure 3 & Figure 4 below and on the next page. The figures are graphical representations of this relationship with a reference line that correlates to the percentage of permitted left turns to the percentage of the hour. Data points above the reference line are operating more efficiently by achieving a higher percentage of permitted left turns than the percentage of the hour that is given for permitted green time. Figure 3 was developed for the large intersections (more than 2 opposing through lanes) collected as part of this study and Figure 4 was developed for the small intersections (2 or less opposing through lanes) collected as part of the previous study.

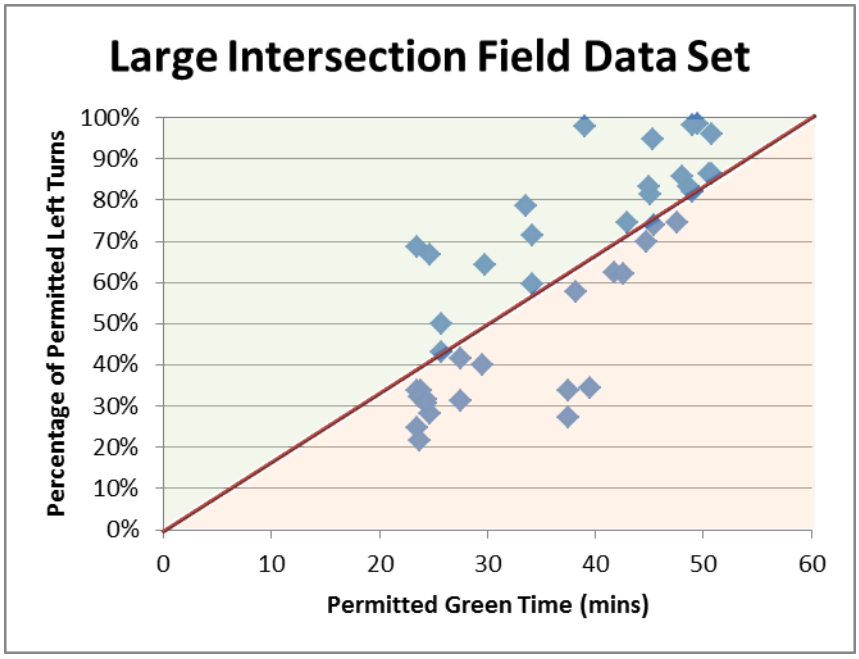


Figure 3: Large Intersection Percentage of Permitted Left Turns vs. Permitted Green Time

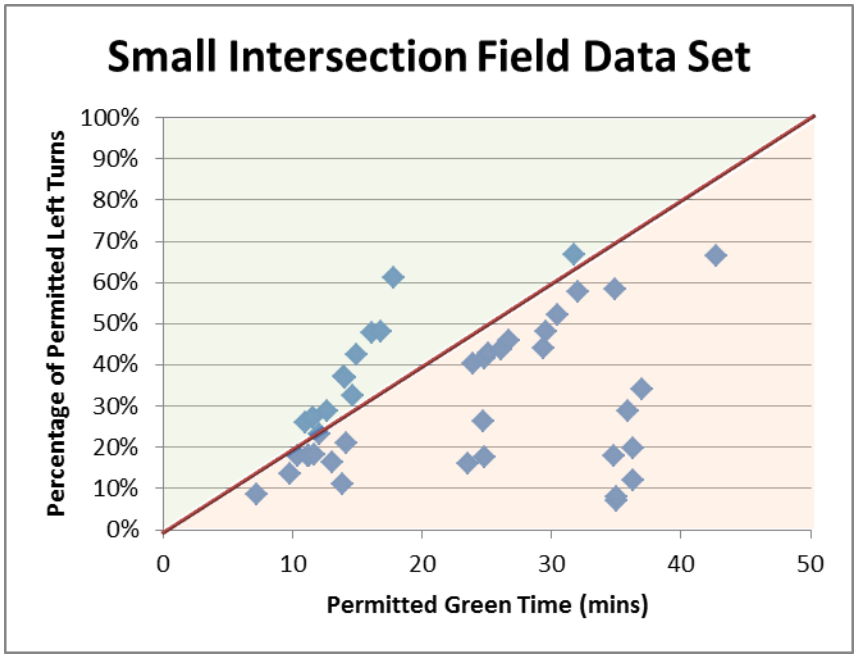


Figure 4: Small Intersection Percentage of Permitted Left Turns vs. Permitted Green Time

There is the similarity that the more left turning vehicles the greater the efficiency is of the permitted left turn phase. The efficiency is defined here as the rate of permitted left turns per minute of permitted green time. This value tends to have a positive relationship with the total number of left turns. Figure 5 on the next page shows that when more cars make the left turn, there is a higher amount of permitted left turns per minute. For this study, sneakers were included as a permitted left turn for consistency with the previous study. However, the vehicle had to initiate movement before the beginning of the red signal to be counted.

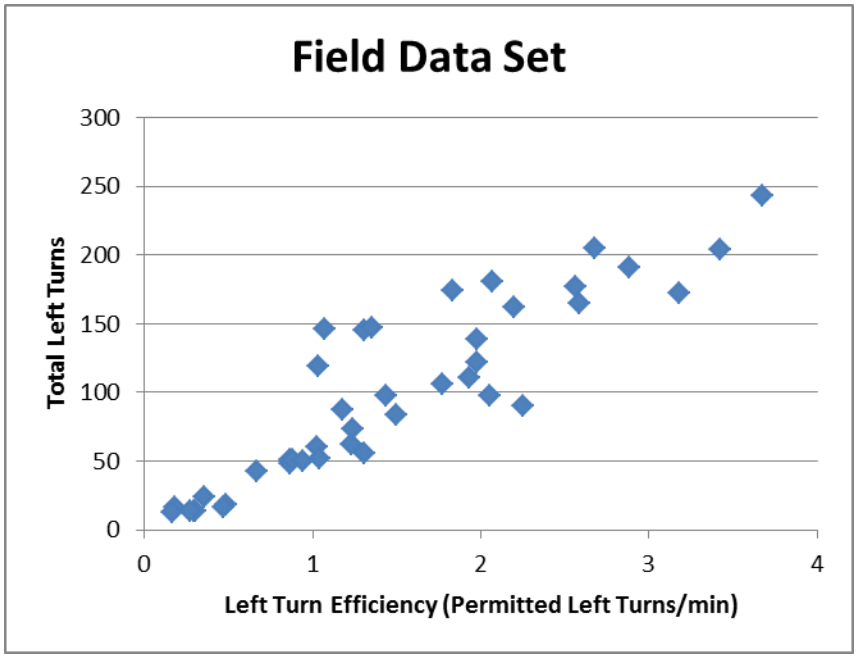


Figure 5: Total Left Turns vs. Left Turn Efficiency

These measures also provide the ability to examine the times in which the permitted phase is useful for the operation of the intersection. The ideal time to protect a left turn may be when the opposing volume is the greatest and there is little benefit to running a permitted phase because a small number of vehicles would be able to make the turn. However, this does not guarantee that this correlation alone will be direct as indicated in the literature review of Al-Kaisy's work (Al-Kaisy et al., 2001). The traffic volumes in the opposing lanes that are oncoming an impedance to the left turning vehicle during the permitted left turn phase provide the study with a parameter that shows what the driver is challenged within the task of making the left turn. This includes all of the lanes that were previously noted as opposing lanes for the geometry of the intersection, not just the opposing through lanes. The results, however, show that there is a much stronger correlation with the permitted green time in Figure 3, on page 24, rather than the opposing volume shown in Figure 6 on the next page. Figure 7 on the next page

shows that the lack of correlation remains when the number of permitted lefts are compared to the total opposing volume.

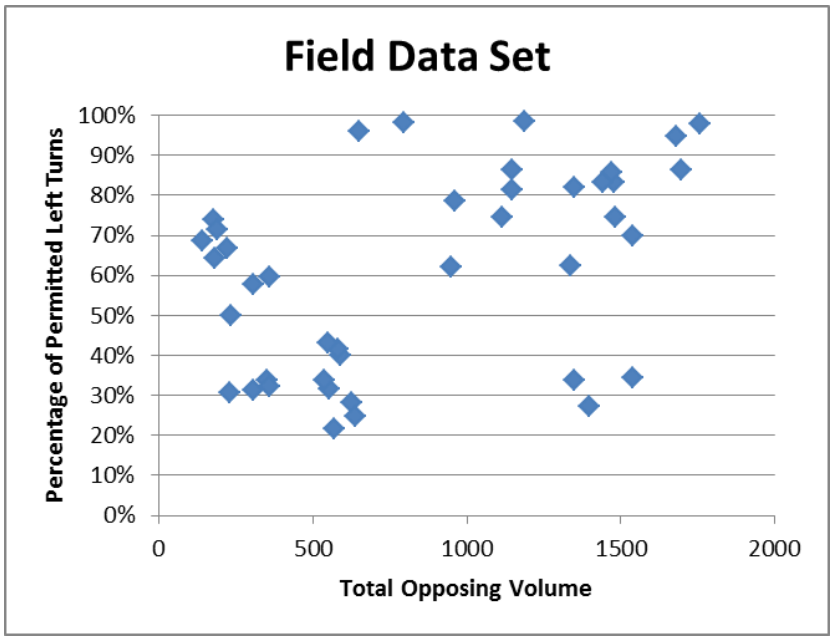


Figure 6: Percentage of Permitted Left Turns vs. Total Opposing Volume

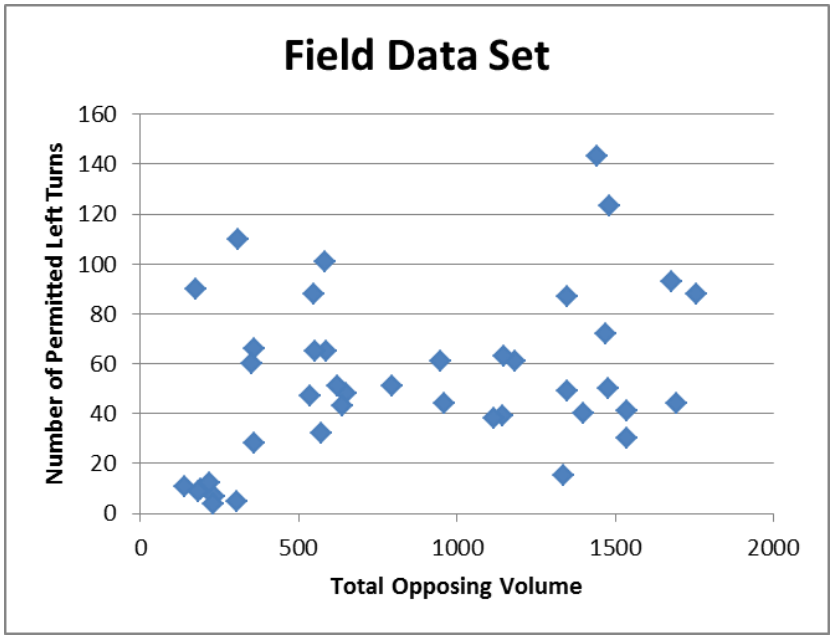


Figure 7: Number of Permitted Left Turns vs. Total Opposing Volume

Characteristics of the specific left turn under analysis are also of paramount importance. The data required the timing of all left turns from initiation of movement, if stopped, and from behind the stop bar until the point in which the entire vehicle is completely outside of the intersection and is in the appropriate receiving lane. Vehicles that were stopped beyond the stop bar were timed from the moment that they began moving. This is the method of which the left turns were timed to derive an average time to take the left turn. This value is critical because of the differing speeds and lengths of the left turns at different intersection locations. It also is important in determining the acceptable time gap that may be accepted by a driver. The follow up time was calculated when a platoon of left turning vehicles were queued and is a measure of the average headway between the vehicles making the left turn. The time between the first vehicle at the end of the left turn and n^{th} vehicle at the same location is taken and then divided by n number of vehicles to obtain the follow up time for the left turn movement. See Table 4 on the next page for an example of how these values are represented in the left turn data collection tables found in Appendix E.

Table 4: Sample Left Turn Data Collection Sheet

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach	**Major Street:** US 27			**Speed:**	55 MPH	
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	1:24	1:31	0:07	0	0:00	0:00
2	5:25	5:31	0:06	0	0:00	0:00
3	9:22	9:30	0:08	0	0:00	0:00
4	17:23	17:30	0:07	0	0:00	0:00
5	21:25	21:31	0:06	0	0:00	0:00
6	25:24	25:28	0:04	2	25:31	0:01
7	31:27	31:33	0:06	1	31:36	0:03
8	35:23	35:29	0:06	0	0:00	0:00
9	35:32	35:39	0:07	0	0:00	0:00
10	39:38	39:44	0:06	0	0:00	0:00
11	47:23	47:30	0:07	0	0:00	0:00
12	49:24	49:29	0:05	0	0:00	0:00
13	57:28	57:38	0:10	0	0:00	0:00
14	3:30	3:36	0:06	0	0:00	0:00
15	7:13	7:19	0:06	2	7:24	0:02
16	9:14	9:20	0:06	0	0:00	0:00
17	15:29	15:35	0:06	1	15:37	0:02
18	21:17	21:22	0:05	1	21:24	0:02
19	22:13	22:19	0:06	1	22:23	0:04
20	33:16	33:21	0:05	0	0:00	0:00
21	43:13	43:19	0:06	0	0:00	0:00
22	45:22	45:28	0:06	0	0:00	0:00
23	49:22	49:27	0:05	1	49:31	0:04
24	51:15	51:22	0:07	0	0:00	0:00
25	53:23	53:31	0:08	0	0:00	0:00
26	53:32	53:36	0:04	0	0:00	0:00
27	55:13	55:20	0:07	0	0:00	0:00
28	59:23	59:29	0:06	0	0:00	0:00
29	0:35	0:41	0:06	0	0:00	0:00
30	2:31	2:38	0:07	1	2:40	0:02
31	4:12	4:20	0:08	1	4:21	0:01
32	4:20	4:24	0:04	0	0:00	0:00
33	0:29	0:36	0:07	0	0:00	0:00
34	3:12	3:17	0:05	2	3:22	0:02
35	5:57	6:02	0:05	0	0:00	0:00

The total volume of the left turning vehicles was collected to compare it to the number of permitted left turns that were able to be made. When there are a low number of permitted turns being made during a peak time, the operational effectiveness of permitting the turn could be lowered along with the safety implications from drivers taking more risk and accepting smaller gaps between the oncoming vehicles. Likewise, the total opposing traffic volume was collected to have a clear understanding of all the operational aspects of the conflicting movements to the left turning vehicles during the permitted time. The following figures represent the permitted left turns, total left turns and permitted green time for each of the intersections. It is of interest to note that in many cases as the permitted left time decreases, the difference between the total left turns and the permitted left turns increases.

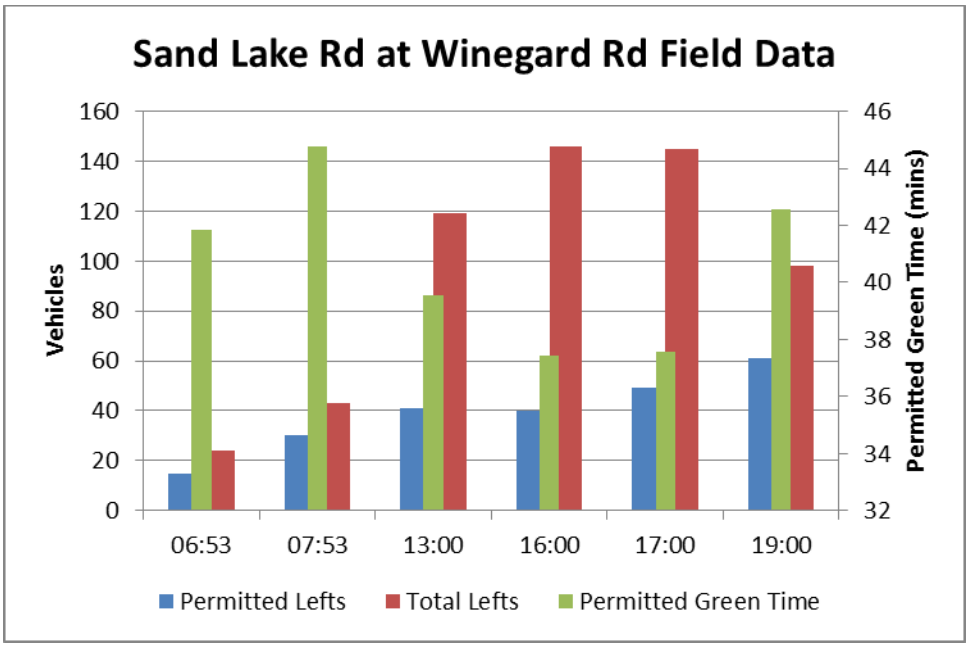


Figure 8: Intersection #4 – Permitted Left Turns, Total Left Turns and Permitted Green Time

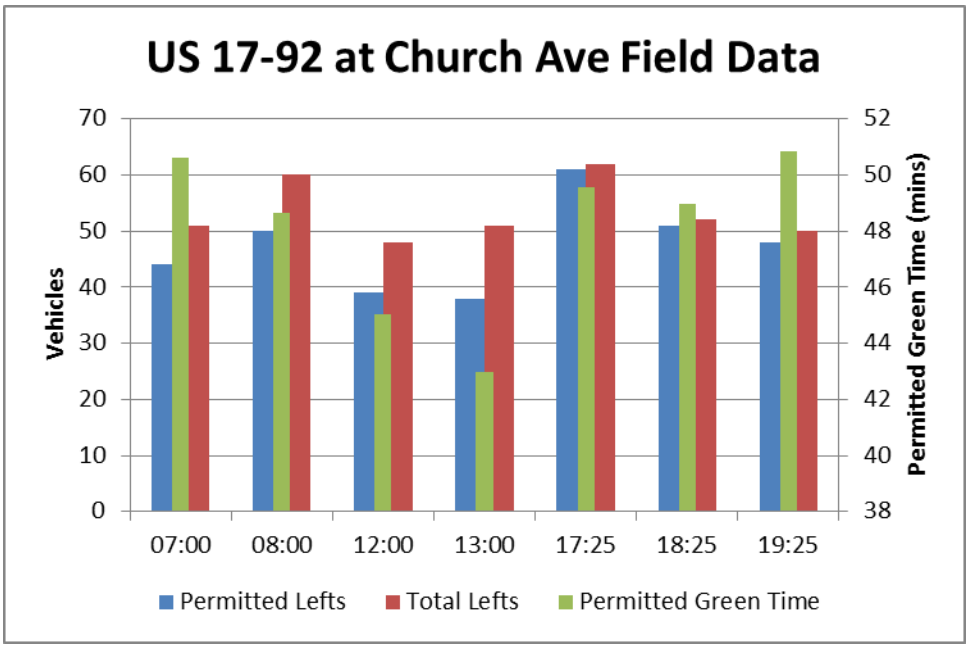


Figure 9: Intersection #5 – Permitted Left Turns, Total Left Turns and Permitted Green Time

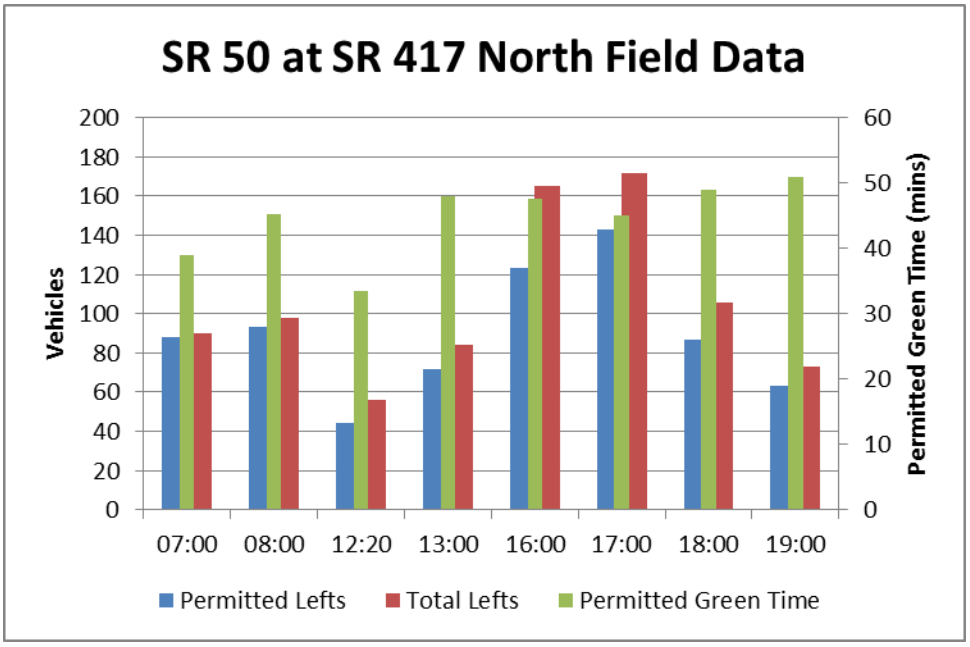


Figure 10: Intersection #6 – Permitted Left Turns, Total Left Turns and Permitted Green Time

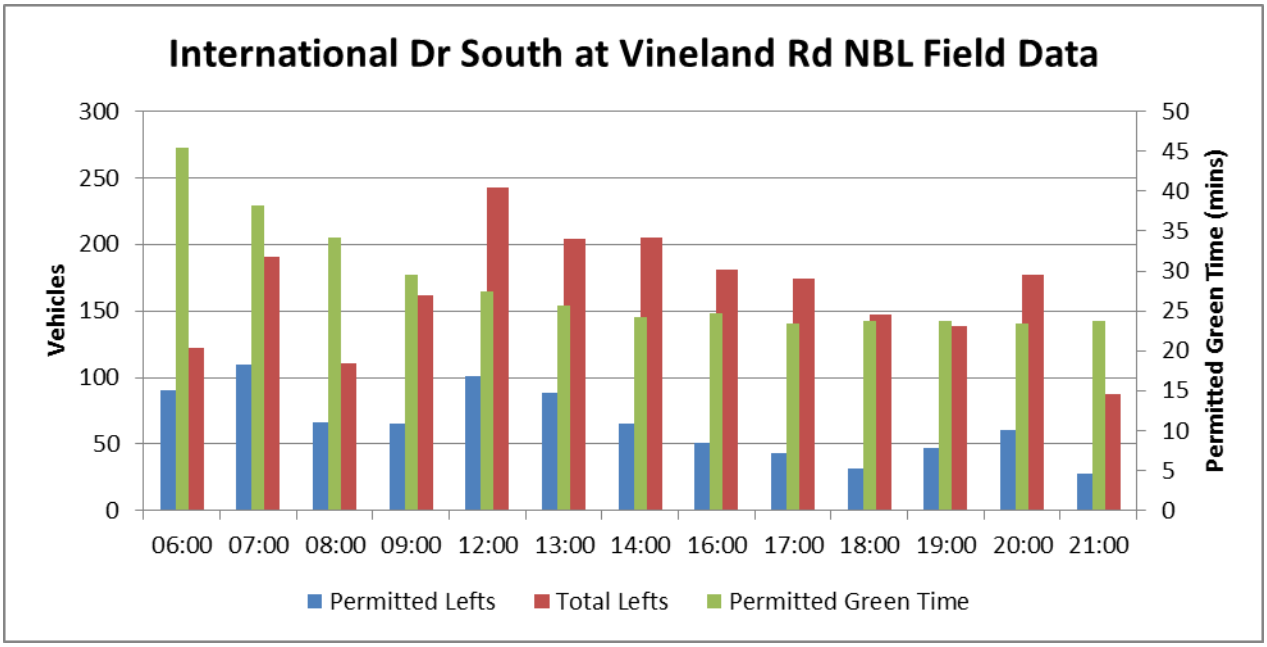


Figure 11: Intersection #7 NBL – Permitted Left Turns, Total Left Turns and Permitted Green Time

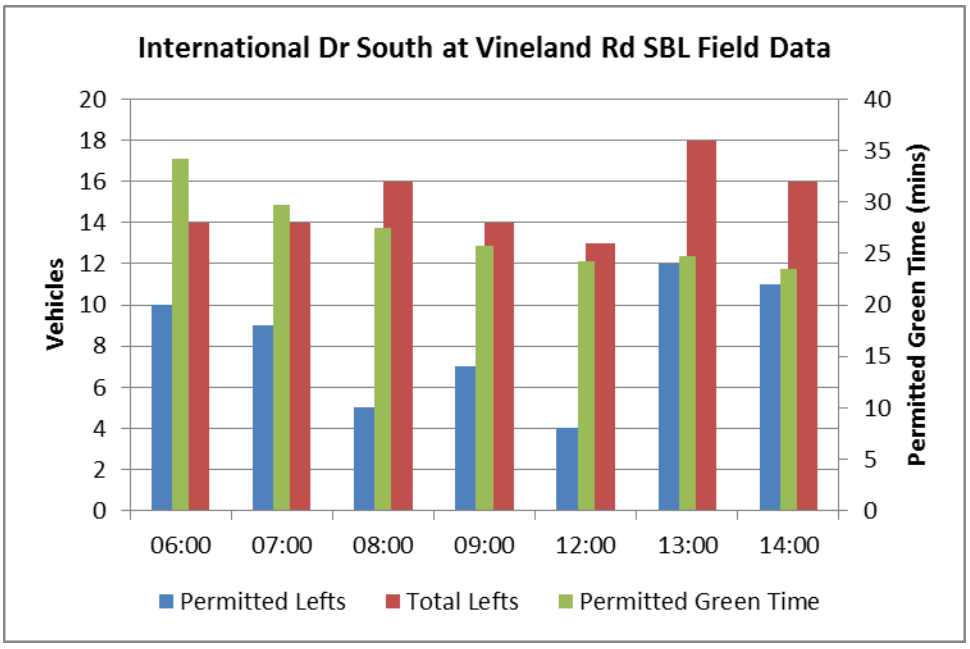


Figure 12: Intersection #7 SBL – Permitted Left Turns, Total Left Turns and Permitted Green Time

All of the collected parameters were then analyzed for their differing effect on the number of left turns that could be made during the permitted phase. The parameters selected will have an impact on the determination on whether or not the left turn should be protected, although this determination is not in the scope of this study and can be further analyzed for future research. A manual system would require gathering volumes and timings, as was done here, and determining the time of day that the signal will need to operate as a protected one. The ultimate goal of research on this topic is to aid the further understanding of the permitted left turn. Additional research is needed to eventually automate the process and have the controller make the final determination of the left turn mode. When the characteristics of the intersection in a particular situation warrant that a turn be protected, the signal would be able to adapt and relay the results of the analysis via the controller. Since the dynamic variables in this set of data are the volumes and timings, they both can be determined. The innovation is to eventually have the ability to take live volume data in conjunction with signal timing data for the two approaches and determine the permitted volumes and total volumes to run in a similar analysis to the one that was run in this study and the previous one conducted by the University of Central Florida.

CHAPTER FIVE: MODEL GENERATION

With all of the data collection activities completed and organized, the compiled database was separated into three distinct categories. The categories determined are Synchro based data, field based large intersection data and field based small intersection data obtained from the previous study. Each category was individually sorted to generate a model based on that data set. The field data was used in the comparative analysis of the large and small intersections. The Synchro data was used for the validation for this software as an accurate predictor of permitted left turns and to generate a base model from the simulation software that will show the significant parameters that relate to the prediction of the number of permitted left turns for protected left turn approaches. It was also used to compare the stop control delay of the protected-permitted and protected only signal modes. The split into the specific categories was to ensure that the models generated would represent the characteristics of the data set that they represent. The focus of the work is not to model the number of permitted left turns but rather pinpoint and compare the parameters within each of the models. Further analysis would need to be conducted to develop more realistic models to predict the number of permitted left turns.

Each of the models were developed using step-wise reverse elimination regression analysis with a combination of one-way and two-way factors as parameters in the initial input. This specific approach was chosen because of the ability to account for all of the parameters and eliminate the insignificant ones, in each step that was taken. It was determined that this would be the most effective way to account for all of the parameters that were collected in the data set and determine the influential ones. While the units of the two-way factors are irrelevant in

practical terms they are provided to understand the selected inputs to the generated model equations. The two-way factors that were chosen are listed below and the full tables are available in Appendix F:

- Total Number of Left Turns multiplied by Permitted Green Time (vehicle-seconds)
- Total Number of Left Turns multiplied by Total Number of Opposing Vehicles (vehicles^2)
- Total Number of Opposing Vehicles multiplied by Lanes Crossed (vehicle-lanes)
- Total Number of Opposing Vehicles multiplied by Speed (vehicle-miles per hour)
- Lanes Crossed multiplied by Permitted Green Time (lane-seconds)

It is important to note that the domain for the variable inputs has to be considered for adjustments to the model equations. Time of Day is defined from 0 seconds (12:00:00 AM) until 86,399 seconds (11:59:59 PM). Permitted Green Time is defined from 0.00 minutes until 60.00 minutes. There are three Land Use categorical data determinations; Mixed (Residential/Commercial), Commercial and Residential/School. There are four Criteria categorical data determinations; Rural, Urban, Ramp, Tourist. There are two Geometry categorical data determinations; 3-legged and 4-legged intersection. The distinction was included; however, it is not used because there is only one 3-legged intersection in the newly collected data set. This could lead to further research regarding the specific approach geometry of intersections. The number of Permitted Lefts, Total Number of Left Turns and Total Opposing Volume are defined to be zero or greater. The Left Turn Timing must be a non-zero positive number. The data tables that were used in each model generation are provided on the following pages.

Table 5: Large Intersection Synchro Data Parameter Table

Flashing Yellow Arrow 6+ Large Intersection Synchro Model Data												
Intersection	Time of Day	Lanes Crossed	Speed	Permitted Green Time	Land Use	Criteria	Geometry	Left Turns				Total Opposing
								PL	Total	%PL	Time (s)	
1	25200	4	55	19.2833	MXD	RURL	4	14	15	93.33%	5	1864
	28800	4	55	25.5167	MXD	RURL	4	19	20	95.00%	5	1399
	43200	4	55	23.8500	MXD	RURL	4	24	44	54.55%	5	881
	46800	4	55	26.0333	MXD	RURL	4	18	39	46.15%	5	941
	57600	4	55	21.3000	MXD	RURL	4	67	75	89.33%	5	874
	62340	4	55	12.2833	MXD	RURL	4	52	59	88.14%	5	638
	64800	4	55	18.8833	MXD	RURL	4	71	81	87.65%	5	794
2 NBL	24000	4	45	46.3833	MXD	URBN	4	2	3	66.67%	6	693
	27600	4	45	52.0000	MXD	URBN	4	4	5	80.00%	6	1053
	43200	4	45	10.6000	MXD	URBN	4	10	14	71.43%	6	484
	44400	4	45	47.7833	MXD	URBN	4	28	36	77.78%	6	1972
	57600	4	45	45.0167	MXD	URBN	4	54	70	77.14%	6	1888
	61200	4	45	44.1833	MXD	URBN	4	57	79	72.15%	6	2343
	64800	4	45	45.2833	MXD	URBN	4	66	98	67.35%	6	1959
	68400	4	45	46.0000	MXD	URBN	4	56	74	75.68%	6	1620
2 SBL	24000	4	45	46.3833	MXD	URBN	4	0	0	100.00%	6	1236
	27600	4	45	53.0167	MXD	URBN	4	8	10	80.00%	6	1915
	43200	4	45	10.6000	MXD	URBN	4	5	6	83.33%	6	386
	44400	4	45	47.7833	MXD	URBN	4	17	21	80.95%	6	1785
	57600	4	45	45.0167	MXD	URBN	4	24	31	77.42%	6	1556
	61200	4	45	44.1833	MXD	URBN	4	23	28	82.14%	6	1646
	64800	4	45	45.2833	MXD	URBN	4	29	37	78.38%	6	1600
	68400	4	45	45.7667	MXD	URBN	4	30	38	78.95%	6	1379
3	24300	4	45	31.9167	RSC	URBN	3	95	133	71.43%	5	1543
	27900	4	45	45.8167	RSC	URBN	3	136	259	52.51%	5	1843
	43200	4	45	31.8500	RSC	URBN	3	122	321	38.01%	5	1559
	56700	4	45	33.4167	RSC	URBN	3	126	366	34.43%	5	1405
	60300	4	45	33.2167	RSC	URBN	3	93	406	22.91%	5	1589
	63900	4	45	33.5500	RSC	URBN	3	107	364	29.40%	5	1305
	67500	4	45	26.9833	RSC	URBN	3	110	204	53.92%	5	900

Table 6: Large Intersection Field Data Parameter Table

Flashing Yellow Arrow 6+ Large Intersection Field Model Data												
Intersection	Time of Day	Lanes Crossed	Speed	Permitted Green Time	Land Use	Criteria	Geometry	Left Turns				Total Opposing
								PL	Total	%PL	Time (s)	
4	24780	4	55	41.8333	COM	RURL	4	15	24	62.50%	5	1338
	28380	4	55	44.7667	COM	RURL	4	30	43	69.77%	5	1539
	46800	4	55	39.5500	COM	RURL	4	41	119	34.45%	5	1539
	57600	4	55	37.4500	COM	RURL	4	40	146	27.40%	5	1398
	61200	4	55	37.5500	COM	RURL	4	49	145	33.79%	5	1349
	68400	4	55	42.5667	COM	RURL	4	61	98	62.24%	5	949
5	25200	4	45	50.6000	COM	URBN	4	44	51	86.27%	4	1696
	28800	4	45	48.6667	COM	URBN	4	50	60	83.33%	4	1478
	43200	4	45	45.0500	COM	URBN	4	39	48	81.25%	4	1146
	46800	4	45	42.9667	COM	URBN	4	38	51	74.51%	4	1117
	62700	4	45	49.5500	COM	URBN	4	61	62	98.39%	4	1186
	66300	4	45	48.9667	COM	URBN	4	51	52	98.08%	4	796
	69900	4	45	50.8500	COM	URBN	4	48	50	96.00%	4	651
6	25200	3	45	39.0500	COM	RAMP	4	88	90	97.78%	4	1757
	28800	3	45	45.3167	COM	RAMP	4	93	98	94.90%	4	1680
	44400	3	45	33.5667	COM	RAMP	4	44	56	78.57%	4	960
	46800	3	45	48.0500	COM	RAMP	4	72	84	85.71%	4	1471
	57600	3	45	47.5833	COM	RAMP	4	123	165	74.55%	4	1483
	61200	3	45	45.0000	COM	RAMP	4	143	172	83.14%	4	1444
	64800	3	45	49.0333	COM	RAMP	4	87	106	82.08%	4	1348
	68400	3	45	50.8500	COM	RAMP	4	63	73	86.30%	4	1149
7 NBL	21600	3	45	45.5000	COM	TRST	4	90	122	73.77%	6	177
	25200	3	45	38.1833	COM	TRST	4	110	191	57.59%	6	308
	28800	3	45	34.1833	COM	TRST	4	66	111	59.46%	6	360
	32400	3	45	29.6000	COM	TRST	4	65	162	40.12%	6	589
	43200	3	45	27.5000	COM	TRST	4	101	243	41.56%	6	582
	46800	3	45	25.7000	COM	TRST	4	88	204	43.14%	6	550
	50400	3	45	24.2833	COM	TRST	4	65	205	31.71%	6	553
	57600	3	45	24.7000	COM	TRST	4	51	181	28.18%	6	624
	61200	3	45	23.4500	COM	TRST	4	43	174	24.71%	6	639
	64800	3	45	23.7000	COM	TRST	4	32	147	21.77%	6	570
	68400	3	45	23.8167	COM	TRST	4	47	139	33.81%	6	538
	72000	3	45	23.4333	COM	TRST	4	60	177	33.90%	6	352
	75600	3	45	23.7667	COM	TRST	4	28	87	32.18%	6	361
7 SBL	28800	3	45	34.1833	COM	TRST	4	10	14	71.43%	5	190
	32400	3	45	29.7333	COM	TRST	4	9	14	64.29%	5	182
	43200	3	45	27.5000	COM	TRST	4	5	16	31.25%	5	307
	46800	3	45	25.7000	COM	TRST	4	7	14	50.00%	5	233
	50400	3	45	24.2833	COM	TRST	4	4	13	30.77%	5	230
	57600	3	45	24.7000	COM	TRST	4	12	18	66.67%	5	220
	61200	3	45	23.4500	COM	TRST	4	11	16	68.75%	5	140

Table 7: Small Intersection Field Data Parameter Table

Flashing Yellow Arrow 6+ Small Intersection Field Model Data												
Intersection	Time of Day	Lanes Crossed	Speed	Permitted Green Time	Land Use	Criteria	Geometry	Left Turns				Total Opposing
								PL	Total	%PL	Time (s)	
FYA 2 WBL	48600	3	45	36.2500	COM	URBN	4	21	177	11.86%	5	1592
	52200	3	45	36.2833	COM	URBN	4	40	203	19.70%	5	1561
	55800	3	45	34.8167	COM	URBN	4	35	195	17.95%	5	1578
	59400	3	45	34.9667	COM	URBN	4	13	183	7.10%	5	1644
	63000	3	45	35.0167	COM	URBN	4	14	174	8.05%	5	1623
	66600	3	45	35.9000	COM	URBN	4	56	194	28.87%	5	1436
	70200	3	45	37.0167	COM	URBN	4	64	188	34.04%	5	1215
	73800	3	45	42.7333	COM	URBN	4	124	187	66.31%	5	1009
	77400	3	45	34.8833	COM	URBN	4	90	154	58.44%	5	831
FYA 5 NBL	25200	2	40	13.9333	RSC	URBN	4	101	272	37.13%	5	220
	28800	2	40	14.0333	RSC	URBN	4	90	244	36.89%	5	232
	32400	2	40	17.8000	RSC	URBN	4	156	255	61.18%	5	204
	43200	2	40	16.0667	RSC	URBN	4	85	178	47.75%	5	214
	46800	2	40	14.9667	RSC	URBN	4	75	177	42.37%	5	197
	50400	2	40	16.8167	RSC	URBN	4	85	177	48.02%	5	250
	57600	2	40	14.1500	RSC	URBN	4	50	238	21.01%	5	359
	61200	2	40	13.8667	RSC	URBN	4	26	238	10.92%	5	416
	64800	2	40	13.0333	RSC	URBN	4	31	189	16.40%	5	294
FYA 6 EBL	54000	1	40	23.5500	RSC	URBN	4	21	130	16.15%	5	422
	57600	1	40	24.7333	RSC	URBN	4	29	110	26.36%	5	466
	61200	1	40	24.8167	RSC	URBN	4	24	137	17.52%	5	480
	64800	1	40	23.9333	RSC	URBN	4	42	104	40.38%	5	315
	68400	1	40	24.7833	RSC	URBN	4	46	111	41.44%	5	293
FYA 8C SBL	28740	2	40	7.2167	RSC	URBN	4	6	70	8.57%	5	103
	32340	2	40	10.9667	RSC	URBN	4	28	108	25.93%	5	126
	35940	2	40	11.5833	RSC	URBN	4	36	132	27.27%	5	61
	39540	2	40	12.6667	RSC	URBN	4	44	152	28.95%	5	83
	43140	2	40	14.5833	RSC	URBN	4	73	224	32.59%	5	135
	46740	2	40	11.2333	RSC	URBN	4	34	190	17.89%	5	113
	50340	2	40	12.0500	RSC	URBN	4	55	238	23.11%	5	113
	53940	2	40	10.4167	RSC	URBN	4	38	213	17.84%	5	190
	57540	2	40	11.1333	RSC	URBN	4	52	288	18.06%	5	171
	61140	2	40	11.6667	RSC	URBN	4	69	376	18.35%	5	233
	64740	2	40	9.7333	RSC	URBN	4	48	356	13.48%	5	164
FYA 11 NBL	28800	3	55	29.5833	RSC	RURL	4	24	50	48.00%	5	801
	32400	3	55	31.7000	RSC	RURL	4	36	54	66.67%	5	493
	43200	3	55	29.3667	RSC	RURL	4	38	86	44.19%	5	506
	46800	3	55	30.4500	RSC	RURL	4	52	100	52.00%	5	462
	50400	3	55	32.0500	RSC	RURL	4	66	114	57.89%	5	510
	57600	3	55	25.0833	RSC	RURL	4	77	180	42.78%	5	504
	61200	3	55	26.0833	RSC	RURL	4	119	272	43.75%	5	562
	64800	3	55	26.7333	RSC	RURL	4	104	227	45.81%	5	122

The parameters were organized into tables presented for input into Minitab, a statistical software package. The tables were directly imported into the program for the appropriate statistical tests that were required. The first test was the step-wise backwards elimination regression analysis based on the each data set. The following are the results of the regression analysis, in the order of large intersection Synchro data, large intersection field data and small intersection field data. Additionally, the calculated Permitted Lefts from the models are as a reference and should not be used as a predictor but rather to give an idea of the values being obtained. The emphasis for this study is on the significant parameters that influence the each of the models. The number of permitted left turns provided cannot exceed the Total Number of Left Turns. The domain for these values has been adjusted and is termed as the "Domain PL" in the data tables to follow. The percentage of permitted left turns are also provided as a reference.

Regression Analysis: PL versus Permitted Gr, Total Lefts , Total Opposi, Speed x Tota, ...

The following terms cannot be estimated and were removed:
Permitted Green Time, Total Opposing, Land Use, Criteria, Geometry

Method

Categorical predictor coding (1, 0)

Backward Elimination of Terms

Candidate terms: Permitted Green Time x Total Le, Total Lefts x Total Opposing, Total Opposing x Cross Lanes, Speed x Total Opposing, Permitted Green Time x Cross La, Time of Day, Speed, Permitted Green Time, Total, Time (s), Total Opposing, Land Use, Criteria, Geometry

	------Step 1-----		------Step 2-----		------Step 3-----	
	Coef	P	Coef	P	Coef	P
Constant	733		691		548	
Permitted Green Time x Total Le	0.00335	0.701	0.00439	0.454	0.00437	0.449
Total Lefts x Total Opposing	0.000039	0.868				
Total Opposing x Cross Lanes	0.0806	0.026	0.0827	0.013	0.0907	0.002
Speed x Total Opposing	-0.00644	0.028	-0.00660	0.016	-0.00728	0.002
Permitted Green Time x Cross La	-0.185	0.254	-0.198	0.151	-0.205	0.128
Time of Day	0.000304	0.483	0.000254	0.399	0.000169	0.484
Speed	-2.24	0.626	-1.80	0.621		
Total	-0.217	0.488	-0.183	0.428	-0.147	0.494
Time (s)	-106.3	0.017	-102.3	0.005	-91.5	0.001
S	19.3504		18.8974		18.5730	
R-sq	87.85%		87.83%		87.69%	
R-sq(adj)	82.38%		83.20%		83.77%	
R-sq(pred)	69.64%		75.12%		75.91%	

Figure 13: Large Intersection Synchro Data Regression Analysis (1 of 3)

	------Step 4-----		------Step 5------	
	Coef	P	Coef	P
Constant	502		539.3	
Permitted Green Time x Total Le	0.00077	0.739		
Total Lefts x Total Opposing				
Total Opposing x Cross Lanes	0.0856	0.002	0.0927	0.000
Speed x Total Opposing	-0.00682	0.002	-0.007395	0.000
Permitted Green Time x Cross La	-0.184	0.154	-0.192	0.123
Time of Day	0.000135	0.563	0.000134	0.557
Speed				
Total				
Time (s)	-84.2	0.001	-90.61	0.000
S	18.3633		18.0212	
R-sq	87.42%		87.35%	
R-sq(adj)	84.13%		84.72%	
R-sq(pred)	77.54%		80.36%	

	------Step 6------		------Step 7------	
	Coef	P	Coef	P
Constant	547.0		567.5	
Permitted Green Time x Total Le				
Total Lefts x Total Opposing				
Total Opposing x Cross Lanes	0.0950	0.000	0.08461	0.000
Speed x Total Opposing	-0.007574	0.000	-0.006913	0.000
Permitted Green Time x Cross La	-0.212	0.075		
Time of Day				
Speed				
Total				
Time (s)	-90.54	0.000	-96.98	0.000
S	17.7872		18.6041	
R-sq	87.17%		85.40%	
R-sq(adj)	85.11%		83.72%	
R-sq(pred)	83.07%		81.01%	

α to remove = 0.05

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	3	52639	17546.3	50.70	0.000
Total Opposing x Cross Lanes	1	27790	27789.8	80.29	0.000
Speed x Total Opposing	1	23768	23767.7	68.67	0.000
Time (s)	1	48386	48386.2	139.80	0.000
Error	26	8999	346.1		
Total	29	61638			

Figure 14: Large Intersection Synchro Data Regression Analysis (2 of 3)

```
Model Summary

      S    R-sq  R-sq(adj)  R-sq(pred)
18.6041  85.40%     83.72%      81.01%


Coefficients

Term                                Coef    SE Coef  T-Value  P-Value    VIF
Constant                           567.5       46.2    12.28    0.000
Total Opposing x Cross Lanes     0.08461    0.00944     8.96    0.000  30.07
Speed x Total Opposing        -0.006913   0.000834    -8.29    0.000  28.92
Time (s)                         -96.98       8.20   -11.82    0.000   1.45


Regression Equation

PL = 567.5 + 0.08461 Total Opposing x Cross Lanes - 0.006913 Speed x Total Opposing
     - 96.98 Time (s)


Fits and Diagnostics for Unusual Observations

                              Std
Obs      PL     Fit  Resid  Resid
  1   14.00    4.73   9.27   0.71      X
 24  166.00  124.80  41.20   2.38  R

R  Large residual
X  Unusual X
```

Figure 15: Large Intersection Synchro Data Regression Analysis (3 of 3)

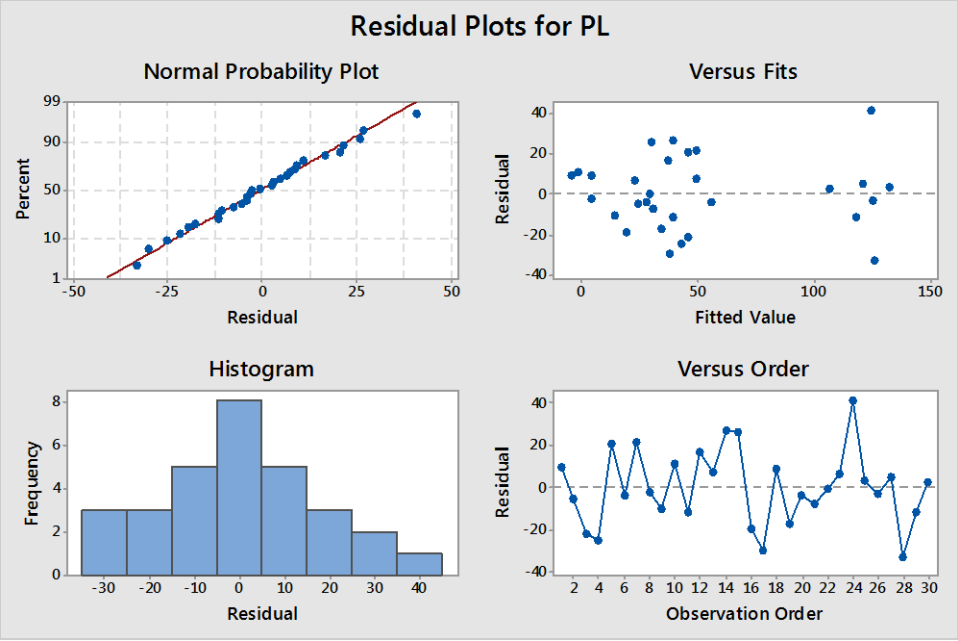


Figure 16: Large Intersection Synchro Data Regression Analysis Plots

Table 8: Large Intersection Synchro Data Permitted Left Predictions

Synchro Prediction		
PL	Domain PL	%PL
5	5	31.54%
24	20	100.00%
46	44	100.00%
43	39	100.00%
46	46	61.45%
56	56	94.83%
49	49	61.03%
5	3	100.00%
14	5	100.00%
-1	0	0.00%
40	36	100.00%
37	37	53.24%
50	50	62.93%
39	39	40.01%
30	30	40.45%
19	0	100.00%
38	10	100.00%
-4	0	0.00%
34	21	100.00%
28	28	90.92%
31	28	100.00%
29	29	79.43%
23	23	61.43%
125	125	93.84%
133	133	51.36%
125	125	39.02%
121	121	33.07%
126	126	31.05%
118	118	32.50%
107	107	52.56%

Regression Analysis: PL versus Permitted Gr, Total Lefts , Total Opposi, Speed x Tota, …

The following terms cannot be estimated and were removed:
Criteria

Method

Categorical predictor coding (1, 0)

Backward Elimination of Terms

Candidate terms: Permitted Green Time x Total Le, Total Lefts x Total Opposing, Total Opposing x Cross Lanes, Speed x Total Opposing, Permitted Green Time x Cross La, Time of Day, Lanes Crossed, Speed, Permitted Green Time, Total, Time (s), Total Opposing, Criteria

	------Step 1------		------Step 2------	
	Coef	P	Coef	P
Constant	264		323	
Permitted Green Time x Total Le	0.02308	0.000	0.02356	0.000
Total Lefts x Total Opposing	-0.000199	0.039	-0.000209	0.026
Total Opposing x Cross Lanes	-0.0341	0.012	-0.0365	0.004
Speed x Total Opposing	-0.00102	0.601		
Permitted Green Time x Cross La	2.555	0.012	2.604	0.009
Time of Day	-0.000261	0.017	-0.000258	0.016
Lanes Crossed	-89.1	0.065	-88.6	0.063
Speed	1.84	0.489	0.555	0.572
Permitted Green Time	-8.69	0.009	-8.90	0.006
Total	-0.139	0.295	-0.146	0.265
Time (s)	-8.77	0.180	-9.06	0.160
Total Opposing	0.1748	0.045	0.1369	0.002
S		7.91847		7.81947
R-sq		96.05%		96.01%
R-sq(adj)		94.35%		94.49%
R-sq(pred)		90.80%		91.36%

	------Step 3------		------Step 4------	
	Coef	P	Coef	P
Constant	280.6		278.3	
Permitted Green Time x Total Le	0.02383	0.000	0.02385	0.000
Total Lefts x Total Opposing	-0.000201	0.028	-0.000154	0.068
Total Opposing x Cross Lanes	-0.0377	0.002	-0.0439	0.000
Speed x Total Opposing				
Permitted Green Time x Cross La	2.269	0.003	2.680	0.000
Time of Day	-0.000250	0.017	-0.000232	0.027
Lanes Crossed	-70.1	0.036	-82.3	0.013
Speed				
Permitted Green Time	-7.88	0.003	-8.98	0.001
Total	-0.173	0.150	-0.245	0.030
Time (s)	-6.82	0.170		
Total Opposing	0.1422	0.001	0.1640	0.000
S		7.73116		7.85237
R-sq		95.96%		95.69%
R-sq(adj)		94.62%		94.45%
R-sq(pred)		91.88%		92.19%

Figure 17: Large Intersection Field Data Regression Analysis (1 of 2)

	Step 5		Step 6	
	Coef	P	Coef	P
Constant	292		217.9	
Permitted Green Time x Total Le	0.01807	0.000	0.013119	0.000
Total Lefts x Total Opposing				
Total Opposing x Cross Lanes	-0.0398	0.001	-0.0370	0.002
Speed x Total Opposing				
Permitted Green Time x Cross La	2.744	0.000	2.188	0.001
Time of Day	-0.000291	0.006	-0.000267	0.011
Lanes Crossed	-90.3	0.009	-72.1	0.024
Speed				
Permitted Green Time	-8.50	0.001	-6.19	0.003
Total	-0.154	0.134		
Time (s)				
Total Opposing	0.1354	0.001	0.1252	0.001
S		8.16181		8.32907
R-sq		95.20%		94.84%
R-sq(adj)		94.00%		93.75%
R-sq(pred)		91.97%		92.05%

α to remove = 0.05

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	7	42110.7	6015.8	86.72	0.000
Permitted Green Time x Total Le	1	20981.0	20981.0	302.44	0.000
Total Opposing x Cross Lanes	1	799.1	799.1	11.52	0.002
Permitted Green Time x Cross La	1	930.9	930.9	13.42	0.001
Time of Day	1	499.9	499.9	7.21	0.011
Lanes Crossed	1	385.9	385.9	5.56	0.024
Permitted Green Time	1	728.4	728.4	10.50	0.003
Total Opposing	1	869.8	869.8	12.54	0.001
Error	33	2289.3	69.4		
Total	40	44400.0			

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
8.32907	94.84%	93.75%	92.05%

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	217.9	91.7	2.38	0.023	
Permitted Green Time x Total Le	0.013119	0.000754	17.39	0.000	1.44
Total Opposing x Cross Lanes	-0.0370	0.0109	-3.39	0.002	272.42
Permitted Green Time x Cross La	2.188	0.597	3.66	0.001	435.93
Time of Day	-0.000267	0.000100	-2.68	0.011	1.50
Lanes Crossed	-72.1	30.6	-2.36	0.024	119.70
Permitted Green Time	-6.19	1.91	-3.24	0.003	214.61
Total Opposing	0.1252	0.0354	3.54	0.001	199.65

Regression Equation

PL = 217.9 + 0.013119 Permitted Green Time x Total Le - 0.0370 Total Opposing x Cross Lanes
+ 2.188 Permitted Green Time x Cross La - 0.000267 Time of Day - 72.1 Lanes Crossed
- 6.19 Permitted Green Time + 0.1252 Total Opposing

Fits and Diagnostics for Unusual Observations

Obs	PL	Fit	Resid	Std Resid	
19	143.00	124.10	18.90	2.51	R

R Large residual

Figure 18: Large Intersection Field Data Regression Analysis (2 of 2)

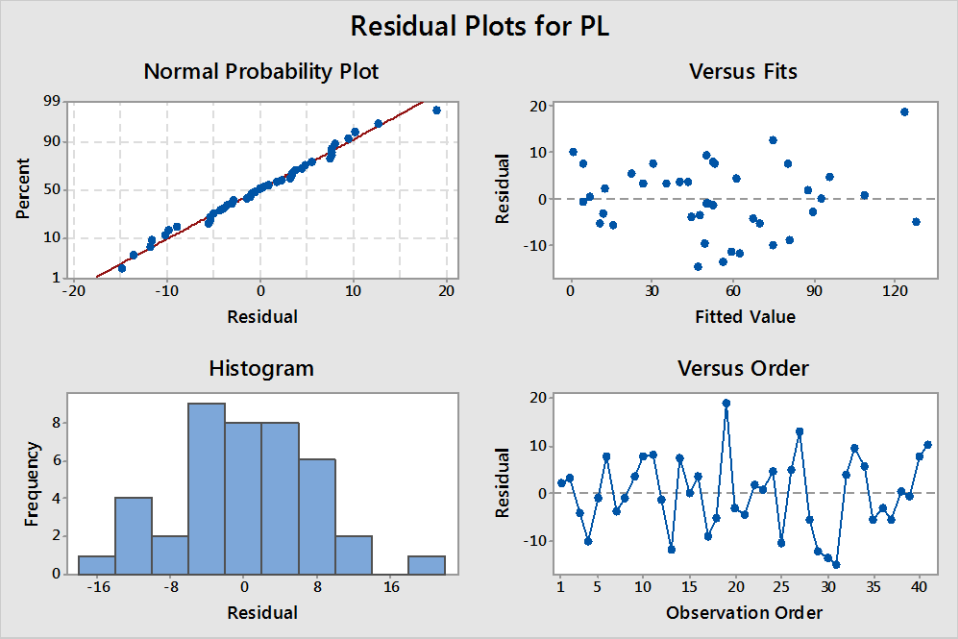


Figure 19: Large Intersection Field Data Regression Analysis Plots

Table 9: Large Intersection Field Data Permitted Left Predictions

Field Permitted Left Prediction							
Intersection	PL	Domain PL	%PL	**Intersection**	PL	Domain PL	%PL
4	13	13	53.02%	**7 NBL**	88	88	72.28%
	27	27	62.28%		109	109	57.17%
	45	45	37.80%		62	62	55.48%
	50	50	34.19%		75	75	46.48%
	50	50	34.51%		96	96	39.62%
	53	53	54.47%		75	75	36.91%
5	48	48	93.32%		70	70	34.33%
	51	51	85.17%		63	63	34.79%
	36	36	74.22%		57	57	32.55%
	30	30	59.54%		47	47	31.95%
	53	53	85.43%		43	43	31.16%
	53	52	100.00%		51	51	28.56%
	60	50	100.00%		23	23	25.93%
6	81	81	89.48%	**7 SBL**	16	14	100.00%
	93	93	94.87%		12	12	86.53%
	41	41	72.48%		10	10	65.51%
	81	81	96.33%		7	7	48.18%
	128	128	77.62%		5	5	35.64%
	124	124	72.17%		4	4	24.53%
	90	90	84.87%		1	1	5.88%
	67	67	92.29%				

Regression Analysis: PL versus Permitted Gr, Total Lefts , Total Opposi, Speed x Tota, …

The following terms cannot be estimated and were removed:
Criteria

Method

Categorical predictor coding (1, 0)

Backward Elimination of Terms

Candidate terms: Permitted Green Time x Total Le, Total Lefts x Total Opposing, Total Opposing x Cross Lanes, Speed x Total Opposing, Permitted Green Time x Cross La, Time of Day, Lanes Crossed, Speed, Permitted Green Time, Total, Total Opposing, Land Use, Criteria

	------Step 1------		------Step 2------	
	Coef	P	Coef	P
Constant	-48.3		-50.9	
Permitted Green Time x Total Le	0.01963	0.001	0.01879	0.000
Total Lefts x Total Opposing	-0.000038	0.850		
Total Opposing x Cross Lanes	-0.0181	0.510	-0.0194	0.462
Speed x Total Opposing	0.01015	0.001	0.01026	0.000
Permitted Green Time x Cross La	-7.00	0.000	-7.08	0.000
Time of Day	-0.000557	0.006	-0.000564	0.004
Lanes Crossed	253.5	0.000	256.1	0.000
Speed	-13.73	0.000	-13.77	0.000
Permitted Green Time	21.71	0.000	22.03	0.000
Total	0.0257	0.683	0.0286	0.635
Total Opposing	-0.518	0.000	-0.527	0.000
Land Use	45.7	0.126	44.5	0.120
S	9.82086		9.66188	
R-sq	93.81%		93.80%	
R-sq(adj)	91.24%		91.53%	
R-sq(pred)	82.89%		86.18%	

	------Step 3------		------Step 4------	
	Coef	P	Coef	P
Constant	-38.8		-45.0	
Permitted Green Time x Total Le	0.02015	0.000	0.02007	0.000
Total Lefts x Total Opposing				
Total Opposing x Cross Lanes	-0.0203	0.434		
Speed x Total Opposing	0.01046	0.000	0.00956	0.000
Permitted Green Time x Cross La	-6.94	0.000	-6.93	0.000
Time of Day	-0.000535	0.003	-0.000500	0.004
Lanes Crossed	254.1	0.000	246.7	0.000
Speed	-14.00	0.000	-13.74	0.000
Permitted Green Time	21.54	0.000	21.72	0.000
Total				
Total Opposing	-0.533	0.000	-0.5471	0.000
Land Use	49.1	0.065	58.0	0.017
S	9.54108		9.48561	
R-sq	93.75%		93.62%	
R-sq(adj)	91.74%		91.83%	
R-sq(pred)	87.61%		88.43%	

α to remove = 0.05

Figure 20: Small Intersection Field Data Regression Analysis (1 of 2)

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	9	42282.6	4698.1	52.21	0.000
Permitted Green Time x Total Le	1	12577.4	12577.4	139.79	0.000
Speed x Total Opposing	1	1794.7	1794.7	19.95	0.000
Permitted Green Time x Cross La	1	2110.3	2110.3	23.45	0.000
Time of Day	1	863.1	863.1	9.59	0.004
Lanes Crossed	1	2963.1	2963.1	32.93	0.000
Speed	1	5724.3	5724.3	63.62	0.000
Permitted Green Time	1	3300.6	3300.6	36.68	0.000
Total Opposing	1	2738.3	2738.3	30.43	0.000
Land Use	1	569.8	569.8	6.33	0.017
Error	32	2879.3	90.0		
Total	41	45161.8			

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
9.48561	93.62%	91.83%	88.43%

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	-45.0	68.2	-0.66	0.514	
Permitted Green Time x Total Le	0.02007	0.00170	11.82	0.000	4.90
Speed x Total Opposing	0.00956	0.00214	4.47	0.000	1091.89
Permitted Green Time x Cross La	-6.93	1.43	-4.84	0.000	1314.20
Time of Day	-0.000500	0.000162	-3.10	0.004	2.17
Lanes Crossed	246.7	43.0	5.74	0.000	381.42
Speed	-13.74	1.72	-7.98	0.000	45.43
Permitted Green Time	21.72	3.59	6.06	0.000	594.21
Total Opposing	-0.5471	0.0992	-5.52	0.000	1105.83
Land Use					
RSC	58.0	23.0	2.52	0.017	41.70

Regression Equation

Land Use

COM PL = -45.0 + 0.02007 Permitted Green Time x Total Le + 0.00956 Speed x Total Opposing
- 6.93 Permitted Green Time x Cross La - 0.000500 Time of Day
+ 246.7 Lanes Crossed - 13.74 Speed + 21.72 Permitted Green Time
- 0.5471 Total Opposing

RSC PL = 13.0 + 0.02007 Permitted Green Time x Total Le + 0.00956 Speed x Total Opposing
- 6.93 Permitted Green Time x Cross La - 0.000500 Time of Day
+ 246.7 Lanes Crossed - 13.74 Speed + 21.72 Permitted Green Time
- 0.5471 Total Opposing

Fits and Diagnostics for Unusual Observations

Obs	PL	Fit	Resid	Std Resid	
12	156.00	137.72	18.28	2.36	R
28	73.00	92.92	-19.92	-2.21	R

R Large residual

Figure 21: Small Intersection Field Data Regression Analysis (2 of 2)

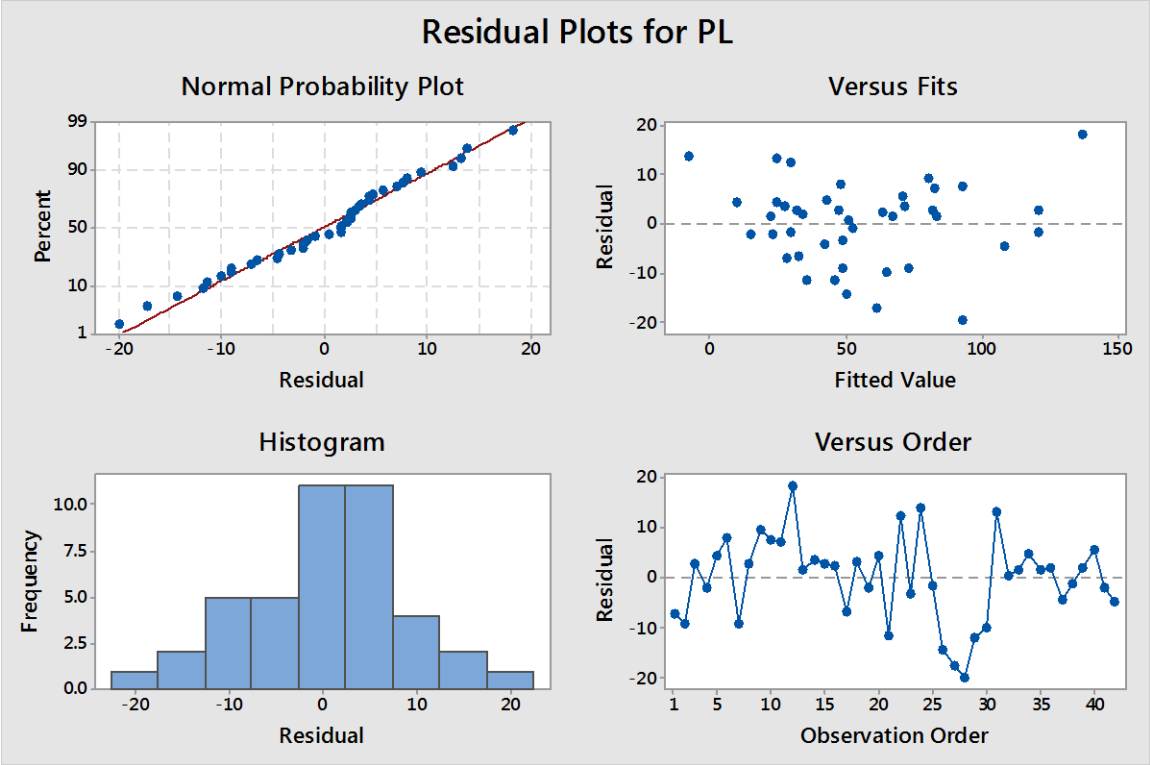


Figure 22: Small Intersection Field Data Regression Analysis Plots

Table 10: Small Intersection Field Data Permitted Left Predictions

Small Geometry Left Turn Prediction								
PL	Domain PL	%PL	PL	Domain PL	%PL	PL	Domain PL	%PL
29	29	16.32%	23	23	17.96%	23	23	46.28%
50	50	24.53%	25	25	22.69%	35	35	63.96%
33	33	16.96%	36	36	26.07%	43	43	50.02%
16	16	8.67%	30	30	28.60%	54	54	53.59%
10	10	5.99%	49	49	44.50%	64	64	56.56%
49	49	25.15%	-7.7	0	0.00%	72	72	39.89%
74	74	39.24%	30	30	27.64%	121	121	44.66%
122	122	65.28%	51	51	38.27%	109	109	48.04%
81	81	52.74%	62	62	40.50%			
94	94	34.39%	93	93	41.60%			
83	83	34.10%	46	46	24.18%			
138	138	54.12%	65	65	27.43%			
84	84	46.99%	25	25	11.71%			
72	72	40.54%	52	52	17.96%			
82	82	46.52%	68	68	17.98%			
48	48	20.03%	43	43	12.21%			
33	33	13.83%						
28	28	14.74%						

CHAPTER SIX: DATA ANALYSIS

The first step in the data analysis portion of this research is the process of validating the Synchro simulation software for use in generating its own model resulting in a response of the number of permitted left turns during a given permitted time period. The validation process was conducted for the large protected-permitted intersections. Protected intersections were not included because the validation is based on determining the number of permitted left turns. As previously indicated, proper calibration with all of the applicable data is critical to developing an accurate model. The turning movement counts were not available for every intersection and were counted manually off of the data collection videos when they were not available. Because of this, turning movement count tables were generated for reference as an input to the Synchro software and are available in Appendix D. For the locations where the turning movement counts were available, all of the movements except for the collected data for the left turns and opposing traffic volume were projected to 2013 levels.

The Synchro validation process for use as an accurate potential predictor of the number of permitted left turns was based on a set of one run for two morning, one midday and three evening hours for intersections 4, 5 and 6 and two morning, three midday and two evening hours for intersection 7 because of data availability. An example of the table is shown on the next page with the full set being available in Appendix D. A comparison of the field data and the Synchro data shows the difference used in the validation. The "PL" column shows the number of permitted left turns and the "Total" column shows the total number of left turns. The percentage is available for a reference of the difference in the numbers.

Table 11: Sample Protected-Permitted Mode Synchro Collection Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	11	16	69%
Run	9	12	75%

The permitted left turns were manually counted in the SimTraffic simulation software, which is part of the Synchro package. A paired t-test was used to make the comparison between hours that had a full set of protected-permitted field data and was simulated in Synchro. The test showed no significant statistical difference in the values with a p-value of 0.090. It is important to note that the standard deviation of the Synchro values were 40.92 versus 35.11 with the protected-permitted field data values, which is influencing the difference in the means. Below is a statistical output of the validation results for using Synchro as predictor of permitted left turns. A detailed table with all of the data used in the analysis is also provided on the next page.

Paired T-Test and CI: Field PL, Synchro PL

```
Paired T for Field PL - Synchro PL

             N   Mean  StDev  SE Mean
Field PL    32  52.25  35.11     6.21
Synchro PL  32  58.09  40.92     7.23
Difference  32  -5.84  18.88     3.34


95% CI for mean difference: (-12.65, 0.96)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -1.75  P-Value = 0.090
```

Figure 23: Synchro Data Use Validation

Table 12: Synchro Data Use Validation Table

Synchro Data Use Validation Table							
Intersection	Time of Day	Field Left Turns			Synchro Left Turns		
		PL	Total	%PL	PL	Total	%PL
4	06:53	15	24	62.50%	13	20	65.00%
	07:53	30	43	69.77%	17	30	56.67%
	13:00	41	119	34.45%	78	112	69.64%
	16:00	40	146	27.40%	82	145	56.55%
	17:00	49	145	33.79%	69	142	48.59%
	19:00	61	98	62.24%	47	87	54.02%
5	07:00	44	51	86.27%	36	38	94.74%
	08:00	50	60	83.33%	40	43	93.02%
	12:00	39	48	81.25%	30	36	83.33%
	17:25	61	62	98.39%	42	48	87.50%
	18:25	51	52	98.08%	42	42	100.00%
	19:25	48	50	96.00%	36	36	100.00%
6	07:00	88	90	97.78%	69	76	90.79%
	08:00	93	98	94.90%	84	97	86.60%
	13:00	72	84	85.71%	64	79	81.01%
	16:00	123	165	74.55%	132	170	77.65%
	17:00	143	172	83.14%	145	179	81.01%
	18:00	87	106	82.08%	91	109	83.49%
7 NBL	08:00	66	111	59.46%	75	112	66.96%
	09:00	65	162	40.12%	85	143	59.44%
	12:00	101	243	41.56%	127	239	53.14%
	13:00	88	204	43.14%	108	212	50.94%
	14:00	65	205	31.71%	112	221	50.68%
	16:00	51	181	28.18%	86	182	47.25%
	17:00	43	174	24.71%	85	173	49.13%
7 SBL	08:00	10	14	71.43%	10	16	62.50%
	09:00	9	14	64.29%	9	15	60.00%
	12:00	5	16	31.25%	11	16	68.75%
	13:00	7	14	50.00%	7	11	63.64%
	14:00	4	13	30.77%	7	12	58.33%
	16:00	12	18	66.67%	11	20	55.00%
	17:00	11	16	68.75%	9	12	75.00%

With the Synchro data validated and able to be used, the model was generated as discussed in the Chapter Five. Five runs for each hour of protected left turn field data was produced and then the average ("Ave" row) of the runs was taken as the final value to represent the permitted left turn values for each hour. An example of the tables generated for each hour is available below with the full set being available in Appendix D. The "PL" column shows the number of permitted left turns generated by Synchro and the "Total" column shows the total number of left turns. The percentage is available for a reference of the difference in the numbers.

Table 13: Sample Protected Mode Synchro Collection Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	9	9	100%
	15	16	94%
	16	17	94%
	14	17	82%
	17	17	100%
Ave	14	15	94%

The final model of the Synchro data based on the regression analysis can be found on below and the detailed analysis can be found on pages 39-42. The regression analysis eliminated all except for three parameters, however two of them are two-way parameters resulting in four variables being included in the model. It is important to note that the following model is not to be used for the prediction of permitted left turns but rather to show the significant parameters that would affect such a prediction. Further calibration must be conducted to have a reliable and fully developed model for the permitted left turn, which is beyond the scope of this study.

The generated model with an R-squared value of 85.40% is provided below.

- PL = 567.5 + 0.08461*Total Opposing Volume x Number of Lanes Crossed - 0.006913*Speed x Total Opposing Volume - 96.98*Left Turn Time

The factors of significance in the equation all have a p-value of 0.000. Intuitively, the Total Opposing Volume is embedded within two of the factors along with the Number of Lanes to Cross and the Speed. The time that the driver takes to make the left turn was also deemed to be a significant factor for this modeled equation, this is understandable and it remains consistent with the hypothesis that more time to complete the left turn would make it more difficult to be able to make the left turn. A paired t-test was run for the generated permitted left turns from Synchro runs versus the generated model based on the field data available with the predictor being the Synchro-based permitted left turn value. Essentially, the Synchro-generated model is being compared to the data that was generated from Synchro as an additional cross-check and no difference should be seen. As expected, this test yielded no statistical significant difference with a p-value of 0.998. The statistical test is shown below.

Paired T-Test and CI: Synchro PL, Synchro Model

```
Paired T for Synchro PL - Synchro Model

                N   Mean  StDev  SE Mean
Synchro PL     30  51.27  46.10     8.42
Synchro Model  30  51.28  42.60     7.78
Difference     30  -0.01  17.62     3.22


95% CI for mean difference: (-6.59, 6.57)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -0.00  P-Value = 0.998
```

Figure 24: Synchro Model Use Validation

Delay parameters were also noted from Synchro to determine the operational benefit of changing the signals that are operating in a protected mode, to a protected-permitted mode. The data table for this comparison is provided on the next page with the paired t-tests that were run for each intersection approach that was analyzed to justify the conclusion to follow. It is a significant reduction in delay time to run the intersections as a protected-permitted signal by an average difference of 29.78 seconds per vehicle for intersection 1, 38.55 seconds per vehicle for the northbound approach of intersection 2, 46.93 seconds per vehicle for the southbound approach of intersection 2 and 11.34 seconds per vehicle for intersection 3. All of the p-values in this test were equal to 0.000. It is noted that the four of the runs in the northbound approach of intersection 2 were removed because of the absence of left turning vehicles in the 06:40 hour of data. The "PL" columns represent the permitted left and the "PT" represent the protected left. The stop control data is provided on the next page.

Table 14: Synchro Based Stop Control Delay Data

Synchro Delay Comparison Data																	
Intersection	Time of Day	Delay		Intersection	Time of Day	Delay		Intersection	Time of Day	Delay		Intersection	Time of Day	Delay	
		PL	PT			PL	PT			PL	PT			PL	PT
1		40.6	69.0	2 NBL		4.2	14.5	2 SBL		-	-	3		25.2	40.6
		58.2	92.5			12.0	16.8			-	-			19.9	40.1
	07:00	58.1	86.0		06:40	4.2	32.5		06:40	-	-		06:45	20.0	46.4
		52.9	50.9			14.6	51.5			13.0	31.4			22.8	48.2
		58.7	81.0			7.2	14.6			-	-			20.8	53.1
		44.9	83.3			15.0	31.0			22.3	37.1			42.3	54.5
		48.6	77.7			4.6	55.8			18.1	28.2			32.1	46.6
	08:00	45.7	81.8		07:40	10.5	33.4		07:40	23.4	39.8		07:45	36.0	53.0
		36.8	63.5			9.3	40.8			13.4	49.1			37.5	57.2
		30.7	78.1			10.4	56.6			21.2	36.0			28.5	52.7
		32.1	71.7			39.7	73.7			20.7	44.2			15.1	20.2
		21.0	57.5			23.4	96.8			34.5	44.1			14.6	21.6
	12:00	26.4	59.7		12:00	23.2	48.4		12:00	11.3	79.1		12:00	12.8	19.5
		26.0	58.5			19.1	44.6			13.7	73.7			15.4	21.5
		31.5	66.3			56.7	94.7			28.2	62.5			12.9	19.6
		23.6	64.0			27.6	68.1			21.8	55.7			14.8	21.6
		33.0	66.5			19.1	57.9			21.1	78.3			16.4	22.0
	13:00	30.6	50.6		12:20	24.2	56.3		12:20	19.1	57.5		15:45	12.6	20.7
		30.5	66.1			21.2	63.7			20.3	60.2			16.3	21.8
		26.4	58.1			20.5	64.5			19.0	54.6			14.2	20.4
		37.4	66.6			29.6	75.5			12.6	66.9			16.1	22.7
		48.3	76.8			24.5	76.1			18.0	83.5			15.7	20.7
	16:00	44.4	69.7		16:00	32.4	74.6		16:00	16.3	78.8		16:45	16.0	21.9
		34.2	63.1			22.6	69.2			17.8	73.8			15.7	21.5
		35.6	61.0			24.1	70.6			17.5	58.5			16.9	22.3
		46.6	62.7			46.8	83.5			16.8	61.0			15.0	22.7
		39.4	71.2			25.1	70.8			22.9	81.8			12.9	19.8
	17:19	30.3	61.5		17:00	36.7	92.4		17:00	21.9	93.3		17:45	13.5	20.3
		43.0	65.5			47.1	70.9			18.6	76.1			14.1	19.0
		41.6	60.1			39.8	84.1			20.0	89.5			13.0	21.6
		31.7	59.0			44.7	78.0			19.6	68.0			9.7	22.2
		37.1	70.9			32.8	64.9			19.1	83.7			8.4	20.4
	18:00	31.7	66.0		18:00	29.1	73.4		18:00	22.8	93.3		18:45	8.4	23.8
		38.3	69.2			26.1	73.7			16.1	85.4			11.0	20.7
		39.7	71.7			25.8	83.4			20.3	90.3			9.8	22.3
						17.0	75.0			14.9	77.1				
						17.9	73.2			14.5	86.3				
					19:00	23.1	57.2		19:00	12.5	56.8				
						22.9	59.6			17.2	67.0				
						18.5	72.9			17.6	65.1				

Paired T-Test and CI: 1 PL, 1 PT

```
Paired T for 1 PL - 1 PT

             N    Mean  StDev  SE Mean
1 PL        35   38.16   9.84     1.66
1 PT        35   67.94   9.62     1.63
Difference  35  -29.78   8.47     1.43


95% CI for mean difference: (-32.69, -26.87)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -20.81  P-Value = 0.000
```

Figure 25: Paired T-Test for Intersection 1 Stop Control Delay

Paired T-Test and CI: 2 NBL PL, 2 NBL PT

```
Paired T for 2 NBL PL - 2 NBL PT

             N    Mean  StDev  SE Mean
2 NBL PL    40   23.83  12.37     1.96
2 NBL PT    40   62.38  20.84     3.30
Difference  40  -38.55  14.46     2.29


95% CI for mean difference: (-43.17, -33.92)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -16.86  P-Value = 0.000
```

Figure 26: Paired T-Test for Intersection 2 Northbound Stop Control Delay

Paired T-Test and CI: 2 SBL PL, 2 SBL PT

```
Paired T for 2 SBL PL - 2 SBL PT

             N    Mean  StDev  SE Mean
2 SBL PL    36   18.84   4.55     0.76
2 SBL PT    36   65.77  18.47     3.08
Difference  36  -46.93  19.59     3.26


95% CI for mean difference: (-53.56, -40.31)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -14.38  P-Value = 0.000
```

Figure 27: Paired T-Test for Intersection 2 Southbound Stop Control Delay

Paired T-Test and CI: 3 PL, 3 PT

```
Paired T for 3 PL - 3 PT

             N    Mean  StDev  SE Mean
3 PL        35   17.90   8.26     1.40
3 PT        35   29.23  13.22     2.23
Difference  35  -11.34   7.22     1.22


95% CI for mean difference: (-13.82, -8.86)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -9.29  P-Value = 0.000
```

Figure 28: Paired T-Test for Intersection 3 Stop Control Delay

The final models of the field data can be found on the next page with their full regression analysis on pages 43-48. As expected, the field models did not eliminate as many parameters as the Synchro model did. Interestingly, the factors of speed and land use were of significance as one-way factors in the smaller intersections only. The two-way factors were the same except for the total number of lanes crossed with the total opposing volume in the larger intersections versus the speed with the total opposing volume in the smaller intersection. These changes between the models show that speed plays a more significant role in determining the number of lefts at smaller intersections whereas the number of lanes would be more of an influence in the larger intersections. The model determined that the following factors were alike in both models:

- Permitted Green Time multiplied by the Total Left Turns
- Permitted Green Time multiplied by the Number of Lanes Crossed
- Time of Day
- Total Number of Lanes Crossed
- Permitted Green Time
- Total Opposing Volume

The generated model for the larger intersection has an R-squared value of 94.84% and the smaller intersection model has a value of 93.62%. The two models that were generated are shown below. As with the previous model, these models were generated for the determination of the significant factors that influence the number of permitted left turns in each case. While the models below are based completely on field data, further analysis and research would need to be conducted to validate and verify a model of this type and should not be used directly.

- PL (Large Intersections) = 217.9 + 0.013119*Permitted Green Time x Total Left Turns - 0.0370*Total Opposing Volume x Total Lanes Crossed + 2.188*Permitted Green Time x Total Lanes Crossed - 0.000267*Time of Day - 72.1*Total Lanes Crossed - 6.19*Permitted Green Time + 0.1252*Total Opposing Volume
- PL (Small Intersections with Commercial Lane Use) = -45.0 + 0.02007*Permitted Green Time x Total Left Turns + 0.00956*Speed x Total Opposing Volume - 6.93*Permitted Green Time x Total Lanes Crossed - 0.000500*Time of Day + 246.7*Total Lanes Crossed - 13.74*Speed + 21.72*Permitted Green Time - 0.5471*Total Opposing Volume
- PL (Small Intersections with Residential/School Lane Use) = 13.0 + 0.02007*Permitted Green Time x Total Left Turns + 0.00956*Speed x Total Opposing Volume - 6.93*Permitted Green Time x Total Lanes Crossed - 0.000500*Time of Day + 246.7*Total Lanes Crossed - 13.74*Speed + 21.72*Permitted Green Time - 0.5471*Total Opposing Volume

The p-values are 0.023 (constant), 0.000, 0.002, 0.001, 0.011, 0.024, 0.003, 0.001 for each of the factors respectively in the equation for the larger intersections. The p-values are 0.514 (constant for Commercial), 0.017 (Constant for Residential/School), 0.000, 0.000, 0.000,

0.004, 0.000, 0.000, 0.000, 0.000. It is important to note that even with the parameters being almost the same; the coefficients determined are different and have to be considered. It is a positive sign, however, that the parameters are not drastically different for each of the cases. The comparative analysis will be applied to determine the statistical significance of the difference in these two models to determine whether or not there should be a separate model generated for larger intersections.

The next step of the process was to determine if there is a significant statistical difference between the large intersection model and the small intersection model using a paired t-test. In addition to the comparative analysis there was a validation performed, similar to the Synchro model, to ensure that each data model was accurately determining the number of permitted left turns. The models were essential in determining the significant parameters involved and their comparison is important to show that the differences in the models affect the parameters as well. The results of the validations are provided below and on the next page and both generate appropriate results to show that there is no significant statistical difference.

Paired T-Test and CI: Large PL, Large Model

```
Paired T for Large PL - Large- Large Model

                     N   Mean  StDev  SE Mean
Large PL            41  53.27  33.32     5.20
Large Model         41  53.33  32.43     5.07
Difference          41  -0.06   7.57     1.18


95% CI for mean difference: (-2.45, 2.33)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -0.05  P-Value = 0.961
```

Figure 29: Paired T-Test for Large Intersection Field Data and Large Intersection Model

Paired T-Test and CI: Small PL, Small Model

```
Paired T for Small PL - Small- Small Model

                     N   Mean  StDev  SE Mean
Small PL            42  55.17  33.19     5.12
Small Model         42  55.61  32.11     4.96
Difference          42  -0.44   8.38     1.29


95% CI for mean difference: (-3.05, 2.17)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -0.34  P-Value = 0.735
```

Figure 30: Paired T-Test for Small Intersection Field Data and Small Intersection Model

The final statistical analysis performed was between the large intersection model and the small intersection model to see if there is a significant statistical difference between the two field based protected-permitted models. The model comparison is an important part of ensuring that the parameters between the two types of intersections are generating differing equations, as hypothesized. The statistical test is provided below.

Paired T-Test and CI: Small Model, Large Model

```
Paired T for Small Model - Large Model

              N    Mean  StDev  SE Mean
Small Model  83   45.16  61.15     6.71
Large Model  83   69.94  32.24     3.54
Difference   83  -24.78  59.68     6.55


95% CI for mean difference: (-37.81, -11.75)
T-Test of mean difference = 0 (vs ≠ 0): T-Value = -3.78  P-Value = 0.000
```

Figure 31: Paired T-Test for Large Intersection Model and Small Intersection Model

The comparative analysis shows that there is a significant statistical difference between the model values generated from the small intersection model versus the large intersection model with a p-value of 0.000 and a mean difference of -24.78. The high end of the confidence interval for this test is -11.75 which is well below zero. This statistical test shows that the mean of the small intersection model is lower than that of the large intersection model; however, the small

intersection model has a standard deviation of 61.15 as compared to the large intersection with a standard deviation of 32.24.

CHAPTER SEVEN: PROJECT CONCLUSIONS

The research in this study presented a case for intersections with more through lanes for the left turn to cross to be modeled slightly different than that of intersections with less through lanes to cross. This analysis showed that there is a statistical significant difference between the two models that were generated for each size of intersection, which implies that a different model or adjustment factors would need to be introduced for larger intersections. In addition, most of the factors included in each model were similar but the emphasis in the larger intersections was on the number of lanes crossed rather than the speed. This is logical because the larger facilities had smaller variations in speed as compared to smaller intersections and would generally hold true in the field as well.

From this study several goals were accomplished in the advancement of a better understanding of the permitted left turn movement. Regression models were generated based on field data sets for intersections with two through lanes or less and more than two through lanes. Although these models should not be used to predict the number of permitted left turns, they gave an understanding of all of the significant parameters of each model and the characteristics that influence the number of permitted left turns that can be made at intersections. Further research can be conducted to refine and fully develop models with larger data sets to establish reliability under differing conditions in the field and explore possible transformations and differing distributions of these models.

There was also a validation of Synchro performed, accepting the use of this program to accurately simulate the permitted left turn. This validation can lead to the further use of this software to accurately predict the number of permitted left turns that may be made at a left turn signal currently operating in the protected mode. The model generated based on the Synchro data can be further investigated by creating additional data sets based on protected mode intersections to test its accuracy. The stop control delay for a protected approach was also concluded to be more than that of the protected-permitted approach, as expected. With a minimum average difference of 11.34 seconds per vehicle of additional stop delay at a protected only left turn.

The protected-permitted mode definitely enhances the operations of the left turn movement. The research into the simulation accuracy can also be further improved by introducing additional data sets that depict the studies that are done at individual intersections that are analyzed and deemed to operate in a protected mode. This will ensure that justifications can be made for the time of day that does not warrant a protected phase. The ability to simulate conditions can dramatically reduce data collection costs by performing these analyses in the simulation rather than in the field, however, this will require additional studies and research to make this shift.

Further studies to grow the database and include additional data about the safety parameters of the permitted left turn operation will enhance the findings in this particular study and provide a detailed database that could be applied for more areas and take into account the regional habits of drivers. The generation of detailed models beyond those presented here to

accurately and extensively develop the prediction of the number of permitted left turns is necessary to move forward in further understanding the implications of the mode choice of a movement.

The conclusions presented are applicable to the conditions that were found in the Central Florida area but the type of data collected may differ in other locations because of the driver characteristics and willingness to accept gaps. With the understanding presented in this study, it is known that there are several parameters that influence the prediction of the number of permitted left turns and the differences of the number of opposing through lanes has to be considered when developing a model to generate the number of predicted permitted left turns. It is clear by this approach that the intersections definitely need to be treated differently as these intersections become more prominent on the highway network.

APPENDIX A:
SIGNAL TIMING SHEETS

Table A-1.1: Intersection #1 Signal Timing Sheet

CARTEGRAPH ID: LC-S-102 **DATE: 6/27/11**

INTERSECTION NAME AND ID#: US 27 & Cagans Crossing 120

PHASE	1	2	3	4	5	6	7	8
INITIAL	5	17	5	8	5	17	5	8
PASSAGE	3	3	3	3	3	3	4	3
YELLOW	5.1	5.1	3	3	5.1	5.1	3	3
RED CLEAR	1.7	1.7	6.0	6.0	1.7	1.7	6.0	6.0
MAX 1	20	60	20	30	20	60	20	30
MAX 2								
WALK		7		7		7		7
DON'T WALK		16		46		26		47
RECALL		MIN				MIN		
DET. FUNC.	L	L			L	L		

SYSTEM TIMING

	CYCLE	OFFSET	COORDINATED		BASE DAY 1		BASE DAY 2		BASE DAY 3	
PATTERN	Sec.	Sec.	Phase	Sequence	Mon.- Fri.		Sat.		Sun.	
1	120	51	2	3	0:00	FREE	0:00	FREE	0:00	FREE
2	120	80	2	1	6:00	C1O1S1	10:00	C5O5S5	10:00	C6O6S6
3	140	71	2	3	10:00	C2O2S2	19:00	FREE	19:00	FREE
4	120	80	2	1	14:00	C3O3S3				
5	120	80	2	1	19:00	C4O4S4				
6	120	80	2	1	21:00	FREE				

SPLIT ALLOCATION - Sec.

PHASE	1	2	3	4	5	6	7	8
1	15	43	15	47	16	42	20	42
2	21	49	18	32	21	49	28	22
3	24	55	18	43	19	60	30	31
4	21	49	18	32	21	49	28	22
5	21	49	18	32	21	49	28	22
6	21	49	18	32	21	49	28	22

NOTES: Naztec 980 V61.2H

Table A-2.1: Intersection #2 Signal Timing Sheet

ORANGE COUNTY TRAFFIC SIGNAL TIMING

Location: Alafaya Tl & Ashton Manor Wy		**Node:**	**618**
Equipment: Eagle	**CDI:** 7-22-13 BH **CDO:**	**Date:**	**07/22/13**

BASIC TIMING

Phase	1	2	3	4	5	6	7	8
Direction	NBL	SB		WB	SBL	NB		EB
Min Green (sec)	5	15		5	5	15		5
Vehicle Gap (sec)	3.0	3.0		3.0	3.0	3.0		3.0
Max Green 1 (sec)	20	50		20	20	50		20
Max Green 2 (sec)	20	50		20	20	50		20
Yellow (sec)	3.2	4.3		3.2	3.2	4.3		3.2
All-Red (sec)	2.2	2.2		3.9	2.2	2.2		3.9
Walk (sec)		7				7		7
Flash Don't Walk (sec)		34				34		36
Recall/Memory	NL	LK/MIN		NL	NL	LK/MIN		NL
Delay (sec)				DRT 10				DRT 10
Detector Switching								
Dual Entry		Y		Y		Y		Y
Overlap								
Flash	4 SECTION	Y		R	4-SECTION	Y		R
Speed (mph)	45	45		25	45	45		25
Veh Distance (ft)								
Ped Distance (ft)								
Ped Clearence (sec)								

COORDINATION PLANS

Coordination Pattern	1/1/1	2/1/1	3/1/1		
Cycle	180	150	180		
Split 1	15	15	20		
Split 2	145	115	109		
Split 3					
Split 4	20	20	51		
Split 5	15	15	20		
Split 6	145	115	109		
Split 7					
Split 8	20	20	51		
Offset	148	38	157		
Lagging Phases	0/0/0/0	0/0/0/0	0/0/0/0		
Source Day	Equate 1	Equate 2	Equate 3	Equate 4	Equate 5
2	3	4	5	6	

Day	Time	Pattern
1	0:01	FREE
1	9:00	2/1/1
1	22:00	FREE
2	0:01	FREE
2	6:00	1/1/1
2	9:00	2/1/1
2	14:00	3/1/1
2	20:00	2/1/1
2	22:00	FREE
7	0:01	FREE
7	7:30	2/1/1
7	22:00	FREE

Notes: PH 1 & PH 5 operate in protected mode (4 section heads)

Table A-3.1: Intersection #3 Signal Timing Sheet

Seminole County Traffic Engineering Timing Sheet - Intersection: SR 436 @ 11-Orange Ave # 6699

Name	SR 436		Orange Ave		SR 436		Orange Ave										IP_	010.049.204.049	Mask	255.255.0.0
Direction	WL	ET				WT			NR								Host	10.46.101.167	Port #	5028
Channel #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Gtwy	10.49.8.1	Com ID #	1478
Phase/OL #	6	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	Ph Mode	QSeq	Node #	6699
Type	OLP	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	Date	23-Jan-13	Done By	eprincipe

Timing Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Grn	6	15				15										
Passage	4.5	4				4										
Max 1	40	50				50										
Max 2	40	50				50										
Yel Clr	4.5	4.5				4.5										
Red Clr	2.3	2.3				2.3										
Walk		7														
Ped Clr		24														
Red Rvrt	2	2				2										
Added Initial																
Max Initial																
Max3 Limit																
Max3 Step																
Time B-4 Reduc																
Cars B-4 Reduc																
Time to Reduce																
Reduce By																
Min Gap																

Alt Timing Plan 1

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 2

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 3

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 4

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 5

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Phase Options

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase On	On	On				On										
Min ®		On				On										
Max ®																
Ped ®																
Soft ®																
Lock Call		On				On										
Flash Ent																
Flash Exit		On				On										
Dual Entry		On				On										
Sim Gap		On				On										
Cond service																
Reservice																
Cnf Phase																

Alt Phase Opt 1

Assign								
Soft ®								
R-N-W								
Cond Serv								

Alt Phase Opt 2

Assign								
Soft ®								
R-N-W								
Cond Serv								

Alt Phase Opt 3

Assign								
Soft ®								
R-N-W								
Cond Serv								

		Type	Included Phase								Modifier Phase								Grn	Yel	Red
OL A=	1	NORMAL	1																	4.5	2
OL B=	2																				
OL C=	3																				
OL D=	4																				
OL E=	5																				
OL F=	6	R-T/OTH	1								2									4.5	2
OL G=	7																				
OL H=	8																				
OL I=	9																				
OL J=	10																				
OL K=	11																				
OL L=	12																				
OL M=	13																				
OL N=	14																				
OL O=	15																				
OL P=	16																				

Table A-3.2: Intersection #3 Signal Timing Sheet

Coordination Programming

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	170	9=	13=	R1=	170	Cycle
Split 1	46	124				170												5+6=	170	10=	14=	R2=	170	170
Coord Ph		ON																3+4=		11=	15=	R3=	NA	OfSt
Mode	NON	MAX				MAX												7+8=		12=	16=	R4=	NA	111
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 2																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 3																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 4																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 5																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 6																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 7																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 8																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 9																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 10																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	85	9=	13=	R1=	85	Cycle
Split 11	24	61				85												5+6=	85	10=	14=	R2=	85	85
Coord Ph		ON																3+4=		11=	15=	R3=	NA	OfSt
Mode	NON	MAX				MAX												7+8=		12=	16=	R4=	NA	15
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 12																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 13																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 14																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 15																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 16																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	OfSt
Mode																		7+8=		12=	16=	R4=	NA	

Table A-3.3: Intersection #3 Signal Timing Sheet

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 17																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 18																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 19																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 20																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 21																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 22																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 23																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 24																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 25																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 26																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 27																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 28																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 29																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 30																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 31																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=	Cycle
Split 32																		5+6=		10=	14=	R2=	
Coord Ph																		3+4=		11=	15=	R3= NA	OfSt
Mode																		7+8=		12=	16=	R4= NA	

Table A-3.4: Intersection #3 Signal Timing Sheet

	Pattern Table				Alt Plans					Time of Day - Day Plans																
	C	O	SP	Seq	TM	OPT	Det	C.I.R.	Mx2	Day Plan 1						Day Of Week=	Sun									
Pattern #1	170	111	1	1						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #2										Hr		6	20													
Pattern #3										Min			30													
Pattern #4										Act	47	48	47													
Pattern #5										Day Plan 2						Day Of Week=		Mon								
Pattern #6										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #7										Hr		6	7	7	9	20										
Pattern #8										Min			15	45	30	30										
Pattern #9										Act	47	1	11	1	48	47										
Pattern #10										Day Plan 3						Day Of Week=			Tue							
Pattern #11	85	15	11	1						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #12										Hr		6	7	7	9	20										
Pattern #13										Min			15	45	30	30										
Pattern #14										Act	47	1	11	1	48	47										
Pattern #15										Day Plan 4						Day Of Week=				Wed						
Pattern #16										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #17										Hr		6	7	7	9	20										
Pattern #18										Min			15	45	30	30										
Pattern #19										Act	47	1	11	1	48	47										
Pattern #20										Day Plan 5						Day Of Week=					Thu					
Pattern #21										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #22										Hr		6	7	7	9	20										
Pattern #23										Min			15	45	30	30										
Pattern #24										Act	47	1	11	1	48	47										
Pattern #25										Day Plan 6						Day Of Week=						Fri				
Pattern #26										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #27										Hr		6	7	7	9	20										
Pattern #28										Min			15	45	30	30										
Pattern #29										Act	47	1	11	1	48	47										
Pattern #30										Day Plan 7						Day Of Week=							Sat			
Pattern #31										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #32										Hr		6	20													
Pattern #33										Min			30													
Pattern #34										Act	47	48	47													
Pattern #35										Day Plan 8						Day Of Week=										
Pattern #36										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #37										Hr																
Pattern #38										Min																
Pattern #39										Act																
Pattern #40										Day Plan 9						Day Of Week=										
Pattern #41										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #42										Hr																
Pattern #43										Min																
Pattern #44										Act																
Pattern #45										Day Plan 10						Day Of Week=										
Pattern #46										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #47							1			Hr																
Pattern #48										Min																
Act#99=P#254	Free			1	Act#100=P#255			Flash		Act																

Det	Call	Swt	Dly	Lck	Src
Det# 1	1			On	
Det# 2	2				
Det# 3	2				
Det# 4	2				
Det# 5	2				
Det# 6	2				
Det# 7	2				
Det# 8	2				
Det# 9	2				
Det# 10	1		15		
Det# 11	1				
Det# 12					
Det# 13					
Det# 14					
Det# 15					
Det# 16					

Det	Call	Swt	Dly	Lck	Src
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

Det	Call	Swt	Dly	Lck	Src
33					
34					
35					
36					
37					
38					
39					
40					
41					1
42					2
43					3
44					4
45					5
46					6
47					7
48					8

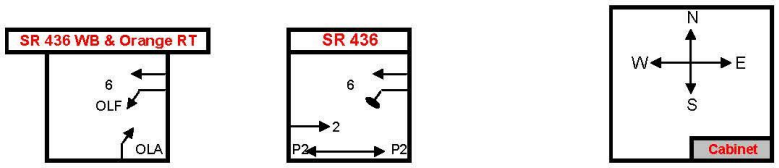
Det	Call	Swt	Dly	Lck	Src
49					9
50					10
51					11
52					12
53					13
54					14
55					15
56					16
57					17
58					18
59					19
60					20
61					21
62					22
63					23
64					24

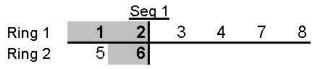
Table A-3.5: Intersection #3 Signal Timing Sheet

	Enbl	Track Phase				Trk Grn	Track Overlap				Dwell Phase								Min Dwl	Dwell Overlap				Exit Phase			
Pre Run 1																											
Pre Run 2																											
Pre Run 3																											
Pre Run 4																											
Pre Run 5	ON									2								5					2	6		
Pre Run 6	ON									1	6							5	6				2	6		

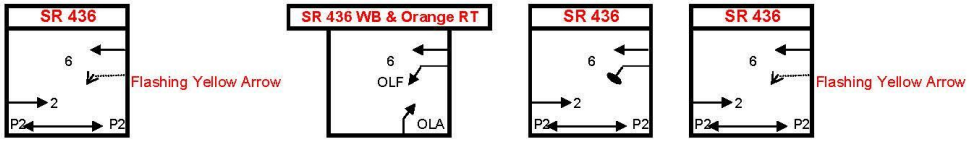
	I/O	Rslt	Inv1	I/O1	Op1	Fun1	Inv2	I/O2	Op2	Fun2	Inv3	I/O3	Op3	TmOp	Time	Purpose
Logic 1	I	190		I	240											Free operation when using Logic1
Logic 2																
Logic 3																
Logic 4																
Logic 5																
Logic 6																
Logic 7																
Logic 8																
Logic 9																
Logic 10																

Intersection Notes	T.O.D Notes
Intersection set up as T intersection. Signal was retimed April 2012. FYA activated on July 18, 2012 from 20:30 to 6:00 everyday.	Pattern 1 used to continue coordination during AM peak traffic. Pattern 11 half cycle used in the AM for Elementary School.





Flashing Yellow Arrow Operation (Active during pattern 47)



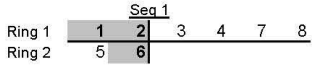


Table A-4.1: Intersection #4 Signal Timing Sheet

Consultant Timing

ORANGE COUNTY TRAFFIC SIGNAL TIMING

Intersection: Sand Lake Rd & Winegard Rd **Node: 227** **Address: 2A31**
Equipment: Eagle **Date: 6/3/2011**

BASIC TIMING

Phase	1	2	3	4	5	6	7	8
Direction	EBL	WB		NB-SB				
Min Green (sec)	5	15		5				
Vehicle Gap (sec)	1.5	3.0		2.3				
Max Green 1 (sec)	15	65		20				
Max Green 2 (sec)	15	65		20				
Yellow (sec)	5.0	5.0		3.6				
All-Red (sec)	1.7	1.5		3.0				
Walk (sec)								
Flash Don't Walk (sec)								
Recall/Memory	NL	SF/LK		NL				
Detector Delay (sec)				DRT 10				
Dual Entry								
Overlap	A	A						
Flash		Y		R				
Speed (mph)	55	55		35				
Crossing Distance (ft)		65.0		127.0				
Ped Clearence (sec)								
Clearence Distance (ft)	120	99		133				

COORDINATION PLANS

Coordination Pattern	1/2/2	3/2/2	4/2/2	4/1/1	5/1/1
Cycle	150	170	180	150	
Split 1	22	38	32	32	
Split 2	88	87	101	79	
Split 3					
Split 4	40	45	47	39	
Split 5					
Split 6					
Split 7					
Split 8					
Offset	140	20	178	18	
Lagging Phases	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0	

Source Day	Equate 1	Equate 2	Equate 3	Equate 4	Equate 5
1	7				
2	3	4	5	6	

Day	Time	Pattern
1	0:01	FREE
1	9:00	4/1/1
1	22:00	FREE
2	0:01	FREE
2	6:00	1/2/2
2	9:00	3/2/2
2	15:00	4/2/2
2	19:00	3/2/2
2	21:00	FREE

Notes: OLA = EB

Table A-5.1: Intersection #5 Signal Timing Sheet

Seminole County Traffic Engineering Timing Sheet - Intersection: US 17-92 @ 26-Church #716

Name	US 17-92		Church St		US 17-92		Church St										IP	010.049.202.086	Mask	255.255.0.0
Direction	NL	ST		WT	SL	NT		ET									Host	10.46.101.167	Port #	5122
Channel #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Gtwy	10.49.8.1	Com ID #	1127
Phase/OL #	2	2	3	4	6	6	7	8	9	10	11	12	2	4	6	8	Ph Mode	STD8	Node #	716
Type	OLP	VEH	VEH	VEH	OLP	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	Date	31-Jul-12	Done By	eprindpe

Timing Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Grn	6	15		8	6	15		8								
Passage	3.5	4		3.5	3.5	4		3.5								
Max 1	20	60		30	20	60		30								
Max 2	20	60		30	20	60		30								
Yel Clr	4.5	4.5		4.5	4.5	4.5		4.5								
Red Clr	4.6	2		4.4	4.6	2		4.4								
Walk		7		7		7		7								
Ped Clr		14		38		13		35								
Red Rvrt	2	2		2	2	2		2								
Added Initial																
Max Initial																
Max3 Limit																
Max3 Step																
Time B-4 Reduc																
Cars B-4 Reduc																
Time to Reduce																
Reduce By																
Min Gap																

Alt Timing Plan 1

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 2

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 3

Assign								
Min Grn								
Passage								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt Timing Plan 4

Alt Timing Plan 5

Phase Options

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase On	On	On		On	On	On		On								
Min ®		On				On										
Max ®																
Ped ®																
Soft ®																
Lock Call		On				On										
Flash Ent				On				On								
Flash Exit		On				On										
Dual Entry		On		On		On		On								
Sim Gap		On				On										
Cond service																
Reservice																
Cnf Phase																

Alt Phase Opt 1

Assign								
Soft ®								
R-N-W								
Cond Serv								

Alt Phase Opt 2

Assign								
Soft ®								
R-N-W								
Cond Serv								

Alt Phase Opt 3

Assign								
Soft ®								
R-N-W								
Cond Serv								

		Type	Included Phase								Modifier Phase								Gm	Yel	Red
OL A=	1																				
OL B=	2	R-T/OTH	1								2									4.5	2
OL C=	3																				
OL D=	4																				
OL E=	5																				
OL F=	6	R-T/OTH	5								6									4.5	2
OL G=	7																				
OL H=	8																				
OL I=	9																				
OL J=	10																				
OL K=	11																				
OL L=	12																				
OL M=	13																				
OL N=	14																				
OL O=	15																				
OL P=	16																				

Table A-5.2: Intersection #5 Signal Timing Sheet

Coordination Programming

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	144	9=		13=		R1=	180	Cycle
Split 1	36	108		36	36	108		36										5+6=	144	10=		14=		R2=	180	180
Coord Ph		ON																3+4=	36	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	36	12=		16=		R4=	NA	8
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=		13=		R1=		Cycle
Split 2																		5+6=		10=		14=		R2=		
Coord Ph																		3+4=		11=		15=		R3=	NA	Offst
Mode																		7+8=		12=		16=		R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	120	9=		13=		R1=	160	Cycle
Split 3	40	80		40	40	80		40										5+6=	120	10=		14=		R2=	160	160
Coord Ph		ON																3+4=	40	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	40	12=		16=		R4=	NA	25
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	145	9=		13=		R1=	180	Cycle
Split 4	30	115		35	30	115		35										5+6=	145	10=		14=		R2=	180	180
Coord Ph						ON												3+4=	35	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	35	12=		16=		R4=	NA	31
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	104	9=		13=		R1=	130	Cycle
Split 5	30	74		26	30	74		26										5+6=	104	10=		14=		R2=	130	130
Coord Ph						ON												3+4=	26	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	26	12=		16=		R4=	NA	31
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	95	9=		13=		R1=	140	Cycle
Split 6	20	75		45	20	75		45										5+6=	95	10=		14=		R2=	140	140
Coord Ph						ON												3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	94
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	85	9=		13=		R1=	130	Cycle
Split 7	25	60		45	25	60		45										5+6=	85	10=		14=		R2=	130	130
Coord Ph		ON																3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	93
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	95	9=		13=		R1=	140	Cycle
Split 8	20	75		45	20	75		45										5+6=	95	10=		14=		R2=	140	140
Coord Ph						ON												3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	94
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	85	9=		13=		R1=	130	Cycle
Split 9	25	60		45	25	60		45										5+6=	85	10=		14=		R2=	130	130
Coord Ph		ON																3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	93
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=		13=		R1=		Cycle
Split 10																		5+6=		10=		14=		R2=		
Coord Ph																		3+4=		11=		15=		R3=	NA	Offst
Mode																		7+8=		12=		16=		R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	69	9=		13=		R1=	90	Cycle
Split 11	21	48		21	21	48		21										5+6=	69	10=		14=		R2=	90	90
Coord Ph		ON																3+4=	21	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	21	12=		16=		R4=	NA	79
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=		13=		R1=		Cycle
Split 12																		5+6=		10=		14=		R2=		
Coord Ph																		3+4=		11=		15=		R3=	NA	Offst
Mode																		7+8=		12=		16=		R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=		13=		R1=		Cycle
Split 13																		5+6=		10=		14=		R2=		
Coord Ph																		3+4=		11=		15=		R3=	NA	Offst
Mode																		7+8=		12=		16=		R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	155	9=		13=		R1=	200	Cycle
Split 14	25	130		45	40	115		45										5+6=	155	10=		14=		R2=	200	200
Coord Ph						ON												3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	187
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=		13=		R1=		Cycle
Split 15																		5+6=		10=		14=		R2=		
Coord Ph																		3+4=		11=		15=		R3=	NA	Offst
Mode																		7+8=		12=		16=		R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	135	9=		13=		R1=	180	Cycle
Split 16	25	110		45	25	110		45										5+6=	135	10=		14=		R2=	180	180
Coord Ph						ON												3+4=	45	11=		15=		R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=		16=		R4=	NA	9

Table A-5.3: Intersection #5 Signal Timing Sheet

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 17																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	135	9=	13=	R1=	180	Cycle
Split 18	25	110		45	25	110		45										5+6=	135	10=	14=	R2=	180	180
Coord Ph						ON												3+4=	45	11=	15=	R3=	NA	Offst
Mode	NON	MAX		NON	NON	MAX		NON										7+8=	45	12=	16=	R4=	NA	8
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 19																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 20																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 21																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 22																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 23																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 24																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 25																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 26																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 27																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 28																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 29																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 30																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 31																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=		9=	13=	R1=		Cycle
Split 32																		5+6=		10=	14=	R2=		
Coord Ph																		3+4=		11=	15=	R3=	NA	Offst
Mode																		7+8=		12=	16=	R4=	NA	

Table A-5.4: Intersection #5 Signal Timing Sheet

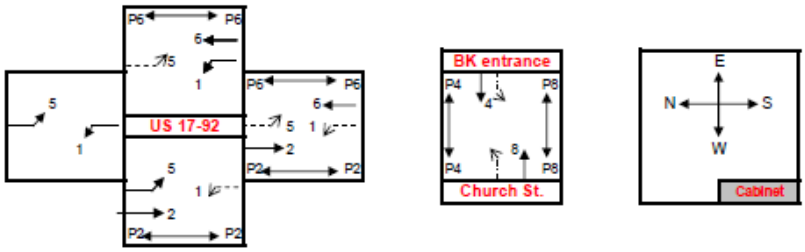
	Pattern Table				Alt Plans					Time of Day - Day Plans															
	C	O	SP	Seq	TM	OPT	Det	C.I.R.	Mx2	Day Plan 1				Day Of Week=	Sun										
Pattern #1	180	8	1	1						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #2										Hr		9	11	17	20											
Pattern #3	160	25	3	1						Min		30		30	30											
Pattern #4	180	31	4	3						Act	99	8	18	9	99											
Pattern #5	130	31	5	3						Day Plan 2				Day Of Week=			Mon								
Pattern #6	140	94	6	3						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #7	130	93	7	2						Hr		6	6	9	14	16	18	19	22							
Pattern #8	140	94	8	3						Min			45	30	30	45	30	30								
Pattern #9	130	93	9	2						Act	99	11	1	3	4	14	4	5	99							
Pattern #10										Day Plan 3				Day Of Week=				Tue							
Pattern #11	90	79	11	1						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #12										Hr		6	6	9	14	16	18	19	22							
Pattern #13										Min			45	30	30	45	30	30								
Pattern #14	200	187	14	3						Act	99	11	1	3	4	14	4	5	99							
Pattern #15										Day Plan 4				Day Of Week=					Wed						
Pattern #16	180	9	16	3						Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #17										Hr		6	6	9	14	16	18	19	22							
Pattern #18	180	8	18	3						Min			45	30	30	45	30	30								
Pattern #19										Act	99	11	1	3	4	14	4	5	99							
Pattern #20										Day Plan 5				Day Of Week=						Thu					
Pattern #21										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #22										Hr		6	6	9	14	16	18	19	22							
Pattern #23										Min			45	30	30	45	30	30								
Pattern #24										Act	99	11	1	3	4	14	4	5	99							
Pattern #25										Day Plan 6				Day Of Week=							Fri				
Pattern #26										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #27										Hr		6	6	9	14	16	18	19	22							
Pattern #28										Min			45	30	30	45	30	30								
Pattern #29										Act	99	11	1	3	4	14	4	5	99							
Pattern #30										Day Plan 7				Day Of Week=								Sat			
Pattern #31										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #32										Hr		8	10	19	22											
Pattern #33										Min																
Pattern #34										Act	99	6	16	7	99											
Pattern #35										Day Plan 8				Day Of Week=											
Pattern #36										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #37										Hr																
Pattern #38										Min																
Pattern #39										Act																
Pattern #40										Day Plan 9				Day Of Week=											
Pattern #41										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #42										Hr																
Pattern #43										Min																
Pattern #44										Act																
Pattern #45										Day Plan 10				Day Of Week=											
Pattern #46										Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #47										Hr																
Pattern #48										Min																
Act#33=P#254	Free			1	Act#100=P#255			Flash		Act																

	Det	Call	Swt	Dly	Lok	Src	Det	Call	Swt	Dly	Lok	Src	Det	Call	Swt	Dly	Lok	Src	Det	Call	Swt	Dly	Lok	Src
Det#	1	1		12			17						33						49					9
Det#	2	2					18						34						50					10
Det#	3	2					19						35						51					11
Det#	4	2					20						36						52					12
Det#	5	2					21						37						53					13
Det#	6	2					22						38						54					14
Det#	7	2					23						39						55					15
Det#	8	4		8			24						40						56					16
Det#	9	5		12			25						41					1	57					17
Det#	10	6					26						42					2	58					18
Det#	11	6					27						43					3	59					19
Det#	12	6					28						44					4	60					20
Det#	13	6					29						45					5	61					21
Det#	14	6					30						46					6	62					22
Det#	15	6					31						47					7	63					23
Det#	16	8		8			32						48					8	64					24

Table A-5.5: Intersection #5 Signal Timing Sheet

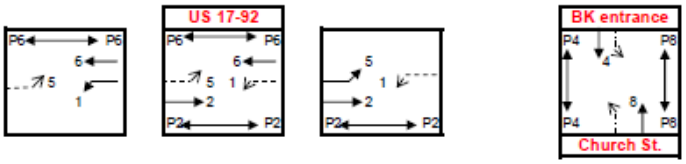
	Enbl	Track Phase				Trk Grn	Track Overlap				Dwell Phase								Min Dwl	Dwell Overlap				Exit Phase			
Pre Run 1																											
Pre Run 2																											
Pre Run 3	ON										8								5					4	8		
Pre Run 4																											
Pre Run 5	ON										2	5							5	6				4	8		
Pre Run 6	ON										1	6							5	2				4	8		

Intersection Notes	T.O.D Notes
Intersection set up with concurrent sides. Flashing Yellow Arrow (FYA) in operation at this time. OL B & F used in FYA operation of main street left turns. FYA turn ( ). Main Street ONLY. Permissive turn ( ). Main & Side Streets. Protected turn ( ). Main Street ONLY.	



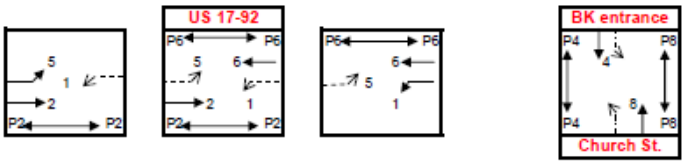
Seq 1

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



Seq 2

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



Seq 3

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

Table A-6.1: Intersection #6 Signal Timing Sheet

Consultant Timing

ORANGE COUNTY TRAFFIC SIGNAL TIMING SHEET

Intersection: SR 50 & SR 417 NB OFF Ramp	**Node: 61**	**Port:**	
Equipment: Eagle ATC^{nx}	**Date: 6/26/2013**	**Address:**	**3J8**

BASIC TIMING

Phase	1	2	3	4	5	6	7	8
Direction	*EBL*	*WB*		*NB*		*EB*		
Min Green (sec)	5	15		5		15		
Vehicle Gap (sec)	3.0	3.0		3.0		3.0		
Max Green 1 (sec)	14	50		20		50		
Max Green 2 (sec)	40	142		24		162		
Yellow (sec)	5.0	5.0		3.5		5.0		
All-Red (sec)	*2.0*	*2.0*		*3.0*		*2.0*		
Walk (sec)						*7*		
Flash Don't Walk (sec)						*23*		
Min Split (sec)	12	22		12		37		
Recall/Memory	NL	SF/LK		NL		SF/LK		
Detector Delay (sec)				DRT 10				
Detector Switching								
Dual Entry		Y				Y		
Overlap								
Flash		Y		R		Y		
Speed (mph)	50	50		30		50		
Veh Traversed Distance (ft)	113	106		167		103		
Ped Crossing Distance (ft)						79.0		
Ped Clearance (sec)						23		

COORDINATION PLANS

Coordination Pattern	1/1/1	2/1/1	3/1/1	4/1/1		Day	Time	Pattern
Cycle	190	170	190	130		1	0:00	FREE
Split 1	20	20	40	22		1	9:00	2/1/1
Split 2	142	124	122	81		1	18:00	4/1/1
Split 3	0	0	0	0		1	22:00	FREE
Split 4	28	26	28	27		2	0:00	FREE
Split 5	0	0	0	0		2	6:00	1/1/1
Split 6	162	144	162	103		2	9:30	2/1/1
Split 7	0	0	0	0		2	14:00	3/1/1
Split 8	0	0	0	0		2	19:00	2/1/1
Offset	66	150	12	48		2	23:00	FREE
Lagging Phases	1/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0		7	0:00	FREE
Source Day	Equate 1	Equate 2	Equate 3	Equate 4	Equate 5	7	6:00	4/1/1
(Sunday) 1						7	7:30	2/1/1
(Monday) 2	3	4	5	6		7	19:30	4/1/1
(Saturday) 7						7	23:00	FREE

Notes:
1) Use Max II during coordination
2) Fixed Force-offs
3) Offset referenced to begin of first through movement green
4) Max recall for phase 1 during pattern 1/1/1
5) Use yield mode during coordination

Phasing Plan MD, PM & NT

1	2		4
	6		

Phasing Plan AM

2	1		4
	6		

Table A-7.1: Intersection #7 Signal Timing Sheet

ORANGE COUNTY TRAFFIC SIGNAL TIMING								
Intersection:	International Dr at Vineland				Node:	405	Port:	
Equipment: Eagle	DESIGN TIMING				Date:	1/13/2010	Address:	
BASIC TIMING								
Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Direction	SBL	NB		EB	NBL	SB		WB
Min Green (sec)	5	15		5	5	15		5
Vehicle Gap (sec)	1.8	3.0		2.0	1.5	3.0		1.5
Max Green 1 (sec)	15	50		25	15	50		15
Max Green 2 (sec)	15	50		25	15	50		15
Yellow (sec)	4.3	4.5		4.0	4.0	4.5		4.3
All-Red (sec)	1.0	2.0		1.5	1.5	2.0		1.0
Walk (sec)		7		7		7		7
Flash Don't Walk (sec)		15		28		29		28
Recall/Memory	NL	MN/LK		NL	NL	MN/LK		NL
Detector Delay (sec)				CD 6	CD 8			
Detector Switching								
Dual Entry		Y				Y		
Overlap								
Flash		Y		R		Y		R
Speed (mph)		45		35		45		45
Crossing Distance (ft)		45.0		120.0		118.0		124.0
Ped Clearance (sec)		11		30		30		31

COORDINATION PLANS

Coordination Pattern	**1/1/1**	**2/1/1**	**3/1/1**	**4/1/1**	**5/1/1**	**Day**	**Time**	**Pattern**
Cycle	0	0	0	0	0	1	0:00	FREE
Split 1						2	0:00	FREE
Split 2								
Split 3								
Split 4								
Split 5								
Split 6								
Split 7								
Split 8								
Offset								
Lagging Phases								
Source Day	**Equate 1**	**Equate 2**	**Equate 3**	**Equate 4**	**Equate 5**			
1	7							
2	3	4	5	6				

Notes: EBR CLUSTER
SEQUENTIAL SIDE STREET

APPENDIX B:
TURNING MOVEMENT COUNTS

Table B-1.1: Intersection #3 Turning Movement Counts

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

SR 436 @ Orange Avenue
Eastbound/Westbound

Start Time	10-Jan-12 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		54	263			52	212				
12:15		23	276			49	262				
12:30		42	239			50	252				
12:45		25	258	144	1036	34	236	185	962	329	1998
01:00		27	227			30	254				
01:15		12	233			35	229				
01:30		13	246			29	260				
01:45		12	236	64	942	24	242	118	985	182	1927
02:00		16	240			21	261				
02:15		26	241			16	254				
02:30		20	243			23	265				
02:45		14	243	76	967	15	250	75	1030	151	1997
03:00		19	216			19	277				
03:15		22	247			13	269				
03:30		22	227			17	306				
03:45		23	241	86	931	19	249	68	1101	154	2032
04:00		19	249			14	271				
04:15		23	237			17	289				
04:30		34	234			18	293				
04:45		41	239	117	959	33	272	82	1125	199	2084
05:00		45	272			28	342				
05:15		76	275			39	292				
05:30		91	232			56	309				
05:45		92	274	304	1053	69	301	192	1244	496	2297
06:00		123	248			74	294				
06:15		154	238			100	251				
06:30		174	218			156	280				
06:45		194	226	645	930	164	249	494	1074	1139	2004
07:00		224	208			169	246				
07:15		272	175			188	233				
07:30		288	171			234	210				
07:45		278	151	1062	705	231	192	822	881	1884	1586
08:00		283	154			198	197				
08:15		274	145			206	178				
08:30		296	149			179	166				
08:45		268	125	1121	573	201	173	784	714	1905	1287
09:00		214	113			185	173				
09:15		238	115			190	158				
09:30		232	112			201	151				
09:45		223	89	907	429	194	138	770	620	1677	1049
10:00		203	90			209	143				
10:15		198	90			202	112				
10:30		212	67			220	108				
10:45		206	67	819	314	230	61	861	424	1680	738
11:00		234	52			234	100				
11:15		229	48			255	75				
11:30		224	38			204	68				
11:45		238	51	925	189	208	60	901	303	1826	492
Total		6270	9028			5352	10463			11622	19491
Percent		41.0%	59.0%			33.8%	66.2%			37.4%	62.6%
Grand Total		6270	9028			5352	10463			11622	19491
Percent		41.0%	59.0%			33.8%	66.2%			37.4%	62.6%
ADT		ADT 31,113		AADT 31,113							

Table B-1.2: Intersection #3 Turning Movement Counts

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

SR 436 @ Orange Avenue
Westbound Left Turns

Start Time	10-Jan-12 Tue	Westbound Left Turns Morning	Westbound Left Turns Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		7	62		
12:15		7	76		
12:30		7	70		
12:45		6	62	27	270
01:00		10	76		
01:15		5	75		
01:30		4	85		
01:45		1	88	20	324
02:00		0	98		
02:15		7	84		
02:30		5	67		
02:45		1	76	13	325
03:00		4	69		
03:15		11	67		
03:30		6	70		
03:45		12	70	33	276
04:00		4	76		
04:15		7	83		
04:30		8	84		
04:45		11	99	30	342
05:00		5	96		
05:15		10	98		
05:30		11	88		
05:45		16	88	42	370
06:00		18	69		
06:15		20	67		
06:30		22	73		
06:45		41	57	101	266
07:00		59	63		
07:15		87	51		
07:30		88	59		
07:45		57	41	291	214
08:00		47	58		
08:15		42	65		
08:30		34	53		
08:45		57	56	180	232
09:00		44	64		
09:15		46	53		
09:30		48	47		
09:45		60	58	198	222
10:00		52	47		
10:15		57	24		
10:30		58	32		
10:45		67	18	234	121
11:00		63	33		
11:15		62	45		
11:30		75	8		
11:45		84	8	284	94
Total		1453	3056		
Percent		32.2%	67.8%		
Grand Total		1453	3056		
Percent		32.2%	67.8%		
ADT		ADT 4,509			AADT 4,509

Table B-1.3: Intersection #3 Adjacent Intersection Turning Movement Counts

Albeck Gerken, Inc.
1911 N US Hwy 301
Suite 410
Tampa, Florida, United States 33619
(813) 319-3790

Count Name: 1480_SR 436 & Weathersfield Ave_WD
Site Code: 1480
Start Date: 11/01/2011
Page No: 1

Turning Movement Data

Start Time	SR 436 Eastbound						SR 436 Westbound						Weathersfield Ave Northbound						Weathersfield Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	2	2	318	8	2	330	1	10	298	2	0	311	0	12	0	20	2	32	0	10	0	2	1	12	685
7:15 AM	0	0	481	11	0	492	3	8	332	1	1	344	0	17	0	12	0	29	0	3	1	6	0	10	875
7:30 AM	0	3	514	15	0	532	7	14	376	4	1	401	0	28	2	20	0	50	0	13	1	11	0	25	1008
7:45 AM	0	5	622	16	0	643	5	18	360	3	0	386	0	13	0	23	1	36	0	9	4	3	0	16	1081
Hourly Total	2	10	1935	50	2	1997	16	50	1366	10	2	1442	0	70	2	75	3	147	0	35	6	22	1	63	3649
8:00 AM	1	3	452	4	0	460	3	13	333	1	1	350	0	16	0	21	0	37	0	11	1	5	0	17	864
8:15 AM	0	2	563	10	0	575	4	10	374	3	1	391	0	6	0	14	0	20	0	11	1	2	1	14	1000
8:30 AM	0	1	513	7	0	521	8	7	352	6	4	373	0	6	0	16	0	22	0	9	1	4	1	14	930
8:45 AM	1	3	467	11	0	482	4	20	335	5	1	364	0	6	0	16	0	22	0	4	2	11	0	17	885
Hourly Total	2	9	1995	32	0	2038	19	50	1394	15	7	1478	0	34	0	67	0	101	0	35	5	22	2	62	3679
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	5	16	442	10	0	473	6	7	483	7	0	503	0	8	3	14	0	25	0	8	0	11	0	19	1020
12:15 PM	3	9	485	13	0	510	11	13	433	12	1	469	0	9	1	14	4	24	0	15	0	12	0	27	1030
12:30 PM	1	16	466	19	0	502	11	11	418	7	0	447	0	11	0	15	0	26	0	25	1	9	1	35	1010
12:45 PM	2	11	422	13	0	448	7	7	502	11	0	527	0	14	1	15	0	30	0	20	3	14	1	37	1042
Hourly Total	11	52	1815	55	0	1933	35	38	1836	37	1	1946	0	42	5	58	4	105	0	68	4	46	2	118	4102
1:00 PM	2	9	412	7	0	430	13	16	481	10	0	520	0	12	1	11	1	24	0	14	2	15	2	31	1005
1:15 PM	2	18	460	19	0	499	5	12	467	11	2	495	0	15	1	19	1	35	0	20	3	13	2	38	1065
1:30 PM	4	14	448	15	0	481	6	14	453	7	1	480	0	12	1	17	1	30	0	20	1	13	1	34	1025
1:45 PM	4	12	410	18	0	444	10	15	496	15	0	536	0	6	0	18	2	24	0	20	0	15	1	35	1039
Hourly Total	12	53	1730	59	0	1854	34	57	1897	43	3	2031	0	45	3	65	5	113	0	74	6	56	6	136	4134
2:00 PM	3	13	408	18	0	442	5	9	464	10	1	488	0	10	0	10	1	20	0	19	0	10	1	29	979
2:15 PM	5	18	431	22	0	476	9	18	499	12	1	538	0	15	4	18	0	37	0	34	3	15	1	52	1103
2:30 PM	6	18	506	11	0	541	3	15	513	13	0	544	0	13	1	18	0	32	0	16	1	12	1	29	1146
2:45 PM	6	16	471	22	2	515	5	13	462	11	0	491	0	11	2	16	1	29	0	22	2	11	0	35	1070
Hourly Total	20	65	1816	73	2	1974	22	55	1938	46	2	2061	0	49	7	62	2	118	0	91	6	48	3	145	4298
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	2	19	430	16	1	467	11	18	531	13	4	573	0	14	3	23	2	40	0	22	1	12	1	35	1115
4:45 PM	3	21	481	18	0	523	6	12	584	10	3	612	0	12	2	21	0	35	0	14	0	12	0	26	1196
Hourly Total	5	40	911	34	1	990	17	30	1115	23	7	1185	0	26	5	44	2	75	0	36	1	24	1	61	2311
5:00 PM	2	12	442	23	0	479	4	24	582	12	2	622	0	21	4	31	1	56	0	21	1	15	1	37	1194
5:15 PM	2	25	553	29	0	609	0	29	672	11	1	712	0	15	6	31	3	52	0	25	2	12	0	39	1412
5:30 PM	2	17	499	22	0	540	13	14	588	15	5	630	0	24	3	25	0	52	0	24	0	14	2	38	1260
5:45 PM	7	7	496	19	0	529	7	17	612	16	0	652	0	11	2	24	0	37	0	23	1	9	0	33	1251
Hourly Total	13	61	1990	93	0	2157	24	84	2454	54	8	2616	0	71	15	111	4	197	0	93	4	50	3	147	5117
6:00 PM	8	14	487	24	2	513	13	24	492	10	0	539	0	15	5	32	1	52	0	29	2	21	2	52	1156
6:15 PM	5	14	476	19	1	514	6	10	552	12	4	580	0	8	0	14	0	22	0	17	1	5	0	23	1139
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	13	28	963	43	3	1027	19	34	1044	22	4	1119	0	23	5	46	1	74	0	46	3	26	2	75	2295
7:00 PM	6	10	386	9	0	411	9	11	453	9	0	482	0	10	1	23	1	34	0	25	2	11	0	38	965
7:15 PM	4	15	379	11	0	409	6	14	490	10	0	520	0	16	1	27	0	44	0	14	2	7	0	23	996
7:30 PM	5	10	334	6	0	355	9	11	379	5	0	404	0	11	0	11	1	22	0	12	0	13	1	25	806
7:45 PM	4	7	299	16	0	326	17	9	369	12	0	407	0	8	0	10	0	18	0	9	0	10	2	19	770
Hourly Total	19	42	1398	42	0	1501	41	45	1691	36	0	1813	0	45	2	71	2	118	0	60	4	41	3	105	3537
Car	96	352	14243	466	-	15157	224	435	14457	282	-	15398	0	396	43	581	-	1020	0	534	35	330	-	899	32474
% Car	99.0	97.8	98.0	96.9	-	98.0	98.7	98.2	98.1	98.6	-	98.1	-	97.8	97.7	97.0	-	97.3	-	99.3	89.7	98.5	-	98.6	98.0
Truck	1	8	290	15	-	314	3	8	278	4	-	293	0	9	1	18	-	28	0	4	4	5	-	13	648
% Truck	1.0	2.2	2.0	3.1	-	2.0	1.3	1.8	1.9	1.4	-	1.9	-	2.2	2.3	3.0	-	2.7	-	0.7	10.3	1.5	-	1.4	2.0
Ped	-	-	-	-	8	-	-	-	-	-	34	-	-	-	-	-	23	-	-	-	-	-	23	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Table B-2.1: Intersection #4 Turning Movement Counts

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32703

Location:
SR 482 @ Winegard Road

File Name : cleaned
Site Code : 00000000
Start Date : 2/23/2011
Page No : 1

Groups Printed- Autos - Trucks - U-Turns

	Winegard Road Southbound				SR 482 Westbound				Winegard Road Northbound				SR 482 Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:00 AM	19	0	16	0	1	202	9	0	0	0	0	0	9	95	0	0	351
06:15 AM	21	0	24	0	5	267	22	0	0	0	0	0	12	100	0	0	451
06:30 AM	19	1	35	0	1	290	24	0	0	0	0	0	17	118	0	0	505
06:45 AM	9	0	21	0	2	257	22	0	0	0	1	0	28	116	0	0	456
Total	68	1	96	0	9	1016	77	0	0	0	1	0	66	429	0	0	1763
07:00 AM	22	0	27	0	0	307	35	0	1	0	0	0	18	132	0	0	542
07:15 AM	25	0	33	0	2	370	50	0	0	0	0	0	17	126	0	0	623
07:30 AM	40	0	19	0	1	462	37	0	0	0	1	0	17	204	0	0	781
07:45 AM	22	0	23	0	2	376	43	0	0	0	0	0	22	181	0	0	669
Total	109	0	102	0	5	1515	165	0	1	0	1	0	74	643	0	0	2615
08:00 AM	29	0	15	0	8	457	32	0	0	0	0	0	21	178	0	0	740
08:15 AM	27	0	22	0	7	367	45	0	0	0	0	0	16	196	0	0	680
08:30 AM	34	0	21	0	2	370	17	0	0	0	0	0	19	189	0	0	652
08:45 AM	15	0	22	0	0	365	12	0	0	0	0	0	12	219	1	0	646
Total	105	0	80	0	17	1559	106	0	0	0	0	0	68	782	1	0	2718
11:00 AM	25	0	18	0	4	264	11	0	0	0	0	0	17	224	0	0	563
11:15 AM	17	0	14	0	1	358	23	0	0	0	0	0	22	217	0	0	652
11:30 AM	23	0	15	0	2	313	15	0	0	0	0	0	20	206	0	0	594
11:45 AM	24	0	17	0	3	378	15	0	1	0	0	0	17	216	0	0	671
Total	89	0	64	0	10	1313	64	0	1	0	0	0	76	863	0	0	2480
12:00 PM	32	0	23	0	4	336	22	0	0	0	0	0	46	276	0	0	739
12:15 PM	34	0	20	0	1	355	15	0	1	0	0	0	19	295	0	0	740
12:30 PM	28	1	25	0	5	381	17	0	1	0	0	0	27	332	0	0	817
12:45 PM	25	0	17	0	4	317	21	0	0	0	0	0	28	322	0	0	734
Total	119	1	85	0	14	1389	75	0	2	0	0	0	120	1225	0	0	3030
03:00 PM	53	0	16	0	2	334	24	0	0	0	0	0	15	315	0	0	759
03:15 PM	16	0	10	0	3	296	22	0	0	0	0	0	20	252	0	0	619
03:30 PM	56	0	27	0	2	447	18	0	0	0	0	0	40	319	0	0	909
03:45 PM	50	0	37	0	4	336	38	0	0	0	0	0	42	385	0	0	892
Total	175	0	90	0	11	1413	102	0	0	0	0	0	117	1271	0	0	3179
04:00 PM	49	0	26	0	1	353	38	0	0	0	0	0	30	312	0	0	809
04:15 PM	45	0	27	0	2	343	25	0	0	0	0	0	45	370	0	0	857
04:30 PM	60	0	17	0	2	449	30	0	0	0	0	0	30	357	0	0	945
04:45 PM	56	0	23	0	4	381	21	0	0	0	0	0	29	447	1	0	962
Total	210	0	93	0	9	1526	114	0	0	0	0	0	134	1486	1	0	3573
05:00 PM	54	0	25	0	4	403	21	0	0	0	0	0	35	386	0	0	928
05:15 PM	65	0	21	0	1	351	29	0	0	0	0	0	36	301	0	0	804
05:30 PM	94	1	8	0	0	366	15	0	0	0	0	0	25	362	0	0	871
05:45 PM	90	1	16	0	1	389	21	0	0	0	0	0	43	452	0	0	1013
Total	303	2	70	0	6	1509	86	0	0	0	0	0	139	1501	0	0	3616
Grand Total	1178	4	680	0	81	11240	789	0	4	0	2	0	794	8200	2	0	22974
Apprch %	63.3	0.2	36.5	0.0	0.7	92.8	6.5	0.0	66.7	0.0	33.3	0.0	8.8	91.2	0.0	0.0	
Total %	5.1	0.0	3.0	0.0	0.4	48.9	3.4	0.0	0.0	0.0	0.0	0.0	3.5	35.7	0.0	0.0	

Table B-2.2: Intersection #4 Turning Movement Counts

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32703

Location:
SR 482 @ Winegard Road

File Name : cleaned
Site Code : 00000000
Start Date : 2/23/2011
Page No : 1

Groups Printed- Trucks

	Winegard Road Southbound				SR 482 Westbound				Winegard Road Northbound				SR 482 Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:00 AM	0	0	0	0	0	8	1	0	0	0	0	0	2	7	0	0	18
06:15 AM	0	0	1	0	0	10	3	0	0	0	0	0	0	9	0	0	23
06:30 AM	1	0	0	0	0	8	0	0	0	0	0	0	2	8	0	0	19
06:45 AM	1	0	0	0	0	4	1	0	0	0	0	0	2	9	0	0	17
Total	2	0	1	0	0	30	5	0	0	0	0	0	6	33	0	0	77
07:00 AM	1	0	0	0	0	8	1	0	0	0	0	0	0	4	0	0	14
07:15 AM	1	0	0	0	0	10	2	0	0	0	0	0	0	13	0	0	26
07:30 AM	0	0	0	0	0	7	1	0	0	0	0	0	0	12	0	0	20
07:45 AM	0	0	0	0	0	11	0	0	0	0	0	0	1	16	0	0	28
Total	2	0	0	0	0	36	4	0	0	0	0	0	1	45	0	0	88
08:00 AM	0	0	0	0	0	12	0	0	0	0	0	0	0	14	0	0	26
08:15 AM	2	0	1	0	0	11	1	0	0	0	0	0	3	6	0	0	24
08:30 AM	1	0	0	0	0	16	2	0	0	0	0	0	1	13	0	0	33
08:45 AM	0	0	1	0	0	10	1	0	0	0	0	0	1	11	0	0	24
Total	3	0	2	0	0	49	4	0	0	0	0	0	5	44	0	0	107
11:00 AM	1	0	0	0	0	13	0	0	0	0	0	0	0	10	0	0	24
11:15 AM	0	0	1	0	0	9	0	0	0	0	0	0	0	13	0	0	23
11:30 AM	0	0	0	0	0	8	0	0	0	0	0	0	1	11	0	0	20
11:45 AM	0	0	1	0	0	13	0	0	0	0	0	0	0	7	0	0	21
Total	1	0	2	0	0	43	0	0	0	0	0	0	1	41	0	0	88
12:00 PM	0	0	1	0	0	17	0	0	0	0	0	0	1	13	0	0	32
12:15 PM	0	0	0	0	0	12	0	0	0	0	0	0	2	10	0	0	24
12:30 PM	0	0	1	0	0	13	1	0	0	0	0	0	2	13	0	0	30
12:45 PM	1	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	12
Total	1	0	2	0	0	46	1	0	0	0	0	0	5	43	0	0	98
03:00 PM	0	0	1	0	0	16	1	0	0	0	0	0	1	6	0	0	25
03:15 PM	0	0	0	0	0	10	0	0	0	0	0	0	1	4	0	0	15
03:30 PM	0	0	0	0	0	15	0	0	0	0	0	0	0	8	0	0	23
03:45 PM	0	0	1	0	0	10	2	0	0	0	0	0	0	12	0	0	25
Total	0	0	2	0	0	51	3	0	0	0	0	0	2	30	0	0	88
04:00 PM	0	0	1	0	0	10	1	0	0	0	0	0	0	5	0	0	17
04:15 PM	1	0	0	0	0	5	0	0	0	0	0	0	0	14	0	0	20
04:30 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	13	0	0	19
04:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	11	1	0	15
Total	1	0	1	0	0	24	1	0	0	0	0	0	0	43	1	0	71
05:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	1	7	0	0	11
05:15 PM	0	0	1	0	0	9	0	0	0	0	0	0	0	5	0	0	15
05:30 PM	0	0	0	0	0	13	0	0	0	0	0	0	0	5	0	0	18
05:45 PM	1	0	0	0	0	4	0	0	0	0	0	0	1	10	0	0	16
Total	1	0	1	0	0	29	0	0	0	0	0	0	2	27	0	0	60
Grand Total	11	0	11	0	0	308	18	0	0	0	0	0	22	306	1	0	677
Apprch %	50.0	0.0	50.0	0.0	0.0	94.5	5.5	0.0	0.0	0.0	0.0	0.0	6.7	93.0	0.3	0.0	
Total %	1.6	0.0	1.6	0.0	0.0	45.5	2.7	0.0	0.0	0.0	0.0	0.0	3.2	45.2	0.1	0.0	

Table B-3.1: Intersection #5 Turning Movement Counts

Accurate Traffic Counts, Inc
Phone:407-678-0605/Fax:407-678-3299
E-Mail:info@accuratetraffic.com

Counter: 1376/1373
Counted By: Ramon/Nino
Weather: Clear
Site:US 17/92@Church St

File Name : pbsj1376-1373-0525
Site Code : 00001376
Start Date : 05/25/2005
Page No : 1

Groups Printed- General Traffic

	US 17/92 Southbound					Church St Westbound					US 17/92 Northbound					Church St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00	2	453	14	0	469	3	0	0	0	3	10	215	17	0	242	5	0	13	0	18	732
07:15	4	501	21	0	526	3	0	4	0	7	15	264	18	0	297	9	5	11	0	25	855
07:30	9	496	17	0	522	3	1	0	0	4	12	298	18	0	328	3	0	18	0	21	875
07:45	3	530	27	0	560	3	0	7	0	10	6	375	14	0	395	5	0	13	0	18	983
Total	18	1980	79	0	2077	12	1	11	0	24	43	1152	67	0	1262	22	5	55	0	82	3445
08:00	1	479	17	0	497	3	0	0	0	3	13	334	13	0	360	12	0	19	0	31	891
08:15	4	498	28	0	530	1	0	3	0	4	18	312	14	0	344	13	1	24	0	38	916
08:30	1	410	18	0	429	2	0	1	0	3	20	326	9	0	355	7	0	40	0	47	834
08:45	4	363	21	0	388	4	1	5	0	10	14	280	12	0	306	7	1	20	0	28	732
Total	10	1750	84	0	1844	10	1	9	0	20	65	1252	48	0	1365	39	2	103	0	144	3373
*** BREAK ***																					
12:00	12	323	30	1	366	6	2	11	0	19	33	276	23	0	332	16	0	36	0	52	769
12:15	13	312	25	0	350	4	1	9	0	14	14	316	21	0	351	8	0	33	0	41	756
12:30	14	337	32	0	383	6	1	12	0	19	20	299	13	0	332	15	1	26	0	42	776
12:45	2	305	19	0	326	3	3	5	0	11	26	335	20	0	381	19	0	29	0	48	766
Total	41	1277	106	1	1425	19	7	37	0	63	93	1226	77	0	1396	58	1	124	0	183	3067
13:00	1	318	13	0	332	6	2	7	0	15	11	297	23	0	331	17	1	25	0	43	721
13:15	50	241	12	0	303	9	2	7	0	18	18	313	19	0	350	9	3	28	0	40	711
13:30	7	292	15	0	314	5	0	11	0	16	13	316	8	3	340	12	1	13	0	26	696
13:45	6	345	21	0	372	3	0	8	0	11	22	284	25	0	331	12	0	18	0	30	744
Total	64	1196	61	0	1321	23	4	33	0	60	64	1210	75	3	1352	50	5	84	0	139	2872
*** BREAK ***																					
15:00	4	253	10	0	267	1	0	3	0	4	13	286	8	0	307	6	2	9	0	17	595
15:15	0	319	14	0	333	2	1	3	0	6	18	330	9	0	357	9	0	16	0	25	721
15:30	5	368	13	0	386	1	2	4	0	7	10	376	14	0	400	12	1	19	0	32	825
15:45	1	327	13	0	341	2	2	4	0	8	20	369	10	0	399	16	0	19	0	35	783
Total	10	1267	50	0	1327	6	5	14	0	25	61	1361	41	0	1463	43	3	63	0	109	2924
16:00	4	343	16	0	363	4	0	2	3	9	12	356	11	0	379	10	0	17	0	27	778
16:15	2	320	15	0	337	5	0	7	0	12	25	400	6	0	431	14	0	27	0	41	821
16:30	1	332	13	0	346	1	0	1	0	2	17	371	6	0	394	8	0	23	0	31	773
16:45	19	351	15	0	385	1	1	1	1	4	13	383	5	0	401	10	2	20	0	32	822
Total	26	1346	59	0	1431	11	1	11	4	27	67	1510	28	0	1605	42	2	87	0	131	3194
17:00	1	431	14	0	446	2	0	3	0	5	16	428	14	0	458	12	2	25	0	39	948
17:15	3	429	18	0	450	3	1	8	0	12	19	530	9	0	558	13	0	21	0	34	1054
17:30	0	377	21	0	398	2	0	6	1	9	19	457	10	0	486	7	0	16	0	23	916
17:45	2	351	18	0	371	4	0	7	0	11	22	444	8	0	474	10	0	18	0	28	884
Total	6	1588	71	0	1665	11	1	24	1	37	76	1859	41	0	1976	42	2	80	0	124	3802
18:00	10	322	16	0	348	1	1	5	0	7	21	370	7	0	398	10	1	25	0	36	789
18:15	1	304	13	0	318	4	2	2	0	8	19	349	8	0	376	12	1	18	0	31	733
18:30	3	294	11	0	308	3	0	4	0	7	11	292	7	1	311	11	1	14	0	26	652
18:45	2	254	14	0	270	8	0	3	0	11	15	289	5	0	309	5	0	14	0	19	609
Total	16	1174	54	0	1244	16	3	14	0	33	66	1300	27	1	1394	38	3	71	0	112	2783

Table B-3.2: Intersection #5 Turning Movement Counts

Grand Total	191	11578	584	1	12334	108	23	153	5	289	535	10870	404	4	11813	334	23	667	0	1024	25460
Apprch %	1.5	93.9	4.6	0.0		37.4	8.0	52.9	1.7		4.5	92.0	3.4	0.0		32.6	2.2	65.1	0.0		
Total %	0.8	45.5	2.2	0.0	48.4	0.4	0.1	0.6	0.0	1.1	2.1	42.7	1.6	0.0	46.4	1.3	0.1	2.6	0.0	4.0	

Table B-3.3: Intersection #5 Turning Movement Counts

Accurate Traffic Counts, Inc
Phone:407-678-0605/Fax:407-678-3299
E-Mail:info@accuratetraffic.com

Counter: 1376/1373
Counted By: Ramon/Nino
Weather: Clear
Site:US 17/92@Church St

File Name : pbsj1376-1373-0525
Site Code : 00001376
Start Date : 05/25/2005
Page No : 1

Groups Printed- Trucks

	US 17/92 Southbound					Church St Westbound					US 17/92 Northbound					Church St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00	0	13	0	0	13	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	24
07:15	0	9	2	0	11	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	24
07:30	0	17	0	0	17	0	0	0	0	0	0	17	1	0	18	0	0	1	0	1	36
07:45	0	10	0	0	10	0	0	1	0	1	0	18	0	0	18	0	0	1	0	1	30
Total	0	49	2	0	51	0	0	2	0	2	0	58	1	0	59	0	0	2	0	2	114
08:00	0	29	0	0	29	0	0	1	0	1	0	18	0	0	18	0	0	0	0	0	48
08:15	0	24	3	0	27	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	37
08:30	0	20	2	0	22	0	0	0	0	0	0	13	0	0	13	0	0	1	0	1	36
08:45	0	12	0	0	12	0	0	0	0	0	0	16	0	0	16	1	0	1	0	2	30
Total	0	85	5	0	90	0	0	1	0	1	0	56	0	0	56	1	0	3	0	4	151
*** BREAK ***																					
12:00	0	15	1	0	16	0	0	0	0	0	6	21	0	0	27	0	0	0	0	0	43
12:15	1	15	1	0	17	0	0	0	0	0	1	23	1	0	25	0	0	2	0	2	44
12:30	0	22	1	0	23	0	0	0	0	0	1	17	0	0	18	0	0	1	0	1	42
12:45	0	17	0	0	17	0	0	2	0	2	7	9	0	0	16	0	0	1	0	1	36
Total	1	69	3	0	73	0	0	2	0	2	15	70	1	0	86	0	0	4	0	4	165
13:00	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	30
13:15	1	12	0	0	13	0	0	0	0	0	0	9	1	0	10	0	0	1	0	1	24
13:30	0	21	0	0	21	0	0	0	0	0	0	12	0	0	12	1	0	0	0	1	34
13:45	3	15	0	0	18	0	0	1	0	1	0	17	1	0	18	1	0	1	0	2	39
Total	4	60	0	0	64	0	0	1	0	1	0	56	2	0	58	2	0	2	0	4	127
*** BREAK ***																					
15:00	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
15:15	0	17	0	0	17	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	25
15:30	0	12	1	0	13	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	24
15:45	0	16	1	0	17	1	0	0	0	1	1	12	1	0	14	0	0	0	0	0	32
Total	0	47	2	0	49	1	0	0	0	1	2	35	1	0	38	0	0	0	0	0	88
16:00	0	8	0	0	8	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	12
16:15	0	12	0	0	12	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	20
16:30	0	14	0	0	14	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	25
16:45	0	5	0	0	5	0	0	0	0	0	0	13	0	0	13	1	0	0	0	1	19
Total	0	39	0	0	39	0	0	0	0	0	1	34	0	0	35	1	0	1	0	2	76
17:00	0	6	0	0	6	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	10
17:15	0	3	1	0	4	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12
17:30	0	10	0	0	10	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	20
17:45	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
Total	0	23	1	0	24	0	0	0	0	0	1	30	0	0	31	0	0	0	0	0	55
18:00	0	6	0	0	6	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	16
18:15	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	8
18:30	1	3	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
18:45	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Total	1	14	0	0	15	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	37
Grand Total	6	386	13	0	405	1	0	6	0	7	19	359	5	0	383	6	0	12	0	18	813
Apprch %	1.5	95.3	3.2	0.0		14.3	0.0	85.7	0.0		5.0	93.7	1.3	0.0		33.3	0.0	66.7	0.0		
Total %	0.7	47.5	1.6	0.0	49.8	0.1	0.0	0.7	0.0	0.9	2.3	44.2	0.6	0.0	47.1	0.7	0.0	1.5	0.0	2.2	

Table B-4.1: Intersection #6 Turning Movement Counts

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION - DISTRICT FIVE
Districtwide Signal Retiming - Orange County
FIN 427048-2-32-02

MIDDAY PLAN										RAW DATA				
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
SR 50 AT FORSYTH ROAD	14	12:00	78	83	48	286	82	198	175	1244	20	86	1344	310
SR 50 AT GOLDENROD ROAD	15	12:00	394	484	184	269	447	293	281	1109	302	255	1130	243
SR 50 AT CHICKASAW TRL	16	12:00	262	0	127	2	1	4	28	1246	237	109	1324	1
SR 50 AT SR 417 SB OFF RAMP	17	12:00	0	0	0	83	0	91	67	1287	0	2	1329	127
SR 50 AT SR 417 NB OFF RAMP	18	11:45	75	0	124	0	0	0	109	1488	0	0	1482	60
SR 50 AT CONSTANTINE STREET	19	12:00	82	2	38	46	1	86	61	1371	55	84	1441	62
SR 50 AT ECONLOCKHATCHEE TRAIL	20	11:00	201	218	439	188	242	134	186	1042	134	457	1102	139
SR 50 AT DEAN ROAD	21	12:00	178	210	131	183	227	186	288	1177	158	122	1162	189
SR 50 AT MURDOCK BLVD	22	12:00	42	31	31	190	33	88	182	1286	15	58	1291	88
SR 50 AT ROUSE ROAD	23	12:00	138	174	152	238	184	201	170	1276	134	116	1308	187
SR 50 AT WALMART/ROUSE LAKE ROAD	24	12:00	197	8	121	22	7	18	88	1388	114	214	1389	35
SR 50 AT ALAFAYA TRAIL	25	12:00	413	1072	283	322	1066	625	427	767	420	423	776	296
SR 50 AT SOPHIE BLVD.	26	12:00	98	13	55	149	8	138	133	1048	90	63	1181	118
SR 50 AT WOODBURY ROAD	27	12:00	143	187	334	72	184	61	118	1038	171	250	1082	97
SR 50 AT SR 408 E OFF RAMP	28	12:00	28	0	388	0	0	0	0	1291	0	0	1771	0
SR 50 AT BONNEVILLE DRIVE	29	12:00	23	8	12	21	13	184	125	1486	40	16	1671	22
SR 50 AT LAKE PICKET RD/BRIDGEWAY BLVD	30	12:00	102	37	60	87	28	294	212	1217	58	34	1234	70
SR 50 AT PEBBLE BEACH BLVD	31	12:00	18	7	7	22	6	84	108	1202	26	16	1274	28
SR 50 AVALON PARK BLVD	32	12:00	388	44	145	29	23	9	33	867	342	127	855	68
SR 434 AT CHALLENGER	33	12:00	74	1841	271	103	1806	23	15	12	30	298	13	134

MIDDAY PLAN										ADJUSTED BY AGGREGATED FACTOR				1.06
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
SR 50 AT FORSYTH ROAD	14	12:00	81	88	51	281	87	208	186	1319	21	90	1426	329
SR 50 AT GOLDENROD ROAD	15	12:00	418	482	174	285	474	311	298	1176	320	270	1198	258
SR 50 AT CHICKASAW TRL	16	12:00	287	0	135	2	1	4	30	1320	251	116	1403	1
SR 50 AT SR 417 SB OFF RAMP	17	12:00	0	0	0	87	0	98	71	1384	0	2	1409	135
SR 50 AT SR 417 NB OFF RAMP	18	11:45	80	0	131	0	0	0	116	1564	0	0	1571	64
SR 50 AT CONSTANTINE STREET	19	12:00	87	2	40	48	1	90	65	1453	58	88	1527	66
SR 50 AT ECONLOCKHATCHEE TRAIL	20	11:00	213	231	486	178	257	142	175	1106	142	484	1168	147
SR 50 AT DEAN ROAD	21	12:00	189	223	139	194	241	207	305	1248	166	129	1232	179
SR 50 AT MURDOCK BLVD	22	12:00	45	33	33	201	35	70	172	1363	16	61	1368	70
SR 50 AT ROUSE ROAD	23	12:00	147	184	161	250	195	213	180	1353	142	122	1388	188
SR 50 AT WALMART/ROUSE LAKE ROAD	24	12:00	209	8	128	23	7	17	91	1460	121	227	1461	37
SR 50 AT ALAFAYA TRAIL	25	12:00	438	1136	300	341	1118	557	453	802	445	448	823	314
SR 50 AT SOPHIE BLVD.	26	12:00	102	14	58	158	8	144	141	1112	96	58	1252	125
SR 50 AT WOODBURY ROAD	27	12:00	152	177	354	76	208	64	123	1098	181	265	1147	103
SR 50 AT SR 408 E OFF RAMP	28	12:00	28	0	422	0	0	0	0	1337	0	0	1877	0
SR 50 AT BONNEVILLE DRIVE	29	12:00	24	8	13	22	14	174	133	1553	42	18	1771	23
SR 50 AT LAKE PICKET RD/BRIDGEWAY BLVD	30	12:00	108	38	63	71	30	312	225	1290	58	36	1308	74
SR 50 AT PEBBLE BEACH BLVD	31	12:00	19	7	7	23	6	100	112	1274	27	18	1360	28
SR 50 AVALON PARK BLVD	32	12:00	390	47	154	31	24	10	35	908	383	135	906	68
SR 434 AT CHALLENGER	33	12:00	78	1739	287	109	1914	24	18	13	32	314	14	142

Table B-5.1: Intersection #7 Turning Movement Counts

Study Name	**I-Drive S @ Vineland Ave**
Start Date	**11/18/2012**
Start Time	**6:00 AM**
Site Code	
Project	**FYA Studies: Flashing Yellow Arrow (FYA) - TMC Stu**
Type	**Road**
Classification	**Totals**

	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound (NBL)			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	18	4	46	0	115	90	5	1	1	5	7	0	19	149	122	0
7:00 AM	38	5	84	1	180	183	5	1	2	7	0	0	16	189	191	1
8:00 AM	57	14	137	2	187	245	14	4	3	14	8	0	17	211	111	0
9:00 AM	135	11	191	1	338	346	14	6	0	15	12	0	15	241	162	1
12:00 PM	203	21	443	1	372	324	16	14	1	18	14	0	33	441	243	0
1:00 PM	245	15	409	6	322	344	14	5	6	17	15	0	32	347	204	1
2:00 PM	203	28	378	3	329	324	13	11	5	14	11	0	23	338	205	0
4:00 PM	269	23	435	0	336	391	18	8	6	15	15	0	17	335	181	1
5:00 PM	292	24	427	2	343	437	16	10	4	11	17	0	16	313	174	0
6:00 PM	260	23	417	5	329	352	19	15	7	11	16	0	17	291	147	0
7:00 PM	237	27	414	4	278	341	13	13	1	12	22	0	21	261	139	0
8:00 PM	202	16	392	1	211	246	15	17	2	11	8	0	12	263	177	0
9:00 PM	337	29	512	4	151	286	14	20	8	7	17	0	15	221	87	0

Table B-5.2: Intersection #7 Turning Movement Counts

Study Name	**I-Drive S @ Vineland Ave**
Start Date	**11/18/2012**
Start Time	**6:00 AM**
Site Code	
Project	**FYA Studies: Flashing Yellow Arrow (FYA) - TMC Stu**
Type	**Road**
Classification	**Truck**

	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound (NBL)			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0	0	7	0	2	1	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	1	6	0	5	3	0	0	0	0	0	0	0	5	1	0
8:00 AM	0	0	9	0	15	4	1	0	0	0	0	0	1	1	1	0
9:00 AM	0	0	9	0	10	5	0	0	0	0	0	0	0	5	0	0
12:00 PM	1	0	9	0	7	3	1	0	0	0	0	0	0	3	1	0
1:00 PM	2	0	13	0	11	4	0	0	0	0	0	0	0	3	1	0
2:00 PM	0	0	9	0	7	0	0	0	0	0	0	0	0	2	0	0
4:00 PM	0	0	9	0	11	2	0	0	0	0	0	0	0	6	1	0
5:00 PM	0	0	10	0	10	5	0	0	0	0	0	0	1	2	0	0
6:00 PM	0	0	9	0	9	3	1	0	0	1	0	0	0	3	0	0
7:00 PM	0	0	9	0	10	1	0	0	0	0	0	0	0	5	0	0
8:00 PM	0	0	8	0	10	2	0	0	0	0	0	0	0	4	0	0
9:00 PM	0	1	8	0	7	2	0	0	0	0	0	0	0	2	0	0

APPENDIX C:
DATA COLLECTION TABLES

Table C.1: Intersection #1 07:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 5/14/13	07:00	07:59	**19:17**	**17**	**18**	**1542**	**1850**	**9**	**14**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:10	1:21	1:11	1	1	22	34	1	1
2	2:33	3:33	1:00	0	0	29	48	0	0
3	4:25	5:20	0:55	1	1	30	43	0	0
4	6:20	7:20	1:00	0	0	35	47	0	0
5	7:55	9:20	1:25	1	1	50	50	0	0
6	10:10	11:34	1:24	0	0	43	59	0	0
7	12:10	13:40	1:30	0	0	51	63	0	0
8	14:00	15:34	1:34	0	0	55	66	0	0
9	16:06	17:20	1:14	1	1	50	62	0	0
10	18:12	19:34	1:22	0	0	41	58	0	1
11	20:25	21:25	1:00	1	1	73	73	0	0
12	22:14	23:34	1:20	0	0	73	73	0	0
13	24:11	25:21	1:10	3	3	63	76	1	1
14	26:10	27:20	1:10	0	0	57	57	0	0
15	27:57	29:34	1:37	0	0	62	78	0	0
16	30:59	31:24	0:25	2	3	42	56	0	0
17	32:23	33:27	1:04	0	0	69	69	0	0
18	33:56	35:20	1:24	2	2	60	72	0	0
19	36:10	37:34	1:24	0	0	50	50	0	0
20	37:55	39:25	1:30	1	1	49	61	0	0
21	40:33	41:21	0:48	1	1	30	42	1	1
22	43:05	43:42	0:37	0	0	53	71	1	1
23	44:32	45:36	1:04	0	0	80	88	0	0
24	46:25	47:20	0:55	1	1	51	62	1	3
25	48:10	49:20	1:10	1	1	68	80	1	1
26	50:33	51:34	1:01	0	0	43	44	0	0
27	51:56	53:34	1:38	0	0	40	60	0	0
28	55:06	55:42	0:36	0	0	66	84	1	1
29	56:54	57:29	0:35	1	1	50	67	1	2
30	58:28	59:33	1:05	0	0	57	57	1	2

Table C.2: Intersection #1 08:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 5/14/13	08:00	08:59	**25:31**	**21**	**21**	**1008**	**1377**	**14**	**22**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	1:06	1:43	0:37	0	0	41	55	0	0
2	2:32	3:23	0:51	1	1	34	52	1	1
3	4:37	5:16	0:39	0	0	29	46	0	0
4	6:06	7:12	1:06	3	3	27	39	0	1
5	7:46	9:11	1:25	1	1	50	50	0	0
6	10:02	11:12	1:10	0	0	33	43	2	2
7	12:55	13:33	0:38	0	0	39	54	0	1
8	15:00	15:27	0:27	2	2	31	43	0	0
9	16:33	17:22	0:49	0	0	53	70	0	0
10	18:07	19:14	1:07	0	0	43	43	1	1
11	20:22	21:10	0:48	2	2	28	45	1	1
12	22:07	23:13	1:06	2	2	71	71	1	1
13	24:15	25:25	1:10	0	0	60	72	0	0
14	26:55	27:22	0:27	0	0	28	44	0	2
15	28:10	29:28	1:18	0	0	41	51	0	0
16	30:23	31:12	0:49	0	0	22	36	1	1
17	32:11	33:11	1:00	1	1	51	51	1	1
18	34:19	35:11	0:52	0	0	45	59	0	0
19	36:22	37:11	0:49	0	0	25	38	1	1
20	38:00	39:24	1:24	0	0	27	39	2	4
21	40:55	41:21	0:26	0	0	33	46	0	0
22	42:10	43:13	1:03	1	1	27	42	0	0
23	44:56	45:21	0:25	1	1	20	39	0	0
24	47:04	47:41	0:37	0	0	37	53	0	0
25	48:35	49:22	0:47	2	2	18	28	1	1
26	50:06	51:15	1:09	1	1	35	44	0	0
27	52:57	53:23	0:26	2	2	20	36	0	0
28	54:34	55:12	0:38	1	1	11	30	0	0
29	56:27	57:27	1:00	0	0	18	35	2	3
30	58:55	59:23	0:28	1	1	11	23	0	1

Table C.3: Intersection #1 12:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 5/14/13	12:00	12:59	**23:51**	**44**	**44**	**794**	**856**	**7**	**25**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:53	1:36	0:43	1	1	30	34	0	0
2	2:50	3:38	0:48	2	2	21	26	0	0
3	4:30	5:36	1:06	3	3	33	33	0	0
4	0:50	1:40	0:50	1	1	25	25	1	1
5	3:25	4:08	0:43	3	3	35	35	1	1
6	5:14	6:00	0:46	0	0	28	28	0	1
7	7:08	7:51	0:43	1	1	17	17	0	0
8	8:58	9:43	0:45	2	2	36	36	0	0
9	10:49	11:41	0:52	0	0	22	33	0	1
10	12:49	13:40	0:51	5	5	31	31	0	0
11	14:30	15:40	1:10	2	2	22	22	0	4
12	17:21	18:04	0:43	2	2	29	29	2	3
13	19:45	20:32	0:47	4	4	28	28	0	1
14	21:43	22:58	1:15	0	0	45	47	0	1
15	24:44	25:40	0:56	1	1	26	30	0	2
16	27:24	28:07	0:43	0	0	33	53	0	2
17	29:13	29:59	0:46	2	2	21	24	1	1
18	31:07	32:00	0:53	1	1	24	24	0	0
19	33:41	34:27	0:46	2	2	29	29	0	0
20	36:08	37:14	1:06	0	0	34	34	0	1
21	38:59	39:42	0:43	2	2	42	42	1	1
22	40:49	41:40	0:51	1	1	20	20	0	1
23	43:24	44:07	0:43	2	2	27	27	0	0
24	44:49	45:59	1:10	1	1	30	30	0	0
25	46:49	47:50	1:01	1	1	25	25	1	3
26	49:20	50:04	0:44	2	2	33	33	0	1
27	51:12	51:55	0:43	0	0	22	35	0	0
28	53:37	54:21	0:44	3	3	26	26	0	0

Table C.4: Intersection #1 13:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 5/14/13	13:00	13:59	**26:02**	**42**	**42**	**820**	**899**	**20**	**42**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:47	2:15	1:28	0	0	37	51	1	2
2	4:01	5:03	1:02	3	3	39	42	1	1
3	6:46	7:30	0:44	0	0	36	56	1	1
4	8:39	9:21	0:42	0	0	31	31	0	0
5	11:03	11:47	0:44	1	1	43	51	0	1
6	12:57	14:14	1:17	1	1	36	36	0	0
7	15:55	17:01	1:06	1	1	45	45	3	3
8	18:09	19:07	0:58	2	2	16	21	0	3
9	20:52	21:34	0:42	0	0	26	36	0	2
10	22:43	23:27	0:44	0	0	18	18	0	2
11	25:03	25:53	0:50	1	1	35	35	1	2
12	27:01	28:19	1:18	3	3	42	42	6	7
13	29:33	30:46	1:13	2	2	35	35	1	1
14	32:00	33:07	1:07	5	5	27	27	1	2
15	34:52	35:35	0:43	1	1	32	32	0	0
16	36:17	37:26	1:09	0	0	18	18	1	3
17	39:09	39:53	0:44	5	5	35	35	0	0
18	41:05	42:19	1:14	3	3	38	40	0	1
19	44:04	45:07	1:03	1	1	25	25	0	0
20	45:58	47:07	1:09	2	2	31	31	0	2
21	48:51	49:34	0:43	3	3	28	31	1	3
22	50:31	51:26	0:55	0	0	29	29	0	2
23	52:23	53:18	0:55	2	2	20	20	0	0
24	55:02	55:43	0:41	4	4	28	28	0	1
25	56:40	58:08	1:28	2	2	24	38	2	2
26	59:12	60:35	1:23	0	0	46	46	1	1

Table C.5: Intersection #1 16:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection										
Approach	**Major Street:** US 27			**Speed:** 55 MPH						
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg						
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn						
Date	**Start**	**End**	**Totals for Values Below for Collection Period**							
Tue 5/14/13	16:00	16:59	**21:18**	**75**	**75**	**474**	**831**	**17**	**43**	
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**				
				LT	**Total**	**TH**	**Total**	**RT**	**Total**	
1	0:00	0:48	0:48	0	0	7	7	0	0	
2	1:43	2:36	0:53	4	4	20	31	1	1	
3	4:07	4:51	0:44	3	3	9	23	1	1	
4	6:10	7:21	1:11	0	0	20	33	3	5	
5	8:41	9:31	0:50	7	7	14	30	0	1	
6	11:06	11:50	0:44	7	7	8	22	0	1	
7	13:31	14:11	0:40	4	4	8	27	0	2	
8	15:40	16:31	0:51	4	4	15	35	0	3	
9	18:03	18:51	0:48	1	1	12	31	2	3	
10	20:58	21:30	0:32	0	0	20	36	0	2	
11	22:47	23:41	0:54	5	5	9	24	0	1	
12	25:17	25:51	0:34	1	1	19	36	1	3	
13	27:15	28:11	0:56	1	1	23	35	0	1	
14	29:51	30:32	0:41	5	5	16	29	0	0	
15	31:41	32:52	1:11	5	5	18	27	1	1	
16	34:10	35:12	1:02	3	3	23	36	1	1	
17	36:36	37:32	0:56	2	2	29	29	0	3	
18	39:37	40:11	0:34	2	2	16	34	0	0	
19	42:13	42:48	0:35	2	2	22	40	2	5	
20	44:14	45:28	1:14	2	2	41	57	1	2	
21	47:06	48:19	1:13	1	1	39	54	1	4	
22	49:55	51:09	1:14	3	3	35	50	2	0	
23	52:56	53:54	0:58	4	4	12	31	1	3	
24	55:44	56:17	0:33	2	2	21	40	0	0	
25	57:49	58:31	0:42	7	7	18	34	0	0	
26	59:37	59:59	0:22	0	0	18	26	0	0	

Table C.6: Intersection #1 17:19 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/16/13	17:19	17:59	**12:17**	**68**	**68**	**350**	**614**	**10**	**24**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:21	1:04	0:43	1	1	16	31	1	2
2	2:36	3:12	0:36	4	4	14	34	0	1
3	5:15	5:50	0:35	3	3	25	43	0	0
4	7:50	8:24	0:34	4	4	17	37	0	0
5	9:43	11:09	1:26	1	1	22	40	1	1
6	12:56	13:56	1:00	3	3	26	46	1	2
7	16:13	17:00	0:47	5	5	27	27	3	5
8	18:18	19:22	1:04	9	9	26	45	1	1
9	21:27	22:02	0:35	5	5	34	53	0	0
10	23:52	24:23	0:31	4	4	17	40	0	0
11	26:29	27:02	0:33	5	5	15	36	0	3
12	28:34	29:40	1:06	5	5	12	34	0	0
13	31:54	32:41	0:47	0	0	38	60	0	1
14	34:56	35:42	0:46	9	9	32	51	2	5
15	37:49	38:25	0:36	6	6	19	27	0	1
16	39:54	40:32	0:38	4	4	10	10	1	2

Table C.7: Intersection #1 18:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 27			**Speed:** 55 MPH					
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Rural/Protected Left Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/16/13	18:00	18:59	**18:53**	**82**	**82**	**351**	**765**	**13**	**29**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:59	1:32	0:33	4	4	7	27	0	0
2	3:14	3:51	0:37	1	1	11	36	0	0
3	5:58	6:32	0:34	3	3	15	34	1	1
4	8:40	9:08	0:28	5	5	10	30	0	1
5	10:40	11:49	1:09	2	2	14	31	0	0
6	14:00	14:49	0:49	8	8	33	53	2	3
7	16:14	17:41	1:27	4	4	19	29	0	1
8	19:51	20:25	0:34	2	2	14	30	0	1
9	21:35	22:33	0:58	3	3	23	42	1	1
10	24:39	25:12	0:33	2	2	19	37	0	0
11	26:40	27:21	0:41	1	1	14	27	1	2
12	28:47	29:34	0:47	1	1	30	48	0	1
13	31:19	31:53	0:34	5	5	8	29	1	3
14	33:37	34:13	0:36	3	3	7	24	0	0
15	35:49	36:32	0:43	1	1	8	27	0	0
16	38:05	38:52	0:47	2	2	15	33	2	2
17	40:58	41:31	0:33	1	1	15	33	0	2
18	43:35	44:07	0:32	5	5	17	36	1	2
19	45:20	46:47	1:27	5	5	15	30	2	4
20	48:22	49:38	1:16	7	7	15	28	1	2
21	51:51	52:38	0:47	8	8	15	30	0	1
22	54:12	55:13	1:01	4	4	9	26	0	0
23	56:56	57:31	0:35	2	2	10	27	1	2
24	59:01	59:53	0:52	3	3	8	18	0	0

Table C.8: Intersection #2 NBL 06:40 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	06:40	07:39	**46:23**	**3**	**3**	**686**	**686**	**7**	**7**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:28	1:28	0	0	12	12	1	1
2	2:00	4:28	2:28	0	0	12	12	0	0
3	4:50	10:48	5:58	1	1	52	52	2	2
4	11:03	13:28	2:25	0	0	39	39	0	0
5	13:58	16:28	2:30	1	1	22	22	0	0
6	17:03	19:28	2:25	0	0	18	18	0	0
7	19:44	22:28	2:44	0	0	33	33	1	1
8	23:03	28:48	5:45	0	0	87	87	0	0
9	29:00	31:48	2:48	0	0	25	25	1	1
10	32:00	34:48	2:48	0	0	38	38	0	0
11	35:02	37:28	2:26	0	0	35	35	1	1
12	37:58	40:28	2:30	0	0	40	40	0	0
13	41:01	43:28	2:27	1	1	41	41	0	0
14	44:03	46:28	2:25	0	0	37	37	0	0
15	46:59	49:48	2:49	0	0	43	43	0	0
16	50:01	52:28	2:27	0	0	36	36	1	1
17	53:00	55:28	2:28	0	0	40	40	0	0
18	56:00	58:48	2:48	0	0	62	62	0	0
19	59:01	59:59	0:58	0	0	14	14	0	0

Table C.9: Intersection #2 NBL 07:40 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	07:40	08:39	**52:00**	**6**	**6**	**1042**	**1047**	**5**	**6**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	60:00	61:28	1:28	0	0	12	12	0	0
2	61:55	62:11	0:16	0	0	16	16	0	0
3	0:00	2:12	2:12	0	0	29	29	0	0
4	2:38	5:12	2:34	0	0	42	42	0	0
5	5:42	8:12	2:30	0	0	49	52	0	0
6	8:39	11:12	2:33	0	0	50	50	1	1
7	11:49	14:12	2:23	0	0	47	47	0	0
8	14:46	17:12	2:26	1	1	45	45	0	0
9	17:42	23:12	5:30	2	2	122	122	2	2
10	23:33	26:12	2:39	0	0	52	52	0	0
11	26:29	29:13	2:44	0	0	40	40	0	0
12	29:44	35:12	5:28	1	1	106	108	0	0
13	35:45	38:12	2:27	1	1	72	72	0	1
14	38:43	41:12	2:29	1	1	48	48	0	0
15	41:44	44:12	2:28	0	0	57	57	0	0
16	44:30	47:12	2:42	0	0	52	52	0	0
17	47:34	50:12	2:38	0	0	49	49	0	0
18	50:34	53:32	2:58	0	0	54	54	2	2
19	53:48	56:12	2:24	0	0	51	51	0	0
20	56:38	57:49	1:11	0	0	49	49	0	0

Table C.10: Intersection #2 NBL 12:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	12:00	12:13	**10:36**	**14**	**14**	**467**	**467**	**15**	**17**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:32	0:32	0	0	24	24	2	3
2	1:06	3:02	1:56	4	4	73	73	2	2
3	3:35	5:32	1:57	6	6	92	92	5	5
4	5:53	8:02	2:09	1	1	90	90	2	3
5	8:39	10:33	1:54	2	2	96	96	2	2
6	11:10	13:18	2:08	1	1	92	92	2	2

Table C.11: Intersection #2 NBL 12:20 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	12:20	13:19	**47:47**	**44**	**44**	**1904**	**1904**	**55**	**68**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:42	0:42	2	2	14	14	0	3
2	1:19	3:12	1:53	0	0	77	77	3	4
3	3:33	5:42	2:09	4	4	95	95	1	1
4	6:04	8:12	2:08	0	0	101	101	4	4
5	8:47	10:42	1:55	0	0	78	78	1	3
6	11:19	13:12	1:53	0	0	89	89	4	4
7	13:35	15:42	2:07	2	2	76	76	2	2
8	16:16	18:12	1:56	0	0	57	57	3	5
9	18:34	20:42	2:08	2	2	66	66	3	3
10	21:19	23:12	1:53	0	0	82	82	2	2
11	23:35	25:42	2:07	0	0	88	88	1	1
12	26:19	28:12	1:53	0	0	79	79	2	3
13	28:35	30:42	2:07	4	4	80	80	2	2
14	31:18	33:12	1:54	5	5	81	81	2	2
15	33:47	35:42	1:55	4	4	74	74	3	4
16	36:07	38:12	2:05	3	3	78	78	1	1
17	38:48	40:43	1:55	2	2	75	75	3	3
18	0:24	2:17	1:53	4	4	84	84	2	2
19	2:54	4:48	1:54	3	3	72	72	3	3
20	5:24	7:17	1:53	4	4	73	73	3	3
21	7:40	9:47	2:07	1	1	71	71	3	3
22	10:18	12:17	1:59	1	1	88	88	1	1
23	12:49	14:47	1:58	2	2	42	42	0	0
24	15:10	17:17	2:07	0	0	91	91	2	3
25	17:53	19:09	1:16	1	1	93	93	4	6

Table C.12: Intersection #2 NBL 16:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	16:00	16:59	**45:01**	**71**	**71**	**1838**	**1838**	**41**	**50**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:04	2:04	6	6	108	108	6	6
2	2:54	5:04	2:10	6	6	99	99	4	5
3	5:55	8:04	2:09	3	3	113	113	3	3
4	8:49	11:04	2:15	0	0	118	118	1	1
5	11:49	14:03	2:14	3	3	109	109	3	3
6	15:18	17:04	1:46	6	6	109	109	2	4
7	18:17	20:04	1:47	4	4	108	108	0	2
8	21:16	23:04	1:48	3	3	108	108	5	5
9	23:48	26:04	2:16	4	4	111	111	3	5
10	26:41	27:36	0:55	0	0	21	21	0	0
11	27:53	28:31	0:38	3	3	28	28	0	1
12	29:01	30:48	1:47	2	2	44	44	0	0
13	31:28	33:29	2:01	3	3	66	66	0	0
14	34:06	36:14	2:08	3	3	87	87	1	1
15	36:33	38:12	1:39	4	4	69	69	2	2
16	38:54	41:05	2:11	2	2	81	81	1	1
17	41:53	44:12	2:19	5	5	76	76	3	4
18	44:43	47:12	2:29	6	6	92	92	1	1
19	47:35	50:12	2:37	1	1	72	72	2	2
20	50:34	53:32	2:58	6	6	66	66	2	2
21	53:49	56:12	2:23	1	1	80	80	1	1
22	56:38	59:05	2:27	0	0	73	73	1	1

Table C.13: Intersection #2 NBL 17:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	17:00	17:59	**44:11**	**79**	**82**	**2221**	**2243**	**79**	**100**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:19	2:39	2:20	0	0	105	116	7	8
2	3:16	5:38	2:22	0	3	109	119	6	7
3	6:21	8:39	2:18	5	5	116	116	4	4
4	9:52	11:39	1:47	4	4	116	116	6	6
5	12:25	14:39	2:14	3	3	121	121	5	5
6	15:21	17:39	2:18	6	6	112	112	2	5
7	18:51	19:45	0:54	7	7	67	67	0	1
8	20:29	22:17	1:48	0	0	81	81	5	7
9	22:55	24:58	2:03	6	6	66	66	3	4
10	25:38	27:04	1:26	2	2	73	73	4	4
11	27:41	29:38	1:57	6	6	115	115	2	3
12	30:16	32:38	2:22	1	1	114	114	2	3
13	33:21	35:39	2:18	6	6	109	109	0	2
14	36:15	38:38	2:23	2	2	105	105	3	4
15	39:21	41:38	2:17	5	5	116	117	5	7
16	42:28	44:38	2:10	2	2	111	111	4	4
17	45:51	47:38	1:47	3	3	117	117	5	8
18	48:13	50:38	2:25	2	2	111	111	5	5
19	51:18	53:38	2:20	4	4	136	136	2	3
20	54:22	56:41	2:19	7	7	110	110	4	5
21	57:15	59:38	2:23	8	8	111	111	5	5

Table C.14: Intersection #2 NBL 18:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	18:00	18:59	**45:17**	**97**	**98**	**1898**	**1898**	**54**	**61**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	60:15	61:26	1:11	6	6	45	45	2	2
2	0:00	1:09	1:09	5	5	45	45	2	3
3	2:03	4:09	2:06	0	0	92	92	5	5
4	4:49	7:09	2:20	6	6	103	103	5	6
5	7:51	10:09	2:18	4	4	101	101	2	2
6	10:49	13:09	2:20	4	4	116	116	4	5
7	13:50	16:08	2:18	4	4	112	112	4	4
8	17:00	19:09	2:09	6	6	107	107	1	1
9	19:46	22:09	2:23	2	2	99	99	6	6
10	22:55	25:08	2:13	6	6	88	88	2	2
11	25:59	28:08	2:09	3	3	108	108	3	3
12	28:51	31:08	2:17	7	7	84	84	3	3
13	31:57	34:08	2:11	4	4	90	90	3	3
14	34:49	37:09	2:20	2	2	83	83	2	2
15	37:54	40:09	2:15	5	5	79	79	1	2
16	41:01	43:09	2:08	5	5	95	95	2	3
17	43:46	46:09	2:23	5	5	88	88	2	3
18	46:50	49:08	2:18	4	4	103	103	0	0
19	49:48	52:08	2:20	6	6	95	95	3	4
20	52:50	55:09	2:19	6	6	93	93	0	0
21	56:00	58:09	2:09	3	4	72	72	2	2
22	58:57	58:58	0:01	4	4	0	0	0	0

Table C.15: Intersection #2 NBL 19:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
NBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	19:00	19:59	**46:00**	**71**	**71**	**1561**	**1561**	**47**	**59**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:06	2:06	2	2	86	86	2	2
2	2:39	5:07	2:28	6	6	95	95	2	3
3	5:55	8:07	2:12	5	5	87	87	3	4
4	8:48	11:06	2:18	2	2	74	74	1	2
5	11:48	14:07	2:19	4	4	88	88	4	4
6	14:54	17:06	2:12	4	4	78	78	3	3
7	17:54	20:07	2:13	2	2	101	101	2	3
8	20:45	23:06	2:21	6	6	75	75	3	3
9	23:55	26:06	2:11	5	5	79	79	4	5
10	26:53	29:07	2:14	2	2	59	59	1	1
11	29:44	32:57	3:13	1	1	103	103	4	4
12	33:13	35:06	1:53	2	2	39	39	0	1
13	35:42	38:06	2:24	2	2	106	106	3	3
14	38:43	41:57	3:14	0	0	84	84	3	3
15	42:21	44:07	1:46	5	5	48	48	2	4
16	45:18	47:07	1:49	1	1	78	78	3	3
17	47:49	50:06	2:17	5	5	56	56	2	3
18	50:48	53:06	2:18	1	1	106	106	5	6
19	53:41	56:06	2:25	16	16	61	61	0	1
20	56:59	59:06	2:07	0	0	58	58	0	1

Table C.16: Intersection #2 SBL 06:40 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	06:40	07:39	**46:23**	**0**	**1**	**1188**	**1234**	**2**	**2**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:28	1:28	0	0	24	24	0	0
2	2:00	4:28	2:28	0	0	61	61	0	0
3	4:50	10:48	5:58	0	0	111	114	1	1
4	11:03	13:28	2:25	0	0	66	67	0	0
5	13:58	16:28	2:30	0	0	53	59	0	0
6	17:03	19:28	2:25	0	0	57	57	0	0
7	19:44	22:28	2:44	0	0	58	62	0	0
8	23:03	28:48	5:45	0	0	119	120	1	1
9	29:00	31:48	2:48	0	0	59	60	0	0
10	32:00	34:48	2:48	0	0	47	48	0	0
11	35:02	37:28	2:26	0	0	50	52	0	0
12	37:58	40:28	2:30	0	0	59	65	0	0
13	41:01	43:28	2:27	0	0	62	65	0	0
14	44:03	46:28	2:25	0	0	60	67	0	0
15	46:59	49:48	2:49	0	0	61	62	0	0
16	50:01	52:28	2:27	0	0	64	66	0	0
17	53:00	55:28	2:28	0	0	74	81	0	0
18	56:00	58:48	2:48	0	0	73	74	0	0
19	59:01	59:59	0:58	0	1	30	30	0	0

Table C.17: Intersection #2 SBL 07:40 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	07:40	08:39	**53:01**	**5**	**7**	**1879**	**1901**	**12**	**14**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	60:00	61:28	1:28	0	0	55	55	1	1
2	61:55	62:11	0:16	1	1	95	95	0	0
3	0:00	2:12	2:12	0	0	89	91	0	1
4	2:38	5:12	2:34	1	1	98	98	1	1
5	5:42	8:12	2:30	0	0	95	98	0	0
6	8:39	11:12	2:33	0	0	70	74	0	1
7	11:49	14:12	2:23	1	1	97	97	1	1
8	14:46	17:12	2:26	1	1	166	166	0	0
9	17:42	23:12	5:30	0	0	166	166	1	1
10	23:33	26:12	2:39	0	0	74	74	1	1
11	26:29	29:13	2:44	0	1	160	160	2	2
12	29:44	35:12	5:28	0	1	91	91	0	0
13	35:45	38:12	2:27	0	0	84	90	2	2
14	38:43	41:12	2:29	0	0	90	98	2	2
15	41:44	44:12	2:28	1	1	83	83	0	0
16	44:30	47:12	2:42	0	0	81	81	1	1
17	47:34	50:12	2:38	0	0	79	73	0	0
18	50:34	53:32	2:58	0	0	78	80	0	0
19	53:48	56:12	2:24	0	0	62	65	0	0
20	56:38	58:50	2:12	0	0	66	66	0	0

Table C.18: Intersection #2 SBL 12:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	12:00	12:13	**10:36**	**5**	**5**	**382**	**382**	**4**	**4**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:32	0:32	0	0	13	13	1	1
2	1:06	3:02	1:56	1	1	68	68	0	0
3	3:35	5:32	1:57	1	1	78	78	0	0
4	5:53	8:02	2:09	1	1	85	85	1	1
5	8:39	10:33	1:54	2	2	65	65	2	2
6	11:10	13:18	2:08	0	0	73	73	0	0

Table C.19: Intersection #2 SBL 12:20 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 5/22/13	12:20	13:19	**47:47**	**18**	**18**	**1766**	**1766**	**16**	**19**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:42	0:42	0	0	25	25	0	0
2	1:19	3:12	1:53	1	1	76	76	1	1
3	3:33	5:42	2:09	0	1	41	41	1	1
4	6:04	8:12	2:08	0	0	74	74	0	0
5	8:47	10:42	1:55	1	1	70	70	2	2
6	11:19	13:12	1:53	2	2	76	76	4	4
7	13:35	15:42	2:07	0	0	56	56	0	0
8	16:16	18:12	1:56	1	1	78	78	0	0
9	18:34	20:42	2:08	0	0	68	68	0	0
10	21:19	23:12	1:53	1	1	70	70	2	2
11	23:35	25:42	2:07	0	0	80	80	1	2
12	26:19	28:12	1:53	1	1	89	89	0	0
13	28:35	30:42	2:07	0	0	72	72	0	0
14	31:18	33:12	1:54	1	1	78	78	0	0
15	33:47	35:42	1:55	1	0	70	70	1	2
16	36:07	38:12	2:05	0	0	72	72	1	1
17	38:48	40:43	1:55	1	1	82	82	1	1
18	0:24	2:17	1:53	2	2	70	70	0	0
19	2:54	4:48	1:54	1	1	86	86	0	0
20	5:24	7:17	1:53	1	1	72	72	0	1
21	7:40	9:47	2:07	0	0	58	58	1	1
22	10:18	12:17	1:59	1	1	70	70	0	0
23	12:49	14:47	1:58	1	1	88	88	0	0
24	15:10	17:17	2:07	0	0	90	90	1	1
25	17:53	19:09	1:16	2	2	55	55	0	0

Table C.20: Intersection #2 SBL 16:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	16:00	16:59	**45:01**	**32**	**33**	**1450**	**1529**	**26**	**27**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:04	2:04	0	0	56	56	2	3
2	2:54	5:04	2:10	0	0	53	71	1	1
3	5:55	8:04	2:09	3	3	71	71	1	1
4	8:49	11:04	2:15	1	1	74	78	3	0
5	11:49	14:03	2:14	2	2	76	76	1	2
6	15:18	17:04	1:46	0	0	71	76	1	2
7	18:17	20:04	1:47	2	2	98	102	0	0
8	21:16	23:04	1:48	1	1	82	86	3	3
9	23:48	26:04	2:16	2	2	77	80	1	1
10	26:41	27:36	0:55	1	1	10	13	0	0
11	27:53	28:31	0:38	1	1	29	29	0	0
12	29:01	30:48	1:47	0	0	33	42	1	2
13	31:28	33:29	2:01	1	1	63	67	1	1
14	34:06	36:14	2:08	4	4	86	86	1	1
15	36:33	38:12	1:39	3	3	71	71	2	2
16	38:54	41:05	2:11	3	0	48	63	0	0
17	41:53	44:12	2:19	0	1	85	92	2	2
18	44:43	47:12	2:29	2	2	86	86	0	0
19	47:35	50:12	2:37	0	0	65	65	2	2
20	50:34	53:32	2:58	3	6	70	70	2	2
21	53:49	56:12	2:23	1	1	74	77	1	1
22	56:38	59:05	2:27	2	2	72	72	1	1

Table C.21: Intersection #2 SBL 17:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	17:00	17:59	**44:11**	**31**	**31**	**1519**	**1620**	**16**	**26**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:19	2:39	2:20	2	2	69	77	3	3
2	3:16	5:38	2:22	1	1	66	66	1	2
3	6:21	8:39	2:18	0	0	94	100	1	1
4	9:52	11:39	1:47	1	1	78	78	1	1
5	12:25	14:39	2:14	1	1	90	90	1	1
6	15:21	17:39	2:18	1	1	81	106	2	2
7	18:51	19:45	0:54	4	4	13	13	0	2
8	20:29	22:17	1:48	2	2	70	71	0	0
9	22:55	24:58	2:03	3	3	71	71	2	2
10	25:38	27:04	1:26	3	3	61	72	0	0
11	27:41	29:38	1:57	0	0	47	47	0	3
12	30:16	32:38	2:22	2	2	86	86	0	0
13	33:21	35:39	2:18	1	1	89	89	0	2
14	36:15	38:38	2:23	2	2	69	75	1	1
15	39:21	41:38	2:17	1	1	77	94	0	0
16	42:28	44:38	2:10	0	0	68	78	0	0
17	45:51	47:38	1:47	0	0	76	87	0	1
18	48:13	50:38	2:25	1	1	86	86	1	2
19	51:18	53:38	2:20	4	4	97	97	1	1
20	54:22	56:41	2:19	2	2	67	73	1	1
21	57:15	59:38	2:23	0	0	64	64	1	1

Table C.22: Intersection #2 SBL 18:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	18:00	18:59	**45:17**	**36**	**37**	**1452**	**1565**	**27**	**35**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	60:15	61:26	1:11	4	4	65	65	2	2
2	0:00	1:09	1:09	0	0	55	69	1	2
3	2:03	4:09	2:06	2	2	84	93	0	0
4	4:49	7:09	2:20	5	5	80	80	1	1
5	7:51	10:09	2:18	5	5	74	74	1	2
6	10:49	13:09	2:20	2	2	81	87	2	2
7	13:50	16:08	2:18	2	2	73	81	0	1
8	17:00	19:09	2:09	1	1	78	78	1	3
9	19:46	22:09	2:23	3	3	76	76	1	1
10	22:55	25:08	2:13	0	0	61	62	2	2
11	25:59	28:08	2:09	3	3	74	75	3	3
12	28:51	31:08	2:17	2	2	80	82	1	2
13	31:57	34:08	2:11	1	1	80	80	1	1
14	34:49	37:09	2:20	1	1	76	81	2	2
15	37:54	40:09	2:15	0	0	55	68	1	1
16	41:01	43:09	2:08	1	1	54	58	0	0
17	43:46	46:09	2:23	2	2	60	60	0	0
18	46:50	49:08	2:18	0	0	57	68	0	1
19	49:48	52:08	2:20	0	0	62	70	2	2
20	52:50	55:09	2:19	2	2	75	81	4	5
21	56:00	58:09	2:09	0	1	52	65	2	2
22	58:57	58:58	0:01	0	0	0	12	0	0

Table C.23: Intersection #2 SBL 19:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Alafaya Trail			**Speed:** 45 MPH					
SBL	**Minor Street:** Ashton Manor Way			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial/Residential		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 5/23/13	19:00	19:59	**45:46**	**36**	**36**	**1271**	**1340**	**31**	**39**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:07	2:07	2	2	77	77	0	1
2	2:39	5:06	2:27	0	0	47	60	1	0
3	5:55	8:07	2:12	2	2	81	83	2	3
4	8:48	11:06	2:18	2	2	91	91	1	1
5	11:50	14:07	2:17	3	3	68	68	2	2
6	14:54	17:07	2:13	4	4	67	67	2	2
7	17:54	20:07	2:13	1	1	80	83	3	3
8	20:46	23:06	2:20	2	2	63	69	1	1
9	23:55	26:06	2:11	0	0	71	71	0	0
10	26:53	29:06	2:13	0	0	59	59	3	3
11	29:46	32:57	3:11	4	4	42	56	3	5
12	33:20	35:06	1:46	0	0	51	57	0	0
13	35:44	38:07	2:23	0	0	63	73	2	2
14	38:42	41:57	3:15	7	7	59	59	2	2
15	42:20	44:06	1:46	3	3	78	78	1	1
16	45:18	47:06	1:48	3	3	62	62	4	6
17	47:47	50:06	2:19	1	1	57	60	2	4
18	50:50	53:07	2:17	1	1	88	88	1	2
19	53:42	56:06	2:24	1	1	63	66	1	1
20	57:00	59:06	2:06	0	0	4	13	0	0

Table C.24: Intersection #3 06:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/5/13	06:45	07:44	**31:55**	**129**	**129**	**1536**	**1536**	**7**	**7**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:05	2:05	3	3	41	41	0	0
2	2:25	4:54	2:29	7	7	70	70	0	0
3	5:23	7:45	2:22	3	3	48	48	0	0
4	8:05	10:35	2:30	2	2	53	53	0	0
5	10:50	13:25	2:35	5	5	69	69	0	0
6	13:48	16:15	2:27	4	4	59	59	2	2
7	16:45	19:05	2:20	5	5	58	58	0	0
8	19:27	21:55	2:28	2	2	60	60	0	0
9	22:08	24:45	2:37	2	2	57	57	0	0
10	25:00	27:34	2:34	9	9	74	74	1	1
11	28:07	30:24	2:17	4	4	76	76	0	0
12	30:51	31:55	1:04	4	4	25	25	0	0
13	32:14	33:10	0:56	3	3	54	54	0	0
14	33:27	34:28	1:01	5	5	13	13	0	0
15	34:50	35:53	1:03	4	4	78	78	0	0
16	36:11	37:18	1:07	4	4	12	12	0	0
17	37:39	38:43	1:04	5	5	65	65	0	0
18	39:05	40:09	1:04	5	5	11	11	0	0
19	40:30	41:33	1:03	3	3	81	81	0	0
20	41:55	43:05	1:10	1	1	18	18	0	0
21	43:20	44:23	1:03	5	5	54	54	0	0
22	44:45	45:48	1:03	6	6	14	14	0	0
23	46:10	47:13	1:03	2	2	66	66	0	0
24	47:35	48:38	1:03	7	7	14	14	0	0
25	49:00	50:03	1:03	7	7	67	67	2	2
26	50:25	51:28	1:03	5	5	14	14	0	0
27	51:49	52:53	1:04	0	0	79	79	0	0
28	53:06	54:18	1:12	5	5	31	31	0	0
29	54:40	55:43	1:03	5	5	55	55	1	1
30	56:01	57:08	1:07	2	2	20	20	0	0
31	57:30	58:33	1:03	4	4	87	87	1	1
32	58:51	59:58	1:07	1	1	13	13	0	0

Table C.25: Intersection #3 07:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/5/13	07:45	08:44	**45:49**	**253**	**253**	**1819**	**1819**	**24**	**24**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:57	0:57	4	4	81	81	0	0
2	1:34	3:58	2:24	12	12	92	92	0	0
3	4:42	6:48	2:06	16	16	86	86	0	0
4	7:32	9:38	2:06	9	9	82	82	3	3
5	10:11	12:28	2:17	14	14	91	91	0	0
6	13:12	15:18	2:06	19	19	71	71	2	2
7	16:02	18:08	2:06	11	11	81	81	2	2
8	18:39	20:58	2:19	11	11	74	74	4	4
9	21:31	23:48	2:17	9	9	97	97	1	1
10	24:18	26:38	2:20	10	10	88	88	1	1
11	27:17	29:28	2:11	9	9	106	106	3	3
12	30:13	32:18	2:05	11	11	86	86	2	2
13	33:02	35:08	2:06	17	17	100	100	1	1
14	35:52	37:59	2:07	13	13	80	80	0	0
15	38:42	40:49	2:07	12	12	73	73	2	2
16	41:32	43:39	2:07	13	13	90	90	2	2
17	44:22	46:29	2:07	12	12	84	84	1	1
18	47:06	49:19	2:13	14	14	85	85	0	0
19	50:02	52:09	2:07	18	18	79	79	0	0
20	52:52	54:58	2:06	6	6	89	89	0	0
21	55:23	57:48	2:25	13	13	69	69	0	0
22	58:24	59:34	1:10	0	0	35	35	0	0

Table C.26: Intersection #3 12:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/5/13	12:00	12:59	**31:51**	**318**	**319**	**1545**	**1545**	**11**	**14**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:58	0:58	11	11	64	64	0	0
2	1:43	2:11	0:28	11	11	7	7	0	0
3	2:56	3:53	0:57	6	6	53	53	1	1
4	4:28	4:55	0:27	2	2	6	6	0	0
5	5:31	6:52	1:21	12	12	49	49	0	0
6	7:36	8:36	1:00	4	4	57	57	1	1
7	9:20	9:44	0:24	13	13	12	12	1	1
8	10:28	11:28	1:00	6	6	70	70	1	1
9	12:00	12:26	0:26	4	4	8	8	0	0
10	13:10	14:15	1:05	11	11	63	63	1	2
11	14:59	15:28	0:29	3	3	13	13	1	1
12	15:58	17:02	1:04	17	17	47	47	0	1
13	17:47	18:11	0:24	4	4	8	8	0	0
14	18:40	19:42	1:02	9	9	54	54	0	0
15	20:26	21:24	0:58	11	11	17	17	0	0
16	21:57	22:51	0:54	14	14	55	55	0	0
17	23:35	24:53	1:18	5	5	60	60	1	1
18	25:15	25:46	0:31	7	7	9	9	0	0
19	26:15	27:32	1:17	11	11	57	57	0	0
20	28:04	28:28	0:24	2	2	4	4	0	0
21	30:10	30:54	0:44	12	12	62	62	0	0
22	31:22	31:37	0:15	1	1	17	17	0	0
23	32:47	33:25	0:38	11	11	54	54	1	1
24	33:53	34:38	0:45	9	10	5	5	0	0
25	35:37	36:21	0:44	6	6	67	67	0	0
26	37:16	37:46	0:30	4	4	28	28	0	0
27	38:34	39:18	0:44	12	12	38	38	0	0
28	40:17	41:02	0:45	9	9	45	45	1	1
29	41:47	42:32	0:45	11	11	38	38	0	0
30	43:40	44:03	0:23	1	1	65	65	0	0
31	44:48	45:23	0:35	9	9	8	8	0	0
32	46:22	46:54	0:32	5	5	58	58	0	0
33	46:54	47:31	0:37	8	8	16	16	0	0
34	48:14	49:08	0:54	8	8	51	51	1	1
35	49:39	50:15	0:36	7	7	14	14	0	0
36	50:43	51:51	1:08	14	14	56	56	1	2
37	52:35	54:17	1:42	6	6	74	74	0	0
38	54:40	55:16	0:36	7	7	18	18	0	0
39	55:47	56:50	1:03	8	8	58	58	0	0
40	57:28	58:00	0:32	5	5	15	15	0	0
41	58:44	59:40	0:56	2	2	45	45	0	0

Table C.27: Intersection #3 15:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/4/13	15:45	16:44	**33:25**	**375**	**376**	**1397**	**1397**	**6**	**8**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:22	0:22	4	4	13	13	1	1
2	0:56	1:27	0:31	10	10	15	15	0	0
3	2:11	2:55	0:44	3	3	39	39	0	0
4	3:36	4:14	0:38	16	16	16	16	0	0
5	4:59	5:58	0:59	7	7	48	48	0	0
6	6:43	7:42	0:59	10	10	40	40	0	0
7	8:27	9:18	0:51	10	11	51	51	0	0
8	10:03	11:02	0:59	9	9	60	60	0	0
9	11:47	12:37	0:50	0	0	27	27	0	0
10	12:57	13:57	1:00	14	14	35	35	0	0
11	14:42	15:26	0:44	17	17	16	16	1	1
12	16:12	16:56	0:44	2	2	45	45	0	0
13	17:42	18:05	0:23	7	7	4	4	0	0
14	18:36	19:34	0:58	10	10	37	37	0	0
15	20:18	21:31	1:13	11	11	22	22	0	0
16	22:08	22:59	0:51	11	11	44	44	1	1
17	23:43	25:16	1:33	17	17	55	55	0	0
18	26:01	26:27	0:26	3	3	6	6	0	0
19	26:47	27:27	0:40	13	13	14	14	0	0
20	28:11	29:12	1:01	4	4	56	56	0	0
21	29:57	31:07	1:10	17	17	73	73	1	2
22	31:51	32:18	0:27	5	5	18	18	0	0
23	32:55	33:56	1:01	16	16	49	49	0	0
24	34:40	35:08	0:28	10	10	7	7	0	0
25	35:42	36:42	1:00	10	10	62	62	0	0
26	37:18	37:43	0:25	11	11	4	4	0	0
27	38:18	39:31	1:13	8	8	75	75	1	1
28	40:15	40:40	0:25	10	10	8	8	0	0
29	41:25	42:39	1:14	11	11	63	63	0	0
30	43:22	44:05	0:43	4	4	19	19	0	0
31	44:28	45:35	1:07	8	8	54	54	0	0
32	46:12	46:50	0:38	9	9	24	24	0	0
33	47:34	48:33	0:59	16	16	51	51	1	1
34	49:18	49:53	0:35	9	9	19	19	0	1
35	50:24	51:00	0:36	6	6	31	31	0	0
36	51:45	52:33	0:48	9	9	14	14	0	0
37	53:11	54:03	0:52	12	12	56	56	0	0
38	54:48	55:17	0:29	8	8	17	17	0	0
39	55:44	56:37	0:53	5	5	27	27	0	0
40	57:00	57:45	0:45	9	9	3	3	0	0
41	58:30	59:41	1:11	4	4	80	80	0	0

Table C.28: Intersection #3 16:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/4/13	16:45	17:44	**33:13**	**414**	**415**	**1572**	**1572**	**13**	**17**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:41	0:41	15	15	40	40	0	0
2	1:25	2:36	1:11	4	4	55	55	0	0
3	3:20	3:58	0:38	10	10	21	21	0	0
4	4:42	5:34	0:52	13	13	55	55	0	0
5	6:19	7:18	0:59	13	13	74	74	1	1
6	8:03	8:29	0:26	7	7	9	9	1	1
7	8:54	9:54	1:00	5	5	52	52	0	1
8	10:17	10:47	0:30	1	1	23	23	0	0
9	11:11	11:57	0:46	16	16	30	30	0	0
10	12:41	13:37	0:56	7	7	47	47	1	1
11	14:04	14:40	0:36	4	4	15	15	1	1
12	15:03	16:13	1:10	11	11	59	59	2	2
13	16:57	17:38	0:41	10	10	16	16	0	0
14	18:22	19:25	1:03	13	13	51	51	0	0
15	20:10	21:18	1:08	17	17	62	62	0	0
16	22:02	22:30	0:28	12	12	10	10	0	0
17	23:14	23:45	0:31	16	16	23	23	1	1
18	24:31	25:24	0:53	9	9	53	53	0	0
19	26:08	27:14	1:06	11	11	59	59	0	1
20	27:59	28:22	0:23	12	12	8	8	0	0
21	28:57	30:23	1:26	15	15	49	49	0	0
22	31:08	32:08	1:00	15	15	39	39	1	1
23	32:53	33:42	0:49	15	15	41	41	0	0
24	34:27	34:51	0:24	5	5	17	17	0	0
25	35:17	36:15	0:58	12	12	48	48	0	0
26	37:00	38:03	1:03	5	5	43	43	1	1
27	38:48	40:02	1:14	19	19	42	42	1	1
28	40:50	41:18	0:28	10	10	65	65	0	0
29	42:33	43:32	0:59	15	15	49	49	0	0
30	44:16	45:15	0:59	10	10	40	40	0	0
31	46:00	46:59	0:59	11	11	66	66	0	0
32	47:29	48:27	0:58	3	3	38	38	0	0
33	49:12	50:11	0:59	17	17	68	68	1	2
34	50:55	51:19	0:24	2	2	6	6	0	0
35	52:04	53:03	0:59	14	14	63	63	0	0
36	53:47	54:46	0:59	10	10	30	30	0	0
37	55:31	56:27	0:56	12	12	44	44	1	2
38	57:12	58:26	1:14	16	17	54	54	1	1
39	59:09	59:36	0:27	2	2	8	8	0	0

Table C.29: Intersection #3 17:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/4/13	17:45	18:44	**33:33**	**358**	**361**	**1299**	**1299**	**4**	**6**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				LT	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:14	1:14	16	16	57	57	1	1
2	1:59	2:37	0:38	2	2	27	27	0	0
3	2:54	3:52	0:58	16	16	51	51	0	0
4	4:38	5:20	0:42	9	9	21	21	0	0
5	5:56	6:46	0:50	7	7	49	49	0	0
6	7:13	7:55	0:42	18	18	15	15	0	0
7	8:39	9:35	0:56	10	10	42	42	0	0
8	10:17	10:48	0:31	5	5	15	15	0	0
9	11:14	12:14	1:00	16	16	42	42	0	0
10	12:59	13:57	0:58	14	14	23	23	0	0
11	14:42	15:42	1:00	6	6	52	52	0	0
12	16:26	17:30	1:04	14	14	39	39	0	0
13	18:15	18:47	0:32	7	7	21	21	0	0
14	19:31	20:30	0:59	13	13	48	48	1	1
15	21:14	22:13	0:59	11	11	25	25	0	0
16	22:55	23:42	0:47	6	6	39	39	0	0
17	24:19	24:45	0:26	6	6	4	4	0	0
18	25:21	26:15	0:54	7	7	51	51	0	0
19	26:44	27:13	0:29	7	7	6	6	0	0
20	27:51	28:23	0:32	13	13	17	17	0	0
21	29:09	30:06	0:57	9	9	47	47	0	0
22	30:51	31:51	1:00	6	6	50	50	0	0
23	32:23	33:01	0:38	6	6	19	19	1	1
24	33:43	34:55	1:12	12	12	52	52	0	0
25	35:40	36:23	0:43	6	7	15	15	0	1
26	37:03	37:52	0:49	10	10	39	39	0	0
27	38:36	39:15	0:39	4	4	18	18	0	0
28	39:42	40:40	0:58	10	10	46	46	0	1
29	41:25	42:13	0:48	7	7	23	23	0	0
30	42:57	43:41	0:44	5	6	33	33	1	1
31	44:03	44:25	0:22	4	4	3	3	0	0
32	45:10	46:18	1:08	10	10	50	50	0	0
33	46:58	47:56	0:58	2	2	23	23	0	0
34	48:14	49:11	0:57	12	12	33	33	0	0
35	49:56	50:34	0:38	10	10	18	18	0	0
36	51:19	52:08	0:49	8	8	39	39	0	0
37	52:53	53:51	0:58	6	6	25	25	0	0
38	54:17	55:11	0:54	15	16	47	47	0	0
39	55:55	56:38	0:43	3	3	22	22	0	0
40	56:55	57:49	0:54	2	2	43	43	0	0
41	58:12	58:45	0:33	8	8	10	10	0	0

Table C.30: Intersection #3 18:45 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 436			**Speed:** 45 MPH					
WBL	**Minor Street:** Orange Avenue			**Geometry:** 3-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** School/Residential		**Criteria:** Rural/FYA Not Operating					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/4/13	18:45	19:30	**26:59**	**205**	**205**	**897**	**897**	**1**	**3**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:03	1:02	0:59	7	7	41	41	0	0
2	1:32	1:55	0:23	11	11	3	3	0	0
3	2:40	3:50	1:10	6	6	56	56	0	0
4	4:20	4:55	0:35	7	7	5	5	0	0
5	5:26	5:55	0:29	3	3	13	13	0	0
6	6:13	6:56	0:43	5	5	38	38	0	0
7	7:41	8:28	0:47	4	4	24	24	0	0
8	8:48	9:34	0:46	6	6	36	36	0	0
9	10:09	10:35	0:26	4	4	4	4	0	0
10	10:58	11:22	0:24	7	7	11	11	0	0
11	11:57	12:45	0:48	2	2	46	46	0	0
12	13:28	13:59	0:31	4	4	9	9	0	0
13	14:18	15:08	0:50	6	6	37	37	0	1
14	15:54	16:39	0:45	2	2	9	9	0	0
15	16:57	17:59	1:02	8	8	39	39	0	0
16	18:42	19:46	1:04	3	3	24	24	1	1
17	20:24	21:08	0:44	9	9	33	33	0	0
18	21:53	22:21	0:28	0	0	13	13	0	0
19	22:33	23:38	1:05	8	8	46	46	0	0
20	24:15	24:49	0:34	3	3	11	11	0	0
21	25:34	26:38	1:04	1	1	55	55	0	0
22	27:04	27:29	0:25	1	1	2	2	0	0
23	27:54	28:57	1:03	17	17	45	45	0	0
24	29:42	30:10	0:28	4	4	16	16	0	0
25	30:35	31:17	0:42	7	7	15	15	0	0
26	31:41	32:41	1:00	6	6	32	32	0	1
27	33:08	33:52	0:44	13	13	17	17	0	0
28	34:37	35:34	0:57	9	9	44	44	0	0
29	36:13	36:40	0:27	9	9	14	14	0	0
30	37:13	37:51	0:38	8	8	36	36	0	0
31	38:16	39:25	1:09	4	4	10	10	0	0
32	39:44	40:40	0:56	13	13	40	40	0	0
33	41:25	42:41	1:16	1	1	16	16	0	0
34	42:52	43:46	0:54	7	7	40	40	0	0
35	44:16	44:59	0:43	0	0	17	17	0	0

Table C.31: Intersection #4 06:53 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Mon 12/23/13	06:53	07:52	**41:50**	**15**	**24**	**1288**	**1290**	**50**	**59**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:40	1:40	0	0	33	33	0	0
2	2:33	4:38	2:05	2	3	43	43	0	0
3	4:49	5:11	0:22	0	0	4	4	0	0
4	6:15	6:46	0:31	0	1	22	24	0	0
5	8:36	9:45	1:09	1	1	56	56	0	0
6	10:10	10:28	0:18	0	0	6	6	0	0
7	10:55	13:22	2:27	2	2	44	44	3	3
8	13:44	15:38	1:54	0	0	50	50	3	3
9	15:58	19:39	3:41	0	0	71	71	4	4
10	20:03	21:03	1:00	0	0	11	11	1	1
11	21:23	23:30	2:07	1	1	42	42	2	2
12	23:50	24:22	0:32	0	0	29	29	0	0
13	24:42	25:28	0:46	0	0	13	13	1	1
14	25:48	27:06	1:18	0	0	47	47	0	0
15	27:30	28:17	0:47	0	0	15	15	0	0
16	28:37	29:36	0:59	0	0	35	35	6	6
17	30:09	30:34	0:25	0	0	14	14	2	3
18	30:57	32:04	1:07	0	1	40	40	2	3
19	32:41	32:59	0:18	0	1	13	13	2	3
20	33:25	34:41	1:16	0	1	42	42	2	3
21	35:04	35:38	0:34	0	0	10	10	0	0
22	35:58	37:23	1:25	2	2	35	35	2	2
23	37:34	38:07	0:33	0	0	18	18	2	2
24	38:29	40:08	1:39	2	2	47	47	3	4
25	40:28	41:00	0:32	0	0	17	17	1	2
26	41:30	42:23	0:53	1	1	44	44	2	2
27	42:48	43:27	0:39	0	0	14	14	1	1
28	43:51	44:37	0:46	1	1	65	65	0	1
29	45:11	45:32	0:21	1	2	16	16	0	0
30	46:02	46:52	0:50	0	0	33	33	0	0
31	47:11	48:16	1:05	0	0	26	26	3	3
32	48:44	49:40	0:56	0	2	53	53	0	0
33	50:14	50:42	0:28	0	0	16	16	2	2
34	50:57	51:47	0:50	0	0	6	6	0	0
35	52:05	53:13	1:08	0	0	60	60	3	3
36	53:33	54:30	0:57	1	1	42	42	1	3
37	55:08	55:39	0:31	0	1	25	25	0	0
38	55:56	57:20	1:24	1	1	56	56	1	1
39	58:00	58:23	0:23	0	0	18	18	0	0
40	58:45	59:59	1:14	0	0	57	57	1	1

Table C.32: Intersection #4 07:53 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Mon 12/23/13	07:53	08:52	**44:46**	**30**	**43**	**1487**	**1487**	**52**	**66**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:42	0:42	1	1	17	17	2	3
2	0:58	1:59	1:01	1	1	33	33	2	2
3	2:40	3:22	0:42	1	2	16	16	0	2
4	3:37	4:28	0:51	0	1	34	34	4	4
5	4:57	7:17	2:20	1	1	79	79	4	4
6	7:54	8:27	0:33	0	4	19	19	1	2
7	9:06	10:13	1:07	0	1	50	50	0	0
8	10:32	11:02	0:30	2	2	3	3	0	0
9	11:17	12:29	1:12	0	0	45	45	2	2
10	12:44	13:06	0:22	0	0	3	3	0	0
11	13:24	14:21	0:57	0	0	29	29	0	0
12	14:59	15:42	0:43	0	2	20	20	1	1
13	15:58	17:20	1:22	2	2	35	35	3	3
14	17:36	18:19	0:43	0	0	18	18	1	3
15	18:35	19:38	1:03	3	3	38	38	1	1
16	20:04	20:52	0:48	0	0	22	22	1	1
17	21:08	22:06	0:58	1	1	40	40	2	2
18	22:28	22:54	0:26	0	0	5	5	0	0
19	23:04	23:43	0:39	0	0	5	5	0	0
20	23:59	24:43	0:44	0	0	43	43	2	2
21	25:04	28:16	3:12	2	2	72	72	4	4
22	28:36	29:48	1:12	2	2	43	43	0	0
23	30:04	30:49	0:45	0	0	16	16	1	1
24	31:04	32:19	1:15	1	1	44	44	0	0
25	32:45	34:36	1:51	1	1	58	58	2	2
26	35:13	35:51	0:38	0	1	26	26	0	2
27	36:06	37:01	0:55	0	0	40	40	1	1
28	37:41	38:10	0:29	0	2	22	22	0	0
29	38:32	38:56	0:24	1	1	5	5	0	0
30	39:16	40:17	1:01	0	0	51	51	4	4
31	40:33	42:24	1:51	0	0	67	67	1	1
32	42:57	44:41	1:44	3	3	69	69	1	1
33	45:13	45:47	0:34	0	1	20	20	0	0
34	46:12	48:28	2:16	0	0	65	65	1	3
35	48:50	49:31	0:41	0	0	37	37	2	3
36	49:48	50:46	0:58	0	0	29	29	1	2
37	51:05	52:32	1:27	1	1	54	54	2	3
38	53:11	53:50	0:39	2	2	19	19	0	0
39	54:07	54:47	0:40	1	1	47	47	0	0
40	55:06	57:29	2:23	1	1	70	70	5	6
41	57:50	59:58	2:08	3	3	79	79	1	1

Table C.33: Intersection #4 13:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Fri 6/14/13	13:00	13:59	**39:33**	**41**	**119**	**1476**	**1497**	**63**	**96**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:02	1:23	1:21	2	3	53	53	6	7
2	2:02	4:01	1:59	4	4	63	83	0	3
3	4:48	5:23	0:35	2	6	26	26	1	1
4	5:41	7:17	1:36	2	5	64	64	3	4
5	7:52	8:21	0:29	0	1	12	12	0	0
6	8:53	10:06	1:13	0	1	58	58	0	2
7	10:44	11:19	0:35	0	0	24	24	0	0
8	11:21	12:32	1:11	1	2	39	39	0	2
9	13:17	13:53	0:36	0	0	25	25	0	0
10	14:12	15:36	1:24	1	5	40	40	3	7
11	16:14	16:41	0:27	0	2	26	26	1	1
12	16:53	18:03	1:10	0	1	35	35	1	1
13	18:42	21:25	2:43	3	5	92	92	3	4
14	22:01	23:00	0:59	1	4	18	18	2	2
15	23:33	25:32	1:59	2	2	64	64	2	2
16	25:55	27:22	1:27	3	6	57	57	3	3
17	28:00	29:09	1:09	0	3	38	38	3	4
18	29:44	31:46	2:02	7	10	54	54	3	3
19	32:23	33:28	1:05	0	4	57	57	0	0
20	34:13	35:23	1:10	1	1	45	45	2	3
21	36:02	36:36	0:34	0	1	34	34	2	2
22	37:16	38:26	1:10	0	2	54	54	2	4
23	39:05	40:16	1:11	2	2	27	27	2	2
24	40:45	41:53	1:08	0	2	59	59	2	2
25	42:43	43:52	1:09	0	2	50	51	1	3
26	44:19	45:29	1:10	2	2	21	21	4	6
27	46:18	47:29	1:11	0	6	67	67	5	6
28	48:18	49:07	0:49	0	6	31	31	1	2
29	49:50	50:43	0:53	2	6	32	32	3	4
30	51:28	52:38	1:10	0	4	58	58	3	5
31	53:19	54:29	1:10	1	3	31	31	1	2
32	55:12	56:09	0:57	0	3	46	46	2	5
33	56:59	58:09	1:10	0	3	59	59	2	3
34	58:54	59:35	0:41	5	12	17	17	0	1

Table C.34: Intersection #4 16:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/13/13	16:00	16:59	**37:27**	**40**	**146**	**1329**	**1329**	**69**	**92**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:17	0:37	0:20	0	1	2	2	0	0
2	1:01	2:49	1:48	3	7	56	56	1	2
3	3:25	5:06	1:41	1	1	43	43	2	4
4	5:50	6:26	0:36	1	6	24	24	4	4
5	6:44	7:54	1:10	3	3	28	28	4	6
6	8:38	9:14	0:36	0	2	25	25	0	0
7	9:33	11:10	1:37	2	2	56	56	4	4
8	11:50	12:14	0:24	0	2	23	23	4	5
9	12:33	14:07	1:34	3	3	40	40	3	5
10	14:47	15:26	0:39	0	1	33	33	4	4
11	16:02	17:12	1:10	0	2	45	45	0	0
12	17:51	18:28	0:37	0	3	36	36	4	4
13	18:46	20:18	1:32	1	1	53	53	2	2
14	21:03	21:36	0:33	1	8	22	22	1	2
15	22:08	23:18	1:10	1	3	40	40	2	4
16	23:57	24:34	0:37	0	7	26	26	3	5
17	25:15	26:13	0:58	0	4	37	37	2	4
18	26:53	27:25	0:32	0	4	18	18	2	2
19	27:51	29:15	1:24	5	5	40	40	2	5
20	29:56	30:28	0:32	0	4	24	24	0	0
21	31:10	31:58	0:48	1	2	31	31	3	3
22	32:30	33:15	0:45	0	1	39	39	1	0
23	34:00	35:10	1:10	0	3	48	48	4	5
24	36:01	36:34	0:33	0	6	18	18	2	2
25	36:51	38:05	1:14	0	0	42	42	1	1
26	38:56	40:38	1:42	4	12	39	39	0	1
27	41:25	42:08	0:43	0	6	46	46	2	2
28	42:36	43:52	1:16	3	3	30	30	1	2
29	44:36	45:12	0:36	0	7	34	34	1	1
30	45:33	46:50	1:17	3	3	33	33	2	2
31	47:28	48:06	0:38	0	1	28	28	1	1
32	48:27	48:48	0:21	0	0	1	1	3	3
33	49:05	50:16	1:11	1	1	51	51	1	3
34	50:48	51:17	0:29	0	5	22	22	0	0
35	51:49	52:59	1:10	2	5	30	30	0	0
36	53:42	54:32	0:50	3	7	36	36	0	0
37	55:08	56:18	1:10	0	3	46	46	0	1
38	57:09	58:15	1:06	1	8	37	37	3	3
39	58:33	59:31	0:58	1	4	47	47	0	0

Table C.35: Intersection #4 17:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/13/13	17:00	17:59	**37:33**	**49**	**145**	**1255**	**1256**	**94**	**134**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:23	0:23	0	0	8	8	0	1
2	0:45	1:57	1:12	2	7	25	25	2	2
3	2:35	3:07	0:32	0	0	24	24	1	1
4	3:28	4:57	1:29	0	7	41	41	4	4
5	5:46	6:37	0:51	0	2	41	41	5	5
6	7:19	8:24	1:05	2	5	40	40	3	5
7	9:11	10:09	0:58	3	3	29	29	2	2
8	10:36	11:35	0:59	0	4	41	41	6	7
9	12:12	13:21	1:09	1	0	21	21	6	6
10	13:54	14:43	0:49	1	3	44	44	2	4
11	15:08	15:27	0:19	0	0	2	2	0	0
12	15:45	16:16	0:31	2	5	12	12	0	0
13	16:34	17:25	0:51	3	5	39	39	3	7
14	18:03	18:26	0:23	0	0	6	6	0	0
15	18:43	20:12	1:29	0	4	42	42	3	6
16	21:00	21:27	0:27	0	0	20	20	0	0
17	21:46	23:09	1:23	2	7	42	42	4	10
18	23:58	24:26	0:28	0	0	21	21	2	2
19	24:46	25:57	1:11	3	6	36	36	1	1
20	26:42	27:07	0:25	0	0	19	19	2	2
21	27:32	28:51	1:19	1	5	37	37	3	3
22	29:35	30:17	0:42	1	7	29	29	3	3
23	31:03	32:35	1:32	4	4	50	50	2	4
24	32:59	33:22	0:23	0	0	10	10	0	0
25	33:41	35:09	1:28	3	6	44	44	3	5
26	35:50	36:12	0:22	0	0	17	17	1	1
27	36:30	37:56	1:26	1	8	46	46	2	3
28	38:45	39:21	0:36	0	0	31	31	6	6
29	39:40	40:51	1:11	0	4	37	37	0	0
30	41:36	42:10	0:34	1	1	32	32	1	2
31	42:31	43:58	1:27	3	9	49	49	2	2
32	44:42	45:41	0:59	3	7	29	29	0	0
33	46:27	47:28	1:01	1	8	46	46	3	8
34	48:11	49:21	1:10	4	4	26	26	4	4
35	49:38	50:16	0:38	1	4	28	29	1	3
36	50:39	51:00	0:21	0	0	8	8	4	4
37	51:27	52:35	1:08	4	9	16	16	3	7
38	53:47	54:26	0:39	0	0	38	38	1	3
39	54:44	56:01	1:17	1	3	37	37	4	5
40	56:37	57:16	0:39	0	6	35	35	3	4
41	57:34	58:52	1:18	2	2	39	39	1	1
42	59:30	59:59	0:29	0	0	18	18	1	1

Table C.36: Intersection #4 19:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** Sand Lake Road			**Speed:** 55 MPH					
EBL	**Minor Street:** Winegard Road			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes	**Land Use:** Commercial			**Criteria:** Rural/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/13/13	19:00	19:59	**42:34**	**61**	**98**	**858**	**861**	**91**	**109**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:17	1:17	3	3	27	27	2	3
2	1:41	2:54	1:13	1	1	33	33	1	1
3	3:19	4:17	0:58	1	2	23	23	1	1
4	4:54	5:39	0:45	2	2	6	6	1	2
5	5:58	8:13	2:15	1	1	38	38	4	4
6	8:32	9:01	0:29	1	2	20	20	2	2
7	9:16	9:38	0:22	0	0	9	9	0	0
8	9:58	11:27	1:29	2	2	22	22	2	2
9	12:00	12:46	0:46	0	2	15	17	3	5
10	13:15	14:22	1:07	4	6	21	21	5	5
11	14:54	15:35	0:41	0	3	33	33	4	6
12	16:08	17:07	0:59	2	2	18	18	3	3
13	17:26	18:38	1:12	0	0	19	19	3	4
14	18:56	20:39	1:43	0	2	44	44	5	8
15	21:14	21:50	0:36	4	5	13	13	0	1
16	22:23	23:18	0:55	0	0	26	26	6	6
17	23:36	24:49	1:13	0	0	10	10	2	3
18	25:10	26:17	1:07	2	2	44	44	2	2
19	26:35	27:06	0:31	1	1	8	8	3	3
20	27:18	28:52	1:34	3	3	27	27	4	4
21	29:11	30:16	1:05	2	6	12	12	3	3
22	30:56	31:52	0:56	1	1	29	29	0	0
23	32:13	32:50	0:37	0	0	2	2	0	1
24	33:08	33:31	0:23	0	7	3	3	0	1
25	33:50	34:15	0:25	0	2	17	17	1	1
26	34:49	35:29	0:40	3	3	10	10	0	0
27	36:00	38:02	2:02	3	3	41	41	4	5
28	38:22	38:41	0:19	2	2	4	4	0	0
29	38:59	39:54	0:55	3	6	26	26	0	0
30	40:28	41:32	1:04	2	2	21	21	0	1
31	41:53	43:14	1:21	1	1	28	28	4	4
32	43:34	44:28	0:54	2	2	8	8	3	3
33	44:48	45:48	1:00	1	1	27	27	4	5
34	46:06	47:33	1:27	3	4	17	17	5	5
35	48:04	48:52	0:48	1	2	28	28	2	2
36	49:24	51:10	1:46	0	3	19	20	3	3
37	51:45	52:32	0:47	3	4	19	19	2	2
38	53:04	53:48	0:44	2	2	10	10	1	1
39	54:06	54:51	0:45	3	3	12	12	2	2
40	55:11	55:47	0:36	2	2	7	7	0	0
41	56:05	56:56	0:51	0	1	21	21	2	2
42	57:07	57:57	0:50	0	2	21	21	1	2
43	58:38	59:45	1:07	0	0	20	20	1	1

Table C.37: Intersection #5 07:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/19/13	07:00	07:59	**50:36**	**44**	**51**	**1628**	**1628**	**68**	**75**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:11	0:11	0	0	0	0	0	0
2	0:35	6:11	5:36	3	3	142	142	9	10
3	7:07	12:12	5:05	5	6	127	127	5	6
4	13:24	18:12	4:48	2	4	154	154	8	11
5	18:59	24:12	5:13	4	4	177	177	4	4
6	24:42	27:12	2:30	1	2	87	87	4	4
7	27:54	30:12	2:18	6	6	84	84	8	8
8	30:35	33:12	2:37	2	2	90	90	1	1
9	33:44	36:12	2:28	1	1	82	82	0	0
10	36:45	39:12	2:27	5	7	88	88	0	0
11	39:52	45:12	5:20	7	7	184	184	6	6
12	45:36	48:12	2:36	1	1	93	93	7	7
13	48:35	51:12	2:37	1	1	80	80	0	1
14	51:50	54:12	2:22	2	3	98	98	4	5
15	54:59	57:12	2:13	3	3	76	76	2	2
16	57:44	59:59	2:15	1	1	66	66	10	10

Table C.38: Intersection #5 08:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/19/13	08:00	08:59	**48:40**	**50**	**60**	**1426**	**1426**	**52**	**62**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:12	0:12	2	3	1	1	0	1
2	0:33	2:50	2:17	1	1	72	72	5	6
3	3:46	8:50	5:04	4	4	147	147	4	6
4	9:17	11:50	2:33	3	3	70	70	3	4
5	12:25	14:50	2:25	0	0	72	72	2	3
6	15:16	17:50	2:34	2	2	70	70	4	4
7	18:12	20:50	2:38	4	6	76	76	1	1
8	21:40	23:50	2:10	1	2	85	85	2	2
9	24:35	26:50	2:15	5	5	69	69	1	1
10	27:25	29:50	2:25	3	3	64	64	4	4
11	30:15	32:50	2:35	1	1	58	58	0	0
12	33:11	35:50	2:39	6	7	73	73	1	1
13	36:46	38:50	2:04	2	3	66	66	2	2
14	39:33	44:50	5:17	9	12	150	150	9	10
15	45:31	47:50	2:19	1	1	81	81	1	2
16	48:20	50:50	2:30	2	2	65	65	4	4
17	51:19	53:56	2:37	2	2	76	76	1	2
18	54:18	56:50	2:32	2	3	65	65	6	7
19	57:43	59:17	1:34	0	0	66	66	2	2

Table C.39: Intersection #5 12:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/19/13	12:00	12:59	**45:03**	**39**	**48**	**1080**	**1081**	**66**	**93**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	4:05	4:05	5	5	59	59	2	3
2	4:44	6:45	2:01	0	0	53	53	1	2
3	7:07	9:25	2:18	6	6	46	46	5	9
4	10:42	12:07	1:25	0	0	51	51	2	4
5	12:40	14:45	2:05	1	1	42	42	6	9
6	15:29	17:25	1:56	2	2	52	52	3	3
7	18:00	20:04	2:04	2	2	38	38	2	3
8	20:47	22:45	1:58	0	3	58	59	1	6
9	24:02	25:24	1:22	3	3	41	41	1	3
10	26:20	28:04	1:44	2	2	49	49	5	5
11	28:53	30:44	1:51	0	0	54	54	1	3
12	31:18	33:24	2:06	1	2	44	44	2	4
13	34:05	36:04	1:59	2	2	41	41	2	2
14	36:44	38:45	2:01	3	7	75	75	3	4
15	39:48	41:25	1:37	0	0	48	48	3	3
16	41:49	44:05	2:16	1	1	44	44	4	4
17	44:34	46:45	2:11	3	3	51	51	5	5
18	47:17	49:24	2:07	0	0	43	43	3	5
19	50:00	52:05	2:05	2	2	55	55	7	8
20	52:47	54:45	1:58	0	0	30	30	4	4
21	55:18	57:24	2:06	4	5	60	60	2	2
22	58:11	59:59	1:48	2	2	46	46	2	2

Table C.40: Intersection #5 13:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/19/13	13:00	13:59	**42:58**	**38**	**51**	**1053**	**1053**	**64**	**98**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:04	0:04	0	1	0	0	0	1
2	0:39	2:26	1:47	3	3	50	50	4	4
3	2:58	5:05	2:07	3	4	40	40	7	9
4	5:57	7:46	1:49	1	1	42	42	1	3
5	8:30	10:26	1:56	0	0	46	46	4	7
6	11:06	13:06	2:00	1	1	54	54	3	3
7	13:32	15:46	2:14	1	3	59	59	3	6
8	16:42	18:26	1:44	1	3	47	47	0	2
9	19:25	21:06	1:41	3	3	54	54	2	4
10	21:46	23:46	2:00	4	4	54	54	4	6
11	24:18	26:26	2:08	0	0	61	61	1	1
12	27:01	29:06	2:05	2	3	40	40	5	5
13	29:55	31:46	1:51	1	3	41	41	5	8
14	32:35	34:26	1:51	1	2	50	50	1	4
15	35:17	37:06	1:49	2	4	41	41	2	4
16	38:00	39:46	1:46	2	2	45	45	1	3
17	40:19	42:26	2:07	1	1	40	40	4	5
18	42:55	45:06	2:11	2	2	53	53	3	4
19	45:30	47:46	2:16	4	4	47	47	2	3
20	48:29	50:26	1:57	2	3	53	53	2	2
21	51:21	53:01	1:40	0	0	48	48	3	5
22	53:50	55:46	1:56	1	1	30	30	5	7
23	56:27	58:26	1:59	3	3	58	58	2	2

Table C.41: Intersection #5 17:25 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/18/13	17:25	18:24	**49:33**	**61**	**62**	**1123**	**1124**	**63**	**76**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	1:11	1:11	1	1	30	30	4	4
2	1:59	4:31	2:32	4	4	80	80	6	7
3	5:28	7:51	2:23	2	2	82	82	7	7
4	8:25	11:11	2:46	2	2	70	70	3	5
5	11:42	14:31	2:49	2	2	58	58	2	5
6	14:55	17:51	2:56	3	3	73	73	1	1
7	18:14	21:11	2:57	3	3	72	72	1	1
8	21:56	24:31	2:35	4	4	50	50	5	5
9	25:07	27:51	2:44	4	4	54	54	1	2
10	28:39	31:11	2:32	3	3	56	56	7	7
11	0:03	2:54	2:51	1	1	56	56	4	4
12	3:50	6:14	2:24	5	5	62	63	1	2
13	7:00	9:34	2:34	8	8	56	56	4	5
14	10:11	12:53	2:42	4	4	55	55	2	2
15	13:17	16:13	2:56	6	6	66	66	3	4
16	17:09	19:33	2:24	1	1	61	61	4	6
17	20:04	22:54	2:50	3	3	54	54	4	4
18	23:24	25:50	2:26	3	4	43	43	3	4
19	26:40	29:41	3:01	2	2	45	45	1	1

Table C.42: Intersection #5 18:25 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/18/13	18:25	19:24	**48:58**	**51**	**52**	**753**	**753**	**43**	**50**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	28:27	29:41	1:14	0	0	16	16	1	1
2	30:05	32:59	2:54	2	2	37	37	1	1
3	33:17	36:13	2:56	5	6	42	42	6	9
4	37:10	39:37	2:27	5	5	49	49	1	2
5	40:15	42:37	2:22	2	2	45	45	1	2
6	43:05	46:44	3:39	4	4	57	57	4	4
7	46:59	48:37	1:38	0	0	24	24	4	4
8	49:15	51:37	2:22	2	2	31	31	1	1
9	52:06	54:37	2:31	0	0	52	52	2	2
10	55:15	57:37	2:22	3	3	29	29	2	2
11	58:13	60:37	2:24	2	2	38	38	2	2
12	1:05	1:55	0:50	3	3	14	14	2	2
13	0:00	1:38	1:38	2	2	27	27	1	1
14	2:02	4:38	2:36	2	2	31	31	3	4
15	5:16	7:38	2:22	1	1	42	42	1	2
16	8:33	10:38	2:05	1	1	40	40	2	2
17	11:02	13:38	2:36	5	5	32	32	0	0
18	14:14	16:38	2:24	2	2	36	36	3	3
19	17:05	19:38	2:33	4	4	33	33	2	2
20	20:34	22:45	2:11	1	1	40	40	1	1
21	23:08	25:39	2:31	5	5	32	32	2	2
22	26:08	26:31	0:23	0	0	6	6	1	1

Table C.43: Intersection #5 19:25 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** US 17-92			**Speed:** 45 MPH					
NBL	**Minor Street:** Church Avenue			**Geometry:** 4-Leg					
Opposing Lanes: 4 Lanes		**Land Use:** Commercial		**Criteria:** Urban/FYA					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/18/13	19:25	20:24	**50:51**	**48**	**50**	**623**	**624**	**28**	**37**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	26:32	28:39	2:07	3	3	7	7	0	1
2	29:02	31:39	2:37	5	5	45	45	1	2
3	32:04	40:21	8:17	6	6	108	109	4	4
4	40:43	42:29	1:46	2	2	27	27	2	3
5	42:57	44:39	1:42	0	0	25	25	1	1
6	45:02	46:57	1:55	1	3	24	24	2	2
7	47:16	48:59	1:43	0	0	23	23	2	3
8	49:27	51:08	1:41	1	1	28	28	0	1
9	51:32	53:18	1:46	2	2	15	15	1	1
10	53:43	55:28	1:45	1	1	23	23	0	1
11	55:57	57:39	1:42	0	0	20	20	2	2
12	58:05	59:48	1:43	2	2	22	22	0	0
13	0:10	0:11	0:01	0	0	0	0	0	0
14	0:00	1:40	1:40	1	1	20	20	0	1
15	2:03	10:20	8:17	9	9	85	85	5	5
16	10:42	12:30	1:48	2	2	11	11	1	2
17	12:58	14:42	1:44	2	2	18	18	1	2
18	15:39	17:11	1:32	4	4	31	31	0	0
19	17:26	21:10	3:44	0	0	51	51	4	4
20	21:31	23:20	1:49	4	4	20	20	1	1
21	23:42	25:14	1:32	3	3	20	20	1	1

Table C.44: Intersection #6 07:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/26/13	07:00	07:59	**39:03**	**88**	**90**	**1757**	**1757**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	2:07	2:07	2	2	66	66	0	0
2	2:43	5:17	2:34	1	1	91	91	0	0
3	5:59	8:27	2:28	4	4	84	84	0	0
4	9:00	11:37	2:37	2	3	108	108	0	0
5	12:25	14:47	2:22	3	4	87	87	0	0
6	15:22	17:57	2:35	3	3	99	99	0	0
7	18:32	21:07	2:35	6	6	82	82	0	0
8	21:55	24:17	2:22	2	2	96	96	0	0
9	25:04	27:27	2:23	5	5	90	90	0	0
10	28:05	30:37	2:32	2	2	102	102	0	0
11	31:21	33:47	2:26	5	5	104	104	0	0
12	34:24	36:57	2:33	7	7	95	95	0	0
13	37:45	40:07	2:22	7	7	94	94	0	0
14	40:55	43:17	2:22	4	4	93	93	0	0
15	44:05	46:27	2:22	9	9	95	95	0	0
16	47:15	49:38	2:23	4	4	81	81	0	0
17	50:26	52:47	2:21	6	6	100	100	0	0
18	53:35	55:58	2:23	10	10	86	86	0	0
19	56:45	59:07	2:22	6	6	87	87	0	0
20	0:03	0:18	0:15	0	0	17	17	0	0

Table C.45: Intersection #6 08:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Wed 6/26/13	08:00	08:59	**45:19**	**93**	**98**	**1680**	**1680**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:19	2:30	2:11	5	5	53	53	0	0
2	3:19	5:40	2:21	6	6	81	81	0	0
3	6:28	8:50	2:22	4	4	88	88	0	0
4	9:38	12:00	2:22	8	8	82	82	0	0
5	12:40	15:10	2:30	4	5	88	88	0	0
6	15:59	18:20	2:21	2	2	95	95	0	0
7	19:03	21:30	2:27	5	6	86	86	0	0
8	22:10	24:41	2:31	2	2	106	106	0	0
9	25:28	27:50	2:22	5	5	93	93	0	0
10	28:31	31:01	2:30	5	5	103	103	0	0
11	31:48	34:11	2:23	5	6	106	106	0	0
12	34:59	37:20	2:21	6	6	104	104	0	0
13	38:08	40:30	2:22	3	3	104	104	0	0
14	41:19	43:42	2:23	8	8	95	95	0	0
15	44:27	46:51	2:24	3	4	80	80	0	0
16	47:35	50:00	2:25	5	5	83	83	0	0
17	50:48	53:10	2:22	8	9	73	73	0	0
18	53:59	56:20	2:21	5	5	93	93	0	0
19	57:09	59:30	2:21	4	4	67	67	0	0

Table C.46: Intersection #6 12:20 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/27/13	12:20	12:59	**33:34**	**44**	**56**	**960**	**960**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	5:13	5:13	5	8	157	157	0	0
2	5:58	8:03	2:05	1	1	79	79	0	0
3	8:21	10:54	2:33	3	4	56	56	0	0
4	11:42	13:43	2:01	2	3	67	67	0	0
5	13:58	16:34	2:36	4	4	62	62	0	0
6	17:01	19:23	2:22	3	3	68	68	0	0
7	19:53	22:14	2:21	3	4	68	68	0	0
8	22:34	25:07	2:33	4	4	65	65	0	0
9	25:28	27:54	2:26	4	4	77	77	0	0
10	28:20	30:43	2:23	2	2	66	66	0	0
11	31:09	33:33	2:24	3	3	59	59	0	0
12	34:19	36:24	2:05	6	10	75	75	0	0
13	36:48	39:13	2:25	4	5	55	55	0	0
14	0:13	0:20	0:07	0	1	6	6	0	0

Table C.47: Intersection #6 13:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/27/13	13:00	13:59	**48:03**	**72**	**84**	**1471**	**1471**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:21	2:20	1:59	4	4	61	61	0	0
2	2:40	5:10	2:30	3	3	64	64	0	0
3	5:54	8:00	2:06	0	1	78	78	0	0
4	8:26	10:50	2:24	2	2	56	56	0	0
5	11:32	14:04	2:32	1	2	94	94	0	0
6	14:20	16:32	2:12	3	3	83	83	0	0
7	16:52	19:20	2:28	2	2	57	57	0	0
8	20:05	22:11	2:06	5	6	60	60	0	0
9	22:55	25:00	2:05	2	3	86	86	0	0
10	25:43	27:51	2:08	3	4	72	72	0	0
11	28:35	30:41	2:06	4	5	64	64	0	0
12	31:06	33:31	2:25	6	6	63	63	0	0
13	33:57	36:21	2:24	4	4	68	68	0	0
14	37:07	39:11	2:04	1	3	74	74	0	0
15	39:40	42:01	2:21	4	4	83	83	0	0
16	42:47	44:51	2:04	1	2	70	70	0	0
17	45:19	47:41	2:22	3	3	40	40	0	0
18	48:25	50:30	2:05	6	7	73	73	0	0
19	51:13	53:21	2:08	4	5	79	79	0	0
20	53:38	56:12	2:34	7	7	55	55	0	0
21	56:58	59:01	2:03	5	6	62	62	0	0
22	59:23	60:20	0:57	2	2	29	29	0	0

Table C.48: Intersection #6 16:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/27/13	16:00	16:59	**47:35**	**123**	**165**	**1483**	**1483**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:11	0:11	0	4	3	3	0	0
2	0:47	3:21	2:34	4	4	56	56	0	0
3	3:52	6:32	2:40	6	8	84	84	0	0
4	7:01	9:41	2:40	8	11	82	82	0	0
5	10:32	12:52	2:20	8	11	82	82	0	0
6	13:43	16:02	2:19	9	13	74	74	0	0
7	16:52	19:12	2:20	6	13	77	77	0	0
8	20:14	22:22	2:08	2	2	72	72	0	0
9	22:52	25:32	2:40	11	11	63	63	0	0
10	26:02	28:42	2:40	6	8	73	73	0	0
11	29:30	31:52	2:22	5	5	70	70	0	0
12	32:22	35:02	2:40	6	8	89	89	0	0
13	35:32	38:12	2:40	5	7	77	77	0	0
14	38:55	41:21	2:26	5	9	91	91	0	0
15	42:09	44:32	2:23	4	5	76	76	0	0
16	45:16	47:42	2:26	4	8	86	86	0	0
17	48:16	50:52	2:36	6	10	70	70	0	0
18	51:41	54:02	2:21	10	10	80	80	0	0
19	54:27	57:12	2:45	6	6	86	86	0	0
20	57:35	59:59	2:24	12	12	92	92	0	0

Table C.49: Intersection #6 17:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/27/13	17:00	17:59	**45:00**	**143**	**172**	**1444**	**1451**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:23	0:23	2	2	3	3	0	0
2	0:51	3:32	2:41	4	7	74	74	0	0
3	0:38	3:00	2:22	5	5	95	95	0	0
4	3:30	4:33	1:03	0	1	38	38	0	0
5	4:50	5:21	0:31	1	1	10	10	0	0
6	5:39	8:19	2:40	8	9	72	72	0	0
7	9:02	12:04	3:02	0	14	123	123	0	0
8	13:10	15:40	2:30	7	11	92	92	0	0
9	16:31	18:50	2:19	6	6	88	88	0	0
10	19:18	22:00	2:42	10	13	76	76	0	0
11	22:49	25:10	2:21	9	9	82	89	0	0
12	25:38	26:14	0:36	4	4	15	15	0	0
13	26:43	29:23	2:40	13	13	81	81	0	0
14	29:40	32:01	2:21	13	15	79	79	0	0
15	32:34	34:43	2:09	2	3	77	77	0	0
16	35:25	37:50	2:25	13	13	93	93	0	0
17	0:00	1:19	1:19	6	6	33	33	0	0
18	1:49	4:29	2:40	14	14	75	75	0	0
19	4:53	7:38	2:45	9	9	100	100	0	0
20	8:01	10:49	2:48	12	12	54	54	0	0
21	11:14	13:57	2:43	5	5	84	84	0	0

Table C.50: Intersection #6 18:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Thu 6/27/13	18:00	18:59	**49:02**	**87**	**106**	**1348**	**1348**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:30	3:10	2:40	9	9	88	88	0	0
2	3:25	6:19	2:54	7	10	61	61	0	0
3	7:09	9:30	2:21	2	2	72	72	0	0
4	10:00	12:40	2:40	9	9	78	78	0	0
5	13:09	15:49	2:40	10	13	81	81	0	0
6	16:30	19:00	2:30	3	6	66	66	0	0
7	19:50	22:09	2:19	3	4	69	69	0	0
8	22:55	25:19	2:24	3	3	76	76	0	0
9	25:38	28:30	2:52	0	0	71	71	0	0
10	28:51	31:40	2:49	4	3	71	71	0	0
11	32:10	34:50	2:40	5	5	82	82	0	0
12	35:21	38:00	2:39	5	6	54	54	0	0
13	38:36	41:10	2:34	3	6	87	87	0	0
14	42:00	44:20	2:20	5	6	59	59	0	0
15	45:05	47:30	2:25	5	7	80	80	0	0
16	48:12	50:40	2:28	5	6	71	71	0	0
17	50:57	53:50	2:53	3	3	67	67	0	0
18	54:17	57:00	2:43	2	4	66	66	0	0
19	57:48	59:59	2:11	4	4	49	49	0	0

Table C.51: Intersection #6 19:00 Data Collection Table

Flashing Yellow Arrow 6+ Left Turn Data Collection									
Approach	**Major Street:** SR 50			**Speed:** 45 MPH					
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:** 4-Leg					
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** On-Ramp/Channelized Right Turn					
Date	**Start**	**End**	**Totals for Values Below for Collection Period**						
Tue 6/18/13	19:00	19:59	**50:51**	**63**	**73**	**1149**	**1149**	**0**	**0**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turns**		**Opposing**			
				PL	**Total**	**TH**	**Total**	**RT**	**Total**
1	0:00	0:01	0:01	0	0	0	0	0	0
2	0:00	0:05	0:05	0	0	0	0	0	0
3	0:30	2:28	1:58	9	10	61	61	0	0
4	3:03	4:46	1:43	5	6	43	43	0	0
5	5:22	7:07	1:45	1	1	53	53	0	0
6	7:22	9:54	2:32	4	7	57	57	0	0
7	10:38	12:44	2:06	5	5	52	52	0	0
8	13:00	15:34	2:34	3	3	40	40	0	0
9	15:49	18:24	2:35	1	1	64	64	0	0
10	18:41	21:15	2:34	4	4	51	51	0	0
11	21:31	24:04	2:33	2	2	53	53	0	0
12	24:25	27:05	2:40	1	1	57	57	0	0
13	27:20	29:44	2:24	2	3	47	47	0	0
14	30:28	32:34	2:06	1	2	56	56	0	0
15	33:10	35:24	2:14	2	2	60	60	0	0
16	35:40	38:14	2:34	1	1	62	62	0	0
17	38:36	41:04	2:28	5	5	49	49	0	0
18	41:22	43:54	2:32	1	1	46	46	0	0
19	44:08	46:44	2:36	3	3	77	77	0	0
20	47:07	49:34	2:27	2	3	47	47	0	0
21	50:12	52:24	2:12	4	5	49	49	0	0
22	52:52	55:14	2:22	4	5	41	41	0	0
23	55:45	58:04	2:19	3	3	48	48	0	0
24	58:22	59:53	1:31	0	0	36	36	0	0

Table C.52: Intersection #7 NBL 06:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
NBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** Tourist		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	06:00	06:59	**45:30**	**90**	**89**	**88**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:04	1:15	1:11	2	0	0
2	1:41	3:09	1:28	0	3	3
3	3:22	5:15	1:53	0	0	0
4	5:25	6:13	0:48	0	0	1
5	6:29	7:01	0:32	0	0	0
6	7:19	8:29	1:10	0	4	0
7	8:47	9:37	0:50	1	4	0
8	9:48	11:57	2:09	2	6	1
9	12:10	12:44	0:34	1	0	1
10	13:00	17:29	4:29	3	7	6
11	17:57	19:30	1:33	1	4	0
12	19:51	20:34	0:43	1	2	2
13	20:47	21:11	0:24	0	0	0
14	21:39	23:59	2:20	1	5	3
15	24:26	26:15	1:49	0	2	4
16	26:32	27:52	1:20	0	3	2
17	28:06	29:53	1:47	3	1	4
18	30:11	31:54	1:43	3	0	2
19	32:06	33:21	1:15	3	3	0
20	33:40	33:59	0:19	0	0	1
21	34:12	36:42	2:30	4	4	4
22	37:08	38:01	0:53	3	2	2
23	38:19	38:49	0:30	5	0	1
24	39:26	41:56	2:30	5	3	9
25	42:11	42:33	0:22	3	0	1
26	42:59	43:26	0:27	2	1	3
27	43:58	44:25	0:27	2	4	5
28	44:54	45:14	0:20	0	2	1
29	45:28	46:19	0:51	7	1	2
30	47:04	47:28	0:24	1	4	0
31	47:43	48:12	0:29	3	2	6
32	48:51	49:06	0:15	3	1	0
33	49:25	49:56	0:31	4	1	0
34	50:27	51:00	0:33	1	3	2
35	51:57	52:23	0:26	1	3	1
36	52:40	53:32	0:52	3	0	5
37	53:45	54:12	0:27	3	0	1
38	54:29	54:49	0:20	3	0	2
39	55:02	56:00	0:58	5	5	5
40	56:17	57:22	1:05	4	4	3
41	57:44	59:47	2:03	7	5	5

Table C.53: Intersection #7 NBL 07:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	Major Street: International Drive South			Speed: 45 MPH		
NBL	Minor Street: Vineland Avenue			Geometry: 4-Leg		
Opposing Lanes: 3 Lanes		Land Use: Commercial		Criteria: Tourist		
Date	Start	End	Totals for Values Below for Collection Period			
Sun 11/18/12	07:00	07:59	38:11	110	176	132
Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing TH	Opposing RT
1	0:04	1:05	1:01	3	4	2
2	1:22	2:52	1:30	3	4	2
3	3:05	3:31	0:26	0	3	0
4	3:45	4:11	0:26	3	1	1
5	4:25	4:44	0:19	0	3	3
6	5:08	5:27	0:19	0	1	3
7	5:40	6:59	1:19	1	5	5
8	7:14	7:38	0:24	0	5	1
9	7:51	8:40	0:49	3	3	1
10	9:02	9:44	0:42	0	1	1
11	10:01	11:03	1:02	2	2	4
12	11:16	11:43	0:27	1	1	1
13	11:57	12:36	0:39	0	0	2
14	12:49	14:20	1:31	4	6	4
15	14:36	15:51	1:15	1	3	1
16	16:04	16:32	0:28	0	5	2
17	16:51	17:13	0:22	1	0	0
18	17:28	18:12	0:44	2	2	2
19	18:25	19:07	0:42	0	3	1
20	19:19	19:56	0:37	0	0	1
21	20:12	20:42	0:30	0	0	1
22	20:54	21:37	0:43	0	3	2
23	21:51	22:29	0:38	1	2	4
24	23:06	23:27	0:21	1	3	3
25	23:39	24:05	0:26	0	2	1
26	24:28	25:13	0:45	3	2	0
27	25:26	26:03	0:37	2	3	0
28	26:17	26:55	0:38	1	3	2
29	27:12	27:31	0:19	0	3	4
30	27:46	29:31	1:45	3	4	7
31	29:44	30:33	0:49	0	2	3
32	30:50	31:12	0:22	2	1	0
33	31:27	32:27	1:00	8	3	2
34	32:43	33:03	0:20	1	2	1
35	33:18	33:36	0:18	2	1	2
36	34:47	35:43	0:56	4	7	1
37	36:06	36:33	0:27	2	1	0
38	36:46	37:20	0:34	1	5	3
39	37:37	38:15	0:38	4	6	5
40	38:28	40:27	1:59	9	8	7
41	40:41	41:24	0:43	7	2	2
42	41:57	42:25	0:28	1	5	4
43	42:38	43:11	0:33	0	0	3
44	43:28	43:53	0:25	2	1	0
45	44:17	45:00	0:43	9	4	2
46	46:02	46:26	0:24	1	5	2
47	47:00	47:54	0:54	4	7	5
48	48:09	48:33	0:24	1	3	0
49	49:03	49:24	0:21	1	3	6
50	50:02	50:25	0:23	0	1	4
51	51:42	52:14	0:32	1	8	5
52	52:47	53:14	0:27	0	5	5
53	53:49	54:25	0:36	6	3	0
54	55:06	55:32	0:26	5	1	2
55	56:03	56:22	0:19	1	1	2
56	56:57	57:19	0:22	1	4	1
57	57:38	58:03	0:25	1	4	2
58	58:22	59:01	0:39	1	6	2

Table C.54: Intersection #7 NBL 08:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	Major Street: International Drive South			Speed:	45 MPH	
NBL	Minor Street: Vineland Avenue			Geometry:	4-Leg	
Opposing Lanes:	3 Lanes	Land Use:	Commercial	Criteria:	Tourist	
Date	Start	End	Totals for Values Below for Collection Period			
Sun 11/18/12	08:00	08:59	34:11	66	239	121
Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing TH	Opposing RT
1	0:21	0:41	0:20	1	1	3
2	0:52	1:16	0:24	1	0	1
3	1:46	2:20	0:34	1	4	2
4	2:38	3:39	1:01	4	6	2
5	3:57	4:20	0:23	0	2	0
6	4:34	5:05	0:31	0	1	0
7	5:18	6:35	1:17	3	2	0
8	6:51	8:14	1:23	1	3	3
9	8:29	8:52	0:23	1	3	0
10	9:05	9:31	0:26	3	1	2
11	9:51	10:22	0:31	0	1	0
12	10:38	11:18	0:40	1	4	2
13	11:30	11:51	0:21	0	4	0
14	12:04	12:32	0:28	0	4	2
15	12:53	13:42	0:49	1	4	1
16	14:07	14:52	0:45	0	2	5
17	15:05	15:49	0:44	1	4	3
18	16:07	16:32	0:25	1	2	0
19	16:56	17:32	0:36	0	3	0
20	17:46	18:38	0:52	1	6	0
21	18:54	19:26	0:32	0	1	2
22	19:40	20:00	0:20	0	1	1
23	20:33	20:58	0:25	1	3	5
24	21:29	21:53	0:24	0	5	0
25	22:19	22:42	0:23	0	5	7
26	23:00	23:23	0:23	1	7	1
27	23:52	24:11	0:19	3	0	1
28	24:25	24:49	0:24	0	3	1
29	25:02	25:44	0:42	0	9	3
30	25:58	26:17	0:19	3	2	3
31	26:31	27:00	0:29	1	3	2
32	27:13	27:50	0:37	1	4	5
33	28:43	29:09	0:26	0	11	4
34	29:52	30:11	0:19	0	4	1
35	30:27	30:59	0:32	0	2	3
36	31:53	32:13	0:20	4	1	1
37	32:31	33:23	0:52	3	2	5
38	33:36	33:55	0:19	0	1	0
39	34:15	34:43	0:28	2	0	2
40	35:35	36:01	0:26	0	6	0
41	36:18	36:41	0:23	0	2	3
42	36:58	37:18	0:20	0	2	0
43	37:35	37:56	0:21	0	2	0
44	38:14	38:34	0:20	2	2	0
45	38:47	39:07	0:20	2	3	2
46	39:20	39:52	0:32	1	1	3
47	40:17	40:38	0:21	0	1	0
48	41:09	41:34	0:25	1	2	3
49	41:49	42:09	0:20	1	1	0
50	42:23	43:17	0:54	4	10	3
51	43:47	44:10	0:23	0	4	3
52	44:29	45:00	0:31	1	8	3
53	45:44	46:16	0:32	0	6	2
54	47:08	47:28	0:20	0	5	0
55	47:47	48:07	0:20	0	2	2
56	48:29	49:13	0:44	1	9	1
57	49:27	49:59	0:32	3	8	3
58	50:49	51:12	0:23	3	7	3
59	51:25	51:59	0:34	0	6	2
60	52:14	52:41	0:27	0	3	1
61	52:50	53:18	0:28	3	3	3
62	54:05	54:25	0:20	0	3	1
63	54:59	55:39	0:40	0	6	4
64	56:23	57:05	0:42	1	5	2
65	57:36	58:03	0:27	2	4	2
66	58:37	58:57	0:20	2	2	1
67	59:21	59:40	0:19	0	4	1
68	59:58	59:59	0:01	0	1	0

Table C.55: Intersection #7 NBL 09:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	Major Street: International Drive South			Speed: 45 MPH		
NBL	Minor Street: Vineland Avenue			Geometry: 4-Leg		
Opposing Lanes: 3 Lanes		Land Use: Commercial		Criteria: Tourist		
Date	Start	End	Totals for Values Below for Collection Period			
Sun 11/18/12	09:00	09:59	29:36	65	336	253
Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing	
					TH	RT
1	0:00	1:09	1:09	0	0	0
2	1:22	1:45	0:23	1	2	3
3	2:01	2:26	0:25	1	3	0
4	2:43	3:10	0:27	3	3	3
5	3:26	4:03	0:37	0	5	3
6	4:17	4:48	0:31	0	2	6
7	5:17	6:09	0:52	1	10	2
8	6:21	6:41	0:20	0	5	2
9	6:58	7:34	0:36	1	6	4
10	8:08	8:36	0:28	0	8	5
11	9:47	10:42	0:55	1	15	10
12	11:22	11:58	0:36	0	7	7
13	12:17	12:41	0:24	0	3	4
14	13:08	13:28	0:20	1	4	3
15	13:57	14:18	0:21	0	2	2
16	14:34	15:05	0:31	3	5	3
17	15:54	16:15	0:21	0	11	4
18	16:35	17:29	0:54	4	11	8
19	18:08	18:32	0:24	1	5	2
20	18:51	19:19	0:28	1	1	2
21	19:51	20:12	0:21	1	5	5
22	21:04	21:40	0:36	1	8	4
23	22:14	22:36	0:22	1	6	4
24	22:56	23:40	0:44	3	5	6
25	23:54	24:19	0:25	1	5	1
26	24:41	25:27	0:46	0	9	8
27	25:49	26:15	0:26	1	6	3
28	27:02	27:22	0:20	0	4	4
29	27:59	28:36	0:37	0	6	6
30	29:36	29:59	0:23	2	7	3
31	30:45	31:11	0:26	1	9	3
32	31:55	32:40	0:45	1	15	7
33	33:15	33:47	0:32	0	5	7
34	34:33	35:13	0:40	1	4	5
35	35:42	36:05	0:23	0	5	6
36	36:42	37:02	0:20	0	7	2
37	37:17	37:41	0:24	1	2	1
38	38:21	39:09	0:48	5	7	6
39	39:43	40:07	0:24	0	5	0
40	40:37	40:59	0:22	0	3	5
41	41:15	42:02	0:47	4	9	5
42	42:47	43:40	0:53	1	10	10
43	44:34	44:58	0:24	1	6	5
44	45:54	46:48	0:54	1	14	18
45	47:37	47:57	0:20	3	2	2
46	48:28	49:23	0:55	2	10	8
47	50:03	50:30	0:27	7	3	3
48	51:23	52:16	0:53	2	13	8
49	53:14	54:04	0:50	2	8	11
50	55:01	55:23	0:22	2	7	5
51	56:13	56:47	0:34	0	7	10
52	57:29	58:02	0:33	2	14	5
53	58:42	59:20	0:38	1	2	4

Table C.56: Intersection #7 NBL 12:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
NBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** Tourist		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	12:00	12:59	**27:30**	**101**	**320**	**262**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:00	0:46	0:46	0	3	0
2	1:37	2:20	0:43	0	10	10
3	3:27	4:20	0:53	0	14	11
4	5:01	5:55	0:54	2	11	9
5	6:55	7:49	0:54	4	10	4
6	8:40	9:34	0:54	5	11	9
7	10:35	11:24	0:49	3	9	9
8	12:17	13:04	0:47	5	6	7
9	13:27	14:21	0:54	4	9	5
10	15:44	16:29	0:45	0	12	14
11	17:37	18:20	0:43	4	12	9
12	19:26	20:16	0:50	1	14	5
13	21:15	22:00	0:45	3	11	9
14	22:39	23:24	0:45	1	8	11
15	24:22	25:06	0:44	2	10	12
16	25:40	26:26	0:46	1	4	4
17	27:26	28:06	0:40	4	5	6
18	28:55	29:51	0:56	2	6	8
19	30:47	31:27	0:40	0	6	11
20	32:35	33:21	0:46	4	10	3
21	34:09	34:55	0:46	0	12	10
22	36:02	36:42	0:40	3	12	1
23	37:28	38:23	0:55	1	13	6
24	39:30	40:17	0:47	10	2	3
25	41:43	42:39	0:56	3	13	11
26	43:47	44:40	0:53	7	14	12
27	45:38	46:22	0:44	1	7	11
28	47:28	48:25	0:57	3	15	15
29	49:33	50:17	0:44	9	8	3
30	51:23	52:06	0:43	4	7	5
31	53:06	54:01	0:55	2	8	9
32	54:48	55:28	0:40	3	5	0
33	56:12	57:04	0:52	7	8	6
34	57:37	58:06	0:29	2	5	1
35	58:58	59:33	0:35	1	10	13

Table C.57: Intersection #7 NBL 13:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
NBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** Tourist		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	13:00	13:59	**25:42**	**88**	**341**	**209**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:25	1:07	0:42	2	3	0
2	2:25	2:47	0:22	0	11	3
3	3:52	4:27	0:35	0	11	13
4	4:59	5:55	0:56	3	9	9
5	6:57	7:50	0:53	3	13	8
6	9:11	9:57	0:46	0	3	6
7	10:43	11:26	0:43	1	17	4
8	12:19	13:00	0:41	0	8	7
9	13:54	14:39	0:45	2	8	5
10	15:21	16:18	0:57	1	7	3
11	17:24	18:13	0:49	2	9	10
12	19:16	19:59	0:43	2	13	7
13	20:30	20:55	0:25	2	3	1
14	21:29	21:54	0:25	2	6	6
15	22:36	22:58	0:22	1	5	0
16	23:46	24:09	0:23	2	9	4
17	24:57	25:31	0:34	2	6	5
18	26:16	26:42	0:26	3	3	3
19	27:20	28:02	0:42	0	8	8
20	29:07	29:49	0:42	1	14	11
21	30:38	31:08	0:30	1	10	5
22	32:04	32:31	0:27	1	5	4
23	33:05	33:42	0:37	1	11	3
24	34:25	34:48	0:23	2	6	3
25	35:26	36:18	0:52	5	10	7
26	36:55	37:32	0:37	5	2	2
27	38:21	38:48	0:27	0	10	6
28	39:30	40:24	0:54	6	13	6
29	41:39	42:33	0:54	2	12	11
30	43:38	44:21	0:43	2	7	5
31	45:08	45:50	0:42	2	12	5
32	46:09	47:06	0:57	5	9	3
33	47:29	48:20	0:51	4	10	6
34	49:49	50:13	0:24	2	4	7
35	51:05	51:30	0:25	3	4	4
36	52:22	52:40	0:18	3	2	0
37	52:55	53:53	0:58	7	11	4
38	54:51	55:23	0:32	4	8	4
39	56:55	57:30	0:35	1	20	8
40	57:50	58:14	0:24	2	3	0
41	58:48	59:09	0:21	1	6	3

Table C.58: Intersection #7 NBL 14:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	14:00	14:59	**24:17**	**65**	**323**	**230**

Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing	
					TH	RT
1	0:02	0:26	0:24	2	3	2
2	1:08	1:39	0:31	1	3	2
3	2:50	3:18	0:28	0	14	5
4	4:17	4:44	0:27	0	7	4
5	5:42	6:14	0:32	0	7	2
6	7:03	7:33	0:30	1	4	4
7	8:10	9:08	0:58	3	13	4
8	9:52	10:12	0:20	1	4	0
9	11:13	11:47	0:34	3	9	6
10	12:56	13:19	0:23	0	5	6
11	14:12	14:38	0:26	0	12	2
12	15:26	15:52	0:26	2	8	1
13	16:55	17:17	0:22	0	6	1
14	17:46	18:37	0:51	7	9	3
15	20:04	20:37	0:33	0	6	9
16	21:30	22:03	0:33	2	8	9
17	23:21	24:06	0:45	2	10	6
18	25:05	25:50	0:45	0	8	14
19	26:33	26:54	0:21	2	9	2
20	27:48	28:32	0:44	1	14	9
21	29:38	30:00	0:22	0	5	2
22	30:34	31:10	0:36	1	8	4
23	32:02	32:52	0:50	2	9	13
24	33:42	34:02	0:20	1	7	5
25	35:01	35:30	0:29	3	7	2
26	36:33	37:24	0:51	0	13	17
27	38:53	39:42	0:49	0	11	15
28	40:38	41:18	0:40	5	4	3
29	41:54	42:37	0:43	2	8	5
30	43:34	44:29	0:55	2	9	15
31	45:31	46:26	0:55	4	16	6
32	47:07	47:50	0:43	4	4	5
33	48:35	49:10	0:35	7	3	9
34	50:11	50:53	0:42	0	12	6
35	51:32	52:16	0:44	1	10	7
36	53:18	54:02	0:44	1	7	4
37	54:54	55:41	0:47	3	11	2
38	56:50	57:34	0:44	1	11	10
39	58:29	59:24	0:55	1	9	9

Table C.59: Intersection #7 NBL 16:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	16:00	16:59	**24:42**	**51**	**385**	**239**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:28	1:04	0:36	1	5	3
2	2:07	2:41	0:34	1	11	3
3	3:36	3:59	0:23	0	3	6
4	4:28	5:00	0:32	2	9	7
5	5:51	6:34	0:43	0	15	7
6	7:38	7:58	0:20	0	4	5
7	8:43	9:30	0:47	2	11	11
8	10:09	10:39	0:30	2	11	5
9	11:38	12:01	0:23	0	8	3
10	13:03	13:37	0:34	1	5	9
11	14:24	14:45	0:21	1	7	2
12	15:20	15:42	0:22	3	5	4
13	16:41	17:18	0:37	0	3	6
14	18:07	18:48	0:41	1	7	9
15	19:51	20:17	0:26	2	11	2
16	20:42	21:37	0:55	6	7	5
17	22:17	22:41	0:24	0	2	0
18	23:30	24:14	0:44	2	10	6
19	25:49	26:41	0:52	2	14	2
20	27:49	28:24	0:35	2	12	4
21	29:13	29:56	0:43	2	11	7
22	31:02	31:39	0:37	0	13	3
23	32:59	33:35	0:36	0	17	6
24	34:43	35:26	0:43	2	14	9
25	36:12	37:05	0:53	3	6	15
26	38:02	38:36	0:34	2	6	5
27	39:41	40:04	0:23	1	10	6
28	41:19	42:01	0:42	3	6	7
29	43:04	44:01	0:57	0	17	9
30	45:08	46:04	0:56	2	19	11
31	47:11	47:39	0:28	2	10	8
32	48:05	48:57	0:52	2	14	9
33	49:59	50:45	0:46	0	11	10
34	52:27	53:17	0:50	0	20	11
35	54:09	54:52	0:43	1	14	5
36	55:17	56:03	0:46	3	11	3
37	56:35	57:34	0:59	0	9	10
38	58:25	59:20	0:55	0	17	6

Table C.60: Intersection #7 NBL 17:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	17:00	17:59	**23:27**	**43**	**409**	**230**

Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing	
					TH	RT
1	0:30	1:12	0:42	2	8	10
2	2:02	2:51	0:49	3	12	7
3	3:35	4:03	0:28	1	12	8
4	4:20	5:15	0:55	1	3	1
5	6:16	6:56	0:40	1	13	7
6	8:01	8:58	0:57	0	14	11
7	9:56	10:39	0:43	0	5	12
8	11:28	11:50	0:22	0	13	1
9	12:24	13:01	0:37	0	9	7
10	13:40	14:07	0:27	9	1	0
11	14:24	15:22	0:58	2	16	7
12	16:30	16:58	0:28	1	5	7
13	17:58	18:19	0:21	2	7	3
14	19:02	19:55	0:53	3	9	7
15	21:03	21:24	0:21	1	8	1
16	23:06	23:26	0:20	0	7	5
17	24:58	25:39	0:41	3	13	5
18	27:06	27:32	0:26	0	16	3
19	28:22	29:02	0:40	1	11	4
20	30:12	30:42	0:30	0	8	9
21	31:44	32:22	0:38	0	12	8
22	33:20	33:42	0:22	0	9	6
23	34:41	35:00	0:19	0	8	5
24	36:03	36:57	0:54	0	12	13
25	37:40	38:00	0:20	1	4	4
26	38:46	39:15	0:29	0	11	1
27	39:51	40:34	0:43	2	13	4
28	41:17	41:41	0:24	0	5	6
29	43:37	44:10	0:33	1	12	3
30	44:56	45:29	0:33	2	11	4
31	46:15	46:52	0:37	0	18	2
32	48:13	48:58	0:45	0	25	9
33	49:42	50:03	0:21	0	12	5
34	51:00	51:56	0:56	0	16	15
35	52:58	53:21	0:23	0	6	6
36	53:57	54:37	0:40	3	16	5
37	55:25	56:07	0:42	4	8	2
38	57:27	58:22	0:55	0	21	17
39	59:24	59:59	0:35	0	0	0

Table C.61: Intersection #7 NBL 18:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes: 3 Lanes		**Land Use:** Tourist		**Criteria:**	Ped/Wide Geometry	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	18:00	18:59	**23:42**	**32**	**345**	**225**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	1:15	1:57	0:42	0	6	3
2	3:04	3:59	0:55	1	12	15
3	5:13	5:34	0:21	0	13	3
4	6:27	7:04	0:37	0	12	9
5	8:11	8:31	0:20	0	8	5
6	9:07	9:30	0:23	0	6	5
7	10:13	10:42	0:29	1	5	3
8	11:30	11:55	0:25	0	4	5
9	12:54	13:48	0:54	0	14	15
10	14:51	15:22	0:31	0	11	5
11	16:25	16:56	0:31	0	13	3
12	17:44	18:09	0:25	1	6	5
13	18:48	19:12	0:24	1	7	6
14	19:42	20:04	0:22	0	3	4
15	20:57	21:18	0:21	0	7	2
16	22:09	22:37	0:28	0	3	1
17	23:22	23:46	0:24	5	2	1
18	25:05	25:24	0:19	0	12	2
19	26:18	27:04	0:46	0	7	9
20	28:10	28:39	0:29	0	6	6
21	29:12	29:44	0:32	0	5	3
22	30:29	30:52	0:23	0	0	4
23	31:29	32:18	0:49	2	15	6
24	32:57	33:39	0:42	0	14	6
25	34:27	34:57	0:30	4	6	4
26	35:20	35:39	0:19	0	2	1
27	36:23	37:04	0:41	2	9	4
28	37:25	38:31	1:06	0	17	9
29	39:28	40:02	0:34	2	10	9
30	40:40	41:13	0:33	0	12	6
31	42:00	42:19	0:19	0	6	6
32	43:20	43:45	0:25	0	5	2
33	44:08	44:35	0:27	2	5	3
34	45:31	45:51	0:20	0	9	3
35	46:21	46:47	0:26	1	5	5
36	47:29	47:48	0:19	1	4	5
37	48:17	48:36	0:19	1	4	4
38	49:10	49:29	0:19	1	6	1
39	49:55	50:20	0:25	1	3	1
40	50:41	51:21	0:40	3	4	4
41	52:04	52:38	0:34	1	7	8
42	53:30	54:25	0:55	1	12	6
43	55:27	56:08	0:41	1	7	4
44	56:42	57:10	0:28	0	8	9
45	57:42	58:13	0:31	0	8	0
46	58:47	59:06	0:19	0	5	5

Table C.62: Intersection #7 NBL 19:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
NBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Tourist		**Criteria:** Ped/Wide Geometry		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	19:00	19:59	**23:49**	**47**	**342**	**196**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:02	0:25	0:23	0	7	5
2	1:05	1:26	0:21	1	9	4
3	1:45	2:08	0:23	1	4	3
4	2:31	3:22	0:51	1	6	7
5	4:07	4:48	0:41	2	4	3
6	5:33	6:09	0:36	1	10	7
7	7:06	8:00	0:54	1	10	13
8	8:47	9:31	0:44	3	15	5
9	10:45	11:22	0:37	0	14	10
10	12:28	13:22	0:54	4	7	4
11	13:53	14:26	0:33	2	7	8
12	15:07	15:27	0:20	1	4	1
13	16:19	16:50	0:31	0	7	11
14	18:33	18:58	0:25	0	14	6
15	19:44	20:07	0:23	0	9	3
16	20:39	20:58	0:19	1	3	1
17	21:20	21:40	0:20	2	5	1
18	22:12	22:43	0:31	1	2	5
19	22:58	23:25	0:27	3	1	0
20	23:42	24:36	0:54	2	11	1
21	25:05	25:29	0:24	4	3	2
22	26:17	26:37	0:20	1	3	1
23	27:52	28:11	0:19	0	6	0
24	29:22	29:42	0:20	1	8	5
25	30:50	31:24	0:34	0	11	9
26	32:09	32:39	0:30	0	7	3
27	32:57	33:33	0:36	0	8	3
28	34:10	34:37	0:27	1	5	3
29	35:35	36:07	0:32	1	8	3
30	36:49	37:15	0:26	0	6	6
31	37:59	38:20	0:21	1	9	4
32	39:13	39:35	0:22	0	4	3
33	40:07	40:36	0:29	0	8	7
34	41:24	41:55	0:31	0	8	6
35	43:12	43:42	0:30	0	9	1
36	44:11	44:30	0:19	0	10	1
37	44:52	45:20	0:28	2	4	2
38	46:16	46:37	0:21	0	6	6
39	47:23	47:47	0:24	1	6	5
40	49:04	49:46	0:42	0	16	9
41	50:32	50:57	0:25	0	4	1
42	51:39	52:21	0:42	1	4	1
43	53:22	53:41	0:19	0	2	1
44	54:07	54:39	0:32	2	15	5
45	55:40	56:21	0:41	1	6	4
46	57:20	57:44	0:24	2	5	2
47	58:39	59:23	0:44	3	12	5

Table C.63: Intersection #7 NBL 20:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes: 3 Lanes		**Land Use:** Tourist		**Criteria:**	Ped/Wide Geometry	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	20:00	20:59	**23:26**	**60**	**229**	**123**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:26	0:48	0:22	0	11	4
2	1:47	2:12	0:25	1	5	3
3	3:01	3:23	0:22	1	3	0
4	3:56	4:17	0:21	1	4	0
5	5:18	5:39	0:21	0	1	1
6	6:25	6:47	0:22	0	7	0
7	7:13	7:42	0:29	0	2	2
8	8:26	9:05	0:39	2	9	5
9	9:53	10:12	0:19	2	1	2
10	10:26	10:52	0:26	1	0	1
11	11:42	12:26	0:44	2	4	6
12	13:02	13:21	0:19	0	6	4
13	13:54	14:34	0:40	2	9	4
14	14:57	15:20	0:23	2	5	2
15	15:43	16:26	0:43	1	3	3
16	17:45	18:24	0:39	2	3	2
17	18:59	19:26	0:27	2	2	4
18	20:03	20:23	0:20	0	5	1
19	21:11	21:37	0:26	0	10	2
20	21:56	22:19	0:23	0	4	0
21	22:40	23:02	0:22	1	2	5
22	23:39	24:08	0:29	1	5	5
23	24:36	24:57	0:21	3	1	2
24	25:31	26:17	0:46	1	5	3
25	26:34	26:56	0:22	1	2	0
26	27:28	28:01	0:33	1	3	3
27	28:11	28:32	0:21	2	0	2
28	29:44	30:31	0:47	4	12	2
29	31:10	31:33	0:23	0	5	2
30	32:21	32:55	0:34	1	7	7
31	33:58	34:18	0:20	0	7	0
32	35:15	35:34	0:19	0	8	2
33	36:17	36:43	0:26	4	1	1
34	37:01	37:41	0:40	2	0	0
35	38:14	38:47	0:33	2	4	3
36	39:33	40:13	0:40	0	2	3
37	40:49	41:19	0:30	1	3	2
38	42:12	42:31	0:19	0	5	2
39	43:20	43:41	0:21	0	7	3
40	44:26	44:51	0:25	1	3	0
41	45:40	46:15	0:35	1	7	8
42	46:50	47:10	0:20	2	5	3
43	47:56	48:23	0:27	2	3	1
44	49:12	49:36	0:24	3	5	2
45	50:22	50:42	0:20	1	4	1
46	51:40	52:07	0:27	0	7	3
47	52:45	53:04	0:19	1	0	4
48	54:12	54:36	0:24	1	6	2
49	55:36	55:58	0:22	1	3	2
50	56:50	57:33	0:43	2	8	4
51	58:25	58:49	0:24	2	5	0

Table C.64: Intersection #7 NBL 21:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	Major Street: International Drive South			Speed: 45 MPH		
NBL	Minor Street: Vineland Avenue			Geometry: 4-Leg		
Opposing Lanes: 3 Lanes		Land Use: Tourist		Criteria: Ped/Wide Geometry		
Date	Start	End	Totals for Values Below for Collection Period			
Sun 11/18/12	21:00	21:59	23:46	28	273	88
Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing TH	Opposing RT
1	1:02	1:27	0:25	1	2	1
2	2:33	2:55	0:22	0	5	0
3	3:42	4:10	0:28	2	6	2
4	4:54	5:22	0:28	2	6	4
5	5:57	6:22	0:25	1	5	0
6	7:07	7:28	0:21	1	6	1
7	8:06	8:37	0:31	0	10	2
8	9:22	9:42	0:20	0	1	1
9	10:04	10:57	0:53	1	5	1
10	12:05	12:56	0:51	0	12	2
11	13:29	13:48	0:19	1	2	1
12	14:15	14:39	0:24	0	3	0
13	15:28	15:55	0:27	1	1	0
14	16:54	17:31	0:37	0	6	7
15	18:03	18:29	0:26	1	4	0
16	19:02	19:26	0:24	0	1	1
17	20:05	20:24	0:19	1	5	0
18	21:13	21:36	0:23	0	5	2
19	22:04	22:29	0:25	0	4	0
20	23:09	23:32	0:23	3	0	0
21	24:04	24:29	0:25	0	6	0
22	25:13	25:37	0:24	1	6	5
23	26:39	26:59	0:20	0	9	2
24	27:26	27:49	0:23	1	2	1
25	28:33	28:53	0:20	0	9	3
26	29:39	30:04	0:25	0	1	0
27	30:27	31:05	0:38	0	8	5
28	31:50	32:11	0:21	0	1	0
29	32:45	33:21	0:36	0	7	3
30	34:07	34:29	0:22	0	6	2
31	35:14	35:45	0:31	0	8	3
32	36:31	37:02	0:31	0	10	7
33	37:55	38:39	0:44	1	7	4
34	39:45	40:10	0:25	1	4	0
35	41:22	41:42	0:20	0	2	2
36	42:26	42:55	0:29	1	5	1
37	44:09	45:04	0:55	0	13	3
38	45:50	46:09	0:19	0	7	2
39	46:46	47:12	0:26	2	7	1
40	47:45	48:33	0:48	0	12	5
41	49:01	49:22	0:21	0	5	0
42	50:13	50:39	0:26	1	4	1
43	51:00	51:22	0:22	0	3	2
44	51:58	52:39	0:41	2	9	2
45	53:21	53:49	0:28	0	9	3
46	54:37	54:56	0:19	1	1	0
47	56:01	56:21	0:20	1	8	1
48	56:54	57:25	0:31	0	7	1
49	57:44	58:06	0:22	0	4	1
50	58:27	58:47	0:20	1	1	0
51	59:00	59:20	0:20	0	2	1
52	59:35	59:58	0:23	0	1	2

Table C.65: Intersection #7 SBL 08:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	Major Street: International Drive South			Speed:	45 MPH	
SBL	Minor Street: Vineland Avenue			Geometry:	4-Leg	
Opposing Lanes: 3 Lanes		Land Use: Commercial		Criteria:	Tourist	
Date	Start	End	Totals for Values Below for Collection Period			
Sun 11/18/12	08:00	08:59	34:11	10	181	9
Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing TH	Opposing RT
1	0:21	0:41	0:20	2	7	0
2	0:52	1:16	0:24	0	1	0
3	1:46	2:20	0:34	0	0	0
4	2:38	3:39	1:01	0	6	0
5	3:57	4:20	0:23	0	0	0
6	4:34	5:05	0:31	0	1	0
7	5:18	6:35	1:17	0	3	0
8	6:51	8:14	1:23	0	2	0
9	8:29	8:52	0:23	0	2	0
10	9:05	9:31	0:26	0	5	0
11	9:51	10:22	0:31	0	3	0
12	10:38	11:18	0:40	0	2	0
13	11:30	11:51	0:21	0	1	0
14	12:04	12:32	0:28	1	1	0
15	12:53	13:42	0:49	0	3	0
16	14:07	14:52	0:45	0	3	0
17	15:05	15:49	0:44	1	4	0
18	16:07	16:32	0:25	0	1	0
19	16:56	17:32	0:36	0	1	1
20	17:46	18:38	0:52	1	3	0
21	18:54	19:26	0:32	0	1	0
22	19:40	20:00	0:20	0	3	0
23	20:33	20:58	0:25	0	3	0
24	21:29	21:53	0:24	0	4	0
25	22:19	22:42	0:23	0	9	1
26	23:00	23:23	0:23	0	0	0
27	23:52	24:11	0:19	0	3	0
28	24:25	24:49	0:24	0	2	0
29	25:02	25:44	0:42	0	4	0
30	25:58	26:17	0:19	0	3	1
31	26:31	27:00	0:29	1	0	1
32	27:13	27:50	0:37	0	3	0
33	28:43	29:09	0:26	0	1	0
34	29:52	30:11	0:19	0	5	0
35	30:27	30:59	0:32	1	4	0
36	31:53	32:13	0:20	0	4	0
37	32:31	33:23	0:52	0	5	1
38	33:36	33:55	0:19	0	1	0
39	34:15	34:43	0:28	0	4	0
40	35:35	36:01	0:26	0	2	0
41	36:18	36:41	0:23	0	2	0
42	36:58	37:18	0:20	0	5	0
43	37:35	37:56	0:21	0	0	0
44	38:14	38:34	0:20	0	6	0
45	38:47	39:07	0:20	0	0	0
46	39:20	39:52	0:32	0	3	1
47	40:17	40:38	0:21	0	2	0
48	41:09	41:34	0:25	0	3	0
49	41:49	42:09	0:20	0	1	0
50	42:23	43:17	0:54	0	1	0
51	43:47	44:10	0:23	0	2	0
52	44:29	45:00	0:31	0	3	0
53	45:44	46:16	0:32	1	5	0
54	47:08	47:28	0:20	1	1	1
55	47:47	48:07	0:20	0	1	0
56	48:29	49:13	0:44	0	4	0
57	49:27	49:59	0:32	0	3	0
58	50:49	51:12	0:23	0	1	0
59	51:25	51:59	0:34	0	3	0
60	52:14	52:41	0:27	1	1	0
61	52:50	53:18	0:28	0	4	0
62	54:05	54:25	0:20	0	2	1
63	54:59	55:39	0:40	0	2	0
64	56:23	57:05	0:42	0	4	0
65	57:36	58:03	0:27	0	2	1
66	58:37	58:57	0:20	0	7	0
67	59:21	59:40	0:19	0	3	0
68	59:58	59:59	0:01	0	0	0

Table C.66: Intersection #7 SBL 09:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
SBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** Tourist		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	09:00	09:59	**29:44**	**9**	**173**	**9**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:00	1:09	1:09	1	5	1
2	1:22	1:45	0:23	0	3	0
3	2:01	2:26	0:25	0	1	0
4	2:43	3:10	0:27	1	2	0
5	3:26	4:02	0:36	0	5	0
6	4:17	4:47	0:30	0	2	1
7	5:17	6:08	0:51	0	5	0
8	6:20	6:40	0:20	0	1	0
9	6:58	7:34	0:36	0	4	1
10	8:08	8:36	0:28	1	1	0
11	9:47	10:41	0:54	0	1	0
12	11:21	11:58	0:37	0	6	0
13	12:17	12:42	0:25	0	0	0
14	13:08	13:28	0:20	0	2	0
15	13:57	14:18	0:21	0	1	0
16	14:34	15:04	0:30	0	2	1
17	15:53	16:15	0:22	0	0	0
18	16:34	17:29	0:55	0	5	0
19	18:08	18:32	0:24	0	7	0
20	18:51	19:18	0:27	0	4	0
21	19:51	20:13	0:22	0	1	0
22	21:04	21:40	0:36	2	1	0
23	22:13	22:36	0:23	0	0	1
24	22:55	23:40	0:45	0	1	0
25	23:53	24:19	0:26	0	7	0
26	24:41	25:27	0:46	0	4	0
27	25:49	26:15	0:26	0	2	0
28	27:02	27:22	0:20	1	2	0
29	28:00	28:36	0:36	0	1	0
30	29:35	29:59	0:24	0	1	0
31	30:45	31:11	0:26	1	0	0
32	31:54	32:40	0:46	0	9	0
33	33:15	33:47	0:32	0	1	0
34	34:33	35:13	0:40	0	3	0
35	35:42	36:06	0:24	0	1	0
36	36:41	37:02	0:21	0	2	0
37	37:16	37:41	0:25	0	0	0
38	38:21	39:09	0:48	0	8	0
39	39:42	40:07	0:25	0	1	0
40	40:37	40:59	0:22	0	1	0
41	41:14	42:02	0:48	0	6	1
42	42:47	43:40	0:53	0	4	0
43	44:34	44:58	0:24	0	2	0
44	45:54	46:48	0:54	0	7	0
45	47:37	47:57	0:20	0	1	0
46	48:28	49:23	0:55	1	15	1
47	50:03	50:30	0:27	0	2	0
48	51:23	52:16	0:53	0	3	2
49	53:14	54:04	0:50	0	17	0
50	55:01	55:23	0:22	0	0	0
51	56:13	56:47	0:34	0	4	0
52	57:29	58:02	0:33	1	2	0
53	58:42	59:20	0:38	0	7	0

Table C.67: Intersection #7 SBL 12:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
SBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	12:00	12:59	**27:30**	**5**	**288**	**19**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:00	0:46	0:46	0	3	0
2	1:37	2:20	0:43	0	0	0
3	3:27	4:20	0:53	1	16	1
4	5:01	5:55	0:54	0	3	1
5	6:55	7:49	0:54	0	17	1
6	8:40	9:34	0:54	0	6	0
7	10:35	11:24	0:49	0	22	1
8	12:17	13:04	0:47	0	4	1
9	13:27	14:21	0:54	0	12	0
10	15:44	16:29	0:45	2	5	1
11	17:37	18:20	0:43	0	4	0
12	19:26	20:16	0:50	1	8	0
13	21:15	22:00	0:45	0	6	0
14	22:39	23:24	0:45	0	3	1
15	24:22	25:06	0:44	0	10	1
16	25:40	26:26	0:46	0	6	0
17	27:26	28:06	0:40	0	6	0
18	28:55	29:51	0:56	0	16	1
19	30:47	31:27	0:40	0	1	1
20	32:35	33:21	0:46	0	3	1
21	34:09	34:55	0:46	0	4	0
22	36:02	36:42	0:40	0	9	1
23	37:28	38:23	0:55	0	2	0
24	39:30	40:17	0:47	0	12	3
25	41:43	42:39	0:56	0	14	0
26	43:47	44:40	0:53	0	17	1
27	45:38	46:22	0:44	0	11	0
28	47:28	48:25	0:57	0	12	0
29	49:33	50:17	0:44	0	9	0
30	51:23	52:06	0:43	1	4	1
31	53:06	54:01	0:55	0	18	1
32	54:48	55:28	0:40	0	7	1
33	56:12	57:04	0:52	0	9	0
34	57:37	58:06	0:29	0	5	0
35	58:58	59:33	0:35	0	4	0

Table C.68: Intersection #7 SBL 13:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:** 45 MPH		
SBL	**Minor Street:** Vineland Avenue			**Geometry:** 4-Leg		
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:** Tourist		
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	13:00	13:59	**25:42**	**7**	**219**	**14**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:25	1:07	0:42	0	8	1
2	2:25	2:47	0:22	0	6	1
3	3:52	4:27	0:35	0	0	0
4	4:59	5:55	0:56	0	11	0
5	6:57	7:50	0:53	0	4	0
6	9:11	9:57	0:46	0	2	0
7	10:43	11:26	0:43	0	5	0
8	12:19	13:00	0:41	0	2	0
9	13:54	14:39	0:45	1	9	0
10	15:21	16:18	0:57	0	17	2
11	17:24	18:13	0:49	0	3	0
12	19:16	19:59	0:43	0	5	1
13	20:30	20:55	0:25	0	3	0
14	21:29	21:54	0:25	0	4	0
15	22:36	22:58	0:22	0	2	0
16	23:46	24:09	0:23	0	7	0
17	24:57	25:31	0:34	0	8	1
18	26:16	26:42	0:26	0	6	0
19	27:20	28:02	0:42	1	5	0
20	29:07	29:49	0:42	0	3	1
21	30:38	31:08	0:30	1	3	1
22	32:04	32:31	0:27	1	1	0
23	33:05	33:42	0:37	1	10	0
24	34:25	34:48	0:23	0	2	0
25	35:26	36:18	0:52	0	13	3
26	36:55	37:32	0:37	0	8	1
27	38:21	38:48	0:27	2	2	1
28	39:30	40:24	0:54	0	11	0
29	41:39	42:33	0:54	0	9	0
30	43:38	44:21	0:43	0	7	0
31	45:08	45:50	0:42	0	4	0
32	46:09	47:06	0:57	0	9	1
33	47:29	48:20	0:51	0	6	0
34	49:49	50:13	0:24	0	8	0
35	51:05	51:30	0:25	0	2	0
36	52:22	52:40	0:18	0	2	0
37	52:55	53:53	0:58	0	3	0
38	54:51	55:23	0:32	0	5	0
39	56:55	57:30	0:35	0	1	0
40	57:50	58:14	0:24	0	1	0
41	58:48	59:09	0:21	0	2	0

Table C.69: Intersection #7 SBL 14:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
SBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	14:00	14:59	**24:17**	**4**	**214**	**16**

Cycle	Start Clock Time	End Clock Time	Permitted Green Time	Left Turn Volume	Opposing	
					TH	RT
1	0:02	0:26	0:24	0	12	1
2	1:08	1:39	0:31	0	3	1
3	2:50	3:18	0:28	0	8	1
4	4:17	4:44	0:27	1	7	0
5	5:42	6:14	0:32	0	3	0
6	7:03	7:33	0:30	0	3	0
7	8:10	9:08	0:58	0	8	0
8	9:52	10:12	0:20	0	7	1
9	11:13	11:47	0:34	0	3	1
10	12:56	13:19	0:23	0	1	0
11	14:12	14:38	0:26	0	2	1
12	15:26	15:52	0:26	0	9	0
13	16:55	17:17	0:22	0	1	0
14	17:46	18:37	0:51	0	8	2
15	20:04	20:37	0:33	0	3	0
16	21:30	22:03	0:33	0	5	1
17	23:21	24:06	0:45	0	8	1
18	25:05	25:50	0:45	1	6	0
19	26:33	26:54	0:21	0	6	1
20	27:48	28:32	0:44	1	3	0
21	29:38	30:00	0:22	0	1	1
22	30:34	31:10	0:36	0	10	0
23	32:02	32:52	0:50	0	13	0
24	33:42	34:02	0:20	0	0	0
25	35:01	35:30	0:29	0	4	0
26	36:33	37:24	0:51	0	18	0
27	38:53	39:42	0:49	0	4	1
28	40:38	41:18	0:40	0	2	0
29	41:54	42:37	0:43	0	0	0
30	43:34	44:29	0:55	0	5	0
31	45:31	46:26	0:55	0	3	0
32	47:07	47:50	0:43	0	6	0
33	48:35	49:10	0:35	0	3	0
34	50:11	50:53	0:42	0	1	0
35	51:32	52:16	0:44	1	1	0
36	53:18	54:02	0:44	0	9	0
37	54:54	55:41	0:47	0	11	0
38	56:50	57:34	0:44	0	11	3
39	58:29	59:24	0:55	0	6	0

Table C.70: Intersection #7 SBL 16:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
SBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes:	3 Lanes	**Land Use:**	Commercial	**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	16:00	16:59	**24:42**	**12**	**211**	**9**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:28	1:04	0:36	0	2	0
2	2:07	2:41	0:34	1	3	1
3	3:36	3:59	0:23	0	8	0
4	4:28	5:00	0:32	0	6	0
5	5:51	6:34	0:43	1	5	0
6	7:38	7:58	0:20	0	2	0
7	8:43	9:30	0:47	0	13	0
8	10:09	10:39	0:30	0	4	0
9	11:38	12:01	0:23	0	6	1
10	13:03	13:37	0:34	0	1	0
11	14:24	14:45	0:21	0	13	1
12	15:20	15:42	0:22	0	5	0
13	16:41	17:18	0:37	0	7	0
14	18:07	18:48	0:41	1	4	0
15	19:51	20:17	0:26	0	3	0
16	20:42	21:37	0:55	0	11	0
17	22:17	22:41	0:24	0	5	0
18	23:30	24:14	0:44	0	4	0
19	25:49	26:41	0:52	1	2	0
20	27:49	28:24	0:35	1	7	0
21	29:13	29:56	0:43	1	6	0
22	31:02	31:39	0:37	2	11	0
23	32:59	33:35	0:36	0	0	0
24	34:43	35:26	0:43	0	5	0
25	36:12	37:05	0:53	0	4	0
26	38:02	38:36	0:34	0	2	0
27	39:41	40:04	0:23	1	2	0
28	41:19	42:01	0:42	0	14	0
29	43:04	44:01	0:57	0	0	1
30	45:08	46:04	0:56	0	10	0
31	47:11	47:39	0:28	0	4	0
32	48:05	48:57	0:52	0	10	2
33	49:59	50:45	0:46	1	1	0
34	52:27	53:17	0:50	0	6	0
35	54:09	54:52	0:43	1	2	0
36	55:17	56:03	0:46	0	8	1
37	56:35	57:34	0:59	0	10	0
38	58:25	59:20	0:55	1	5	2

Table C.71: Intersection #7 SBL 17:00 Data Collection Table

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
SBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Opposing Lanes: 3 Lanes		**Land Use:** Commercial		**Criteria:**	Tourist	
Date	**Start**	**End**	**Totals for Values Below for Collection Period**			
Sun 11/18/12	17:00	17:59	**23:27**	**11**	**133**	**7**
Cycle	**Start Clock Time**	**End Clock Time**	**Permitted Green Time**	**Left Turn Volume**	**Opposing**	
					TH	**RT**
1	0:30	1:12	0:42	0	3	0
2	2:02	2:51	0:49	0	3	0
3	3:35	4:03	0:28	0	2	0
4	4:20	5:15	0:55	0	3	0
5	6:16	6:56	0:40	1	1	0
6	8:01	8:58	0:57	0	4	0
7	9:56	10:39	0:43	0	5	0
8	11:28	11:50	0:22	0	0	0
9	12:24	13:01	0:37	0	6	1
10	13:40	14:07	0:27	0	4	1
11	14:24	15:22	0:58	2	7	0
12	16:30	16:58	0:28	1	10	0
13	17:58	18:19	0:21	0	4	0
14	19:02	19:55	0:53	0	6	1
15	21:03	21:24	0:21	0	1	0
16	23:06	23:26	0:20	0	1	0
17	24:58	25:39	0:41	1	4	2
18	27:06	27:32	0:26	1	5	0
19	28:22	29:02	0:40	0	4	0
20	30:12	30:42	0:30	0	4	0
21	31:44	32:22	0:38	1	8	0
22	33:20	33:42	0:22	0	1	0
23	34:41	35:00	0:19	0	0	0
24	36:03	36:57	0:54	1	0	0
25	37:40	38:00	0:20	0	2	0
26	38:46	39:15	0:29	0	2	0
27	39:51	40:34	0:43	1	10	0
28	41:17	41:41	0:24	0	2	0
29	43:37	44:10	0:33	0	6	0
30	44:56	45:29	0:33	0	2	0
31	46:15	46:52	0:37	1	0	0
32	48:13	48:58	0:45	0	1	0
33	49:42	50:03	0:21	0	0	0
34	51:00	51:56	0:56	0	2	0
35	52:58	53:21	0:23	0	1	0
36	53:57	54:37	0:40	0	1	1
37	55:25	56:07	0:42	0	11	0
38	57:27	58:22	0:55	1	4	1
39	59:24	59:59	0:35	0	3	0

APPENDIX D:
SYNCHRO RUN TABLES

Table D.1.1: Intersection #1 07:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	44	606	88	738
Southbound	139	856	25	1020
Eastbound	45	44	39	128
Westbound	343	38	82	463

Table D.1.2: Intersection #1 07:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3853
0:45	-	TF
PHF	0.95	7%

Table D.1.3: Intersection #1 07:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	9	9	100%
	15	16	94%
	16	17	94%
	14	17	82%
	17	17	100%
Ave	14	15	94%

Table D.1.4: Intersection #1 08:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	21	1479	94	1594
Southbound	56	1377	22	1455
Eastbound	44	23	41	108
Westbound	189	16	50	255

Table D.1.5: Intersection #1 08:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3412
0:45	-	**TF**
PHF	0.95	7%

Table D.1.6: Intersection #1 08:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	13	14	**93%**
	17	17	**100%**
	23	24	**96%**
	19	21	**90%**
	22	22	**100%**
Ave	19	20	**96%**

Table D.1.7: Intersection #1 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	44	606	88	738
Southbound	139	856	25	1020
Eastbound	45	44	39	128
Westbound	343	38	82	463

Table D.1.8: Intersection #1 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	2349
0:45	-	**TF**
PHF	0.95	7%

Table D.1.9: Intersection #1 12:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	26	44	**59%**
	26	41	**63%**
	18	41	**44%**
	32	55	**58%**
	20	39	**51%**
Ave	24	44	**55%**

Table D.1.10: Intersection #1 13:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	42	975	145	1162
Southbound	122	899	42	1063
Eastbound	56	37	44	137
Westbound	528	39	99	666

Table D.1.11: Intersection #1 13:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3028
0:45	-	**TF**
PHF	0.95	7%

Table D.1.12: Intersection #1 13:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	22	42	**52%**
	14	35	**40%**
	9	31	**29%**
	24	44	**55%**
	21	42	**50%**
Ave	18	39	**45%**

Table D.1.13: Intersection #1 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	75	1239	160	1474
Southbound	105	831	43	979
Eastbound	74	38	37	149
Westbound	320	37	120	477

Table D.1.14: Intersection #1 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3079
0:45	-	TF
PHF	0.95	7%

Table D.1.15: Intersection #1 16:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	75	77	**97%**
	52	61	**85%**
	67	79	**85%**
	71	79	**90%**
	69	80	**86%**
Ave	67	75	**89%**

Table D.1.16: Intersection #1 17:19 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	68	963	65	1096
Southbound	56	614	24	694
Eastbound	59	33	26	118
Westbound	213	30	72	315

Table D.1.17: Intersection #1 17:19 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	2223
0:45	-	TF
PHF	0.95	7%

Table D.1.18: Intersection #1 17:19 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	55	58	95%
	68	72	94%
	47	59	80%
	41	53	77%
	49	52	94%
Ave	52	59	88%

Table D.1.19: Intersection #1 18:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	82	800	107	989
Southbound	106	765	29	900
Eastbound	70	46	36	152
Westbound	311	42	115	468

Table D.1.20: Intersection #1 18:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	2509
0:45	-	TF
PHF	0.95	7%

Table D.1.21: Intersection #1 18:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	85	93	91%
	57	70	81%
	69	78	88%
	64	80	80%
	80	85	94%
Ave	71	81	87%

Table D.2.1: Intersection #2 NBL 06:40 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	3	1234	2	1239
Southbound	1	686	7	694
Eastbound	0	0	0	0
Westbound	18	0	19	37

Table D.2.2: Intersection #2 NBL 06:40 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	1970
0:45	-	TF
PHF	0.95	2%

Table D.2.3: Intersection #2 NBL 06:40 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	5	5	100%
	1	2	50%
	1	1	100%
	1	2	50%
	4	5	80%
Ave	2	3	76%

Table D.2.4: Intersection #2 NBL 07:40 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	6	1901	14	1921
Southbound	7	1047	6	1060
Eastbound	1	0	1	2
Westbound	26	0	30	56

Table D.2.5: Intersection #2 NBL 07:40 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3039
0:45	-	TF
PHF	0.95	2%

Table D.2.6: Intersection #2 NBL 07:40 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	2	3	67%
	1	2	50%
	4	6	67%
	11	11	100%
	2	2	100%
Ave	4	5	77%

Table D.2.7: Intersection #2 NBL 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	14	382	4	400
Southbound	5	467	17	489
Eastbound	8	0	5	13
Westbound	5	0	8	13

Table D.2.8: Intersection #2 NBL 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	915
0:45	-	TF
PHF	0.95	2%

Table D.2.9: Intersection #2 NBL 12:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	10	15	67%
	13	14	93%
	9	12	75%
	11	17	65%
	6	12	50%
Ave	10	14	70%

Table D.2.10: Intersection #2 NBL 12:20 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	44	1766	19	1829
Southbound	18	1904	68	1990
Eastbound	46	0	32	78
Westbound	58	0	60	118

Table D.2.11: Intersection #2 NBL 12:20 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	4015
0:45	-	TF
PHF	0.95	2%

Table D.2.12: Intersection #2 NBL 12:20 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	28	36	78%
	31	39	79%
	29	35	83%
	25	35	71%
	28	37	76%
Ave	28	36	77%

Table D.2.13: Intersection #2 NBL 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	71	1529	27	1627
Southbound	33	1838	50	1921
Eastbound	53	0	44	97
Westbound	29	1	23	53

Table D.2.14: Intersection #2 NBL 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3698
0:45	-	TF
PHF	0.95	2%

Table D.2.15: Intersection #2 NBL 16:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	51	64	80%
	49	68	72%
	53	68	78%
	55	73	75%
	61	79	77%
Ave	54	70	76%

Table D.2.16: Intersection #2 NBL 17:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	82	1620	26	1728
Southbound	31	2243	100	2374
Eastbound	36	0	56	92
Westbound	27	0	32	59

Table D.2.17: Intersection #2 NBL 17:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	4253
0:45	-	TF
PHF	0.95	2%

Table D.2.18: Intersection #2 NBL 17:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	47	68	69%
	52	70	74%
	66	84	79%
	58	92	63%
	61	79	77%
Ave	57	79	72%

Table D.2.19: Intersection #2 NBL 18:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	98	1565	35	1698
Southbound	37	1898	61	1996
Eastbound	74	0	59	133
Westbound	33	0	14	47

Table D.2.20: Intersection #2 NBL 18:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3874
0:45	-	TF
PHF	0.95	2%

Table D.2.21: Intersection #2 NBL 18:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	61	93	66%
	62	97	64%
	77	103	75%
	64	97	66%
	67	99	68%
Ave	66	98	68%

Table D.2.22: Intersection #2 NBL 19:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	71	1340	39	1450
Southbound	36	1561	59	1656
Eastbound	64	1	58	123
Westbound	19	0	23	42

Table D.2.23: Intersection #2 NBL 19:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3271
0:45	-	TF
PHF	0.95	2%

Table D.2.24: Intersection #2 NBL 19:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	51	70	73%
	55	72	76%
	52	73	71%
	61	77	79%
	61	78	78%
Ave	56	74	76%

Table D.3.1: Intersection #2 SBL 06:40 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	3	1234	2	1239
Southbound	1	686	7	694
Eastbound	0	0	0	0
Westbound	18	0	19	37

Table D.3.2: Intersection #2 SBL 06:40 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	1970
0:45	-	TF
PHF	0.95	2%

Table D.3.3: Intersection #2 SBL 06:40 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	0	0	100%
	0	0	100%
	0	0	100%
	1	1	100%
	0	0	100%
Ave	0	0	100%

Table D.3.4: Intersection #2 SBL 07:40 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	6	1901	14	1921
Southbound	7	1047	6	1060
Eastbound	1	0	1	2
Westbound	26	0	30	56

Table D.3.5: Intersection #2 SBL 07:40 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3039
0:45	-	TF
PHF	0.95	2%

Table D.3.6: Intersection #2 SBL 07:40 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	7	7	100%
	5	7	71%
	10	11	91%
	9	11	82%
	11	13	85%
Ave	8	10	86%

Table D.3.7: Intersection #2 SBL 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	14	382	4	400
Southbound	5	467	17	489
Eastbound	8	0	5	13
Westbound	5	0	8	13

Table D.3.8: Intersection #2 SBL 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	915
0:45	-	TF
PHF	0.95	2%

Table D.3.9: Intersection #2 SBL 12:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	2	3	67%
	5	5	100%
	3	5	60%
	4	4	100%
	10	11	91%
Ave	5	6	84%

Table D.3.10: Intersection #2 SBL 12:20 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	44	1766	19	1829
Southbound	18	1904	68	1990
Eastbound	46	0	32	78
Westbound	58	0	60	118

Table D.3.11: Intersection #2 SBL 12:20 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	4015
0:45	-	TF
PHF	0.95	2%

Table D.3.12: Intersection #2 SBL 12:20 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	15	21	71%
	16	19	84%
	17	19	89%
	19	25	76%
	19	22	86%
Ave	17	21	81%

Table D.3.13: Intersection #2 SBL 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	71	1529	27	1627
Southbound	33	1838	50	1921
Eastbound	53	0	44	97
Westbound	29	1	23	53

Table D.3.14: Intersection #2 SBL 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3698
0:45	-	TF
PHF	0.95	2%

Table D.3.15: Intersection #2 SBL 16:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	18	23	78%
	33	37	89%
	28	34	82%
	23	32	72%
	20	30	67%
Ave	24	31	78%

Table D.3.16: Intersection #2 SBL 17:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	82	1620	26	1728
Southbound	31	2243	100	2374
Eastbound	36	0	56	92
Westbound	27	0	32	59

Table D.3.17: Intersection #2 SBL 17:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	4253
0:45	-	TF
PHF	0.95	2%

Table D.3.18: Intersection #2 SBL 17:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	21	24	88%
	29	36	81%
	24	26	92%
	21	27	78%
	22	28	79%
Ave	23	28	83%

Table D.3.19: Intersection #2 SBL 18:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	98	1565	35	1698
Southbound	37	1898	61	1996
Eastbound	74	0	59	133
Westbound	33	0	14	47

Table D.3.20: Intersection #2 SBL 18:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3874
0:45	-	TF
PHF	0.95	2%

Table D.3.21: Intersection #2 SBL 18:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	20	27	74%
	38	46	83%
	29	35	83%
	27	35	77%
	31	40	78%
Ave	29	37	79%

Table D.3.22: Intersection #2 SBL 19:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	71	1340	39	1450
Southbound	36	1561	59	1656
Eastbound	64	1	58	123
Westbound	19	0	23	42

Table D.3.23: Intersection #2 SBL 19:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3271
0:45	-	TF
PHF	0.95	2%

Table D.3.24: Intersection #2 SBL 19:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	24	29	83%
	32	36	89%
	30	39	77%
	36	48	75%
	27	36	75%
Ave	30	38	80%

Table D.4.1: Intersection #3 06:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1536	7
Westbound	129	1186	-

Table D.4.2: Intersection #3 06:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	399	Trucks
0:15	452	-
0:30	547	2008
0:45	610	TF
PHF	0.82	2%

Table D.4.3: Intersection #3 06:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	78	113	69%
	95	140	68%
	79	115	69%
	114	150	76%
	111	149	74%
Ave	95	133	71%

Table D.4.4: Intersection #3 07:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1819	24
Westbound	253	1309	-

Table D.4.5: Intersection #3 07:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	566	Trucks
0:15	528	-
0:30	522	2125
0:45	509	TF
PHF	0.94	2%

Table D.4.6: Intersection #3 07:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	135	268	50%
	142	266	53%
	130	251	52%
	134	254	53%
	139	255	55%
Ave	136	259	53%

Table D.4.7: Intersection #3 12:00 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1545	14
Westbound	319	1435	-

Table D.4.8: Intersection #3 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	537	Trucks
0:15	614	-
0:30	561	2268
0:45	556	TF
PHF	0.92	2%

Table D.4.9: Intersection #3 12:00 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	124	313	40%
	136	313	43%
	118	307	38%
	122	325	38%
	108	349	31%
Ave	122	321	38%

Table D.4.10: Intersection #3 15:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1397	8
Westbound	376	1602	-

Table D.4.11: Intersection #3 15:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	560	Trucks
0:15	596	-
0:30	609	2376
0:45	611	TF
PHF	0.97	2%

Table D.4.12: Intersection #3 15:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	111	366	30%
	122	349	35%
	128	362	35%
	122	372	33%
	148	379	39%
Ave	126	366	34%

Table D.4.13: Intersection #3 16:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1572	17
Westbound	415	1876	-

Table D.4.14: Intersection #3 16:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	610	Trucks
0:15	710	-
0:30	665	2614
0:45	629	TF
PHF	0.92	2%

Table D.4.15: Intersection #3 16:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	90	371	24%
	83	394	21%
	97	399	24%
	115	416	28%
	82	451	18%
Ave	93	406	23%

Table D.4.16: Intersection #3 17:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	1299	6
Westbound	361	1496	-

Table D.4.17: Intersection #3 17:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	663	Trucks
0:15	611	-
0:30	556	2401
0:45	571	TF
PHF	0.91	2%

Table D.4.18: Intersection #3 17:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	106	346	31%
	107	364	29%
	106	366	29%
	112	384	29%
	102	362	28%
Ave	107	364	29%

Table D.4.19: Intersection #3 18:45 Input Parameters Table #1

Calculated Turning Movement Counts			
Approach	Left Turns	Thru Traffic	Right Turns
Northbound	-	-	-
Southbound	-	-	-
Eastbound	-	897	3
Westbound	205	1072	-

Table D.4.20: Intersection #3 18:45 Input Parameters Table #2

Intersection PHF & TF		
0:00	532	Trucks
0:15	517	-
0:30	459	1508
0:45		TF
PHF	0.94	2%

Table D.4.21: Intersection #3 18:45 Synchro Run Table

Simulation Runs			
Type	*PL*	*Total*	*%*
Model	110	184	60%
	115	219	53%
	108	197	55%
	115	212	54%
	102	207	49%
Ave	110	204	54%

Table D.5.1: Intersection #4 06:53 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	1	0	1	2
Southbound	109	0	102	211
Eastbound	74	643	0	717
Westbound	5	1515	165	1685

Table D.5.2: Intersection #4 06:53 Input Parameters Table #2

Intersection PHF & TF		
0:00	542	Trucks
0:15	623	88
0:30	781	2615
0:45	669	TF
PHF	0.84	3%

Table D.5.3: Intersection #4 06:53 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	15	24	63%
Run	13	20	65%

Table D.5.4: Intersection #4 07:53 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	0	0	0	0
Southbound	105	0	80	185
Eastbound	68	782	1	851
Westbound	17	1559	106	1682

Table D.5.5: Intersection #4 07:53 Input Parameters Table #2

Intersection PHF & TF		
0:00	740	Trucks
0:15	680	107
0:30	652	2718
0:45	646	TF
PHF	0.92	4%

Table D.5.6: Intersection #4 07:53 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	30	43	70%
Run	17	30	57%

Table D.5.7: Intersection #4 13:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	2	0	0	2
Southbound	119	1	85	205
Eastbound	120	1225	0	1345
Westbound	14	1389	75	1478

Table D.5.8: Intersection #4 13:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	739	Trucks
0:15	740	98
0:30	817	3030
0:45	734	TF
PHF	0.93	3%

Table D.5.9: Intersection #4 13:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	41	119	35%
Ave	78	112	70%

Table D.5.10: Intersection #4 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	0	0	0	0
Southbound	210	0	93	303
Eastbound	134	1486	1	1621
Westbound	9	1526	114	1649

Table D.5.11: Intersection #4 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	809	Trucks
0:15	857	98
0:30	945	3573
0:45	962	TF
PHF	0.93	3%

Table D.5.12: Intersection #4 16:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	40	146	27%
Run	82	145	57%

Table D.5.13: Intersection #4 17:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	0	0	0	0
Southbound	303	2	70	375
Eastbound	139	1501	0	1640
Westbound	6	1509	86	1601

Table D.5.14: Intersection #4 17:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	928	Trucks
0:15	804	60
0:30	871	3616
0:45	1013	TF
PHF	0.89	2%

Table D.5.15: Intersection #4 17:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	49	145	34%
Run	69	142	49%

Table D.5.16: Intersection #4 19:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	0	0	0	0
Southbound	303	2	70	375
Eastbound	139	1501	0	1640
Westbound	6	1509	86	1601

Table D.5.17: Intersection #4 19:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	928	Trucks
0:15	804	60
0:30	871	3616
0:45	1013	TF
PHF	0.89	2%

Table D.5.18: Intersection #4 19:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	61	98	62%
Run	47	87	54%

Table D.6.1: Intersection #5 07:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	43	1152	67	1262
Southbound	18	1980	79	2077
Eastbound	22	5	55	82
Westbound	12	1	11	24

Table D.6.2: Intersection #5 07:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	732	Trucks
0:15	855	114
0:30	875	3445
0:45	983	TF
PHF	0.88	3%

Table D.6.3: Intersection #5 07:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	44	51	86%
Run	36	38	95%

Table D.6.4: Intersection #5 08:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	65	1252	48	1365
Southbound	10	1750	84	1844
Eastbound	39	2	103	144
Westbound	10	1	9	20

Table D.6.5: Intersection #5 08:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	891	Trucks
0:15	916	165
0:30	834	3373
0:45	732	TF
PHF	0.92	5%

Table D.6.6: Intersection #5 08:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	50	60	83%
Run	40	43	93%

Table D.6.7: Intersection #5 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	93	1226	77	1396
Southbound	41	1277	106	1424
Eastbound	58	1	124	183
Westbound	19	7	37	63

Table D.6.8: Intersection #5 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	768	Trucks
0:15	756	165
0:30	776	3066
0:45	766	TF
PHF	0.99	5%

Table D.6.9: Intersection #5 12:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	39	48	81%
Run	30	36	83%

Table D.6.10: Intersection #5 17:25 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	81	1620	33	1734
Southbound	13	1354	68	1435
Eastbound	39	2	77	118
Westbound	11	3	20	34

Table D.6.11: Intersection #5 17:25 Input Parameters Table #2

Intersection PHF & TF		
0:30	915	Trucks
0:45	884	57
0:00	789	3321
0:15	733	TF
PHF	0.91	2%

Table D.6.12: Intersection #5 17:25 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	61	62	98%
Run	42	48	88%

Table D.6.13: Intersection #5 18:25 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	66	1300	27	1393
Southbound	16	1174	54	1244
Eastbound	38	3	71	112
Westbound	16	3	14	33

Table D.6.14: Intersection #5 18:25 Input Parameters Table #2

Intersection PHF & TF		
0:00	789	Trucks
0:15	733	37
0:30	652	2783
0:45	609	TF
PHF	0.88	1%

Table D.6.15: Intersection #5 18:25 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	51	52	98%
Run	42	42	100%

Table D.6.16: Intersection #5 19:25 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	66	1300	27	1393
Southbound	16	1174	54	1244
Eastbound	38	3	71	112
Westbound	16	3	14	33

Table D.6.17: Intersection #5 19:25 Input Parameters Table #2

Intersection PHF & TF		
0:00	789	Trucks
0:15	733	37
0:30	652	2783
0:45	609	TF
PHF	0.88	1%

Table D.6.18: Intersection #5 19:25 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	48	50	96%
Run	36	36	100%

Table D.7.1: Intersection #6 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	80	0	131	211
Southbound	-	-	-	0
Eastbound	116	1554	-	1670
Westbound	-	1571	64	1635

Table D.7.2: Intersection #6 Input Parameters Table #2

Intersection PHF & TF		
0:00	-	Trucks
0:15	-	-
0:30	-	3516
0:45	-	TF
PHF	0.95	2%

Table D.7.3: Intersection #6 07:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	88	90	98%
Run	69	76	91%

Table D.7.4: Intersection #6 08:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	93	98	95%
Run	84	97	87%

Table D.7.5: Intersection #6 13:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	72	84	86%
Run	64	79	81%

Table D.7.6: Intersection #6 16:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	123	165	75%
Run	132	170	78%

Table D.7.7: Intersection #6 17:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	143	172	83%
Run	145	179	81%

Table D.7.8: Intersection #6 18:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	87	106	82%
Run	91	109	83%

Table D.8.1: Intersection #7 NBL 08:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	111	211	17	339
Southbound	14	245	187	446
Eastbound	137	14	57	208
Westbound	8	14	3	25

Table D.8.2: Intersection #7 NBL 08:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	190	Trucks
0:45	275	32
0:00	248	1024
0:15	311	TF
PHF	0.82	3%

Table D.8.3: Intersection #7 NBL 08:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	66	111	59%
Run	75	112	67%

Table D.8.4: Intersection #7 NBL 09:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	162	241	15	418
Southbound	14	346	338	698
Eastbound	191	11	135	337
Westbound	12	15	0	27

Table D.8.5: Intersection #7 NBL 09:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	313	Trucks
0:15	350	29
0:30	353	1488
0:45	472	TF
PHF	0.79	2%

Table D.8.6: Intersection #7 NBL 09:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	65	162	40%
Run	85	143	59%

Table D.8.7: Intersection #7 NBL 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	243	441	33	717
Southbound	16	324	372	712
Eastbound	443	21	203	667
Westbound	14	18	1	33

Table D.8.8: Intersection #7 NBL 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	505	Trucks
0:45	517	25
0:00	552	2144
0:15	570	TF
PHF	0.94	1%

Table D.8.9: Intersection #7 NBL 12:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	101	243	42%
Run	127	239	53%

Table D.8.10: Intersection #7 NBL 13:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	204	347	32	583
Southbound	14	344	322	680
Eastbound	409	15	245	669
Westbound	15	17	6	38

Table D.8.11: Intersection #7 NBL 13:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	525	Trucks
0:15	485	34
0:30	482	1982
0:45	490	TF
PHF	0.94	2%

Table D.8.12: Intersection #7 NBL 13:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	88	204	43%
Run	108	212	51%

Table D.8.13: Intersection #7 NBL 14:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	205	338	23	566
Southbound	13	324	329	666
Eastbound	378	28	203	609
Westbound	11	14	5	30

Table D.8.14: Intersection #7 NBL 14:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	442	Trucks
0:15	467	18
0:30	511	1885
0:45	465	TF
PHF	0.92	1%

Table D.8.15: Intersection #7 NBL 14:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	65	205	32%
Run	112	221	51%

Table D.8.16: Intersection #7 NBL 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	181	335	17	533
Southbound	18	391	336	745
Eastbound	435	23	269	727
Westbound	15	15	6	36

Table D.8.17: Intersection #7 NBL 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	516	Trucks
0:45	475	29
0:00	501	2050
0:15	558	TF
PHF	0.92	1%

Table D.8.18: Intersection #7 NBL 16:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	51	181	28%
Run	86	182	47%

Table D.8.19: Intersection #7 NBL 17:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	174	313	16	503
Southbound	16	437	343	796
Eastbound	427	24	292	743
Westbound	17	11	4	32

Table D.8.20: Intersection #7 NBL 17:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	546	Trucks
0:15	509	28
0:30	512	2086
0:45	519	TF
PHF	0.96	1%

Table D.8.21: Intersection #7 NBL 17:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	43	174	25%
Run	85	173	49%

Table D.9.1: Intersection #7 SBL 08:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	111	211	17	339
Southbound	14	245	187	446
Eastbound	137	14	57	208
Westbound	8	14	3	25

Table D.9.2: Intersection #7 SBL 08:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	190	Trucks
0:15	275	32
0:30	248	1024
0:45	311	TF
PHF	0.82	3%

Table D.9.3: Intersection #7 SBL 08:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	10	14	71%
Run	10	16	63%

Table D.9.4: Intersection #7 SBL 09:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	162	241	15	418
Southbound	14	346	338	698
Eastbound	191	11	135	337
Westbound	12	15	0	27

Table D.9.5: Intersection #7 SBL 09:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	313	Trucks
0:45	350	29
0:00	353	1488
0:15	472	TF
PHF	0.79	2%

Table D.9.6: Intersection #7 SBL 09:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	9	14	64%
Run	9	15	60%

Table D.9.7: Intersection #7 SBL 12:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	243	441	33	717
Southbound	16	324	372	712
Eastbound	443	21	203	667
Westbound	14	18	1	33

Table D.9.8: Intersection #7 SBL 12:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	505	Trucks
0:15	517	25
0:30	552	2144
0:45	570	TF
PHF	0.94	1%

Table D.9.9: Intersection #7 SBL 12:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	5	16	31%
Run	11	16	69%

Table D.9.10: Intersection #7 SBL 13:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	204	347	32	583
Southbound	14	344	322	680
Eastbound	409	15	245	669
Westbound	15	17	6	38

Table D.9.11: Intersection #7 SBL 13:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	525	Trucks
0:45	485	34
0:00	482	1982
0:15	490	TF
PHF	0.94	2%

Table D.9.12: Intersection #7 SBL 13:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	7	14	50%
Run	7	11	64%

Table D.9.13: Intersection #7 SBL 14:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	205	338	23	566
Southbound	13	324	329	666
Eastbound	378	28	203	609
Westbound	11	14	5	30

Table D.9.14: Intersection #7 SBL 14:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	442	Trucks
0:15	467	18
0:30	511	1885
0:45	465	TF
PHF	0.92	1%

Table D.9.15: Intersection #7 SBL 14:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	4	13	31%
Run	7	12	58%

Table D.9.16: Intersection #7 SBL 16:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	181	335	17	533
Southbound	18	391	336	745
Eastbound	435	23	269	727
Westbound	15	15	6	36

Table D.9.17: Intersection #7 SBL 16:00 Input Parameters Table #2

Intersection PHF & TF		
0:00	516	Trucks
0:15	475	29
0:30	501	2050
0:45	558	TF
PHF	0.92	1%

Table D.9.18: Intersection #7 SBL 16:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	12	18	67%
Run	11	20	55%

Table D.9.19: Intersection #7 SBL 17:00 Input Parameters Table #1

Turning Movement Count Inputs				
Approach	Left Turns	Thru Traffic	Right Turns	Total
Northbound	174	313	16	503
Southbound	16	437	343	796
Eastbound	427	24	292	743
Westbound	17	11	4	32

Table D.9.20: Intersection #7 SBL 17:00 Input Parameters Table #2

Intersection PHF & TF		
0:30	546	Trucks
0:45	509	28
0:00	512	2086
0:15	519	TF
PHF	0.96	1%

Table D.9.21: Intersection #7 SBL 17:00 Synchro Run Table

Simulation Validation			
Type	*PL*	*Total*	*%*
Field	11	16	69%
Run	9	12	75%

APPENDIX E:
INTERSECTION LEFT TURN MOVEMENT DATA COLLECTION

Table E.1.1: Intersection #1 Left Turn Movement Data (1 of 5)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach	**Major Street:** US 27			**Speed:**	55 MPH	
NBL	**Minor Street:** Cagan Crossings Boulevard			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	1:24	1:31	0:07	0	0:00	0:00
2	5:25	5:31	0:06	0	0:00	0:00
3	9:22	9:30	0:08	0	0:00	0:00
4	17:23	17:30	0:07	0	0:00	0:00
5	21:25	21:31	0:06	0	0:00	0:00
6	25:24	25:28	0:04	2	25:31	0:01
7	31:27	31:33	0:06	1	31:36	0:03
8	35:23	35:29	0:06	0	0:00	0:00
9	35:32	35:39	0:07	0	0:00	0:00
10	39:38	39:44	0:06	0	0:00	0:00
11	47:23	47:30	0:07	0	0:00	0:00
12	49:24	49:29	0:05	0	0:00	0:00
13	57:28	57:38	0:10	0	0:00	0:00
14	3:30	3:36	0:06	0	0:00	0:00
15	7:13	7:19	0:06	2	7:24	0:02
16	9:14	9:20	0:06	0	0:00	0:00
17	15:29	15:35	0:06	1	15:37	0:02
18	21:17	21:22	0:05	1	21:24	0:02
19	22:13	22:19	0:06	1	22:23	0:04
20	33:16	33:21	0:05	0	0:00	0:00
21	43:13	43:19	0:06	0	0:00	0:00
22	45:22	45:28	0:06	0	0:00	0:00
23	49:22	49:27	0:05	1	49:31	0:04
24	51:15	51:22	0:07	0	0:00	0:00
25	53:23	53:31	0:08	0	0:00	0:00
26	53:32	53:36	0:04	0	0:00	0:00
27	55:13	55:20	0:07	0	0:00	0:00
28	59:23	59:29	0:06	0	0:00	0:00
29	0:35	0:41	0:06	0	0:00	0:00
30	2:31	2:38	0:07	1	2:40	0:02
31	4:12	4:20	0:08	1	4:21	0:01
32	4:20	4:24	0:04	0	0:00	0:00
33	0:29	0:36	0:07	0	0:00	0:00
34	3:12	3:17	0:05	2	3:22	0:02
35	5:57	6:02	0:05	0	0:00	0:00

Table E.1.2: Intersection #1 Left Turn Movement Data (2 of 5)

36	8:45	8:50	0:05	1	8:53	0:03
37	12:37	12:40	0:03	4	12:49	0:02
38	14:14	14:21	0:07	1	14:23	0:02
39	17:09	17:13	0:04	1	17:15	0:02
40	19:27	19:33	0:06	0	0:00	0:00
41	19:33	19:39	0:06	2	19:42	0:01
42	24:28	24:33	0:05	0	0:00	0:00
43	28:54	29:03	0:09	1	29:05	0:02
44	30:48	30:54	0:06	0	0:00	0:00
45	33:27	33:31	0:04	1	33:33	0:02
46	38:45	38:50	0:05	0	0:00	0:00
47	38:49	38:53	0:04	0	0:00	0:00
48	40:34	40:39	0:05	0	0:00	0:00
49	43:11	43:16	0:05	1	43:18	0:02
50	44:38	44:43	0:05	0	0:00	0:00
51	46:40	46:44	0:04	0	0:00	0:00
52	49:03	49:09	0:06	0	0:00	0:00
53	49:10	49:14	0:04	0	0:00	0:00
54	53:23	53:27	0:04	2	53:33	0:03
55	3:43	3:49	0:06	0	0:00	0:00
56	3:51	3:55	0:04	1	3:57	0:02
57	10:53	10:58	0:05	0	0:00	0:00
58	12:43	12:47	0:04	0	0:00	0:00
59	15:44	15:48	0:04	0	0:00	0:00
60	17:54	18:00	0:06	1	18:02	0:02
61	24:55	25:00	0:05	0	0:00	0:00
62	26:43	26:49	0:06	2	26:53	0:02
63	29:13	29:18	0:05	1	29:20	0:02
64	31:44	31:48	0:04	4	31:58	0:02
65	34:40	34:45	0:05	0	0:00	0:00
66	38:51	38:57	0:06	4	39:07	0:02
67	40:47	40:51	0:04	2	40:57	0:03
68	43:49	43:54	0:05	0	0:00	0:00
69	45:42	45:47	0:05	1	45:50	0:03
70	48:37	48:41	0:04	0	0:00	0:00
71	48:41	48:46	0:05	1	48:47	0:01
72	52:08	52:12	0:04	0	0:00	0:00
73	52:12	52:18	0:06	0	0:00	0:00
74	54:42	54:48	0:06	0	0:00	0:00
75	54:49	54:54	0:05	2	54:59	0:02

Table E.1.3: Intersection #1 Left Turn Movement Data (3 of 5)

76	56:27	56:33	0:06	1	56:36	0:03
77	2:37	2:43	0:06	0	0:00	0:00
78	2:43	2:48	0:05	2	2:53	0:02
79	4:51	4:59	0:08	1	5:01	0:02
80	5:00	5:06	0:06	0	0:00	0:00
81	9:31	9:39	0:08	6	9:52	0:02
82	11:52	11:59	0:07	6	12:15	0:02
83	14:12	14:19	0:07	3	14:27	0:02
84	16:37	16:42	0:05	2	16:47	0:02
85	16:52	16:57	0:05	0	0:00	0:00
86	19:05	19:10	0:05	0	0:00	0:00
87	23:46	23:51	0:05	0	0:00	0:00
88	23:50	23:54	0:04	0	0:00	0:00
89	23:54	23:58	0:04	2	24:02	0:02
90	25:56	25:59	0:03	0	0:00	0:00
91	28:18	28:24	0:06	0	0:00	0:00
92	30:37	30:42	0:05	4	30:52	0:02
93	32:56	33:01	0:05	2	33:07	0:03
94	33:07	33:11	0:04	1	33:13	0:02
95	35:14	35:19	0:05	0	0:00	0:00
96	35:20	35:25	0:05	1	35:27	0:02
97	37:34	37:40	0:06	0	0:00	0:00
98	37:42	37:47	0:05	0	0:00	0:00
99	40:27	40:30	0:03	1	40:33	0:03
100	42:50	42:56	0:06	0	0:00	0:00
101	42:57	43:01	0:04	0	0:00	0:00
102	45:33	45:37	0:04	0	0:00	0:00
103	45:40	45:45	0:05	0	0:00	0:00
104	48:19	48:27	0:08	0	0:00	0:00
105	51:14	51:20	0:06	2	51:26	0:03
106	53:59	54:04	0:05	3	54:10	0:02
107	56:20	56:26	0:06	1	56:28	0:02
108	58:33	58:38	0:05	1	58:41	0:03
109	58:41	58:47	0:06	4	58:55	0:02
110	1:04	1:14	0:10	0	0:00	0:00
111	3:14	3:21	0:07	2	3:27	0:03
112	3:27	3:32	0:05	0	0:00	0:00
113	5:49	5:57	0:08	1	5:59	0:02
114	5:57	6:02	0:05	0	0:00	0:00
115	8:25	8:33	0:08	2	8:37	0:02

Table E.1.4: Intersection #1 Left Turn Movement Data (4 of 5)

116	8:38	8:42	0:04	0	0:00	0:00
117	11:09	11:16	0:07	0	0:00	0:00
118	14:08	14:14	0:06	2	14:19	0:02
119	17:04	17:09	0:05	0	0:00	0:00
120	17:11	17:16	0:05	1	17:18	0:02
121	17:17	17:22	0:05	1	17:24	0:02
122	19:22	19:28	0:06	8	19:47	0:02
123	22:03	22:09	0:06	1	22:13	0:04
124	22:16	22:20	0:04	2	22:23	0:01
125	24:23	24:31	0:08	3	24:39	0:02
126	27:02	27:09	0:07	0	0:00	0:00
127	27:09	27:14	0:05	3	27:22	0:02
128	29:41	29:49	0:08	4	29:57	0:02
129	35:42	35:51	0:09	8	36:14	0:02
130	38:22	38:29	0:07	0	0:00	0:00
131	38:29	38:35	0:06	1	38:37	0:02
132	38:35	38:40	0:05	2	38:44	0:02
133	40:32	40:38	0:06	2	40:43	0:02
134	40:42	40:48	0:06	0	0:00	0:00
135	1:38	1:42	0:04	3	1:48	0:02
136	3:59	4:02	0:03	0	0:00	0:00
137	6:37	6:40	0:03	2	6:46	0:03
138	9:10	9:15	0:05	2	9:18	0:01
139	9:19	9:23	0:04	1	9:26	0:03
140	11:51	11:55	0:04	1	11:57	0:02
141	14:52	14:55	0:03	1	14:58	0:03
142	14:59	15:01	0:02	5	15:13	0:02
143	17:47	17:51	0:04	3	17:57	0:02
144	20:27	20:32	0:05	0	0:00	0:00
145	20:32	20:35	0:03	0	0:00	0:00
146	22:38	22:42	0:04	2	22:46	0:02
147	25:14	25:18	0:04	1	25:21	0:03
148	27:25	27:29	0:04	0	0:00	0:00
149	29:36	29:40	0:04	0	0:00	0:00
150	31:54	31:59	0:05	4	32:12	0:03
151	34:15	34:19	0:04	0	0:00	0:00
152	34:22	34:27	0:05	1	34:28	0:01
153	36:45	36:49	0:04	0	0:00	0:00
154	38:57	39:01	0:04	1	39:02	0:01
155	41:37	41:42	0:05	0	0:00	0:00

Table E.1.5: Intersection #1 Left Turn Movement Data (5 of 5)

156	44:09	44:13	0:04	1	44:17	0:04
157	44:19	44:22	0:03	2	44:27	0:02
158	46:54	46:59	0:05	1	47:01	0:02
159	47:00	47:04	0:04	2	47:11	0:03
160	49:41	49:45	0:04	6	50:00	0:02
161	52:42	52:46	0:04	7	53:05	0:02
162	55:15	55:18	0:03	2	55:24	0:03
163	55:24	55:28	0:04	0	0:00	0:00
164	57:34	57:38	0:04	1	57:40	0:02
165	59:55	59:59	0:04	2	60:05	0:03

Table E.2.1: Intersection #2 NBL Left Turn Movement Data (1 of 4)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach *NBL*	**Major Street:** Alafaya Trail			**Speed:** 45 MPH		
	Minor Street: Ashton Manor Way			**Geometry:** 4-Leg		
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	10:51	10:58	0:07	0	0:00	0:00
2	16:53	16:57	0:04	0	0:00	0:00
3	43:50	43:56	0:06	0	0:00	0:00
4	14:35	14:40	0:05	0	0:00	0:00
5	17:28	17:35	0:07	1	17:37	0:02
6	35:33	35:38	0:05	0	0:00	0:00
7	38:31	38:37	0:06	0	0:00	0:00
8	41:33	41:39	0:06	0	0:00	0:00
9	0:53	0:58	0:05	3	1:06	0:02
10	3:22	3:28	0:06	5	3:37	0:01
11	5:53	5:59	0:06	0	0:00	0:00
12	8:26	8:33	0:07	1	8:35	0:02
13	10:58	11:02	0:04	0	0:00	0:00
14	1:09	1:11	0:02	1	1:14	0:03
15	3:33	3:38	0:05	3	3:44	0:02
16	13:36	13:42	0:06	1	13:45	0:03
17	18:36	18:41	0:05	1	18:46	0:05
18	28:30	28:35	0:05	0	0:00	0:00
19	28:41	28:45	0:04	2	28:49	0:02
20	31:05	31:14	0:09	4	31:21	0:01
21	33:37	33:41	0:04	2	33:47	0:03
22	33:47	33:51	0:04	0	0:00	0:00
23	36:05	36:12	0:07	2	36:16	0:02
24	38:38	38:43	0:05	1	38:45	0:02
25	0:11	0:17	0:06	3	0:25	0:02
26	2:41	2:48	0:07	0	0:00	0:00
27	2:47	2:51	0:04	1	2:54	0:03
28	5:11	5:17	0:06	3	5:24	0:02
29	7:42	7:48	0:06	0	0:00	0:00
30	10:13	10:18	0:05	0	0:00	0:00
31	12:36	12:42	0:06	1	12:44	0:02
32	17:41	17:47	0:06	0	0:00	0:00
33	2:35	2:40	0:05	0	0:00	0:00
34	2:42	2:48	0:06	4	2:56	0:02
35	5:37	5:42	0:05	5	5:54	0:02

Table E.2.2: Intersection #2 NBL Left Turn Movement Data (2 of 4)

36	8:31	8:37	0:06	2	8:42	0:02
37	15:00	15:06	0:06	2	15:11	0:02
38	17:59	18:04	0:05	2	18:09	0:02
39	18:09	18:13	0:04	2	18:17	0:02
40	20:58	21:04	0:06	2	21:09	0:02
41	21:08	21:13	0:05	0	0:00	0:00
42	23:32	23:38	0:06	2	23:45	0:03
43	26:23	26:29	0:06	3	26:35	0:02
44	28:53	28:59	0:06	2	29:03	0:02
45	31:15	31:21	0:06	1	31:23	0:02
46	33:51	33:57	0:06	2	34:01	0:02
47	36:18	36:25	0:07	0	0:00	0:00
48	36:25	36:29	0:04	1	36:31	0:02
49	38:37	38:42	0:05	3	38:48	0:02
50	41:37	41:42	0:05	1	41:45	0:03
51	44:25	44:32	0:07	4	44:41	0:02
52	47:31	47:36	0:05	2	47:41	0:02
53	47:41	47:46	0:05	2	47:49	0:01
54	50:24	50:30	0:06	0	0:00	0:00
55	53:59	54:04	0:05	0	0:00	0:00
56	54:06	54:09	0:03	1	54:11	0:02
57	54:12	54:17	0:05	2	54:20	0:01
58	56:29	56:37	0:08	0	0:00	0:00
59	6:03	6:08	0:05	4	6:17	0:02
60	9:34	9:39	0:05	3	9:47	0:02
61	12:08	12:15	0:07	2	12:19	0:02
62	15:03	15:09	0:06	2	15:12	0:01
63	15:15	15:18	0:03	2	15:21	0:01
64	18:00	18:06	0:06	6	18:19	0:02
65	22:37	22:44	0:07	5	22:52	0:01
66	25:20	25:27	0:07	1	25:29	0:02
67	27:25	27:32	0:07	5	27:41	0:01
68	30:04	30:11	0:07	0	0:00	0:00
69	33:04	33:09	0:05	5	33:20	0:02
70	36:02	36:09	0:07	1	36:10	0:01
71	39:03	39:10	0:07	4	39:17	0:01
72	42:13	42:19	0:06	1	42:21	0:02
73	45:35	45:41	0:06	0	0:00	0:00
74	45:40	45:45	0:05	1	45:49	0:04
75	47:57	48:05	0:08	1	48:07	0:02

Table E.2.3: Intersection #2 NBL Left Turn Movement Data (3 of 4)

76	51:01	51:06	0:05	3	51:13	0:02
77	54:03	54:11	0:08	6	54:24	0:02
78	56:56	57:02	0:06	7	57:18	0:02
79	60:33	60:39	0:06	5	60:51	0:02
80	1:44	1:52	0:08	4	2:00	0:02
81	4:30	4:37	0:07	3	4:44	0:02
82	4:42	4:47	0:05	1	4:50	0:03
83	7:30	7:37	0:07	3	7:44	0:02
84	10:31	10:37	0:06	3	10:45	0:02
85	13:33	13:40	0:07	3	13:45	0:01
86	16:41	16:46	0:05	2	16:50	0:02
87	16:49	16:55	0:06	2	17:01	0:03
88	19:30	19:36	0:06	1	19:39	0:03
89	22:36	22:42	0:06	5	22:55	0:02
90	25:42	25:47	0:05	2	25:52	0:02
91	28:33	28:39	0:06	6	28:53	0:02
92	31:39	31:45	0:06	0	0:00	0:00
93	31:49	31:53	0:04	2	31:57	0:02
94	34:35	34:42	0:07	1	34:43	0:01
95	37:34	37:41	0:07	4	37:49	0:02
96	40:42	40:47	0:05	4	40:57	0:02
97	43:27	43:33	0:06	4	43:42	0:02
98	46:32	46:39	0:07	3	46:46	0:02
99	49:30	49:35	0:05	2	49:41	0:03
100	49:41	49:45	0:04	2	49:49	0:02
101	52:32	52:38	0:06	5	52:51	0:02
102	55:41	55:47	0:06	0	0:00	0:00
103	55:46	55:51	0:05	1	55:54	0:03
104	58:39	58:44	0:05	3	58:51	0:02
105	2:25	2:33	0:08	1	2:34	0:01
106	5:37	5:44	0:07	5	5:54	0:02
107	8:30	8:37	0:07	0	0:00	0:00
108	8:37	8:41	0:04	3	8:47	0:02
109	11:33	11:39	0:06	1	11:43	0:04
110	14:35	14:43	0:08	3	14:48	0:01
111	17:35	17:42	0:07	3	17:51	0:03
112	20:30	20:36	0:06	1	20:39	0:03
113	23:38	23:45	0:07	5	23:57	0:02
114	26:35	26:41	0:06	4	26:52	0:02
115	29:31	29:37	0:06	1	29:40	0:03

Table E.2.4: Intersection #2 NBL Left Turn Movement Data (4 of 4)

116	33:02	33:08	0:06	0	0:00	0:00
117	35:28	35:35	0:07	1	35:38	0:03
118	38:29	38:35	0:06	1	38:37	0:02
119	44:59	45:05	0:06	4	45:14	0:02
120	47:31	47:38	0:07	0	0:00	0:00
121	50:29	50:36	0:07	4	50:43	0:01
122	53:31	53:37	0:06	0	0:00	0:00
123	56:41	56:47	0:06	6	57:01	0:02
124	59:30	59:35	0:05	8	59:49	0:01

Table E.3.1: Intersection #2 SBL Left Turn Movement Data (1 of 3)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach *SBL*	**Major Street:** Alafaya Trail			**Speed:** 45 MPH		
	Minor Street: Ashton Manor Way			**Geometry:** 4-Leg		
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	61:44	61:50	0:06	0	0:00	0:00
2	5:31	5:35	0:04	0	0:00	0:00
3	14:35	14:41	0:06	0	0:00	0:00
4	17:29	17:36	0:07	0	0:00	0:00
5	44:32	44:37	0:05	0	0:00	0:00
6	0:53	0:58	0:05	0	0:00	0:00
7	3:24	3:29	0:05	0	0:00	0:00
8	8:30	8:36	0:06	0	0:00	0:00
9	10:55	11:00	0:05	1	11:03	0:03
10	1:04	1:08	0:04	0	0:00	0:00
11	8:37	8:41	0:04	0	0:00	0:00
12	11:05	11:11	0:06	1	11:14	0:03
13	16:04	16:09	0:05	0	0:00	0:00
14	21:07	21:12	0:05	0	0:00	0:00
15	26:05	26:11	0:06	0	0:00	0:00
16	31:07	31:13	0:06	0	0:00	0:00
17	33:37	33:41	0:04	0	0:00	0:00
18	38:37	38:43	0:06	0	0:00	0:00
19	0:12	0:18	0:06	1	0:20	0:02
20	2:40	2:46	0:06	0	0:00	0:00
21	5:11	5:16	0:05	0	0:00	0:00
22	10:04	10:10	0:06	0	0:00	0:00
23	12:35	12:44	0:09	0	0:00	0:00
24	17:44	17:50	0:06	0	0:00	0:00
25	17:13	17:17	0:04	0	0:00	0:00
26	5:37	5:44	0:07	2	5:48	0:02
27	8:32	8:38	0:06	0	0:00	0:00
28	11:33	11:38	0:05	1	11:41	0:03
29	17:59	18:05	0:06	1	18:08	0:03
30	20:58	21:03	0:05	0	0:00	0:00
31	23:28	23:34	0:06	1	23:37	0:03
32	26:23	26:29	0:06	0	0:00	0:00
33	27:42	27:47	0:05	0	0:00	0:00
34	31:15	31:21	0:06	0	0:00	0:00
35	33:50	33:56	0:06	3	34:04	0:02

Table E.3.2: Intersection #2 SBL Left Turn Movement Data (2 of 3)

36	36:17	36:24	0:07	2	36:27	0:01
37	41:38	41:43	0:05	2	41:49	0:03
38	44:27	44:33	0:06	1	44:34	0:01
39	50:25	50:32	0:07	2	50:38	0:03
40	53:59	54:06	0:07	0	0:00	0:00
41	56:29	56:35	0:06	1	56:39	0:04
42	0:01	0:08	0:07	1	0:10	0:02
43	3:04	3:11	0:07	0	0:00	0:00
44	9:35	9:41	0:06	0	0:00	0:00
45	12:07	12:13	0:06	0	0:00	0:00
46	15:12	15:17	0:05	0	0:00	0:00
47	18:01	18:07	0:06	3	18:11	0:01
48	20:15	20:23	0:08	1	20:25	0:02
49	22:38	22:45	0:07	2	22:49	0:02
50	25:21	25:27	0:06	2	25:31	0:02
51	30:04	30:11	0:07	1	30:13	0:02
52	33:02	33:08	0:06	0	0:00	0:00
53	36:02	36:10	0:08	1	36:12	0:02
54	39:02	39:09	0:07	0	0:00	0:00
55	47:59	48:05	0:06	0	0:00	0:00
56	51:01	51:06	0:05	3	51:12	0:02
57	54:05	54:12	0:07	1	54:13	0:01
58	0:32	0:38	0:06	3	0:45	0:02
59	4:30	4:36	0:06	0	0:00	0:00
60	4:35	4:40	0:05	0	0:00	0:00
61	7:32	7:38	0:06	4	7:45	0:01
62	10:30	10:33	0:03	4	10:42	0:02
63	13:33	13:40	0:07	1	13:41	0:01
64	16:41	16:49	0:08	1	16:51	0:02
65	19:30	19:36	0:06	0	0:00	0:00
66	22:37	22:41	0:04	2	22:47	0:03
67	28:33	28:40	0:07	1	28:42	0:02
68	28:41	28:45	0:04	0	0:00	0:00
69	31:38	31:45	0:07	1	31:47	0:02
70	34:33	34:39	0:06	0	0:00	0:00
71	37:37	37:43	0:06	0	0:00	0:00
72	43:27	43:34	0:07	0	0:00	0:00
73	46:35	46:40	0:05	1	46:41	0:01
74	55:40	55:48	0:08	1	55:50	0:02
75	2:25	2:31	0:06	1	2:34	0:03

Table E.3.3: Intersection #2 SBL Left Turn Movement Data (3 of 3)

76	8:29	8:35	0:06	1	8:37	0:02
77	11:33	11:38	0:05	1	11:41	0:03
78	14:35	14:41	0:06	1	14:43	0:02
79	14:43	14:50	0:07	0	0:00	0:00
80	17:37	17:43	0:06	3	17:47	0:01
81	20:33	20:37	0:04	0	0:00	0:00
82	23:37	23:42	0:05	1	23:44	0:02
83	33:01	33:07	0:06	3	33:14	0:02
84	42:02	42:07	0:05	0	0:00	0:00
85	42:05	42:11	0:06	5	42:24	0:02
86	44:59	45:05	0:06	2	45:10	0:02
87	47:31	47:38	0:07	2	47:42	0:02
88	50:29	50:36	0:07	0	0:00	0:00
89	53:31	53:37	0:06	0	0:00	0:00
90	56:41	56:47	0:06	0	0:00	0:00

Table E.4.1: Intersection #3 Left Turn Movement Data (1 of 11)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach *WBL*	**Major Street:** SR 436			**Speed:** 45 MPH		
	Minor Street: Orange Avenue			**Geometry:** 3-Leg		
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	2:06	2:11	0:05	2	2:16	0:02
2	4:55	5:01	0:06	5	5:12	0:02
3	5:12	5:17	0:05	0	0:00	0:00
4	7:46	7:52	0:06	1	7:54	0:02
5	7:55	7:59	0:04	0	0:00	0:00
6	10:36	10:42	0:06	1	10:44	0:02
7	13:26	13:32	0:06	4	13:40	0:02
8	16:16	16:21	0:05	3	16:29	0:02
9	19:05	19:12	0:07	4	19:21	0:02
10	21:56	22:03	0:07	0	0:00	0:00
11	22:06	22:10	0:04	0	0:00	0:00
12	24:46	24:51	0:05	1	24:55	0:04
13	27:35	27:40	0:05	7	27:57	0:02
14	27:56	28:00	0:04	0	0:00	0:00
15	30:25	30:31	0:06	3	30:37	0:02
16	31:56	32:02	0:06	2	32:07	0:02
17	32:13	32:19	0:06	0	0:00	0:00
18	33:10	33:17	0:07	2	33:20	0:01
19	34:29	34:34	0:05	3	34:46	0:04
20	34:48	34:52	0:04	0	0:00	0:00
21	35:54	35:58	0:04	2	36:05	0:03
22	36:06	36:12	0:06	0	0:00	0:00
23	37:20	37:24	0:04	3	37:33	0:03
24	38:44	38:49	0:05	4	38:59	0:02
25	40:10	40:14	0:04	4	40:25	0:02
26	41:33	41:38	0:05	1	41:41	0:03
27	41:47	41:51	0:04	0	0:00	0:00
28	43:07	43:14	0:07	0	0:00	0:00
29	44:25	44:30	0:05	4	44:38	0:02
30	45:50	45:56	0:06	5	46:05	0:01
31	47:15	47:21	0:06	1	47:23	0:02
32	48:40	48:45	0:05	3	48:52	0:02
33	48:53	48:57	0:04	2	49:00	0:01
34	50:04	50:09	0:05	6	50:24	0:02
35	51:30	51:35	0:05	3	51:43	0:02

Table E.4.2: Intersection #3 Left Turn Movement Data (2 of 11)

36	51:46	51:49	0:03	0	0:00	0:00
37	54:19	54:27	0:08	4	54:36	0:02
38	55:44	55:49	0:05	2	55:55	0:03
39	55:58	56:01	0:03	1	56:03	0:02
40	56:09	56:15	0:06	1	56:17	0:02
41	58:34	58:38	0:04	3	58:44	0:02
42	59:59	60:04	0:05	0	0:00	0:00
43	0:58	1:04	0:06	1	1:05	0:01
44	1:11	1:15	0:04	0	0:00	0:00
45	1:18	1:22	0:04	0	0:00	0:00
46	3:59	4:04	0:05	11	4:33	0:02
47	6:51	6:56	0:05	15	7:30	0:02
48	9:40	9:44	0:04	8	10:04	0:02
49	12:30	12:36	0:06	8	12:52	0:02
50	12:57	13:00	0:03	0	0:00	0:00
51	13:00	13:05	0:05	3	13:11	0:02
52	15:19	15:25	0:06	16	15:55	0:01
53	15:55	15:59	0:04	0	0:00	0:00
54	16:01	16:04	0:03	0	0:00	0:00
55	18:10	18:14	0:04	9	18:33	0:02
56	18:38	18:41	0:03	0	0:00	0:00
57	21:00	21:05	0:05	10	21:25	0:02
58	23:50	23:54	0:04	8	24:12	0:02
59	26:40	26:45	0:05	9	27:10	0:02
60	29:29	29:36	0:07	8	29:53	0:02
61	32:19	32:24	0:05	10	32:46	0:02
62	35:10	35:15	0:05	15	35:45	0:02
63	35:47	35:50	0:03	0	0:00	0:00
64	38:00	38:05	0:05	10	38:28	0:02
65	38:33	38:36	0:03	0	0:00	0:00
66	38:39	38:43	0:04	0	0:00	0:00
67	41:00	41:06	0:06	8	41:15	0:01
68	41:20	41:24	0:04	1	41:25	0:01
69	41:29	41:32	0:03	0	0:00	0:00
70	43:39	43:44	0:05	9	44:03	0:02
71	44:14	44:17	0:03	2	44:24	0:03
72	46:30	46:35	0:05	11	46:59	0:02
73	49:20	49:25	0:05	13	49:54	0:02
74	52:09	52:14	0:05	17	52:52	0:02
75	54:59	55:05	0:06	5	55:15	0:02

Table E.4.3: Intersection #3 Left Turn Movement Data (3 of 11)

76	57:50	57:54	0:04	11	58:18	0:02
77	58:21	58:24	0:03	0	0:00	0:00
78	0:59	1:06	0:07	10	1:29	0:02
79	2:13	2:19	0:06	6	2:32	0:02
80	2:33	2:38	0:05	3	2:45	0:02
81	3:54	4:01	0:07	2	4:04	0:01
82	4:05	4:10	0:05	0	0:00	0:00
83	4:11	4:15	0:04	1	4:17	0:02
84	4:56	5:01	0:05	1	5:04	0:03
85	6:52	6:57	0:05	7	7:12	0:02
86	7:21	7:25	0:04	1	7:26	0:01
87	7:27	7:31	0:04	0	0:00	0:00
88	7:30	7:35	0:05	0	0:00	0:00
89	8:37	8:43	0:06	3	8:51	0:02
90	9:45	9:51	0:06	11	10:14	0:02
91	10:15	10:20	0:05	0	0:00	0:00
92	11:29	11:35	0:06	1	11:37	0:02
93	11:38	11:42	0:04	1	11:44	0:02
94	11:45	11:49	0:04	0	0:00	0:00
95	11:49	11:53	0:04	0	0:00	0:00
96	12:30	12:36	0:06	2	12:39	0:01
97	12:46	12:50	0:04	0	0:00	0:00
98	14:16	14:21	0:05	6	14:34	0:02
99	14:44	14:47	0:03	3	14:56	0:03
100	15:29	15:36	0:07	2	15:40	0:02
101	17:03	17:10	0:07	16	17:47	0:02
102	18:13	18:18	0:05	3	18:26	0:02
103	19:42	19:49	0:07	7	20:05	0:02
104	20:16	20:20	0:04	0	0:00	0:00
105	21:25	21:31	0:06	9	21:51	0:02
106	21:57	22:00	0:03	0	0:00	0:00
107	22:52	22:58	0:06	13	23:32	0:02
108	24:52	24:59	0:07	4	25:09	0:02
109	25:48	25:54	0:06	6	26:09	0:02
110	27:33	27:38	0:05	10	27:58	0:02
111	28:30	28:36	0:06	1	28:38	0:02
112	30:11	30:16	0:05	10	30:42	0:02
113	30:49	30:54	0:05	0	0:00	0:00
114	31:22	31:27	0:05	0	0:00	0:00
115	32:48	32:53	0:05	9	33:18	0:02

Table E.4.4: Intersection #3 Left Turn Movement Data (4 of 11)

116	33:24	33:28	0:04	0	0:00	0:00
117	33:55	34:00	0:05	0	0:00	0:00
118	34:18	34:22	0:04	7	34:39	0:02
119	35:37	35:43	0:06	3	35:55	0:04
120	35:58	36:02	0:04	0	0:00	0:00
121	36:09	36:14	0:05	0	0:00	0:00
122	37:16	37:22	0:06	2	37:28	0:03
123	37:35	37:39	0:04	0	0:00	0:00
124	38:34	38:40	0:06	10	39:09	0:02
125	39:16	39:19	0:03	0	0:00	0:00
126	40:17	40:25	0:08	4	40:35	0:02
127	40:45	40:49	0:04	0	0:00	0:00
128	40:50	40:54	0:04	2	41:00	0:03
129	41:47	41:53	0:06	4	42:01	0:02
130	42:03	42:07	0:04	1	42:10	0:03
131	42:22	42:26	0:04	3	42:32	0:02
132	43:47	43:51	0:04	0	0:00	0:00
133	44:49	44:55	0:06	7	45:17	0:03
134	45:21	45:25	0:04	0	0:00	0:00
135	46:22	46:30	0:08	4	46:40	0:02
136	47:35	47:40	0:05	3	47:46	0:02
137	47:48	47:53	0:05	3	47:58	0:01
138	49:09	49:15	0:06	7	49:30	0:02
139	50:16	50:22	0:06	6	50:38	0:02
140	51:52	51:56	0:04	13	52:26	0:02
141	54:17	54:24	0:07	5	54:35	0:02
142	55:17	55:24	0:07	6	55:39	0:02
143	56:50	56:57	0:07	5	57:10	0:02
144	57:13	57:17	0:04	1	57:19	0:02
145	58:14	58:18	0:04	1	58:22	0:04
146	58:29	58:34	0:05	0	0:00	0:00
147	58:36	58:40	0:04	0	0:00	0:00
148	58:41	58:43	0:02	0	0:00	0:00
149	59:42	59:47	0:05	0	0:00	0:00
150	0:24	0:29	0:05	2	0:34	0:02
151	0:42	0:45	0:03	0	0:00	0:00
152	1:30	1:34	0:04	2	1:38	0:02
153	1:38	1:42	0:04	0	0:00	0:00
154	1:44	1:48	0:04	0	0:00	0:00
155	1:50	1:53	0:03	0	0:00	0:00

Table E.4.5: Intersection #3 Left Turn Movement Data (5 of 11)

156	1:59	2:03	0:04	0	0:00	0:00
157	2:06	2:09	0:03	2	2:13	0:02
158	2:57	3:04	0:07	2	3:08	0:02
159	4:20	4:24	0:04	12	4:51	0:02
160	4:51	4:55	0:04	1	4:56	0:01
161	4:58	5:01	0:03	0	0:00	0:00
162	6:00	6:05	0:05	0	0:00	0:00
163	6:16	6:20	0:04	0	0:00	0:00
164	6:20	6:24	0:04	1	6:25	0:01
165	6:29	6:34	0:05	2	6:39	0:02
166	7:44	7:50	0:06	7	8:07	0:02
167	8:09	8:13	0:04	1	8:14	0:01
168	9:21	9:26	0:05	6	9:41	0:02
169	9:46	9:50	0:04	0	0:00	0:00
170	9:51	9:55	0:04	0	0:00	0:00
171	9:58	10:02	0:04	0	0:00	0:00
172	11:03	11:09	0:06	8	11:27	0:02
173	13:59	14:04	0:05	13	14:31	0:02
174	15:27	15:31	0:04	15	16:08	0:02
175	16:09	16:12	0:03	0	0:00	0:00
176	16:59	17:04	0:05	1	17:06	0:02
177	18:08	18:13	0:05	2	18:18	0:02
178	18:23	18:26	0:03	1	18:29	0:03
179	18:33	18:35	0:02	1	18:38	0:03
180	19:37	19:43	0:06	4	19:53	0:02
181	19:58	20:02	0:04	2	20:07	0:02
182	20:09	20:13	0:04	0	0:00	0:00
183	20:13	20:18	0:05	0	0:00	0:00
184	21:32	21:38	0:06	7	21:53	0:02
185	21:53	21:59	0:06	1	22:01	0:02
186	22:07	22:11	0:04	0	0:00	0:00
187	23:02	23:06	0:04	10	23:28	0:02
188	25:17	25:23	0:06	12	25:47	0:02
189	25:48	25:54	0:06	3	26:00	0:02
190	26:29	26:36	0:07	2	26:41	0:02
191	27:32	27:38	0:06	12	28:07	0:02
192	29:13	29:17	0:04	0	0:00	0:00
193	29:17	29:22	0:05	2	29:26	0:02
194	31:08	31:17	0:09	16	31:53	0:02
195	32:19	32:26	0:07	2	32:32	0:03

Table E.4.6: Intersection #3 Left Turn Movement Data (6 of 11)

196	32:34	32:39	0:05	1	32:41	0:02
197	33:58	34:04	0:06	15	34:44	0:02
198	35:09	35:15	0:06	9	35:36	0:02
199	36:43	36:49	0:06	7	37:05	0:02
200	37:14	37:18	0:04	1	37:20	0:02
201	37:44	37:49	0:05	7	38:02	0:01
202	38:02	38:05	0:03	1	38:07	0:02
203	38:07	38:12	0:05	0	0:00	0:00
204	39:31	39:38	0:07	5	39:50	0:02
205	40:05	40:09	0:04	0	0:00	0:00
206	40:09	40:13	0:04	0	0:00	0:00
207	40:45	40:51	0:06	9	41:11	0:02
208	42:40	42:46	0:06	9	43:08	0:02
209	43:18	43:22	0:04	0	0:00	0:00
210	44:06	44:13	0:07	0	0:00	0:00
211	44:13	44:19	0:06	2	44:23	0:02
212	45:36	45:43	0:07	7	45:58	0:02
213	46:51	46:57	0:06	0	0:00	0:00
214	46:57	47:01	0:04	7	47:16	0:02
215	48:36	48:44	0:08	15	49:17	0:02
216	49:53	50:00	0:07	8	50:18	0:02
217	51:01	51:07	0:06	2	51:13	0:03
218	51:30	51:34	0:04	1	51:36	0:02
219	51:37	51:42	0:05	0	0:00	0:00
220	52:36	52:42	0:06	8	53:03	0:02
221	54:04	54:11	0:07	4	54:21	0:02
222	54:27	54:32	0:05	0	0:00	0:00
223	54:32	54:36	0:04	3	54:42	0:02
224	54:43	54:48	0:05	1	54:50	0:02
225	55:18	55:25	0:07	6	55:39	0:02
226	55:43	55:47	0:04	0	0:00	0:00
227	56:38	56:44	0:06	4	56:54	0:02
228	57:48	57:53	0:05	8	58:14	0:02
229	59:45	59:51	0:06	2	59:54	0:01
230	59:55	59:59	0:04	0	0:00	0:00
231	60:02	60:06	0:04	1	60:08	0:02
232	60:12	60:16	0:04	0	0:00	0:00
233	60:21	60:24	0:03	0	0:00	0:00
234	0:42	0:48	0:06	14	1:23	0:02
235	3:10	3:13	0:03	3	3:23	0:03

Table E.4.7: Intersection #3 Left Turn Movement Data (7 of 11)

236	3:59	4:08	0:09	7	4:20	0:01
237	4:25	4:30	0:05	1	4:32	0:02
238	5:38	5:45	0:07	8	6:05	0:02
239	6:06	6:10	0:04	3	6:21	0:03
240	7:18	7:25	0:07	12	7:50	0:02
241	8:29	8:35	0:06	5	8:48	0:02
242	8:51	8:54	0:03	0	0:00	0:00
243	9:54	9:59	0:05	4	10:08	0:02
244	10:47	10:54	0:07	0	0:00	0:00
245	11:58	12:03	0:05	14	12:32	0:02
246	12:34	12:37	0:03	0	0:00	0:00
247	13:38	13:44	0:06	6	13:57	0:02
248	14:41	14:47	0:06	3	14:56	0:03
249	16:13	16:21	0:08	10	16:48	0:02
250	17:40	17:45	0:05	6	17:59	0:02
251	18:11	18:15	0:04	2	18:19	0:02
252	19:28	19:34	0:06	12	20:02	0:02
253	21:19	21:25	0:06	4	21:35	0:02
254	21:40	21:44	0:04	11	22:05	0:01
255	22:31	22:36	0:05	3	22:42	0:02
256	22:42	22:46	0:04	7	22:58	0:01
257	23:47	23:51	0:04	11	24:15	0:02
258	24:18	24:22	0:04	2	24:25	0:01
259	24:28	24:32	0:04	0	0:00	0:00
260	25:25	25:31	0:06	8	25:47	0:02
261	27:15	27:21	0:06	5	27:34	0:02
262	27:42	27:45	0:03	0	0:00	0:00
263	27:46	27:50	0:04	0	0:00	0:00
264	27:53	27:56	0:03	2	28:01	0:02
265	28:24	28:29	0:05	11	28:51	0:02
266	30:24	30:31	0:07	9	30:53	0:02
267	30:54	30:58	0:04	4	31:07	0:02
268	32:08	32:14	0:06	0	0:00	0:00
269	32:15	32:21	0:06	13	32:52	0:02
270	33:42	33:48	0:06	7	34:07	0:02
271	34:08	34:12	0:04	0	0:00	0:00
272	34:13	34:17	0:04	5	34:28	0:02
273	34:51	34:57	0:06	3	35:08	0:03
274	35:14	35:17	0:03	0	0:00	0:00
275	36:15	36:22	0:07	11	36:53	0:02

Table E.4.8: Intersection #3 Left Turn Movement Data (8 of 11)

276	38:04	38:09	0:05	4	38:19	0:02
277	40:02	40:08	0:06	18	40:46	0:02
278	41:50	41:56	0:06	2	42:01	0:02
279	42:06	42:10	0:04	3	42:18	0:02
280	42:22	42:26	0:04	0	0:00	0:00
281	42:27	42:31	0:04	1	42:33	0:02
282	43:32	43:39	0:07	13	44:06	0:02
283	44:14	44:18	0:04	0	0:00	0:00
284	45:15	45:21	0:06	0	0:00	0:00
285	45:35	45:38	0:03	8	45:58	0:02
286	47:01	47:05	0:04	9	47:22	0:01
287	47:26	47:29	0:03	0	0:00	0:00
288	48:36	48:41	0:05	0	0:00	0:00
289	48:44	48:49	0:05	1	48:53	0:04
290	50:13	50:18	0:05	16	50:51	0:02
291	51:21	51:27	0:06	1	51:30	0:03
292	53:04	53:11	0:07	11	53:34	0:02
293	53:40	53:45	0:05	1	53:47	0:02
294	54:49	54:54	0:05	6	55:08	0:02
295	55:14	55:18	0:04	0	0:00	0:00
296	55:20	55:25	0:05	0	0:00	0:00
297	55:26	55:30	0:04	0	0:00	0:00
298	56:28	56:34	0:06	11	56:54	0:01
299	58:28	58:33	0:05	13	59:02	0:02
300	59:06	59:09	0:03	0	0:00	0:00
301	59:09	59:12	0:03	0	0:00	0:00
302	59:37	59:41	0:04	1	59:45	0:04
303	1:15	1:22	0:07	14	1:58	0:02
304	1:58	2:01	0:03	0	0:00	0:00
305	2:38	2:43	0:05	0	0:00	0:00
306	2:44	2:48	0:04	0	0:00	0:00
307	3:53	4:00	0:07	14	4:31	0:02
308	4:34	4:38	0:04	0	0:00	0:00
309	5:21	5:28	0:07	8	5:47	0:02
310	6:46	6:53	0:07	6	7:07	0:02
311	7:55	8:03	0:08	17	8:41	0:02
312	9:37	9:43	0:06	7	9:59	0:02
313	10:14	10:17	0:03	0	0:00	0:00
314	10:17	10:22	0:05	0	0:00	0:00
315	10:50	10:57	0:07	4	11:09	0:03

Table E.4.9: Intersection #3 Left Turn Movement Data (9 of 11)

316	12:15	12:21	0:06	15	13:01	0:02
317	14:01	14:07	0:06	13	14:38	0:02
318	15:43	15:48	0:05	5	16:02	0:02
319	17:32	17:39	0:07	11	18:05	0:02
320	18:09	18:11	0:02	1	18:16	0:05
321	18:48	18:54	0:06	1	18:57	0:03
322	19:04	19:08	0:04	0	0:00	0:00
323	19:09	19:13	0:04	0	0:00	0:00
324	19:14	19:18	0:04	2	19:24	0:03
325	20:30	20:37	0:07	1	20:39	0:02
326	20:40	20:44	0:04	8	21:02	0:02
327	21:03	21:06	0:03	0	0:00	0:00
328	21:07	21:12	0:05	0	0:00	0:00
329	22:15	22:20	0:05	5	22:32	0:02
330	22:36	22:40	0:04	4	22:47	0:01
331	23:44	23:50	0:06	3	23:57	0:02
332	23:59	24:03	0:04	0	0:00	0:00
333	24:15	24:19	0:04	0	0:00	0:00
334	24:51	24:55	0:04	0	0:00	0:00
335	24:55	24:59	0:04	1	25:02	0:03
336	25:05	25:09	0:04	2	25:14	0:02
337	26:15	26:22	0:07	6	26:37	0:02
338	27:19	27:23	0:04	1	27:27	0:04
339	27:33	27:37	0:04	4	27:51	0:03
340	28:24	28:30	0:06	5	28:44	0:02
341	28:44	28:51	0:07	0	0:00	0:00
342	28:54	28:58	0:04	5	29:08	0:02
343	30:08	30:13	0:05	2	30:20	0:03
344	30:22	30:26	0:04	0	0:00	0:00
345	30:29	30:34	0:05	1	30:36	0:02
346	30:40	30:43	0:03	1	30:47	0:04
347	30:50	30:53	0:03	0	0:00	0:00
348	31:54	31:59	0:05	5	32:11	0:02
349	33:03	33:10	0:07	0	0:00	0:00
350	33:14	33:18	0:04	0	0:00	0:00
351	33:18	33:22	0:04	1	33:25	0:03
352	33:29	33:33	0:04	1	33:35	0:02
353	34:57	35:02	0:05	11	35:26	0:02
354	36:23	36:29	0:06	0	0:00	0:00
355	36:42	36:47	0:05	1	36:49	0:02

Table E.4.10: Intersection #3 Left Turn Movement Data (10 of 11)

356	36:51	36:54	0:03	1	36:56	0:02
357	37:00	37:04	0:04	0	0:00	0:00
358	37:55	38:02	0:07	9	38:21	0:02
359	39:15	39:21	0:06	3	39:32	0:03
360	40:42	40:47	0:05	8	41:08	0:02
361	41:10	41:14	0:04	0	0:00	0:00
362	42:14	42:20	0:06	0	0:00	0:00
363	42:35	42:39	0:04	6	42:58	0:03
364	43:42	43:48	0:06	2	43:53	0:02
365	43:58	44:02	0:04	1	44:03	0:01
366	44:27	44:32	0:05	3	44:40	0:02
367	46:19	46:24	0:05	8	46:43	0:02
368	46:44	46:48	0:04	0	0:00	0:00
369	47:57	48:03	0:06	1	48:09	0:06
370	49:17	49:22	0:05	7	49:38	0:02
371	49:41	49:45	0:04	0	0:00	0:00
372	49:50	49:53	0:03	2	49:59	0:03
373	50:36	50:42	0:06	7	50:59	0:02
374	51:03	51:07	0:04	1	51:09	0:02
375	52:11	52:16	0:05	4	52:26	0:02
376	52:42	52:45	0:03	0	0:00	0:00
377	52:49	52:52	0:03	1	52:54	0:02
378	53:54	54:00	0:06	5	54:10	0:02
379	55:14	55:20	0:06	13	55:49	0:02
380	55:53	55:56	0:03	0	0:00	0:00
381	56:38	56:43	0:05	2	56:49	0:03
382	57:49	57:55	0:06	1	57:57	0:02
383	58:47	58:54	0:07	5	59:06	0:02
384	59:07	59:10	0:03	1	59:12	0:02
385	1:03	1:09	0:06	5	1:22	0:02
386	1:28	1:31	0:03	0	0:00	0:00
387	1:55	2:02	0:07	4	2:13	0:02
388	2:19	2:22	0:03	1	2:25	0:03
389	2:27	2:31	0:04	3	2:38	0:02
390	3:52	3:57	0:05	5	4:12	0:03
391	4:56	5:01	0:05	6	5:19	0:03
392	5:56	6:03	0:07	2	6:07	0:02
393	6:58	7:03	0:05	7	7:20	0:02
394	7:22	7:26	0:04	4	7:38	0:03
395	8:28	8:34	0:06	3	8:41	0:02

Table E.4.11: Intersection #3 Left Turn Movement Data (11 of 11)

396	9:38	9:44	0:06	5	9:56	0:02
397	10:37	10:43	0:06	3	10:51	0:02
398	11:22	11:28	0:06	4	11:39	0:02
399	11:41	11:44	0:03	0	0:00	0:00
400	11:46	11:50	0:04	0	0:00	0:00
401	12:46	12:52	0:06	1	12:54	0:02
402	13:59	14:05	0:06	2	14:09	0:02
403	14:15	14:19	0:04	0	0:00	0:00
404	15:11	15:17	0:06	3	15:24	0:02
405	15:28	15:32	0:04	0	0:00	0:00
406	15:32	15:36	0:04	0	0:00	0:00
407	16:40	16:46	0:06	1	16:48	0:02
408	18:00	18:05	0:05	6	18:20	0:02
409	18:25	18:29	0:04	0	0:00	0:00
410	19:47	19:51	0:04	2	19:57	0:03
411	21:09	21:14	0:05	8	21:37	0:02
412	23:40	23:45	0:05	3	23:53	0:02
413	23:56	24:00	0:04	3	24:08	0:02
414	24:50	24:55	0:05	1	24:58	0:03
415	25:10	25:14	0:04	0	0:00	0:00
416	26:38	26:45	0:07	0	0:00	0:00
417	27:30	27:35	0:05	0	0:00	0:00
418	28:59	29:04	0:05	16	29:43	0:02
419	30:10	30:17	0:07	0	0:00	0:00
420	30:20	30:24	0:04	2	30:29	0:02
421	31:18	31:23	0:05	5	31:34	0:02
422	31:38	31:41	0:03	0	0:00	0:00
423	32:42	32:48	0:06	5	33:00	0:02
424	33:54	34:00	0:06	11	34:28	0:02
425	34:29	34:33	0:04	0	0:00	0:00
426	35:35	35:40	0:05	4	35:50	0:02
427	35:57	36:00	0:03	3	36:06	0:02
428	36:40	36:47	0:07	6	37:00	0:02
429	37:02	37:06	0:04	0	0:00	0:00
430	37:11	37:15	0:04	0	0:00	0:00
431	37:52	37:57	0:05	7	38:16	0:02
432	39:27	39:32	0:05	3	39:38	0:02
433	40:40	40:46	0:06	11	41:14	0:02
434	41:16	41:20	0:04	0	0:00	0:00
435	42:42	42:47	0:05	0	0:00	0:00
436	43:47	43:52	0:05	6	44:09	0:02

Table E.5.1: Intersection #4 Left Turn Movement Data (1 of 5)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach *EBL*	**Major Street:** Sand Lake Road			**Speed:** 55 MPH		
	Minor Street: Winegard Road			**Geometry:** 4-Leg		
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	3:01	3:06	0:05	1	3:10	0:04
2	9:42	9:47	0:05	0	0:00	0:00
3	11:47	11:53	0:06	0	0:00	0:00
4	12:02	12:07	0:05	0	0:00	0:00
5	21:59	22:05	0:06	0	0:00	0:00
6	36:03	36:08	0:05	0	0:00	0:00
7	37:15	37:20	0:05	0	0:00	0:00
8	38:47	38:55	0:08	0	0:00	0:00
9	39:43	39:48	0:05	0	0:00	0:00
10	42:03	42:09	0:06	0	0:00	0:00
11	44:34	44:40	0:06	0	0:00	0:00
12	45:30	45:36	0:06	0	0:00	0:00
13	54:25	54:30	0:05	0	0:00	0:00
14	57:13	57:18	0:05	0	0:00	0:00
15	0:36	0:40	0:04	0	0:00	0:00
16	1:47	1:52	0:05	0	0:00	0:00
17	3:16	3:21	0:05	0	0:00	0:00
18	7:10	7:16	0:06	0	0:00	0:00
19	10:38	10:44	0:06	1	10:46	0:02
20	14:14	14:20	0:06	1	14:22	0:02
21	16:28	16:32	0:04	0	0:00	0:00
22	16:46	16:49	0:03	0	0:00	0:00
23	19:18	19:22	0:04	0	0:00	0:00
24	19:30	19:35	0:05	1	19:38	0:03
25	21:25	21:28	0:03	0	0:00	0:00
26	26:56	27:03	0:07	0	0:00	0:00
27	27:16	27:22	0:06	0	0:00	0:00
28	29:40	29:46	0:06	1	29:48	0:02
29	32:12	32:17	0:05	0	0:00	0:00
30	32:55	33:01	0:06	0	0:00	0:00
31	34:18	34:24	0:06	0	0:00	0:00
32	34:28	34:31	0:03	0	0:00	0:00
33	38:34	38:39	0:05	0	0:00	0:00
34	43:28	43:31	0:03	0	0:00	0:00
35	43:39	43:45	0:06	1	43:46	0:01

Table E.5.2: Intersection #4 Left Turn Movement Data (2 of 5)

36	51:10	51:14	0:04	0	0:00	0:00
37	54:43	54:47	0:04	0	0:00	0:00
38	57:23	57:29	0:06	0	0:00	0:00
39	58:25	58:30	0:05	0	0:00	0:00
40	58:37	58:42	0:05	0	0:00	0:00
41	59:41	59:44	0:03	0	0:00	0:00
42	0:21	0:26	0:05	0	0:00	0:00
43	1:21	1:28	0:07	0	0:00	0:00
44	2:23	2:27	0:04	0	0:00	0:00
45	2:38	2:43	0:05	0	0:00	0:00
46	3:30	3:38	0:08	0	0:00	0:00
47	4:00	4:05	0:05	0	0:00	0:00
48	5:15	5:21	0:06	0	0:00	0:00
49	5:21	5:25	0:04	0	0:00	0:00
50	6:03	6:09	0:06	0	0:00	0:00
51	7:14	7:19	0:05	0	0:00	0:00
52	11:39	11:43	0:04	0	0:00	0:00
53	15:34	15:38	0:04	0	0:00	0:00
54	19:21	19:25	0:04	1	19:28	0:03
55	19:57	20:01	0:04	0	0:00	0:00
56	22:57	23:03	0:06	0	0:00	0:00
57	24:55	24:59	0:04	0	0:00	0:00
58	25:10	25:14	0:04	0	0:00	0:00
59	26:35	26:39	0:04	0	0:00	0:00
60	26:47	26:52	0:05	0	0:00	0:00
61	27:05	27:09	0:04	0	0:00	0:00
62	30:33	30:36	0:03	0	0:00	0:00
63	30:39	30:45	0:06	1	30:47	0:02
64	30:55	31:00	0:05	2	31:03	0:01
65	31:23	31:27	0:04	0	0:00	0:00
66	35:20	35:26	0:06	0	0:00	0:00
67	39:25	39:29	0:04	0	0:00	0:00
68	39:30	39:35	0:05	0	0:00	0:00
69	44:45	44:51	0:06	1	44:54	0:03
70	50:34	50:39	0:05	1	50:42	0:03
71	53:36	53:41	0:05	0	0:00	0:00
72	59:11	59:17	0:06	0	0:00	0:00
73	59:19	59:23	0:04	1	59:25	0:02
74	59:25	59:33	0:08	1	59:35	0:02
75	2:06	2:12	0:06	1	2:14	0:02

Table E.5.3: Intersection #4 Left Turn Movement Data (3 of 5)

76	2:20	2:28	0:08	0	0:00	0:00
77	4:23	4:28	0:05	0	0:00	0:00
78	6:22	6:28	0:06	0	0:00	0:00
79	7:22	7:27	0:05	2	7:30	0:01
80	9:39	9:43	0:04	0	0:00	0:00
81	9:44	9:48	0:04	0	0:00	0:00
82	14:00	14:05	0:05	2	14:08	0:01
83	19:49	19:54	0:05	0	0:00	0:00
84	21:28	21:32	0:04	0	0:00	0:00
85	22:23	22:28	0:05	0	0:00	0:00
86	28:15	28:19	0:04	4	28:26	0:01
87	31:51	31:57	0:06	0	0:00	0:00
88	39:23	39:26	0:03	0	0:00	0:00
89	39:48	39:52	0:04	0	0:00	0:00
90	40:11	40:15	0:04	0	0:00	0:00
91	40:32	40:37	0:05	0	0:00	0:00
92	42:48	42:55	0:07	1	42:57	0:02
93	43:15	43:18	0:03	0	0:00	0:00
94	46:05	46:09	0:04	1	46:11	0:02
95	46:11	46:14	0:03	0	0:00	0:00
96	49:24	49:27	0:03	0	0:00	0:00
97	51:55	51:59	0:04	0	0:00	0:00
98	52:00	52:05	0:05	0	0:00	0:00
99	54:18	54:23	0:05	0	0:00	0:00
100	54:24	54:29	0:05	1	54:31	0:02
101	58:09	58:13	0:04	0	0:00	0:00
102	59:24	59:28	0:04	0	0:00	0:00
103	1:19	1:24	0:05	1	1:27	0:03
104	8:12	8:17	0:05	0	0:00	0:00
105	8:18	8:23	0:05	0	0:00	0:00
106	9:45	9:49	0:04	0	0:00	0:00
107	10:03	10:06	0:03	1	10:08	0:02
108	13:06	13:10	0:04	0	0:00	0:00
109	14:43	14:48	0:05	0	0:00	0:00
110	16:02	16:07	0:05	0	0:00	0:00
111	16:08	16:13	0:05	0	0:00	0:00
112	17:18	17:22	0:04	2	17:26	0:02
113	22:13	22:17	0:04	0	0:00	0:00
114	22:35	22:39	0:04	0	0:00	0:00
115	25:07	25:10	0:03	2	25:14	0:02

Table E.5.4: Intersection #4 Left Turn Movement Data (4 of 5)

116	28:16	28:21	0:05	0	0:00	0:00
117	30:10	30:15	0:05	0	0:00	0:00
118	31:43	31:47	0:04	0	0:00	0:00
119	32:00	32:04	0:04	0	0:00	0:00
120	32:13	32:18	0:05	1	32:21	0:03
121	33:57	34:02	0:05	2	34:06	0:02
122	37:04	37:10	0:06	0	0:00	0:00
123	42:06	42:11	0:05	0	0:00	0:00
124	42:45	42:48	0:03	0	0:00	0:00
125	43:09	43:13	0:04	0	0:00	0:00
126	43:16	43:19	0:03	0	0:00	0:00
127	45:16	45:21	0:05	1	45:23	0:02
128	45:26	45:30	0:04	0	0:00	0:00
129	47:20	47:25	0:05	0	0:00	0:00
130	48:27	48:31	0:04	0	0:00	0:00
131	48:40	48:43	0:03	0	0:00	0:00
132	48:43	48:47	0:04	0	0:00	0:00
133	48:46	48:50	0:04	0	0:00	0:00
134	50:13	50:17	0:04	0	0:00	0:00
135	51:36	51:41	0:05	0	0:00	0:00
136	52:06	52:09	0:03	2	52:14	0:02
137	55:12	55:16	0:04	0	0:00	0:00
138	58:04	58:09	0:05	1	58:10	0:01
139	0:11	0:15	0:04	1	0:17	0:02
140	0:33	0:38	0:05	0	0:00	0:00
141	2:30	2:35	0:05	0	0:00	0:00
142	4:14	4:18	0:04	0	0:00	0:00
143	5:14	5:19	0:05	1	5:21	0:02
144	7:45	7:50	0:05	0	0:00	0:00
145	8:57	9:01	0:04	0	0:00	0:00
146	10:20	10:24	0:04	0	0:00	0:00
147	10:35	10:38	0:03	0	0:00	0:00
148	13:21	13:26	0:05	0	0:00	0:00
149	13:34	13:37	0:03	0	0:00	0:00
150	14:00	14:03	0:03	0	0:00	0:00
151	14:05	14:09	0:04	0	0:00	0:00
152	16:19	16:23	0:04	1	16:25	0:02
153	21:37	21:43	0:06	3	21:48	0:01
154	25:58	26:02	0:04	0	0:00	0:00
155	26:13	26:18	0:05	0	0:00	0:00

Table E.5.5: Intersection #4 Left Turn Movement Data (5 of 5)

156	27:02	27:06	0:04	0	0:00	0:00
157	27:23	27:29	0:06	0	0:00	0:00
158	27:55	28:00	0:05	0	0:00	0:00
159	28:47	28:50	0:03	0	0:00	0:00
160	29:30	29:35	0:05	1	29:37	0:02
161	31:38	31:43	0:05	0	0:00	0:00
162	35:01	35:06	0:05	0	0:00	0:00
163	35:14	35:19	0:05	0	0:00	0:00
164	35:19	35:23	0:04	0	0:00	0:00
165	36:22	36:26	0:04	0	0:00	0:00
166	37:23	37:29	0:06	0	0:00	0:00
167	37:55	38:00	0:05	0	0:00	0:00
168	38:34	38:39	0:05	1	38:41	0:02
169	39:01	39:07	0:06	1	39:09	0:02
170	39:47	39:52	0:05	0	0:00	0:00
171	41:02	41:08	0:06	0	0:00	0:00
172	41:10	41:15	0:05	0	0:00	0:00
173	42:04	42:08	0:04	0	0:00	0:00
174	44:06	44:10	0:04	1	44:13	0:03
175	45:43	45:47	0:04	0	0:00	0:00
176	46:16	46:21	0:05	0	0:00	0:00
177	47:10	47:15	0:05	0	0:00	0:00
178	47:20	47:25	0:05	0	0:00	0:00
179	48:45	48:50	0:05	0	0:00	0:00
180	52:17	52:21	0:04	0	0:00	0:00
181	52:26	52:30	0:04	0	0:00	0:00
182	52:30	52:34	0:04	0	0:00	0:00
183	53:33	53:39	0:06	1	53:41	0:02
184	54:14	54:18	0:04	0	0:00	0:00
185	54:48	54:53	0:05	1	54:56	0:03
186	55:23	55:28	0:05	0	0:00	0:00
187	55:39	55:44	0:05	0	0:00	0:00

Table E.6.1: Intersection #5 Left Turn Movement Data (1 of 8)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach	**Major Street:** US 17-92			**Speed:**	45 MPH	
NBL	**Minor Street:** Church Avenue			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	1:57	2:02	0:05	0	0:00	0:00
2	5:28	5:34	0:06	0	0:00	0:00
3	5:50	5:55	0:05	0	0:00	0:00
4	9:07	9:12	0:05	0	0:00	0:00
5	9:40	9:44	0:04	0	0:00	0:00
6	10:53	10:58	0:05	0	0:00	0:00
7	11:55	11:59	0:04	0	0:00	0:00
8	12:09	12:14	0:05	0	0:00	0:00
9	14:02	14:05	0:03	0	0:00	0:00
10	17:28	17:31	0:03	0	0:00	0:00
11	21:05	21:08	0:03	0	0:00	0:00
12	23:14	23:19	0:05	0	0:00	0:00
13	23:20	23:24	0:04	0	0:00	0:00
14	23:43	23:47	0:04	0	0:00	0:00
15	26:56	27:01	0:05	0	0:00	0:00
16	29:22	29:26	0:04	0	0:00	0:00
17	29:51	29:55	0:04	0	0:00	0:00
18	29:56	30:01	0:05	2	30:05	0:02
19	30:10	30:15	0:05	0	0:00	0:00
20	32:57	33:01	0:04	0	0:00	0:00
21	33:04	33:09	0:05	0	0:00	0:00
22	35:52	35:57	0:05	0	0:00	0:00
23	38:45	38:50	0:05	0	0:00	0:00
24	38:55	38:59	0:04	2	39:03	0:02
25	39:04	39:08	0:04	0	0:00	0:00
26	40:53	40:58	0:05	2	41:01	0:01
27	41:31	41:36	0:05	0	0:00	0:00
28	41:39	41:44	0:05	0	0:00	0:00
29	44:49	44:53	0:04	0	0:00	0:00
30	45:00	45:05	0:05	0	0:00	0:00
31	48:04	48:09	0:05	0	0:00	0:00
32	50:52	50:55	0:03	0	0:00	0:00
33	52:20	52:25	0:05	0	0:00	0:00
34	54:08	54:13	0:05	0	0:00	0:00
35	56:02	56:06	0:04	0	0:00	0:00

Table E.6.2: Intersection #5 Left Turn Movement Data (2 of 8)

36	56:06	56:10	0:04	0	0:00	0:00
37	57:10	57:15	0:05	0	0:00	0:00
38	58:02	58:06	0:04	0	0:00	0:00
39	0:01	0:08	0:07	1	0:11	0:03
40	2:49	2:54	0:05	0	0:00	0:00
41	4:48	4:53	0:05	0	0:00	0:00
42	6:15	6:20	0:05	0	0:00	0:00
43	8:30	8:37	0:07	1	8:38	0:01
44	11:09	11:13	0:04	1	11:14	0:01
45	11:20	11:24	0:04	0	0:00	0:00
46	16:54	16:57	0:03	0	0:00	0:00
47	16:59	17:04	0:05	0	0:00	0:00
48	19:50	19:54	0:04	0	0:00	0:00
49	20:14	20:19	0:05	1	20:22	0:03
50	20:34	20:37	0:03	0	0:00	0:00
51	23:43	23:48	0:05	0	0:00	0:00
52	25:36	25:41	0:05	0	0:00	0:00
53	26:28	26:33	0:05	0	0:00	0:00
54	26:37	26:42	0:05	2	26:45	0:01
55	27:47	27:50	0:03	0	0:00	0:00
56	29:19	29:23	0:04	0	0:00	0:00
57	29:37	29:41	0:04	0	0:00	0:00
58	32:25	32:29	0:04	0	0:00	0:00
59	33:21	33:26	0:05	0	0:00	0:00
60	34:16	34:19	0:03	0	0:00	0:00
61	34:59	35:04	0:05	0	0:00	0:00
62	35:20	35:24	0:04	2	35:30	0:03
63	37:57	38:02	0:05	0	0:00	0:00
64	38:15	38:19	0:04	0	0:00	0:00
65	41:30	41:33	0:03	0	0:00	0:00
66	41:35	41:39	0:04	0	0:00	0:00
67	41:49	41:53	0:04	0	0:00	0:00
68	42:14	42:17	0:03	0	0:00	0:00
69	43:40	43:43	0:03	0	0:00	0:00
70	43:44	43:47	0:03	0	0:00	0:00
71	44:23	44:27	0:04	0	0:00	0:00
72	44:35	44:39	0:04	0	0:00	0:00
73	44:44	44:49	0:05	0	0:00	0:00
74	46:37	46:40	0:03	0	0:00	0:00
75	50:19	50:24	0:05	1	50:25	0:01

Table E.6.3: Intersection #5 Left Turn Movement Data (3 of 8)

76	52:59	53:05	0:06	0	0:00	0:00
77	53:43	53:46	0:03	0	0:00	0:00
78	56:16	56:20	0:04	0	0:00	0:00
79	56:41	56:46	0:05	0	0:00	0:00
80	0:45	0:51	0:06	1	0:54	0:03
81	2:01	2:06	0:05	0	0:00	0:00
82	2:35	2:40	0:05	0	0:00	0:00
83	3:41	3:46	0:05	0	0:00	0:00
84	7:28	7:31	0:03	0	0:00	0:00
85	7:57	8:01	0:04	0	0:00	0:00
86	8:24	8:27	0:03	0	0:00	0:00
87	8:40	8:44	0:04	0	0:00	0:00
88	8:55	8:59	0:04	0	0:00	0:00
89	9:10	9:14	0:04	0	0:00	0:00
90	14:14	14:19	0:05	0	0:00	0:00
91	15:55	15:59	0:04	0	0:00	0:00
92	17:21	17:27	0:06	0	0:00	0:00
93	18:34	18:37	0:03	0	0:00	0:00
94	19:53	19:58	0:05	0	0:00	0:00
95	24:37	24:42	0:05	0	0:00	0:00
96	24:54	25:00	0:06	0	0:00	0:00
97	25:15	25:19	0:04	0	0:00	0:00
98	26:43	26:46	0:03	0	0:00	0:00
99	27:33	27:37	0:04	0	0:00	0:00
100	32:51	32:54	0:03	0	0:00	0:00
101	35:31	35:35	0:04	0	0:00	0:00
102	35:36	35:40	0:04	0	0:00	0:00
103	38:16	38:20	0:04	0	0:00	0:00
104	38:30	38:34	0:04	1	38:35	0:01
105	44:02	44:07	0:05	0	0:00	0:00
106	44:59	45:04	0:05	0	0:00	0:00
107	45:42	45:47	0:05	0	0:00	0:00
108	46:22	46:25	0:03	0	0:00	0:00
109	50:35	50:39	0:04	0	0:00	0:00
110	51:37	51:44	0:07	0	0:00	0:00
111	55:45	55:50	0:05	0	0:00	0:00
112	56:02	56:06	0:04	0	0:00	0:00
113	56:28	56:31	0:03	0	0:00	0:00
114	56:57	57:01	0:04	0	0:00	0:00
115	59:30	59:34	0:04	0	0:00	0:00

Table E.6.4: Intersection #5 Left Turn Movement Data (4 of 8)

116	59:40	59:43	0:03	0	0:00	0:00
117	1:02	1:07	0:05	0	0:00	0:00
118	2:03	2:08	0:05	1	2:10	0:02
119	3:23	3:31	0:08	0	0:00	0:00
120	4:30	4:35	0:05	1	4:37	0:02
121	7:06	7:10	0:04	0	0:00	0:00
122	13:02	13:06	0:04	0	0:00	0:00
123	13:56	13:59	0:03	0	0:00	0:00
124	17:54	17:57	0:03	0	0:00	0:00
125	20:41	20:45	0:04	0	0:00	0:00
126	20:56	21:02	0:06	1	21:03	0:01
127	22:13	22:17	0:04	0	0:00	0:00
128	23:12	23:15	0:03	0	0:00	0:00
129	23:27	23:31	0:04	0	0:00	0:00
130	23:35	23:38	0:03	0	0:00	0:00
131	27:43	27:49	0:06	0	0:00	0:00
132	27:48	27:53	0:05	0	0:00	0:00
133	31:42	31:47	0:05	0	0:00	0:00
134	33:08	33:12	0:04	0	0:00	0:00
135	35:47	35:51	0:04	0	0:00	0:00
136	37:00	37:04	0:04	0	0:00	0:00
137	38:30	38:34	0:04	0	0:00	0:00
138	39:26	39:29	0:03	0	0:00	0:00
139	41:32	41:37	0:05	0	0:00	0:00
140	43:29	43:34	0:05	0	0:00	0:00
141	44:30	44:33	0:03	0	0:00	0:00
142	46:57	47:01	0:04	0	0:00	0:00
143	47:30	47:36	0:06	0	0:00	0:00
144	47:43	47:48	0:05	1	47:49	0:01
145	49:08	49:11	0:03	0	0:00	0:00
146	49:39	49:44	0:05	0	0:00	0:00
147	54:11	54:17	0:06	0	0:00	0:00
148	57:41	57:47	0:06	2	57:54	0:03
149	0:01	0:06	0:05	0	0:00	0:00
150	3:25	3:29	0:04	0	0:00	0:00
151	3:39	3:42	0:03	0	0:00	0:00
152	4:10	4:13	0:03	0	0:00	0:00
153	4:28	4:31	0:03	0	0:00	0:00
154	6:49	6:53	0:04	1	6:56	0:03
155	9:41	9:46	0:05	1	9:48	0:02

Table E.6.5: Intersection #5 Left Turn Movement Data (5 of 8)

156	12:26	12:31	0:05	0	0:00	0:00
157	13:33	13:36	0:03	0	0:00	0:00
158	16:14	16:17	0:03	0	0:00	0:00
159	16:24	16:27	0:03	0	0:00	0:00
160	16:41	16:46	0:05	0	0:00	0:00
161	19:36	19:40	0:04	0	0:00	0:00
162	19:43	19:47	0:04	0	0:00	0:00
163	20:54	20:59	0:05	0	0:00	0:00
164	22:22	22:25	0:03	0	0:00	0:00
165	22:59	23:04	0:05	0	0:00	0:00
166	23:06	23:09	0:03	0	0:00	0:00
167	24:14	24:18	0:04	0	0:00	0:00
168	26:08	26:12	0:04	0	0:00	0:00
169	26:43	26:46	0:03	0	0:00	0:00
170	26:53	26:57	0:04	0	0:00	0:00
171	27:16	27:21	0:05	0	0:00	0:00
172	29:23	29:26	0:03	0	0:00	0:00
173	29:31	29:34	0:03	0	0:00	0:00
174	29:49	29:53	0:04	0	0:00	0:00
175	1:22	1:25	0:03	0	0:00	0:00
176	4:34	4:38	0:04	0	0:00	0:00
177	4:36	4:41	0:05	0	0:00	0:00
178	4:41	4:45	0:04	0	0:00	0:00
179	4:58	5:02	0:04	0	0:00	0:00
180	5:47	5:51	0:04	0	0:00	0:00
181	7:20	7:25	0:05	0	0:00	0:00
182	7:46	7:51	0:05	0	0:00	0:00
183	8:06	8:11	0:05	1	8:13	0:02
184	8:15	8:18	0:03	0	0:00	0:00
185	8:22	8:27	0:05	0	0:00	0:00
186	8:32	8:35	0:03	0	0:00	0:00
187	9:20	9:25	0:05	0	0:00	0:00
188	11:11	11:15	0:04	0	0:00	0:00
189	11:29	11:33	0:04	0	0:00	0:00
190	11:58	12:01	0:03	0	0:00	0:00
191	12:30	12:33	0:03	0	0:00	0:00
192	14:01	14:07	0:06	0	0:00	0:00
193	14:10	14:13	0:03	0	0:00	0:00
194	14:42	14:46	0:04	0	0:00	0:00
195	14:50	14:54	0:04	0	0:00	0:00

Table E.6.6: Intersection #5 Left Turn Movement Data (6 of 8)

196	15:26	15:30	0:04	0	0:00	0:00
197	15:59	16:02	0:03	0	0:00	0:00
198	18:01	18:07	0:06	0	0:00	0:00
199	21:12	21:17	0:05	0	0:00	0:00
200	21:38	21:42	0:04	0	0:00	0:00
201	21:47	21:53	0:06	0	0:00	0:00
202	24:15	24:19	0:04	1	24:21	0:02
203	24:30	24:35	0:05	0	0:00	0:00
204	27:27	27:32	0:05	0	0:00	0:00
205	27:59	28:03	0:04	0	0:00	0:00
206	31:06	31:10	0:04	0	0:00	0:00
207	32:39	32:43	0:04	0	0:00	0:00
208	34:09	34:14	0:05	0	0:00	0:00
209	34:44	34:50	0:06	0	0:00	0:00
210	34:49	34:52	0:03	0	0:00	0:00
211	35:38	35:41	0:03	0	0:00	0:00
212	36:02	36:05	0:03	0	0:00	0:00
213	37:48	37:52	0:04	1	37:53	0:01
214	37:57	38:02	0:05	0	0:00	0:00
215	38:41	38:46	0:05	0	0:00	0:00
216	39:17	39:21	0:04	0	0:00	0:00
217	40:47	40:51	0:04	0	0:00	0:00
218	41:27	41:31	0:04	0	0:00	0:00
219	43:42	43:45	0:03	0	0:00	0:00
220	44:42	44:45	0:03	0	0:00	0:00
221	46:36	46:41	0:05	0	0:00	0:00
222	46:44	46:47	0:03	0	0:00	0:00
223	50:28	50:32	0:04	0	0:00	0:00
224	50:57	51:01	0:04	0	0:00	0:00
225	55:39	55:44	0:05	0	0:00	0:00
226	56:41	56:45	0:04	0	0:00	0:00
227	57:11	57:15	0:04	0	0:00	0:00
228	59:42	59:46	0:04	0	0:00	0:00
229	59:58	60:03	0:05	0	0:00	0:00
230	1:20	1:25	0:05	0	0:00	0:00
231	1:28	1:32	0:04	0	0:00	0:00
232	1:43	1:47	0:04	0	0:00	0:00
233	0:22	0:26	0:04	0	0:00	0:00
234	0:40	0:46	0:06	0	0:00	0:00
235	3:16	3:19	0:03	0	0:00	0:00

Table E.6.7: Intersection #5 Left Turn Movement Data (7 of 8)

236	4:19	4:23	0:04	0	0:00	0:00
237	6:54	6:57	0:03	0	0:00	0:00
238	9:32	9:35	0:03	0	0:00	0:00
239	11:40	11:43	0:03	0	0:00	0:00
240	13:07	13:12	0:05	2	13:16	0:02
241	13:25	13:30	0:05	0	0:00	0:00
242	14:57	15:00	0:03	0	0:00	0:00
243	16:34	16:39	0:05	0	0:00	0:00
244	17:21	17:26	0:05	1	17:28	0:02
245	17:58	18:03	0:05	0	0:00	0:00
246	18:12	18:15	0:03	0	0:00	0:00
247	20:51	20:56	0:05	0	0:00	0:00
248	23:46	23:50	0:04	0	0:00	0:00
249	23:53	23:56	0:03	0	0:00	0:00
250	23:56	23:59	0:03	0	0:00	0:00
251	25:21	25:25	0:04	0	0:00	0:00
252	25:37	25:41	0:04	0	0:00	0:00
253	27:03	27:07	0:04	0	0:00	0:00
254	27:10	27:15	0:05	0	0:00	0:00
255	27:31	27:34	0:03	0	0:00	0:00
256	29:38	29:42	0:04	1	29:46	0:04
257	29:55	29:59	0:04	0	0:00	0:00
258	30:12	30:16	0:04	0	0:00	0:00
259	30:32	30:37	0:05	0	0:00	0:00
260	32:24	32:28	0:04	0	0:00	0:00
261	36:38	36:43	0:05	0	0:00	0:00
262	37:02	37:07	0:05	0	0:00	0:00
263	37:41	37:45	0:04	0	0:00	0:00
264	39:11	39:14	0:03	0	0:00	0:00
265	39:44	39:47	0:03	0	0:00	0:00
266	42:03	42:07	0:04	0	0:00	0:00
267	42:21	42:23	0:02	0	0:00	0:00
268	45:36	45:41	0:05	0	0:00	0:00
269	49:49	49:53	0:04	0	0:00	0:00
270	53:12	53:16	0:04	1	53:17	0:01
271	55:07	55:10	0:03	0	0:00	0:00
272	58:28	58:31	0:03	0	0:00	0:00
273	58:51	58:55	0:04	0	0:00	0:00
274	0:11	0:15	0:04	0	0:00	0:00
275	2:35	2:40	0:05	0	0:00	0:00

Table E.6.8: Intersection #5 Left Turn Movement Data (8 of 8)

276	3:28	3:32	0:04	0	0:00	0:00
277	5:39	5:42	0:03	0	0:00	0:00
278	5:45	5:48	0:03	0	0:00	0:00
279	6:46	6:50	0:04	0	0:00	0:00
280	7:06	7:10	0:04	0	0:00	0:00
281	9:50	9:54	0:04	0	0:00	0:00
282	9:54	9:57	0:03	0	0:00	0:00
283	10:15	10:19	0:04	0	0:00	0:00
284	11:47	11:51	0:04	0	0:00	0:00
285	12:00	12:03	0:03	0	0:00	0:00
286	13:27	13:31	0:04	0	0:00	0:00
287	14:13	14:17	0:04	0	0:00	0:00
288	16:21	16:25	0:04	0	0:00	0:00
289	16:29	16:32	0:03	0	0:00	0:00
290	16:43	16:48	0:05	0	0:00	0:00
291	17:06	17:12	0:06	0	0:00	0:00
292	21:40	21:44	0:04	0	0:00	0:00
293	22:23	22:27	0:04	1	22:32	0:05
294	23:18	23:22	0:04	0	0:00	0:00
295	23:50	23:54	0:04	1	23:56	0:02
296	23:03	23:07	0:04	0	0:00	0:00

Table E.7.1: Intersection #6 Left Turn Movement Data (1 of 11)

Flashing Yellow Arrow 6+ Left Turn Data Collection						
Approach	**Major Street:** SR 50			**Speed:**	45 MPH	
EBL	**Minor Street:** SR 417 Northbound Ramp			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	0:47	0:52	0:05	0	0:00	0:00
2	1:54	1:58	0:04	0	0:00	0:00
3	5:04	5:10	0:06	0	0:00	0:00
4	6:45	6:51	0:06	0	0:00	0:00
5	7:04	7:08	0:04	0	0:00	0:00
6	7:14	7:18	0:04	0	0:00	0:00
7	7:22	7:25	0:03	0	0:00	0:00
8	10:12	10:16	0:04	0	0:00	0:00
9	10:22	10:27	0:05	0	0:00	0:00
10	13:37	13:41	0:04	0	0:00	0:00
11	13:40	13:43	0:03	0	0:00	0:00
12	14:11	14:16	0:05	0	0:00	0:00
13	16:40	16:44	0:04	0	0:00	0:00
14	17:12	17:18	0:06	1	17:20	0:02
15	19:30	19:35	0:05	0	0:00	0:00
16	20:20	20:25	0:05	1	20:26	0:01
17	20:28	20:32	0:04	0	0:00	0:00
18	20:34	20:38	0:04	0	0:00	0:00
19	20:42	20:46	0:04	0	0:00	0:00
20	22:55	23:00	0:05	1	23:02	0:02
21	26:15	26:19	0:04	2	26:24	0:02
22	26:35	26:38	0:03	0	0:00	0:00
23	27:01	27:04	0:03	0	0:00	0:00
24	29:34	29:39	0:05	1	29:41	0:02
25	32:37	32:41	0:04	1	32:43	0:02
26	32:46	32:50	0:04	0	0:00	0:00
27	33:02	33:06	0:04	0	0:00	0:00
28	35:48	35:51	0:03	6	36:05	0:02
29	38:47	38:52	0:05	0	0:00	0:00
30	38:56	38:59	0:03	3	39:09	0:03
31	39:16	39:19	0:03	0	0:00	0:00
32	39:55	39:57	0:02	0	0:00	0:00
33	41:46	41:49	0:03	1	41:51	0:02
34	42:12	42:14	0:02	0	0:00	0:00
35	42:39	42:42	0:03	0	0:00	0:00

Table E.7.2: Intersection #6 Left Turn Movement Data (2 of 11)

36	45:15	45:21	0:06	2	45:25	0:02
37	45:47	45:52	0:05	0	0:00	0:00
38	45:53	45:57	0:04	4	46:06	0:02
39	48:10	48:13	0:03	0	0:00	0:00
40	48:26	48:31	0:05	0	0:00	0:00
41	48:32	48:34	0:02	0	0:00	0:00
42	48:50	48:54	0:04	0	0:00	0:00
43	51:39	51:42	0:03	3	51:49	0:02
44	52:04	52:10	0:06	1	52:14	0:04
45	54:27	54:31	0:04	2	54:37	0:03
46	54:53	54:56	0:03	2	55:04	0:04
47	55:06	55:10	0:04	2	55:13	0:01
48	56:32	56:36	0:04	0	0:00	0:00
49	57:37	57:40	0:03	0	0:00	0:00
50	57:54	58:01	0:07	1	58:03	0:02
51	58:19	58:23	0:04	1	58:25	0:02
52	58:59	59:06	0:07	0	0:00	0:00
53	1:08	1:12	0:04	0	0:00	0:00
54	1:19	1:24	0:05	0	0:00	0:00
55	1:50	1:56	0:06	1	1:59	0:03
56	2:19	2:23	0:04	0	0:00	0:00
57	4:22	4:25	0:03	1	4:28	0:03
58	4:31	4:34	0:03	1	4:36	0:02
59	4:53	4:58	0:05	1	5:00	0:02
60	7:39	7:45	0:06	0	0:00	0:00
61	7:53	7:58	0:05	0	0:00	0:00
62	8:01	8:04	0:03	0	0:00	0:00
63	8:13	8:16	0:03	0	0:00	0:00
64	10:44	10:50	0:06	1	10:53	0:03
65	11:05	11:09	0:04	1	11:11	0:02
66	11:16	11:19	0:03	0	0:00	0:00
67	11:32	11:36	0:04	2	11:41	0:02
68	13:50	13:55	0:05	0	0:00	0:00
69	13:57	14:01	0:04	2	14:06	0:02
70	17:23	17:27	0:04	1	17:30	0:03
71	20:23	20:28	0:05	0	0:00	0:00
72	20:34	20:37	0:03	0	0:00	0:00
73	21:02	21:07	0:05	1	21:09	0:02
74	21:13	21:16	0:03	0	0:00	0:00
75	23:23	23:29	0:06	0	0:00	0:00

Table E.7.3: Intersection #6 Left Turn Movement Data (3 of 11)

76	23:45	23:48	0:03	0	0:00	0:00
77	26:32	26:37	0:05	1	26:39	0:02
78	26:43	26:48	0:05	1	26:50	0:02
79	27:36	27:39	0:03	0	0:00	0:00
80	29:45	29:49	0:04	0	0:00	0:00
81	30:00	30:03	0:03	0	0:00	0:00
82	30:11	30:14	0:03	1	30:17	0:03
83	30:28	30:32	0:04	0	0:00	0:00
84	33:08	33:12	0:04	3	33:20	0:02
85	33:42	33:45	0:03	0	0:00	0:00
86	36:19	36:24	0:05	4	36:34	0:02
87	36:57	37:03	0:06	0	0:00	0:00
88	39:22	39:26	0:04	2	39:29	0:01
89	42:36	42:40	0:04	0	0:00	0:00
90	42:46	42:49	0:03	4	42:57	0:02
91	43:09	43:13	0:04	1	43:17	0:04
92	45:34	45:39	0:05	0	0:00	0:00
93	45:53	45:58	0:05	0	0:00	0:00
94	46:01	46:05	0:04	0	0:00	0:00
95	48:50	48:55	0:05	2	48:59	0:02
96	49:02	49:07	0:05	1	49:10	0:03
97	52:02	52:08	0:06	5	52:19	0:02
98	52:21	52:25	0:04	0	0:00	0:00
99	52:39	52:43	0:04	0	0:00	0:00
100	55:14	55:18	0:04	3	55:24	0:02
101	55:28	55:32	0:04	0	0:00	0:00
102	55:32	55:36	0:04	0	0:00	0:00
103	57:52	57:56	0:04	0	0:00	0:00
104	58:08	58:12	0:04	0	0:00	0:00
105	58:21	58:25	0:04	1	58:28	0:03
106	58:46	58:51	0:05	0	0:00	0:00
107	0:25	0:28	0:03	0	0:00	0:00
108	1:49	1:53	0:04	0	0:00	0:00
109	3:10	3:14	0:04	0	0:00	0:00
110	5:08	5:15	0:07	1	5:16	0:01
111	6:28	6:32	0:04	0	0:00	0:00
112	9:08	9:14	0:06	0	0:00	0:00
113	9:14	9:18	0:04	0	0:00	0:00
114	10:21	10:26	0:05	0	0:00	0:00
115	12:51	12:55	0:04	0	0:00	0:00

Table E.7.4: Intersection #6 Left Turn Movement Data (4 of 11)

116	13:03	13:07	0:04	0	0:00	0:00
117	14:04	14:08	0:04	0	0:00	0:00
118	15:37	15:41	0:04	1	15:43	0:02
119	16:14	16:19	0:05	0	0:00	0:00
120	18:31	18:36	0:05	2	18:40	0:02
121	20:36	20:40	0:04	0	0:00	0:00
122	20:47	20:51	0:04	0	0:00	0:00
123	22:05	22:10	0:05	0	0:00	0:00
124	22:47	22:52	0:05	0	0:00	0:00
125	24:07	24:11	0:04	1	24:13	0:02
126	24:22	24:26	0:04	0	0:00	0:00
127	25:44	25:49	0:05	0	0:00	0:00
128	25:50	25:54	0:04	0	0:00	0:00
129	27:10	27:15	0:05	0	0:00	0:00
130	27:50	27:53	0:03	0	0:00	0:00
131	29:44	29:49	0:05	0	0:00	0:00
132	30:21	30:26	0:05	0	0:00	0:00
133	31:24	31:28	0:04	1	31:30	0:02
134	32:30	32:35	0:05	0	0:00	0:00
135	35:47	35:52	0:05	0	0:00	0:00
136	35:54	35:59	0:05	0	0:00	0:00
137	36:10	36:14	0:04	0	0:00	0:00
138	36:16	36:20	0:04	2	36:23	0:01
139	37:31	37:35	0:04	0	0:00	0:00
140	38:40	38:44	0:04	0	0:00	0:00
141	38:46	38:50	0:04	1	38:53	0:03
142	1:32	1:34	0:02	1	1:36	0:02
143	1:40	1:45	0:05	1	1:46	0:01
144	4:07	4:13	0:06	0	0:00	0:00
145	4:19	4:24	0:05	0	0:00	0:00
146	4:50	4:55	0:05	0	0:00	0:00
147	9:09	9:13	0:04	0	0:00	0:00
148	9:27	9:31	0:04	0	0:00	0:00
149	13:55	13:59	0:04	0	0:00	0:00
150	14:41	14:45	0:04	0	0:00	0:00
151	16:09	16:14	0:05	0	0:00	0:00
152	16:22	16:25	0:03	0	0:00	0:00
153	18:11	18:15	0:04	1	18:17	0:02
154	21:00	21:05	0:05	0	0:00	0:00
155	21:07	21:13	0:06	1	21:15	0:02

Table E.7.5: Intersection #6 Left Turn Movement Data (5 of 11)

156	21:24	21:30	0:06	0	0:00	0:00
157	21:39	21:44	0:05	0	0:00	0:00
158	24:27	24:34	0:07	1	24:36	0:02
159	26:00	26:04	0:04	0	0:00	0:00
160	27:17	27:22	0:05	0	0:00	0:00
161	29:48	29:53	0:05	1	29:55	0:02
162	29:59	30:04	0:05	1	30:05	0:01
163	31:23	31:28	0:05	0	0:00	0:00
164	32:03	32:07	0:04	0	0:00	0:00
165	32:30	32:35	0:05	0	0:00	0:00
166	32:55	32:57	0:02	2	33:05	0:04
167	33:07	33:11	0:04	0	0:00	0:00
168	35:32	35:35	0:03	1	35:37	0:02
169	35:50	35:55	0:05	1	35:58	0:03
170	38:59	39:03	0:04	0	0:00	0:00
171	41:28	41:33	0:05	0	0:00	0:00
172	41:37	41:41	0:04	0	0:00	0:00
173	41:45	41:51	0:06	1	41:53	0:02
174	43:54	43:57	0:03	0	0:00	0:00
175	46:42	46:48	0:06	0	0:00	0:00
176	46:55	47:01	0:06	0	0:00	0:00
177	47:08	47:12	0:04	0	0:00	0:00
178	49:59	50:03	0:04	4	50:11	0:02
179	50:29	50:32	0:03	0	0:00	0:00
180	52:41	52:45	0:04	0	0:00	0:00
181	52:49	52:52	0:03	0	0:00	0:00
182	52:58	53:02	0:04	1	53:05	0:03
183	53:42	53:46	0:04	0	0:00	0:00
184	54:09	54:13	0:04	0	0:00	0:00
185	55:48	55:52	0:04	0	0:00	0:00
186	55:53	56:01	0:08	1	56:04	0:03
187	56:06	56:10	0:04	0	0:00	0:00
188	56:09	56:14	0:05	0	0:00	0:00
189	57:59	58:04	0:05	0	0:00	0:00
190	57:17	57:20	0:03	0	0:00	0:00
191	58:29	58:32	0:03	0	0:00	0:00
192	58:51	58:57	0:06	1	58:59	0:02
193	59:49	59:53	0:04	0	0:00	0:00
194	59:53	59:56	0:03	0	0:00	0:00
195	1:05	1:12	0:07	0	0:00	0:00

Table E.7.6: Intersection #6 Left Turn Movement Data (6 of 11)

196	1:46	1:51	0:05	0	0:00	0:00
197	1:56	1:59	0:03	0	0:00	0:00
198	2:56	3:01	0:05	0	0:00	0:00
199	5:19	5:24	0:05	0	0:00	0:00
200	6:08	6:15	0:07	1	6:17	0:02
201	6:21	6:26	0:05	2	6:30	0:02
202	7:26	7:30	0:04	0	0:00	0:00
203	9:16	9:20	0:04	2	9:25	0:02
204	9:25	9:29	0:04	1	9:30	0:01
205	9:33	9:38	0:05	1	9:41	0:03
206	10:59	11:03	0:04	0	0:00	0:00
207	11:48	11:53	0:05	2	12:00	0:03
208	12:22	12:25	0:03	0	0:00	0:00
209	12:31	12:35	0:04	0	0:00	0:00
210	12:38	12:42	0:04	1	12:44	0:02
211	14:47	14:50	0:03	0	0:00	0:00
212	14:57	15:01	0:04	0	0:00	0:00
213	15:10	15:14	0:04	0	0:00	0:00
214	15:17	15:23	0:06	0	0:00	0:00
215	15:36	15:40	0:04	4	15:50	0:02
216	17:47	17:50	0:03	0	0:00	0:00
217	18:32	18:38	0:06	0	0:00	0:00
218	18:42	18:46	0:04	2	18:49	0:01
219	19:09	19:12	0:03	0	0:00	0:00
220	20:40	20:43	0:03	0	0:00	0:00
221	21:58	22:02	0:04	0	0:00	0:00
222	23:21	23:24	0:03	0	0:00	0:00
223	23:27	23:29	0:02	0	0:00	0:00
224	23:40	23:43	0:03	3	23:48	0:01
225	24:44	24:47	0:03	1	24:48	0:01
226	24:54	24:58	0:04	0	0:00	0:00
227	25:12	25:16	0:04	1	25:18	0:02
228	26:55	27:02	0:07	0	0:00	0:00
229	27:17	27:21	0:04	0	0:00	0:00
230	28:32	28:37	0:05	3	28:43	0:02
231	30:04	30:07	0:03	0	0:00	0:00
232	30:16	30:20	0:04	1	30:22	0:02
233	30:50	30:53	0:03	0	0:00	0:00
234	31:25	31:31	0:06	0	0:00	0:00
235	34:28	34:31	0:03	0	0:00	0:00

Table E.7.7: Intersection #6 Left Turn Movement Data (7 of 11)

236	34:38	34:43	0:05	0	0:00	0:00
237	34:50	34:54	0:04	3	35:00	0:02
238	37:07	37:12	0:05	1	37:14	0:02
239	37:44	37:48	0:04	1	37:52	0:04
240	38:00	38:03	0:03	0	0:00	0:00
241	39:50	39:53	0:03	0	0:00	0:00
242	41:09	41:13	0:04	0	0:00	0:00
243	41:13	41:17	0:04	2	41:22	0:02
244	43:50	43:54	0:04	3	43:59	0:01
245	47:03	47:07	0:04	0	0:00	0:00
246	47:15	47:21	0:06	2	47:26	0:02
247	48:27	48:30	0:03	0	0:00	0:00
248	48:37	48:40	0:03	0	0:00	0:00
249	49:18	49:21	0:03	1	49:23	0:02
250	50:25	50:30	0:05	1	50:32	0:02
251	52:48	52:51	0:03	0	0:00	0:00
252	53:23	53:27	0:04	1	53:30	0:03
253	53:34	53:37	0:03	6	53:50	0:02
254	55:10	55:16	0:06	0	0:00	0:00
255	55:19	55:22	0:03	0	0:00	0:00
256	55:31	55:35	0:04	0	0:00	0:00
257	56:47	56:52	0:05	2	56:58	0:03
258	58:02	58:08	0:06	0	0:00	0:00
259	58:11	58:14	0:03	0	0:00	0:00
260	58:20	58:23	0:03	0	0:00	0:00
261	58:31	58:34	0:03	0	0:00	0:00
262	58:40	58:44	0:04	6	58:54	0:01
263	59:59	60:03	0:04	0	0:00	0:00
264	0:08	0:11	0:03	0	0:00	0:00
265	0:17	0:20	0:03	0	0:00	0:00
266	2:27	2:30	0:03	1	2:31	0:01
267	2:42	2:46	0:04	0	0:00	0:00
268	2:57	3:02	0:05	0	0:00	0:00
269	2:17	2:20	0:03	2	2:23	0:01
270	2:29	2:33	0:04	0	0:00	0:00
271	2:37	2:40	0:03	0	0:00	0:00
272	5:07	5:10	0:03	0	0:00	0:00
273	6:10	6:14	0:04	1	6:17	0:03
274	6:26	6:31	0:05	2	6:37	0:03
275	6:38	6:43	0:05	0	0:00	0:00

Table E.7.8: Intersection #6 Left Turn Movement Data (8 of 11)

276	7:01	7:06	0:05	0	0:00	0:00
277	7:09	7:13	0:04	0	0:00	0:00
278	13:38	13:41	0:03	1	13:43	0:02
279	13:46	13:48	0:02	0	0:00	0:00
280	15:14	15:18	0:04	3	15:24	0:02
281	18:30	18:34	0:04	1	18:38	0:04
282	18:38	18:42	0:04	3	18:48	0:02
283	19:36	19:39	0:03	0	0:00	0:00
284	20:37	20:43	0:06	0	0:00	0:00
285	21:21	21:26	0:05	3	21:30	0:01
286	21:31	21:36	0:05	3	21:42	0:02
287	24:29	24:33	0:04	2	24:37	0:02
288	24:41	24:45	0:04	5	24:57	0:02
289	25:47	25:50	0:03	0	0:00	0:00
290	26:02	26:05	0:03	2	26:10	0:02
291	26:47	26:52	0:05	0	0:00	0:00
292	26:59	27:01	0:02	2	27:04	0:01
293	28:52	28:56	0:04	4	29:03	0:01
294	29:05	29:09	0:04	3	29:15	0:02
295	31:11	31:14	0:03	2	31:20	0:03
296	31:24	31:27	0:03	0	0:00	0:00
297	31:33	31:37	0:04	4	31:47	0:02
298	31:48	31:52	0:04	2	31:57	0:02
299	33:57	34:01	0:04	0	0:00	0:00
300	35:05	35:09	0:04	0	0:00	0:00
301	36:51	36:56	0:05	0	0:00	0:00
302	37:03	37:08	0:05	1	37:10	0:02
303	37:10	37:14	0:04	0	0:00	0:00
304	37:23	37:27	0:04	4	37:36	0:02
305	37:42	37:44	0:02	3	37:50	0:02
306	0:50	0:54	0:04	0	0:00	0:00
307	0:57	1:02	0:05	4	1:11	0:02
308	2:09	2:15	0:06	9	2:38	0:02
309	2:46	2:50	0:04	1	2:53	0:03
310	2:59	3:02	0:03	0	0:00	0:00
311	4:02	4:06	0:04	0	0:00	0:00
312	6:30	6:37	0:07	1	6:39	0:02
313	7:17	7:23	0:06	3	7:27	0:01
314	7:29	7:32	0:03	1	7:35	0:03
315	7:37	7:41	0:04	0	0:00	0:00

Table E.7.9: Intersection #6 Left Turn Movement Data (9 of 11)

316	8:10	8:13	0:03	0	0:00	0:00
317	8:33	8:37	0:04	0	0:00	0:00
318	9:17	9:19	0:02	0	0:00	0:00
319	9:22	9:25	0:03	0	0:00	0:00
320	9:30	9:33	0:03	0	0:00	0:00
321	9:44	9:49	0:05	3	9:53	0:01
322	10:00	10:02	0:02	2	10:07	0:02
323	11:36	11:39	0:03	0	0:00	0:00
324	11:47	11:51	0:04	1	11:52	0:01
325	12:34	12:39	0:05	0	0:00	0:00
326	13:25	13:28	0:03	0	0:00	0:00
327	13:30	13:33	0:03	0	0:00	0:00
328	2:45	2:49	0:04	8	3:03	0:01
329	3:40	3:44	0:04	0	0:00	0:00
330	4:04	4:08	0:04	0	0:00	0:00
331	4:11	4:15	0:04	0	0:00	0:00
332	4:44	4:48	0:04	1	4:50	0:02
333	5:20	5:23	0:03	0	0:00	0:00
334	5:52	5:57	0:05	0	0:00	0:00
335	8:11	8:14	0:03	0	0:00	0:00
336	9:00	9:04	0:04	0	0:00	0:00
337	10:21	10:25	0:04	2	10:30	0:02
338	10:30	10:34	0:04	1	10:36	0:02
339	10:55	10:57	0:02	0	0:00	0:00
340	12:03	12:08	0:05	1	12:10	0:02
341	12:34	12:37	0:03	0	0:00	0:00
342	13:33	13:36	0:03	0	0:00	0:00
343	13:43	13:46	0:03	0	0:00	0:00
344	13:55	13:58	0:03	0	0:00	0:00
345	14:13	14:15	0:02	0	0:00	0:00
346	15:21	15:26	0:05	3	15:31	0:01
347	15:43	15:46	0:03	1	15:48	0:02
348	17:22	17:25	0:03	2	17:31	0:03
349	20:27	20:30	0:03	1	20:31	0:01
350	21:33	21:37	0:04	0	0:00	0:00
351	23:18	23:22	0:04	0	0:00	0:00
352	24:43	24:46	0:03	0	0:00	0:00
353	25:00	25:04	0:04	0	0:00	0:00
354	29:12	29:15	0:03	0	0:00	0:00
355	30:33	30:36	0:03	0	0:00	0:00

Table E.7.10: Intersection #6 Left Turn Movement Data (10 of 11)

356	30:49	30:52	0:03	0	0:00	0:00
357	30:56	30:59	0:03	0	0:00	0:00
358	32:38	32:41	0:03	1	32:42	0:01
359	33:03	33:07	0:04	0	0:00	0:00
360	33:13	33:15	0:02	0	0:00	0:00
361	33:47	33:52	0:05	0	0:00	0:00
362	35:54	35:58	0:04	1	35:59	0:01
363	36:28	36:32	0:04	0	0:00	0:00
364	36:52	36:55	0:03	0	0:00	0:00
365	37:17	37:20	0:03	0	0:00	0:00
366	38:56	38:59	0:03	1	39:00	0:01
367	39:31	39:34	0:03	0	0:00	0:00
368	42:11	42:14	0:03	1	42:15	0:01
369	42:21	42:24	0:03	0	0:00	0:00
370	43:54	43:59	0:05	1	44:02	0:03
371	45:27	45:30	0:03	1	45:33	0:03
372	45:55	45:57	0:02	0	0:00	0:00
373	47:06	47:10	0:04	1	47:14	0:04
374	49:11	49:15	0:04	1	49:18	0:03
375	49:27	49:32	0:05	1	49:34	0:02
376	49:40	49:42	0:02	0	0:00	0:00
377	52:56	53:00	0:04	0	0:00	0:00
378	53:16	53:19	0:03	1	53:22	0:03
379	54:52	54:55	0:03	0	0:00	0:00
380	55:37	55:40	0:03	0	0:00	0:00
381	58:52	58:56	0:04	0	0:00	0:00
382	59:02	59:07	0:05	0	0:00	0:00
383	59:11	59:13	0:02	2	59:17	0:02
384	0:49	0:54	0:05	1	0:57	0:03
385	1:00	1:06	0:06	2	1:09	0:01
386	1:57	2:01	0:04	2	2:05	0:02
387	2:07	2:10	0:03	0	0:00	0:00
388	3:13	3:18	0:05	0	0:00	0:00
389	3:51	3:56	0:05	0	0:00	0:00
390	4:00	4:04	0:04	1	4:06	0:02
391	4:20	4:24	0:04	0	0:00	0:00
392	6:25	6:28	0:03	0	0:00	0:00
393	8:17	8:22	0:05	1	8:24	0:02
394	9:23	9:28	0:05	0	0:00	0:00
395	9:30	9:33	0:03	0	0:00	0:00

Table E.7.11: Intersection #6 Left Turn Movement Data (11 of 11)

396	11:23	11:26	0:03	0	0:00	0:00
397	11:45	11:50	0:05	0	0:00	0:00
398	11:52	11:55	0:03	0	0:00	0:00
399	12:04	12:08	0:04	0	0:00	0:00
400	12:09	12:14	0:05	0	0:00	0:00
401	13:02	13:07	0:05	0	0:00	0:00
402	13:58	14:02	0:04	0	0:00	0:00
403	14:23	14:28	0:05	0	0:00	0:00
404	17:38	17:42	0:04	0	0:00	0:00
405	19:15	19:18	0:03	0	0:00	0:00
406	20:00	20:06	0:06	0	0:00	0:00
407	20:13	20:16	0:03	0	0:00	0:00
408	20:47	20:52	0:05	0	0:00	0:00
409	22:13	22:17	0:04	0	0:00	0:00
410	23:52	23:57	0:05	0	0:00	0:00
411	24:55	24:58	0:03	0	0:00	0:00
412	28:11	28:15	0:04	0	0:00	0:00
413	28:56	29:00	0:04	0	0:00	0:00
414	31:58	32:03	0:05	0	0:00	0:00
415	33:42	33:47	0:05	0	0:00	0:00
416	34:32	34:35	0:03	0	0:00	0:00
417	36:53	36:57	0:04	0	0:00	0:00
418	40:27	40:30	0:03	2	40:35	0:02
419	40:36	40:40	0:04	0	0:00	0:00
420	40:58	41:01	0:03	0	0:00	0:00
421	42:20	42:23	0:03	0	0:00	0:00
422	45:51	45:55	0:04	0	0:00	0:00
423	45:48	45:51	0:03	0	0:00	0:00
424	46:06	46:11	0:05	0	0:00	0:00
425	48:45	48:51	0:06	1	48:52	0:01
426	50:54	50:57	0:03	0	0:00	0:00
427	51:49	51:53	0:04	0	0:00	0:00
428	52:14	52:19	0:05	1	52:20	0:01
429	53:31	53:35	0:04	0	0:00	0:00
430	54:05	54:09	0:04	0	0:00	0:00
431	54:21	54:25	0:04	0	0:00	0:00
432	54:31	54:35	0:04	0	0:00	0:00
433	56:29	56:34	0:05	1	56:37	0:03
434	56:47	56:51	0:04	0	0:00	0:00

Table E.8.1: Intersection #7 NBL Left Turn Movement Data (1 of 16)

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
NBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	0:51	0:57	0:06	0	0:00	0:00
2	1:05	1:12	0:07	0	0:00	0:00
3	2:32	2:37	0:05	1	2:39	0:02
4	2:42	2:48	0:06	0	0:00	0:00
5	3:57	4:02	0:05	0	0:00	0:00
6	4:25	4:30	0:05	0	0:00	0:00
7	6:35	6:39	0:04	0	0:00	0:00
8	13:43	13:48	0:05	6	14:00	0:02
9	13:58	14:03	0:05	1	14:05	0:02
10	15:07	15:13	0:06	0	0:00	0:00
11	15:19	15:24	0:05	0	0:00	0:00
12	16:49	16:55	0:06	0	0:00	0:00
13	18:11	18:16	0:05	1	18:19	0:03
14	19:18	19:24	0:06	0	0:00	0:00
15	19:31	19:36	0:05	0	0:00	0:00
16	19:47	19:55	0:08	0	0:00	0:00
17	21:19	21:24	0:05	0	0:00	0:00
18	25:29	25:34	0:05	2	25:38	0:02
19	28:54	29:00	0:06	0	0:00	0:00
20	37:54	38:00	0:06	0	0:00	0:00
21	40:24	40:30	0:06	0	0:00	0:00
22	40:28	40:34	0:06	0	0:00	0:00
23	44:03	44:08	0:05	0	0:00	0:00
24	45:16	45:21	0:05	1	45:24	0:03
25	54:05	54:14	0:09	1	54:15	0:01
26	54:29	54:38	0:09	0	0:00	0:00
27	55:31	55:38	0:07	3	55:49	0:03
28	0:55	1:02	0:07	0	0:00	0:00
29	2:27	2:30	0:03	0	0:00	0:00
30	4:51	4:58	0:07	1	5:00	0:02
31	9:21	9:27	0:06	1	9:30	0:03
32	10:29	10:37	0:08	1	10:39	0:02
33	13:35	13:38	0:03	0	0:00	0:00
34	14:34	14:40	0:06	0	0:00	0:00
35	15:30	15:35	0:05	2	15:42	0:03

Table E.8.2: Intersection #7 NBL Left Turn Movement Data (2 of 16)

36	18:29	18:35	0:06	0	0:00	0:00
37	20:10	20:16	0:06	1	20:18	0:02
38	20:59	21:05	0:06	1	21:07	0:02
39	21:05	21:12	0:07	0	0:00	0:00
40	21:16	21:21	0:05	1	21:24	0:03
41	21:31	21:36	0:05	0	0:00	0:00
42	24:07	24:14	0:07	1	24:15	0:01
43	26:04	26:09	0:05	0	0:00	0:00
44	26:13	26:18	0:05	0	0:00	0:00
45	28:14	28:22	0:08	1	28:24	0:02
46	29:44	29:51	0:07	0	0:00	0:00
47	29:52	29:57	0:05	0	0:00	0:00
48	35:17	35:24	0:07	1	35:26	0:02
49	36:44	36:50	0:06	0	0:00	0:00
50	36:58	37:04	0:06	1	37:06	0:02
51	38:10	38:19	0:09	0	0:00	0:00
52	38:24	38:35	0:11	0	0:00	0:00
53	39:57	40:06	0:09	0	0:00	0:00
54	41:36	41:44	0:08	1	41:47	0:03
55	41:46	41:52	0:06	0	0:00	0:00
56	45:46	45:52	0:06	0	0:00	0:00
57	45:56	46:04	0:08	0	0:00	0:00
58	47:31	47:38	0:07	1	47:39	0:01
59	48:07	48:13	0:06	0	0:00	0:00
60	48:50	48:57	0:07	0	0:00	0:00
61	54:34	54:40	0:06	0	0:00	0:00
62	55:37	55:45	0:08	2	55:49	0:02
63	5:21	5:29	0:08	0	0:00	0:00
64	5:48	5:55	0:07	0	0:00	0:00
65	7:03	7:11	0:08	1	7:13	0:02
66	7:42	7:47	0:05	1	7:49	0:02
67	9:00	9:05	0:05	2	9:10	0:02
68	9:26	9:35	0:09	1	9:36	0:01
69	11:08	11:17	0:09	0	0:00	0:00
70	11:17	11:22	0:05	1	11:24	0:02
71	12:34	12:40	0:06	3	12:46	0:02
72	12:49	12:54	0:05	0	0:00	0:00
73	13:42	13:46	0:04	0	0:00	0:00
74	14:02	14:06	0:04	0	0:00	0:00
75	14:09	14:15	0:06	1	14:17	0:02

Table E.8.3: Intersection #7 NBL Left Turn Movement Data (3 of 16)

76	18:09	18:14	0:05	3	18:20	0:02
77	20:10	20:15	0:05	0	0:00	0:00
78	21:47	21:55	0:08	2	21:59	0:02
79	23:21	23:24	0:03	0	0:00	0:00
80	24:57	25:03	0:06	1	25:06	0:03
81	26:08	26:11	0:03	0	0:00	0:00
82	27:37	27:45	0:08	3	27:51	0:02
83	29:03	29:08	0:05	0	0:00	0:00
84	29:22	29:27	0:05	0	0:00	0:00
85	33:02	33:07	0:05	2	33:11	0:02
86	33:17	33:21	0:04	0	0:00	0:00
87	36:19	36:26	0:07	0	0:00	0:00
88	36:27	36:33	0:06	1	36:35	0:02
89	37:53	37:59	0:06	0	0:00	0:00
90	39:32	39:37	0:05	5	39:51	0:02
91	40:02	40:09	0:07	3	40:16	0:02
92	42:16	42:22	0:06	1	42:24	0:02
93	42:31	42:37	0:06	0	0:00	0:00
94	44:19	44:24	0:05	0	0:00	0:00
95	44:26	44:31	0:05	5	44:42	0:02
96	46:17	46:22	0:05	0	0:00	0:00
97	48:07	48:12	0:05	0	0:00	0:00
98	48:19	48:25	0:06	1	48:27	0:02
99	49:49	49:54	0:05	7	50:10	0:02
100	50:14	50:18	0:04	0	0:00	0:00
101	51:39	51:47	0:08	0	0:00	0:00
102	51:45	51:51	0:06	0	0:00	0:00
103	52:00	52:04	0:04	1	54:06	2:02
104	53:21	53:30	0:09	0	0:00	0:00
105	53:29	53:33	0:04	0	0:00	0:00
106	55:10	55:14	0:04	0	0:00	0:00
107	55:18	55:22	0:04	0	0:00	0:00
108	55:23	55:28	0:05	0	0:00	0:00
109	56:21	56:26	0:05	3	56:36	0:03
110	56:36	56:39	0:03	1	56:42	0:03
111	56:53	57:00	0:07	0	0:00	0:00
112	57:55	58:02	0:07	1	58:05	0:03
113	59:18	59:24	0:06	0	0:00	0:00
114	1:06	1:15	0:09	0	0:00	0:00
115	1:51	1:56	0:05	0	0:00	0:00

Table E.8.4: Intersection #7 NBL Left Turn Movement Data (4 of 16)

116	2:12	2:18	0:06	0	0:00	0:00
117	2:42	2:47	0:05	0	0:00	0:00
118	2:50	2:53	0:03	0	0:00	0:00
119	3:17	3:22	0:05	0	0:00	0:00
120	3:23	3:26	0:03	0	0:00	0:00
121	5:20	5:26	0:06	0	0:00	0:00
122	6:29	6:34	0:05	1	6:36	0:02
123	8:07	8:11	0:04	0	0:00	0:00
124	8:49	8:52	0:03	0	0:00	0:00
125	9:08	9:16	0:08	2	9:20	0:02
126	11:13	11:18	0:05	0	0:00	0:00
127	13:37	13:41	0:04	0	0:00	0:00
128	15:40	15:43	0:03	0	0:00	0:00
129	16:09	16:15	0:06	0	0:00	0:00
130	18:28	18:31	0:03	0	0:00	0:00
131	20:51	20:57	0:06	0	0:00	0:00
132	23:16	23:22	0:06	0	0:00	0:00
133	23:55	24:02	0:07	2	24:07	0:02
134	26:09	26:15	0:06	2	26:18	0:01
135	26:52	26:58	0:06	0	0:00	0:00
136	27:24	27:30	0:06	0	0:00	0:00
137	31:55	32:00	0:05	1	32:02	0:02
138	32:06	32:11	0:05	1	32:13	0:02
139	32:33	32:39	0:06	1	32:41	0:02
140	32:57	33:04	0:07	0	0:00	0:00
141	34:17	34:23	0:06	1	34:25	0:02
142	38:20	38:26	0:06	1	38:29	0:03
143	38:57	39:02	0:05	0	0:00	0:00
144	39:02	39:09	0:07	0	0:00	0:00
145	39:35	39:42	0:07	0	0:00	0:00
146	41:28	41:31	0:03	0	0:00	0:00
147	41:56	42:01	0:05	0	0:00	0:00
148	42:49	42:53	0:04	0	0:00	0:00
149	42:58	43:06	0:08	0	0:00	0:00
150	43:09	43:15	0:06	1	43:17	0:02
151	44:53	44:59	0:06	0	0:00	0:00
152	48:46	48:51	0:05	0	0:00	0:00
153	49:46	49:51	0:05	1	49:53	0:02
154	49:53	49:59	0:06	0	0:00	0:00
155	51:01	51:06	0:05	1	51:08	0:02

Table E.8.5: Intersection #7 NBL Left Turn Movement Data (5 of 16)

156	51:08	51:13	0:05	0	0:00	0:00
157	53:01	53:05	0:04	0	0:00	0:00
158	54:14	54:17	0:03	0	0:00	0:00
159	54:17	54:24	0:07	0	0:00	0:00
160	56:28	56:32	0:04	0	0:00	0:00
161	57:49	57:53	0:04	0	0:00	0:00
162	57:55	58:00	0:05	0	0:00	0:00
163	58:44	58:48	0:04	0	0:00	0:00
164	58:50	58:56	0:06	0	0:00	0:00
165	0:07	0:13	0:06	0	0:00	0:00
166	0:12	0:16	0:04	0	0:00	0:00
167	0:58	1:01	0:03	0	0:00	0:00
168	1:29	1:36	0:07	0	0:00	0:00
169	2:04	2:08	0:04	0	0:00	0:00
170	2:32	2:38	0:06	0	0:00	0:00
171	3:50	3:58	0:08	1	4:02	0:04
172	4:08	4:12	0:04	0	0:00	0:00
173	6:42	6:47	0:05	0	0:00	0:00
174	7:55	7:59	0:04	1	8:00	0:01
175	8:22	8:26	0:04	0	0:00	0:00
176	10:54	10:59	0:05	1	11:01	0:02
177	11:23	11:30	0:07	0	0:00	0:00
178	13:05	13:08	0:03	0	0:00	0:00
179	13:14	13:20	0:06	0	0:00	0:00
180	13:47	13:51	0:04	0	0:00	0:00
181	13:59	14:07	0:08	0	0:00	0:00
182	15:16	15:22	0:06	0	0:00	0:00
183	17:09	17:13	0:04	0	0:00	0:00
184	17:31	17:37	0:06	0	0:00	0:00
185	17:58	18:03	0:05	0	0:00	0:00
186	22:12	22:20	0:08	0	0:00	0:00
187	23:20	23:28	0:08	0	0:00	0:00
188	24:45	24:51	0:06	0	0:00	0:00
189	24:51	24:56	0:05	1	24:58	0:02
190	25:53	25:57	0:04	0	0:00	0:00
191	25:58	26:02	0:04	0	0:00	0:00
192	26:21	26:27	0:06	0	0:00	0:00
193	28:23	28:26	0:03	0	0:00	0:00
194	28:49	28:53	0:04	0	0:00	0:00
195	28:54	28:58	0:04	0	0:00	0:00

Table E.8.6: Intersection #7 NBL Left Turn Movement Data (6 of 16)

196	31:05	31:10	0:05	0	0:00	0:00
197	31:09	31:12	0:03	0	0:00	0:00
198	31:39	31:43	0:04	0	0:00	0:00
199	31:55	32:00	0:05	1	32:01	0:01
200	32:03	32:07	0:04	1	32:08	0:01
201	32:08	32:11	0:03	1	32:12	0:01
202	32:13	32:17	0:04	0	0:00	0:00
203	32:58	33:03	0:05	0	0:00	0:00
204	33:28	33:33	0:05	1	33:36	0:03
205	34:53	34:58	0:05	0	0:00	0:00
206	35:04	35:08	0:04	0	0:00	0:00
207	35:16	35:20	0:04	0	0:00	0:00
208	35:19	35:24	0:05	0	0:00	0:00
209	36:11	36:15	0:04	0	0:00	0:00
210	36:18	36:22	0:04	0	0:00	0:00
211	36:59	37:05	0:06	0	0:00	0:00
212	37:40	37:47	0:07	1	37:48	0:01
213	37:59	38:07	0:08	0	0:00	0:00
214	38:09	38:15	0:06	0	0:00	0:00
215	38:49	38:53	0:04	0	0:00	0:00
216	39:01	39:05	0:04	0	0:00	0:00
217	39:16	39:24	0:08	0	0:00	0:00
218	39:27	39:31	0:04	0	0:00	0:00
219	39:32	39:36	0:04	0	0:00	0:00
220	39:36	39:40	0:04	0	0:00	0:00
221	39:54	39:59	0:05	0	0:00	0:00
222	40:21	40:26	0:05	1	40:26	0:00
223	40:44	40:49	0:05	0	0:00	0:00
224	40:58	41:05	0:07	2	41:08	0:01
225	41:12	41:15	0:03	2	41:19	0:02
226	42:18	42:25	0:07	0	0:00	0:00
227	43:32	43:37	0:05	1	43:39	0:02
228	44:21	44:25	0:04	3	44:32	0:02
229	44:31	44:38	0:07	2	44:41	0:01
230	44:41	44:49	0:08	0	0:00	0:00
231	44:55	45:01	0:06	0	0:00	0:00
232	46:18	46:25	0:07	0	0:00	0:00
233	47:12	47:16	0:04	1	47:18	0:02
234	47:40	47:47	0:07	1	47:50	0:03
235	48:19	48:23	0:04	0	0:00	0:00

Table E.8.7: Intersection #7 NBL Left Turn Movement Data (7 of 16)

236	49:20	49:24	0:04	0	0:00	0:00
237	52:07	52:14	0:07	0	0:00	0:00
238	53:51	53:57	0:06	0	0:00	0:00
239	54:09	54:13	0:04	2	54:16	0:01
240	54:17	54:23	0:06	1	54:25	0:02
241	55:09	55:13	0:04	1	55:14	0:01
242	55:22	55:28	0:06	2	55:32	0:02
243	56:09	56:14	0:05	0	0:00	0:00
244	57:01	57:07	0:06	0	0:00	0:00
245	57:57	58:03	0:06	0	0:00	0:00
246	58:48	58:59	0:11	0	0:00	0:00
247	0:31	0:36	0:05	0	0:00	0:00
248	1:09	1:13	0:04	0	0:00	0:00
249	8:49	8:54	0:05	0	0:00	0:00
250	10:00	10:04	0:04	0	0:00	0:00
251	11:52	11:57	0:05	0	0:00	0:00
252	12:20	12:24	0:04	0	0:00	0:00
253	14:07	14:11	0:04	0	0:00	0:00
254	15:20	15:29	0:09	1	15:34	0:05
255	19:06	19:11	0:05	0	0:00	0:00
256	20:22	20:26	0:04	0	0:00	0:00
257	22:14	22:18	0:04	0	0:00	0:00
258	28:15	28:19	0:04	0	0:00	0:00
259	28:52	28:57	0:05	0	0:00	0:00
260	29:41	29:45	0:04	0	0:00	0:00
261	30:59	31:02	0:03	1	31:04	0:02
262	31:32	31:37	0:05	0	0:00	0:00
263	32:50	32:54	0:04	0	0:00	0:00
264	33:12	33:17	0:05	0	0:00	0:00
265	33:16	33:20	0:04	0	0:00	0:00
266	34:22	34:26	0:04	0	0:00	0:00
267	34:27	34:32	0:05	0	0:00	0:00
268	35:46	35:52	0:06	0	0:00	0:00
269	36:21	36:25	0:04	0	0:00	0:00
270	37:11	37:15	0:04	0	0:00	0:00
271	37:23	37:26	0:03	0	0:00	0:00
272	37:38	37:42	0:04	0	0:00	0:00
273	38:22	38:27	0:05	0	0:00	0:00
274	38:27	38:30	0:03	0	0:00	0:00
275	38:38	38:44	0:06	1	38:46	0:02

Table E.8.8: Intersection #7 NBL Left Turn Movement Data (8 of 16)

276	38:45	38:49	0:04	0	0:00	0:00
277	39:46	39:50	0:04	0	0:00	0:00
278	40:32	40:35	0:03	0	0:00	0:00
279	40:39	40:43	0:04	0	0:00	0:00
280	40:42	40:46	0:04	0	0:00	0:00
281	40:54	41:03	0:09	0	0:00	0:00
282	42:12	42:18	0:06	2	42:23	0:02
283	43:19	43:26	0:07	1	43:29	0:03
284	44:08	44:18	0:10	0	0:00	0:00
285	44:19	44:24	0:05	0	0:00	0:00
286	45:58	46:04	0:06	4	46:13	0:02
287	46:11	46:18	0:07	1	46:21	0:03
288	47:26	47:30	0:04	0	0:00	0:00
289	47:49	47:58	0:09	0	0:00	0:00
290	48:05	48:12	0:07	1	48:14	0:02
291	48:58	49:02	0:04	1	49:03	0:01
292	49:03	49:06	0:03	0	0:00	0:00
293	49:27	49:36	0:09	0	0:00	0:00
294	49:35	49:39	0:04	0	0:00	0:00
295	49:51	49:56	0:05	1	49:57	0:01
296	50:28	50:33	0:05	0	0:00	0:00
297	52:20	52:23	0:03	0	0:00	0:00
298	52:43	52:49	0:06	0	0:00	0:00
299	53:16	53:22	0:06	0	0:00	0:00
300	53:26	53:51	0:25	0	0:00	0:00
301	53:46	53:52	0:06	0	0:00	0:00
302	53:59	54:03	0:04	1	54:05	0:02
303	54:30	54:36	0:06	0	0:00	0:00
304	54:36	54:44	0:08	1	54:46	0:02
305	55:15	55:18	0:03	1	55:20	0:02
306	55:21	55:26	0:05	0	0:00	0:00
307	55:26	55:33	0:07	1	55:35	0:02
308	56:31	56:36	0:05	0	0:00	0:00
309	56:53	56:58	0:05	0	0:00	0:00
310	57:03	57:10	0:07	0	0:00	0:00
311	57:11	57:14	0:03	0	0:00	0:00
312	57:51	57:57	0:06	0	0:00	0:00
313	58:09	58:12	0:03	0	0:00	0:00
314	58:26	58:30	0:04	0	0:00	0:00
315	58:31	58:34	0:03	0	0:00	0:00

Table E.8.9: Intersection #7 NBL Left Turn Movement Data (9 of 16)

316	59:29	59:33	0:04	0	0:00	0:00
317	59:37	59:40	0:03	1	59:42	0:02
318	1:36	1:40	0:04	0	0:00	0:00
319	2:07	2:15	0:08	0	0:00	0:00
320	2:50	2:55	0:05	1	2:58	0:03
321	2:58	3:10	0:12	0	0:00	0:00
322	5:50	6:00	0:10	0	0:00	0:00
323	7:06	7:10	0:04	0	0:00	0:00
324	10:36	10:43	0:07	0	0:00	0:00
325	13:24	13:30	0:06	0	0:00	0:00
326	14:41	14:54	0:13	1	14:55	0:01
327	14:59	15:07	0:08	0	0:00	0:00
328	16:58	17:05	0:07	1	17:07	0:02
329	17:19	17:24	0:05	0	0:00	0:00
330	17:22	17:28	0:06	0	0:00	0:00
331	18:13	18:22	0:09	0	0:00	0:00
332	19:05	19:17	0:12	0	0:00	0:00
333	20:02	20:12	0:10	0	0:00	0:00
334	21:32	21:39	0:07	0	0:00	0:00
335	22:34	22:37	0:03	0	0:00	0:00
336	22:59	23:08	0:09	0	0:00	0:00
337	23:01	23:12	0:11	0	0:00	0:00
338	23:37	23:41	0:04	0	0:00	0:00
339	24:11	24:18	0:07	0	0:00	0:00
340	26:10	26:15	0:05	0	0:00	0:00
341	29:48	29:53	0:05	0	0:00	0:00
342	29:53	29:56	0:03	0	0:00	0:00
343	31:02	31:08	0:06	0	0:00	0:00
344	32:35	32:40	0:05	0	0:00	0:00
345	34:54	34:59	0:05	0	0:00	0:00
346	37:24	37:28	0:04	0	0:00	0:00
347	38:29	38:39	0:10	2	38:43	0:02
348	38:45	38:53	0:08	0	0:00	0:00
349	39:02	39:09	0:07	0	0:00	0:00
350	41:26	41:33	0:07	0	0:00	0:00
351	41:38	41:47	0:09	1	41:48	0:01
352	41:55	42:02	0:07	0	0:00	0:00
353	43:08	43:14	0:06	0	0:00	0:00
354	44:50	44:55	0:05	0	0:00	0:00
355	46:36	46:42	0:06	0	0:00	0:00

Table E.8.10: Intersection #7 NBL Left Turn Movement Data (10 of 16)

356	47:40	47:46	0:06	0	0:00	0:00
357	47:45	47:50	0:05	0	0:00	0:00
358	47:53	47:57	0:04	0	0:00	0:00
359	48:42	48:46	0:04	1	48:48	0:02
360	50:12	50:20	0:08	6	50:31	0:01
361	51:39	51:51	0:12	1	51:53	0:02
362	53:51	54:03	0:12	1	54:05	0:02
363	55:15	55:23	0:08	1	55:24	0:01
364	57:53	58:00	0:07	1	58:03	0:03
365	59:16	59:22	0:06	0	0:00	0:00
366	0:47	0:51	0:04	0	0:00	0:00
367	0:59	1:05	0:06	0	0:00	0:00
368	5:08	5:16	0:08	0	0:00	0:00
369	5:47	5:53	0:06	1	5:55	0:02
370	7:41	7:50	0:09	2	7:53	0:01
371	11:15	11:20	0:05	0	0:00	0:00
372	14:32	14:37	0:05	1	14:39	0:02
373	16:11	16:15	0:04	0	0:00	0:00
374	18:06	18:12	0:06	1	18:14	0:02
375	19:50	19:57	0:07	1	19:59	0:02
376	20:36	20:46	0:10	1	20:47	0:01
377	21:46	21:52	0:06	1	21:54	0:02
378	22:51	22:56	0:05	0	0:00	0:00
379	24:03	24:08	0:05	1	24:10	0:02
380	25:12	25:21	0:09	0	0:00	0:00
381	25:27	25:31	0:04	0	0:00	0:00
382	26:24	26:35	0:11	0	0:00	0:00
383	26:32	26:38	0:06	0	0:00	0:00
384	26:28	26:42	0:14	0	0:00	0:00
385	29:39	29:45	0:06	0	0:00	0:00
386	31:02	31:06	0:04	0	0:00	0:00
387	32:15	32:22	0:07	0	0:00	0:00
388	33:37	33:42	0:05	0	0:00	0:00
389	34:36	34:43	0:07	1	34:48	0:05
390	35:38	35:45	0:07	2	35:49	0:02
391	36:05	36:11	0:06	0	0:00	0:00
392	36:12	36:18	0:06	0	0:00	0:00
393	37:08	37:12	0:04	0	0:00	0:00
394	37:11	37:15	0:04	0	0:00	0:00
395	37:16	37:19	0:03	0	0:00	0:00

Table E.8.11: Intersection #7 NBL Left Turn Movement Data (11 of 16)

396	37:24	37:28	0:04	0	0:00	0:00
397	37:28	37:32	0:04	0	0:00	0:00
398	39:45	39:51	0:06	1	39:54	0:03
399	40:01	40:06	0:05	3	40:13	0:02
400	41:57	42:03	0:06	0	0:00	0:00
401	42:14	42:22	0:08	0	0:00	0:00
402	43:53	43:58	0:05	0	0:00	0:00
403	44:06	44:10	0:04	0	0:00	0:00
404	45:26	45:31	0:05	0	0:00	0:00
405	45:31	45:35	0:04	0	0:00	0:00
406	46:29	46:34	0:05	0	0:00	0:00
407	46:37	46:41	0:04	0	0:00	0:00
408	46:53	47:00	0:07	1	47:02	0:02
409	47:02	47:06	0:04	0	0:00	0:00
410	47:40	47:47	0:07	0	0:00	0:00
411	48:13	48:20	0:07	2	48:22	0:01
412	50:04	50:13	0:09	1	50:15	0:02
413	51:20	51:26	0:06	2	51:29	0:01
414	52:26	52:32	0:06	2	52:36	0:02
415	53:04	53:09	0:05	0	0:00	0:00
416	53:09	53:13	0:04	0	0:00	0:00
417	53:24	53:29	0:05	0	0:00	0:00
418	53:39	53:44	0:05	3	53:50	0:02
419	55:10	55:15	0:05	3	55:21	0:02
420	57:26	57:32	0:06	0	0:00	0:00
421	57:54	58:03	0:09	0	0:00	0:00
422	58:05	58:09	0:04	0	0:00	0:00
423	59:05	59:09	0:04	0	0:00	0:00
424	0:08	0:15	0:07	0	0:00	0:00
425	0:15	0:22	0:07	0	0:00	0:00
426	1:18	1:25	0:07	0	0:00	0:00
427	7:07	7:13	0:06	0	0:00	0:00
428	8:35	8:42	0:07	0	0:00	0:00
429	8:40	8:48	0:08	0	0:00	0:00
430	8:53	8:58	0:05	0	0:00	0:00
431	10:04	10:09	0:05	0	0:00	0:00
432	11:31	11:38	0:07	1	11:40	0:02
433	11:41	11:47	0:06	0	0:00	0:00
434	15:44	15:52	0:08	1	15:54	0:02
435	17:50	17:57	0:07	2	18:01	0:02

Table E.8.12: Intersection #7 NBL Left Turn Movement Data (12 of 16)

436	18:02	18:11	0:09	0	0:00	0:00
437	18:18	18:25	0:07	1	18:27	0:02
438	18:28	18:35	0:07	0	0:00	0:00
439	21:50	22:01	0:11	1	22:09	0:08
440	23:50	23:56	0:06	1	23:58	0:02
441	26:45	26:50	0:05	1	26:53	0:03
442	28:26	28:31	0:05	0	0:00	0:00
443	30:48	30:53	0:05	0	0:00	0:00
444	32:17	32:25	0:08	0	0:00	0:00
445	32:46	32:52	0:06	0	0:00	0:00
446	33:58	34:04	0:06	0	0:00	0:00
447	35:20	35:23	0:03	0	0:00	0:00
448	35:23	35:27	0:04	0	0:00	0:00
449	35:27	35:30	0:03	0	0:00	0:00
450	40:49	40:55	0:06	2	40:59	0:02
451	41:00	41:05	0:05	0	0:00	0:00
452	41:14	41:18	0:04	0	0:00	0:00
453	42:11	42:18	0:07	0	0:00	0:00
454	42:24	42:27	0:03	0	0:00	0:00
455	44:06	44:10	0:04	0	0:00	0:00
456	44:10	44:16	0:06	0	0:00	0:00
457	45:55	46:01	0:06	2	46:04	0:01
458	46:20	46:26	0:06	0	0:00	0:00
459	47:09	47:14	0:05	0	0:00	0:00
460	47:29	47:36	0:07	1	47:37	0:01
461	47:38	47:50	0:12	0	0:00	0:00
462	48:46	48:52	0:06	0	0:00	0:00
463	48:51	48:58	0:07	2	49:02	0:02
464	49:01	49:08	0:07	2	49:11	0:01
465	51:55	52:04	0:09	0	0:00	0:00
466	53:33	53:39	0:06	0	0:00	0:00
467	55:05	55:12	0:07	1	55:14	0:02
468	55:16	55:19	0:03	0	0:00	0:00
469	57:18	57:25	0:07	0	0:00	0:00
470	58:43	58:48	0:05	0	0:00	0:00
471	3:52	4:00	0:08	0	0:00	0:00
472	10:24	10:36	0:12	0	0:00	0:00
473	18:02	18:10	0:08	0	0:00	0:00
474	18:57	19:11	0:14	0	0:00	0:00
475	23:24	23:29	0:05	4	23:39	0:02

Table E.8.13: Intersection #7 NBL Left Turn Movement Data (13 of 16)

476	31:57	32:04	0:07	0	0:00	0:00
477	32:05	32:10	0:05	0	0:00	0:00
478	34:41	34:47	0:06	0	0:00	0:00
479	34:51	34:56	0:05	2	36:00	0:32
480	36:47	36:51	0:04	0	0:00	0:00
481	36:50	36:54	0:04	0	0:00	0:00
482	39:48	39:57	0:09	0	0:00	0:00
483	39:56	40:00	0:04	0	0:00	0:00
484	44:28	44:34	0:06	1	44:35	0:01
485	46:43	46:48	0:05	0	0:00	0:00
486	47:40	47:47	0:07	0	0:00	0:00
487	48:28	48:36	0:08	0	0:00	0:00
488	49:25	49:29	0:04	0	0:00	0:00
489	50:12	50:17	0:05	0	0:00	0:00
490	51:06	51:13	0:07	0	0:00	0:00
491	51:11	51:21	0:10	1	51:23	0:02
492	52:35	52:40	0:05	0	0:00	0:00
493	53:39	53:55	0:16	0	0:00	0:00
494	55:42	55:49	0:07	0	0:00	0:00
495	1:21	1:26	0:05	0	0:00	0:00
496	1:59	2:05	0:06	0	0:00	0:00
497	3:14	3:22	0:08	0	0:00	0:00
498	4:21	4:27	0:06	0	0:00	0:00
499	4:26	4:30	0:04	0	0:00	0:00
500	5:56	6:05	0:09	0	0:00	0:00
501	7:25	7:30	0:05	0	0:00	0:00
502	9:12	9:17	0:05	0	0:00	0:00
503	9:24	9:29	0:05	1	9:31	0:02
504	12:35	12:40	0:05	0	0:00	0:00
505	12:46	12:51	0:05	0	0:00	0:00
506	13:01	13:05	0:04	0	0:00	0:00
507	13:17	13:23	0:06	0	0:00	0:00
508	14:12	14:20	0:08	1	14:22	0:02
509	15:24	15:29	0:05	0	0:00	0:00
510	20:46	20:58	0:12	0	0:00	0:00
511	21:28	21:34	0:06	1	21:36	0:02
512	22:36	22:40	0:04	0	0:00	0:00
513	23:00	23:06	0:06	2	23:09	0:01
514	24:26	24:34	0:08	0	0:00	0:00
515	24:35	24:38	0:03	0	0:00	0:00

Table E.8.14: Intersection #7 NBL Left Turn Movement Data (14 of 16)

516	25:07	25:20	0:13	1	25:22	0:02
517	25:16	25:22	0:06	0	0:00	0:00
518	25:26	25:32	0:06	0	0:00	0:00
519	26:28	26:33	0:05	0	0:00	0:00
520	29:38	29:43	0:05	0	0:00	0:00
521	34:29	34:35	0:06	0	0:00	0:00
522	35:55	36:00	0:05	0	0:00	0:00
523	38:18	38:21	0:03	0	0:00	0:00
524	45:01	45:07	0:06	0	0:00	0:00
525	45:15	45:20	0:05	0	0:00	0:00
526	47:43	47:49	0:06	0	0:00	0:00
527	52:04	52:11	0:07	0	0:00	0:00
528	54:34	54:41	0:07	1	54:43	0:02
529	56:18	56:22	0:04	0	0:00	0:00
530	57:27	57:33	0:06	0	0:00	0:00
531	57:40	57:44	0:04	0	0:00	0:00
532	59:04	59:09	0:05	0	0:00	0:00
533	59:15	59:21	0:06	0	0:00	0:00
534	59:14	59:25	0:11	0	0:00	0:00
535	1:59	2:06	0:07	0	0:00	0:00
536	3:06	3:12	0:06	0	0:00	0:00
537	3:59	4:06	0:07	0	0:00	0:00
538	8:37	8:42	0:05	0	0:00	0:00
539	8:59	9:05	0:06	0	0:00	0:00
540	10:03	10:09	0:06	0	0:00	0:00
541	10:11	10:14	0:03	0	0:00	0:00
542	10:48	10:53	0:05	0	0:00	0:00
543	12:16	12:20	0:04	1	12:22	0:02
544	14:05	14:12	0:07	1	14:14	0:02
545	15:12	15:18	0:06	1	15:20	0:02
546	16:02	16:07	0:05	0	0:00	0:00
547	18:09	18:14	0:05	0	0:00	0:00
548	18:21	18:25	0:04	0	0:00	0:00
549	19:17	19:24	0:07	1	19:26	0:02
550	22:52	23:02	0:10	0	0:00	0:00
551	23:57	24:08	0:11	0	0:00	0:00
552	24:38	24:47	0:09	0	0:00	0:00
553	24:44	24:54	0:10	1	24:56	0:02
554	26:12	26:17	0:05	0	0:00	0:00
555	26:51	26:56	0:05	0	0:00	0:00

Table E.8.15: Intersection #7 NBL Left Turn Movement Data (15 of 16)

556	27:55	28:01	0:06	0	0:00	0:00
557	28:24	28:30	0:06	1	28:32	0:02
558	30:02	30:08	0:06	0	0:00	0:00
559	30:13	30:21	0:08	1	30:23	0:02
560	30:25	30:31	0:06	0	0:00	0:00
561	32:36	32:47	0:11	0	0:00	0:00
562	36:24	36:29	0:05	1	36:31	0:02
563	36:37	36:41	0:04	1	36:43	0:02
564	37:09	37:14	0:05	0	0:00	0:00
565	37:17	37:25	0:08	0	0:00	0:00
566	38:32	38:37	0:05	1	38:39	0:02
567	41:10	41:20	0:10	0	0:00	0:00
568	44:41	44:45	0:04	0	0:00	0:00
569	46:10	46:15	0:05	0	0:00	0:00
570	47:02	47:08	0:06	1	47:10	0:02
571	48:00	48:06	0:06	0	0:00	0:00
572	48:19	48:23	0:04	0	0:00	0:00
573	49:21	49:27	0:06	2	49:31	0:02
574	50:40	50:43	0:03	0	0:00	0:00
575	52:50	52:57	0:07	0	0:00	0:00
576	54:24	54:34	0:10	0	0:00	0:00
577	55:54	55:58	0:04	0	0:00	0:00
578	57:12	57:17	0:05	0	0:00	0:00
579	57:29	57:33	0:04	0	0:00	0:00
580	58:36	58:43	0:07	0	0:00	0:00
581	58:44	58:48	0:04	0	0:00	0:00
582	1:21	1:27	0:06	0	0:00	0:00
583	3:58	4:04	0:06	0	0:00	0:00
584	4:07	4:10	0:03	0	0:00	0:00
585	5:06	5:11	0:05	0	0:00	0:00
586	5:15	5:21	0:06	0	0:00	0:00
587	6:01	6:09	0:08	0	0:00	0:00
588	7:15	7:19	0:04	0	0:00	0:00
589	10:42	10:53	0:11	0	0:00	0:00
590	13:33	13:40	0:07	0	0:00	0:00
591	15:42	15:47	0:05	0	0:00	0:00
592	18:18	18:29	0:11	0	0:00	0:00
593	20:14	20:21	0:07	0	0:00	0:00
594	23:12	23:18	0:06	1	23:19	0:01
595	23:26	23:29	0:03	0	0:00	0:00

Table E.8.16: Intersection #7 NBL Left Turn Movement Data (16 of 16)

596	25:29	25:35	0:06	0	0:00	0:00
597	27:29	27:40	0:11	0	0:00	0:00
598	38:33	38:38	0:05	0	0:00	0:00
599	39:59	40:03	0:04	0	0:00	0:00
600	42:34	42:44	0:10	0	0:00	0:00
601	46:55	47:05	0:10	1	47:07	0:02
602	50:29	50:39	0:10	0	0:00	0:00
603	52:31	52:39	0:08	1	52:40	0:01
604	54:40	54:46	0:06	0	0:00	0:00
605	56:11	56:17	0:06	0	0:00	0:00
606	58:29	58:35	0:06	0	0:00	0:00

Table E.9.1: Intersection #7 SBL Left Turn Movement Data (1 of 2)

Flashing Yellow Arrow Left Turn Data Collection						
Approach	**Major Street:** International Drive South			**Speed:**	45 MPH	
SBL	**Minor Street:** Vineland Avenue			**Geometry:**	4-Leg	
Left Turn Group	**Start 1st Left Clock Time**	**End 1st Left Clock Time**	**Total Time for 1st Left**	**Following Vehicles**	**End Left Turn Group Time**	**Follow-Up Time**
1	0:35	0:40	0:05	0	0:00	0:00
2	0:39	0:44	0:05	0	0:00	0:00
3	12:05	12:15	0:10	0	0:00	0:00
4	15:42	15:48	0:06	0	0:00	0:00
5	18:14	18:18	0:04	0	0:00	0:00
6	26:50	26:53	0:03	0	0:00	0:00
7	30:34	30:40	0:06	0	0:00	0:00
8	46:10	46:15	0:05	0	0:00	0:00
9	47:13	47:17	0:04	0	0:00	0:00
10	52:35	52:39	0:04	0	0:00	0:00
11	0:05	0:13	0:08	0	0:00	0:00
12	2:58	3:04	0:06	0	0:00	0:00
13	8:25	8:29	0:04	0	0:00	0:00
14	21:18	21:23	0:05	0	0:00	0:00
15	21:27	21:33	0:06	0	0:00	0:00
16	27:12	27:16	0:04	0	0:00	0:00
17	30:56	31:01	0:05	0	0:00	0:00
18	49:18	49:23	0:05	0	0:00	0:00
19	57:33	57:38	0:05	0	0:00	0:00
20	3:59	4:06	0:07	0	0:00	0:00
21	15:46	15:51	0:05	0	0:00	0:00
22	15:54	16:00	0:06	0	0:00	0:00
23	19:46	19:51	0:05	0	0:00	0:00
24	51:36	51:41	0:05	0	0:00	0:00
25	14:23	14:28	0:05	0	0:00	0:00
26	27:23	27:28	0:05	0	0:00	0:00
27	30:55	30:59	0:04	0	0:00	0:00
28	32:07	32:14	0:07	0	0:00	0:00
29	33:30	33:34	0:04	0	0:00	0:00
30	38:34	38:39	0:05	1	38:42	0:03
31	4:38	4:44	0:06	0	0:00	0:00
32	25:06	25:12	0:06	0	0:00	0:00
33	27:49	27:56	0:07	0	0:00	0:00
34	52:11	52:17	0:06	0	0:00	0:00
35	2:26	2:29	0:03	0	0:00	0:00

Table E.9.2: Intersection #7 SBL Left Turn Movement Data (2 of 2)

36	5:54	5:59	0:05	0	0:00	0:00
37	18:17	18:22	0:05	0	0:00	0:00
38	25:51	25:57	0:06	0	0:00	0:00
39	28:11	28:17	0:06	0	0:00	0:00
40	29:23	29:28	0:05	0	0:00	0:00
41	31:19	31:25	0:06	0	0:00	0:00
42	31:33	31:40	0:07	0	0:00	0:00
43	39:55	39:59	0:04	0	0:00	0:00
44	50:31	50:34	0:03	0	0:00	0:00
45	54:28	54:34	0:06	0	0:00	0:00
46	59:17	59:21	0:04	0	0:00	0:00
47	6:21	6:26	0:05	0	0:00	0:00
48	14:57	15:04	0:07	0	0:00	0:00
49	15:03	15:09	0:06	0	0:00	0:00
50	16:53	16:59	0:06	0	0:00	0:00
51	25:23	25:28	0:05	0	0:00	0:00
52	27:28	27:32	0:04	0	0:00	0:00
53	32:06	32:12	0:06	0	0:00	0:00
54	36:20	36:23	0:03	0	0:00	0:00
55	40:00	40:03	0:03	0	0:00	0:00
56	46:16	46:23	0:07	0	0:00	0:00
57	58:10	58:16	0:06	0	0:00	0:00

APPENDIX F:
MODEL TWO-WAY PARAMETER TABLES

Table F.1: Large Intersection Synchro Data Two-Way Parameter Table

Flashing Yellow Arrow 6+ Large Intersection Synchro Model Two-Way Parameters					
Intersection	Permitted Green Time x Total Lefts	Total Lefts x Total Opposing	Total Opposing x Cross Lanes	Speed x Total Opposing	Permitted Green Time x Cross
1	289.2500	27960	7456	102520	77.1333
	510.3333	27980	5596	76945	102.0667
	1049.4000	38764	3524	48455	95.4000
	1015.3000	36699	3764	51755	104.1333
	1597.5000	65550	3496	48070	85.2000
	724.7167	37642	2552	35090	49.1333
	1529.5500	64314	3176	43670	75.5333
2 NBL	139.1500	2079	2772	31185	185.5333
	260.0000	5265	4212	47385	208.0000
	148.4000	6776	1936	21780	42.4000
	1720.2000	70992	7888	88740	191.1333
	3151.1667	132160	7552	84960	180.0667
	3490.4833	185097	9372	105435	176.7333
	4437.7667	191982	7836	88155	181.1333
	3404.0000	119880	6480	72900	184.0000
2 SBL	0.0000	0	4944	55620	185.5333
	530.1667	19150	7660	86175	212.0667
	63.6000	2316	1544	17370	42.4000
	1003.4500	37485	7140	80325	191.1333
	1395.5167	48236	6224	70020	180.0667
	1237.1333	46088	6584	74070	176.7333
	1675.4833	59200	6400	72000	181.1333
	1739.1333	52402	5516	62055	183.0667
3	4244.9167	205219	6172	69435	127.6667
	11866.5167	477337	7372	82935	183.2667
	10223.8500	500439	6236	70155	127.4000
	12230.5000	514230	5620	63225	133.6667
	13485.9667	645134	6356	71505	132.8667
	12212.2000	475020	5220	58725	134.2000
	5504.6000	183600	3600	40500	107.9333

Table F.2: Large Intersection Field Data Two-Way Parameter Table

Flashing Yellow Arrow 6+ Large Intersection Field Model Two-Way Parameters					
Intersection	Permitted Green Time x Total Lefts	Total Lefts x Total Opposing	Total Opposing x Cross Lanes	Speed x Total Opposing	Permitted Green Time x Cross
4	1004.0000	32112	5352	73590	167.3333
	1924.9667	66177	6156	84645	179.0667
	4706.4500	183141	6156	84645	158.2000
	5467.7000	204108	5592	76890	149.8000
	5444.7500	195605	5396	74195	150.2000
	4171.5333	93002	3796	52195	170.2667
5	2580.6000	86496	6784	76320	202.4000
	2920.0000	88680	5912	66510	194.6667
	2162.4000	55008	4584	51570	180.2000
	2191.3000	56967	4468	50265	171.8667
	3072.1000	73532	4744	53370	198.2000
	2546.2667	41392	3184	35820	195.8667
	2542.5000	32550	2604	29295	203.4000
6	3514.5000	158130	5271	79065	117.1500
	4441.0333	164640	5040	75600	135.9500
	1879.7333	53760	2880	43200	100.7000
	4036.2000	123564	4413	66195	144.1500
	7851.2500	244695	4449	66735	142.7500
	7740.0000	248368	4332	64980	135.0000
	5197.5333	142888	4044	60660	147.1000
	3712.0500	83877	3447	51705	152.5500
7 NBL	5551.0000	21594	531	7965	136.5000
	7293.0167	58828	924	13860	114.5500
	3794.3500	39960	1080	16200	102.5500
	4795.2000	95418	1767	26505	88.8000
	6682.5000	141426	1746	26190	82.5000
	5242.8000	112200	1650	24750	77.1000
	4978.0833	113365	1659	24885	72.8500
	4470.7000	112944	1872	28080	74.1000
	4080.3000	111186	1917	28755	70.3500
	3483.9000	83790	1710	25650	71.1000
	3310.5167	74782	1614	24210	71.4500
	4147.7000	62304	1056	15840	70.3000
	2067.7000	31407	1083	16245	71.3000
7 SBL	478.5667	2660	570	8550	102.5500
	416.2667	2548	546	8190	89.2000
	440.0000	4912	921	13815	82.5000
	359.8000	3262	699	10485	77.1000
	315.6833	2990	690	10350	72.8500
	444.6000	3960	660	9900	74.1000
	375.2000	2240	420	6300	70.3500

Table F.3: Small Intersection Field Data Two-Way Parameter Table

Flashing Yellow Arrow 6+ Small Intersection Field Model Two-Way Parameters					
Intersection	Permitted Green Time x Total Lefts	Total Lefts x Total Opposing	Total Opposing x Cross Lanes	Speed x Total Opposing	Permitted Green Time x Cross
FYA 2 WBL	6416.2500	281784	4776	71640	108.7500
	7365.5167	316883	4683	70245	108.8500
	6789.2500	307710	4734	71010	104.4500
	6398.9000	300852	4932	73980	104.9000
	6092.9000	282402	4869	73035	105.0500
	6964.6000	278584	4308	64620	107.7000
	6959.1333	228420	3645	54675	111.0500
	7991.1333	188683	3027	45405	128.2000
	5372.0333	127974	2493	37395	104.6500
FYA 5 NBL	3789.8667	59840	440	8800	27.8667
	3424.1333	56608	464	9280	28.0667
	4539.0000	52020	408	8160	35.6000
	2859.8667	38092	428	8560	32.1333
	2649.1000	34869	394	7880	29.9333
	2976.5500	44250	500	10000	33.6333
	3367.7000	85442	718	14360	28.3000
	3300.2667	99008	832	16640	27.7333
	2463.3000	55566	588	11760	26.0667
FYA 6 EBL	3061.5000	54860	422	16880	23.5500
	2720.6667	51260	466	18640	24.7333
	3399.8833	65760	480	19200	24.8167
	2489.0667	32760	315	12600	23.9333
	2750.9500	32523	293	11720	24.7833
FYA 8C SBL	505.1667	7210	206	4120	14.4333
	1184.4000	13608	252	5040	21.9333
	1529.0000	8052	122	2440	23.1667
	1925.3333	12616	166	3320	25.3333
	3266.6667	30240	270	5400	29.1667
	2134.3333	21470	226	4520	22.4667
	2867.9000	26894	226	4520	24.1000
	2218.7500	40470	380	7600	20.8333
	3206.4000	49248	342	6840	22.2667
	4386.6667	87608	466	9320	23.3333
	3465.0667	58384	328	6560	19.4667
FYA 11 NBL	1479.1667	40050	2403	44055	88.7500
	1711.8000	26622	1479	27115	95.1000
	2525.5333	43516	1518	27830	88.1000
	3045.0000	46200	1386	25410	91.3500
	3653.7000	58140	1530	28050	96.1500
	4515.0000	90720	1512	27720	75.2500
	7094.6667	152864	1686	30910	78.2500
	6068.4667	27694	366	6710	80.2000

APPENDIX G:
SYNCHRO INTERFACE SCREENSHOTS

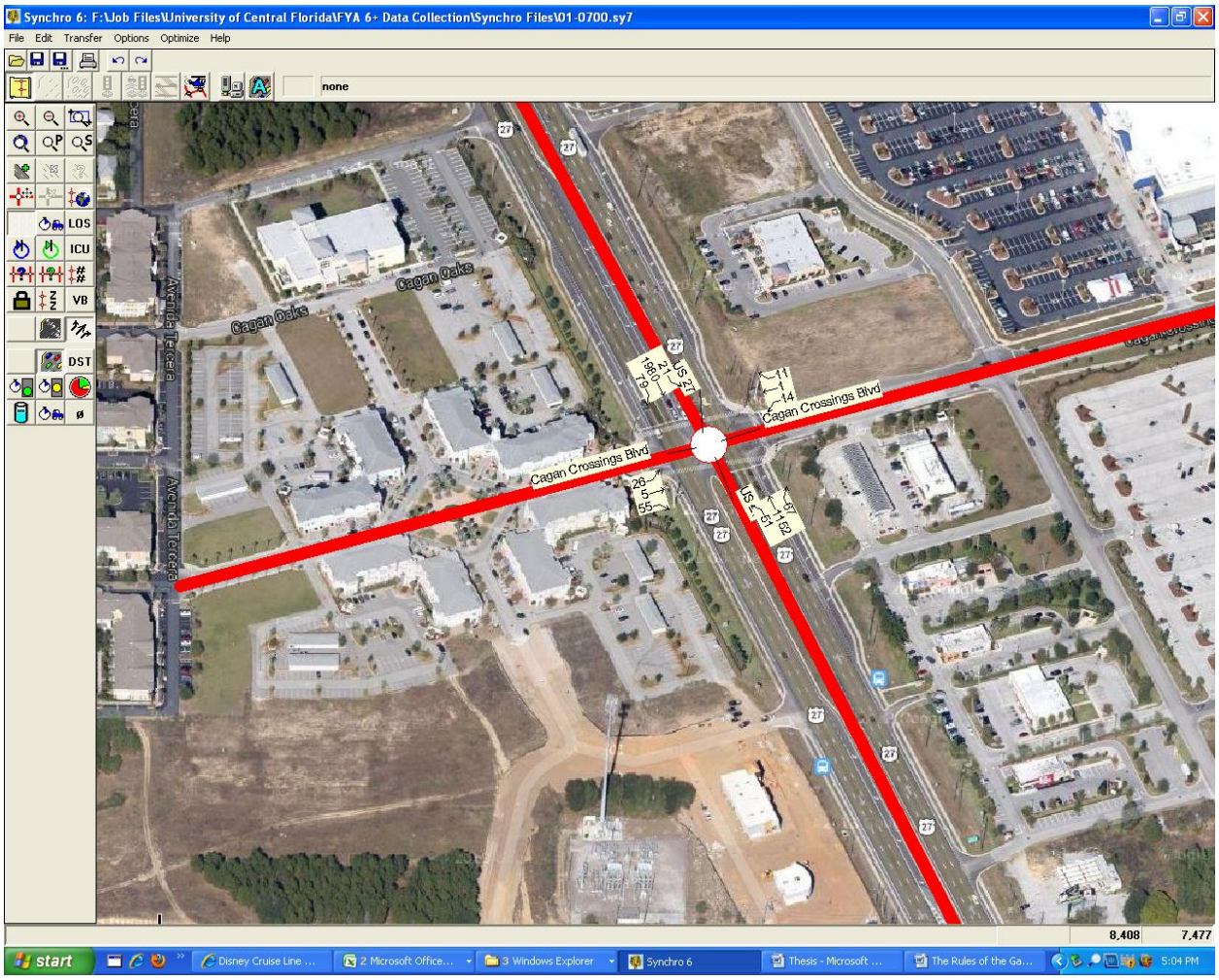


Figure G.1: Synchro Network Building Screenshot

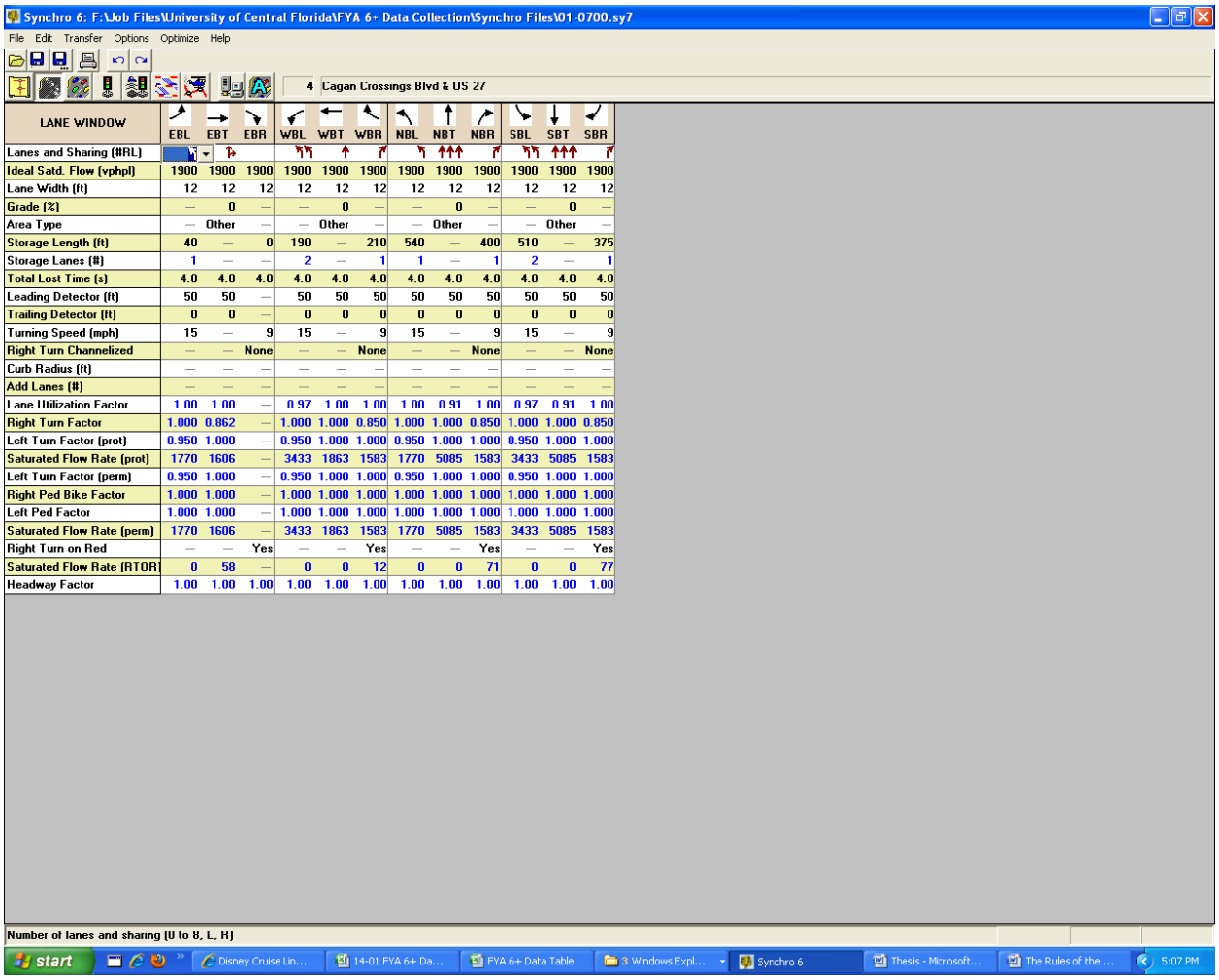


Figure G.2: Synchro Lane Window Screenshot

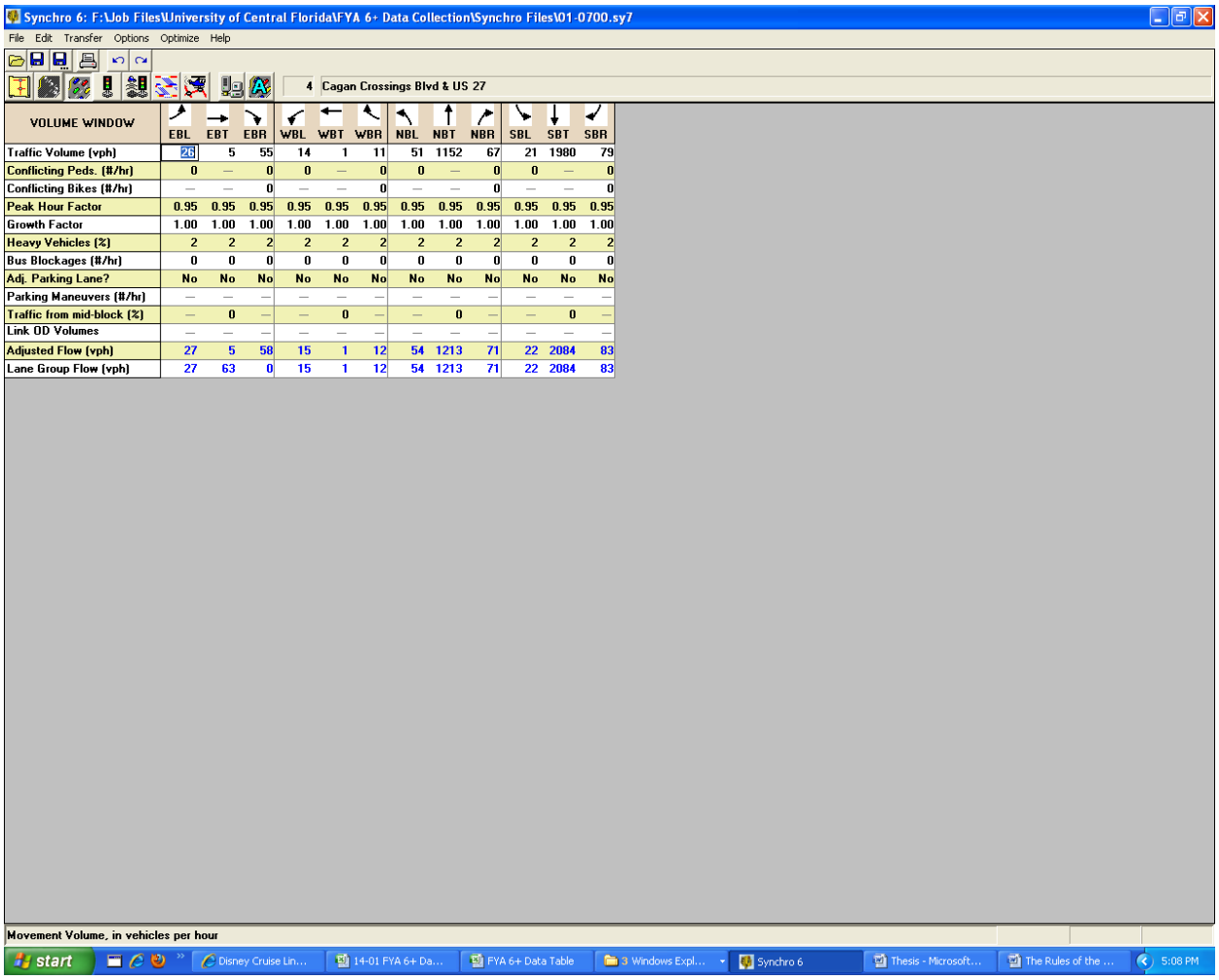


Figure G.3: Synchro Volume Window Screenshot

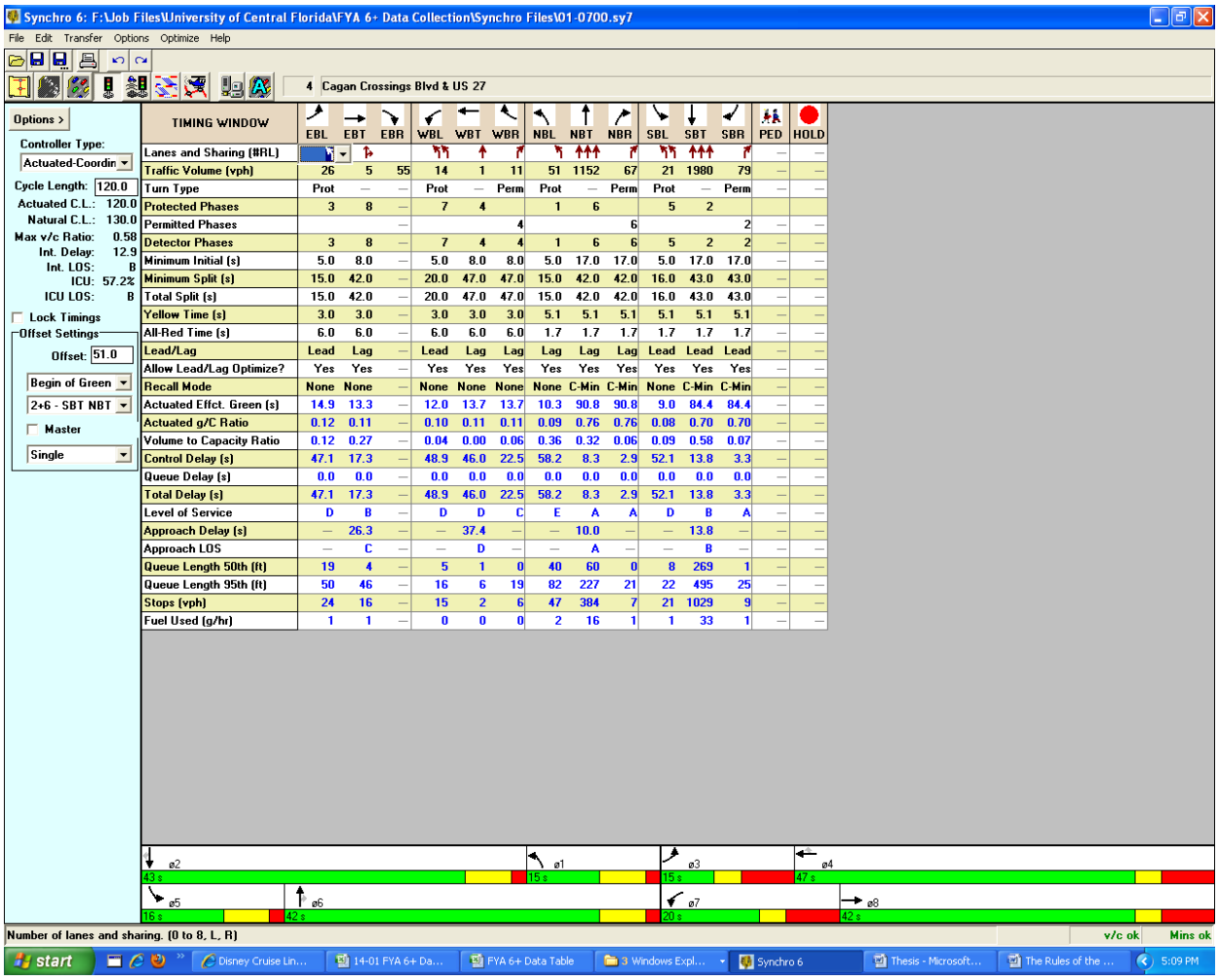
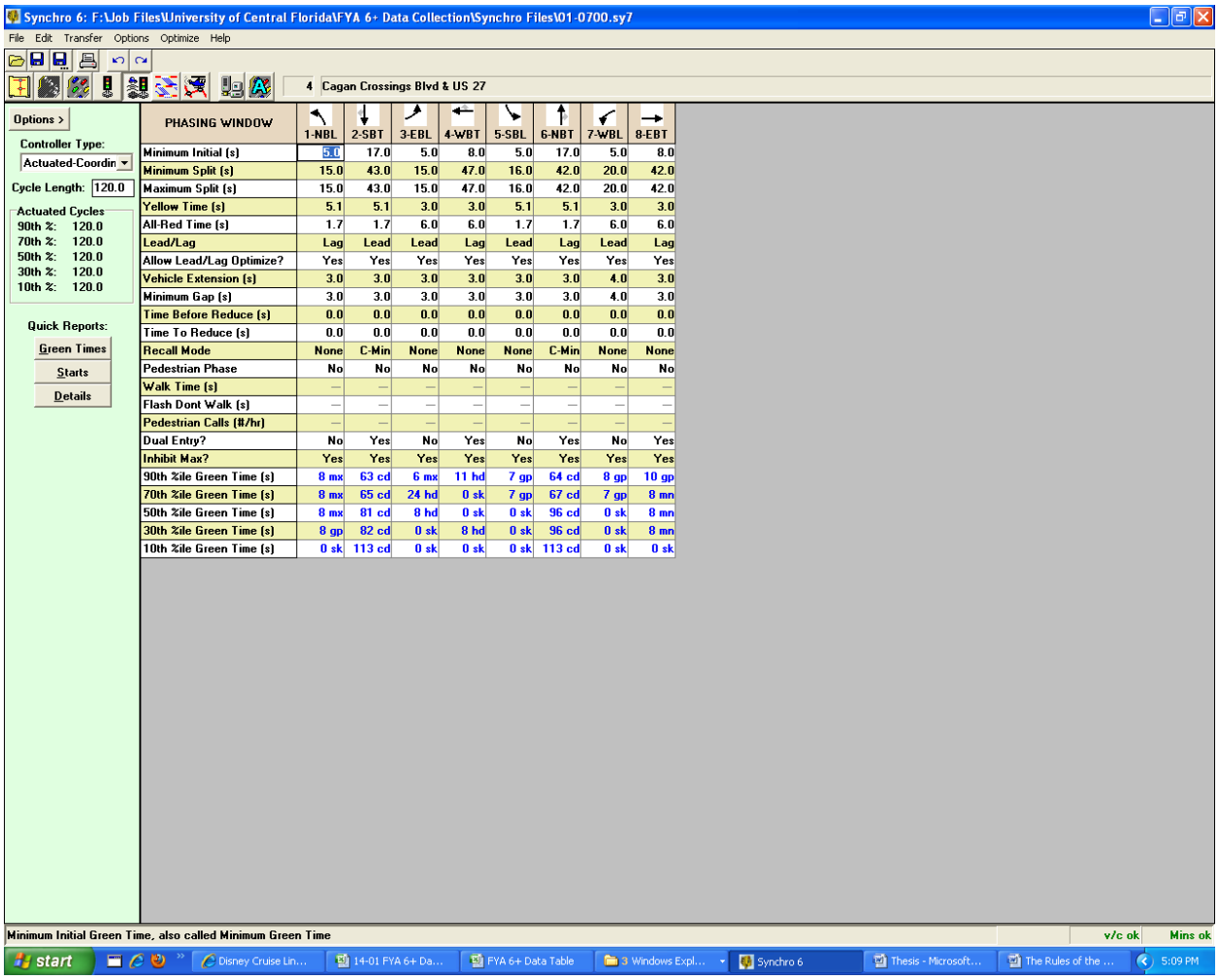


Figure G.4: Synchro Timing Window Screenshot



PHASING WINDOW	1-NBL	2-SBT	3-EBL	4-WBT	5-SBL	6-NBT	7-WBL	8-EBT
Minimum Initial (s)	5.0	17.0	5.0	8.0	5.0	17.0	5.0	8.0
Minimum Split (s)	15.0	43.0	15.0	47.0	16.0	42.0	20.0	42.0
Maximum Split (s)	15.0	43.0	15.0	47.0	16.0	42.0	20.0	42.0
Yellow Time (s)	5.1	5.1	3.0	3.0	5.1	5.1	3.0	3.0
All-Red Time (s)	1.7	1.7	6.0	6.0	1.7	1.7	6.0	6.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Allow Lead/Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	None	None	C-Min	None	None
Pedestrian Phase	No	No	No	No	No	No	No	No
Walk Time (s)	–	–	–	–	–	–	–	–
Flash Dont Walk (s)	–	–	–	–	–	–	–	–
Pedestrian Calls (#/hr)	–	–	–	–	–	–	–	–
Dual Entry?	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
90th %ile Green Time (s)	8 mx	63 cd	6 mx	11 hd	7 gp	64 cd	8 gp	10 gp
70th %ile Green Time (s)	8 mx	65 cd	24 hd	0 sk	7 gp	67 cd	7 gp	8 mn
50th %ile Green Time (s)	8 mx	81 cd	8 hd	0 sk	0 sk	96 cd	0 sk	8 mn
30th %ile Green Time (s)	8 gp	82 cd	0 sk	8 hd	0 sk	96 cd	0 sk	8 mn
10th %ile Green Time (s)	0 sk	113 cd	0 sk	0 sk	0 sk	113 cd	0 sk	0 sk

Figure G.5: Synchro Timing Window Screenshot

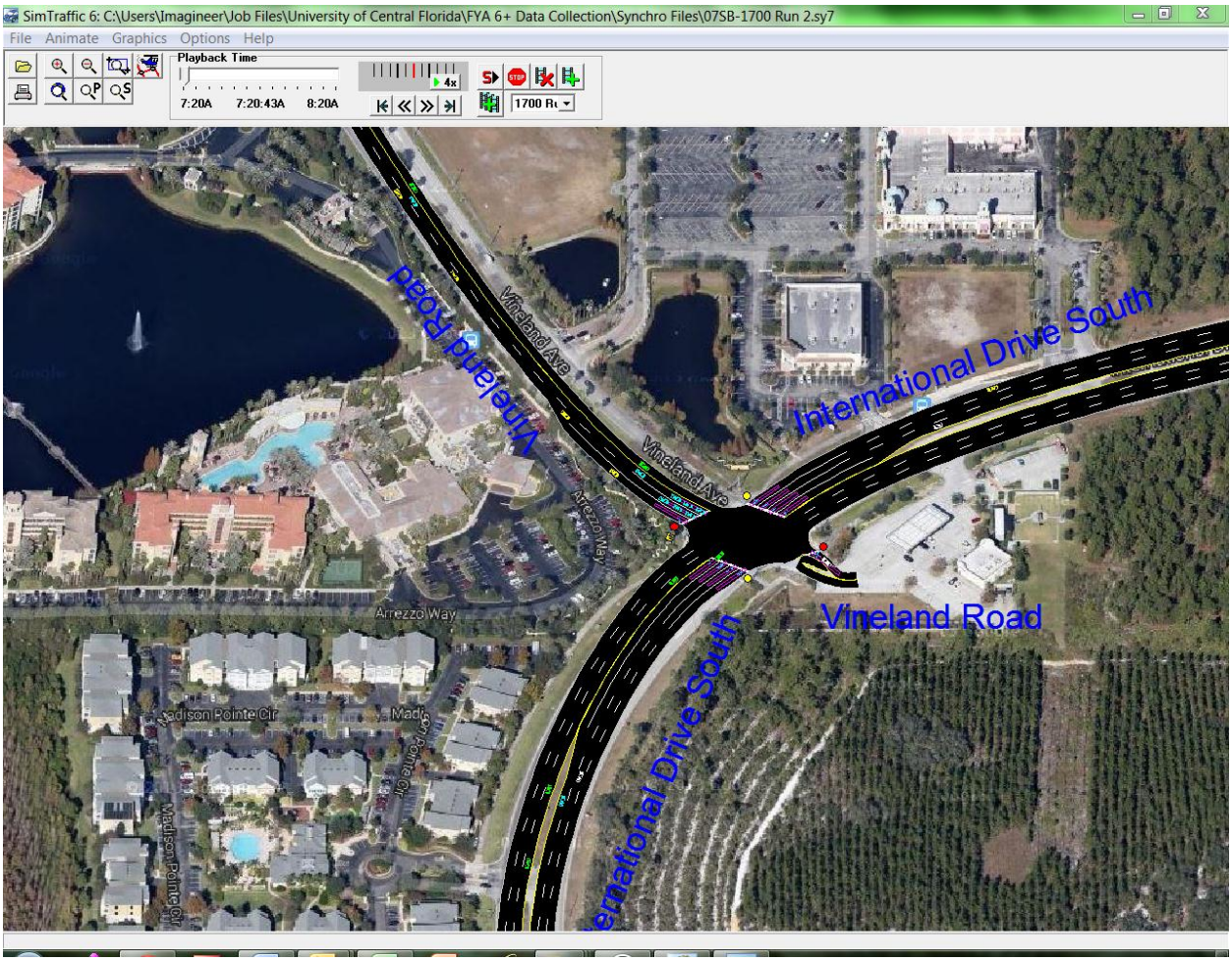


Figure G.6: SimTraffic Visualization Screenshot

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