RAISING CANE'S RESTAURANT

Traffic Impact Study

Arlington Heights, Illinois

May 2019

Prepared for:
Raising Cane's Restaurants, LLC

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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by Raising Cane's Restaurants, LLC to perform a traffic impact study for a proposed restaurant on the southeast quadrant of Arlington Heights Road/Palatine Road in Arlington Heights, Illinois. The proposed restaurant would occupy an outlot within the existing shopping center known as Town & Country Center. Access to the restaurant would be provided via the existing Town & Country Center driveways along Arlington Heights Road, Palatine Road, and Rand Road. Internal to the shopping center, two-full access driveways would be provided for the proposed Raising Cane's restaurant.

As part of this traffic impact study, existing and future traffic conditions were evaluated for the signalized intersections of Arlington Heights Road/Palatine Road, Arlington Heights Road/Lillian Avenue/Access B, and Rand Road/Access E. In addition, the unsignalized intersections of Arlington Heights Road/Access A, Palatine Road/Access C and Rand Road/Access D were evaluated. Traffic conditions were also evaluated from the proposed site access driveways on the southern boundary of the subject site.

Based on a review of future traffic conditions, it is anticipated that future background traffic growth and site-generated trips would be accommodated at the study intersections. The existing Town & Country Center access driveways are projected to operate with acceptable delay and limited queues. At the internal site access driveways proposed for the Raising Cane's restaurant, a single inbound lane and single outbound lane is recommended. Stop control should be posted for outbound traffic at each Raising Cane's restaurant driveway. In addition, onsite wayfinding should be provided to direct motorists to the dedicated drive-through window lanes. Additional details related to the improvements identified above are provided in the *Recommendations & Conclusions* section of this report.

1. INTRODUCTION

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by Raising Cane's Restaurants, LLC to perform a traffic impact study for a proposed outlot redevelopment at the Town & Country Center, located on the southeast quadrant of the intersection of Arlington Heights Road/Palatine Road in Arlington Heights, Illinois. The proposed outlot redevelopment would provide an approximately 3,735 square-foot restaurant with a drive-through window.

Existing site access for the Town & Country Center would be maintained with the outlot redevelopment; internal cross-access would be provided in order to facilitate access to the proposed restaurant. The proposed outlot redevelopment would provide two full-access driveways to the internal Town & Country Center access drive, and cross-access with the bank to the west would be maintained. With the outlot redevelopment, two internal full-access driveways would be removed. An aerial view of the study location and surrounding roadway network is presented in **Exhibit 1.**

As a part of this study, the existing network was analyzed to determine the current operations at the study intersections. In order to assess the site's impact on the area roadway network, site-generated trips were established and added to background traffic volumes. This report presents and documents Kimley-Horn's data collection, summarizes the evaluation of existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential impact of site-generated traffic on the adjacent roadway network.

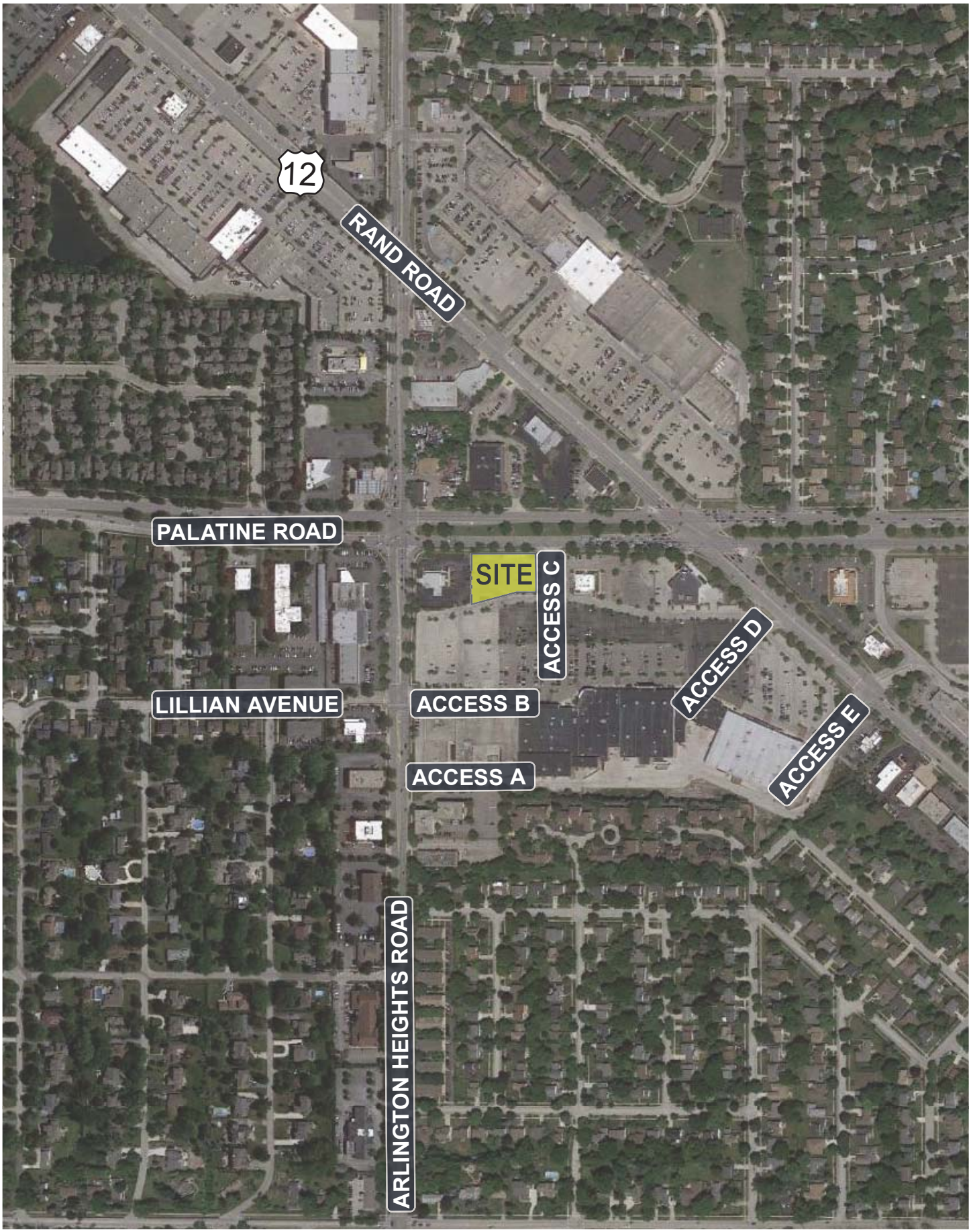

EXHIBIT 1

SITE LOCATION MAP

2. EXISTING CONDITIONS

Kimley-Horn conducted a field visit to collect relevant information pertaining to existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on these existing conditions.

2.1. Area Land Uses & Connectivity

Located on the southeast quadrant of the intersection of Arlington Heights Road/Palatine Road, Town & Country Center is an existing commercial shopping center. The shopping center provides both inline commercial tenants and outlots fronting Palatine Road. The restaurant redevelopment is proposed for an outlot currently occupied by a surface parking lot.

Near Town & Country Center, commercial uses front Palatine Road and Rand Road. East of Rand Road, the north side of Palatine Road is developed with single-family residences. Single-family residences are also located on the north and south sides of Palatine Road west of Arlington Heights Road. South of Palatine Road, Arlington Heights Road provides access to single- and multi-family residences with limited commercial uses on the west side of the street.

Located along the northern boundary of the Town & Country Center, Palatine Road provides east-west access from South Barrington on the west to Northbrook on the east. Approximately one mile west of the subject site, Palatine Road provides a full interchange with IL Route 53. IL 53 provides access to Interstate 90 (I-90) and Interstate 290 (I-290) less than five miles south of the Palatine Road interchange. Nearly six miles east of the subject site, Palatine Road provides a full interchange with Interstate 294 (I-294). Regional connectivity is also provided by Arlington Heights Road and Rand Road (US Route 12), located on the eastern and western boundaries of the Town & Country Center, respectively.

2.2. Existing Roadway Characteristics

A field investigation was conducted within the study area. As a result of this visit, the following information was obtained about the existing roadway network.

Arlington Heights Road travels in a north-south direction along the west boundary of the Town & Country Center. The Illinois Department of Transportation (IDOT) classifies Arlington Heights Road as a minor arterial roadway. Through the study area, Arlington Heights Road provides two travel lanes in each direction with channelized turn lanes provided at key intersections. At its signalized intersection with Palatine Road, Arlington Heights Road provides a dedicated left-turn lane, two through lanes, and a dedicated right-turn lane on both the north and south legs. At its signalized intersection with Lillian Avenue, Arlington Heights Road provides a dedicated left-turn lane, a single through lane, and a shared through/right-turn lane on both legs. The posted speed limit is 35 miles per hour (MPH) through the study area. Arlington Heights Road is under IDOT jurisdiction.

Rand Road (US 12) travels in a northwesterly-southeasterly direction along the eastern boundary of the Town & Country Center. IDOT classifies Rand Road as a Strategic Regional Arterial (SRA) roadway. The SRA system was established by IDOT to promote mobility on key routes throughout the Chicago area by applying various strategies, such as access control and limited signalization. Through the study area, Rand Road generally provides two travel lanes in each direction; however, along the property frontage three travel lanes are provided. A signalized access to the Town & Country Center is provided on Rand Road; the signalized intersection also provides access to the Southpoint shopping center located on the east side of the street. At this intersection, Rand Road provides a dedicated left-turn lane, two through lanes, and a shared through/right-turn lane on the north leg; the south leg provides a dedicated left-turn lane, one through lane, and one shared through/right-turn lane. A 35 MPH speed limit is posted on Rand Road through the study area. Rand Road is under IDOT jurisdiction.

Palatine Road travels in an east-west direction along the northern boundary of the subject site. IDOT classifies Palatine Road as an SRA roadway. Palatine Road generally provides three travel lanes in each direction with left-turn channelization. A landscape center median is provided through the study area. At its signalized intersection with Arlington Heights Road, Palatine Road provides a dedicated left-turn lane, three through lanes, and a dedicated right-turn lane on the west leg. On the east leg, Palatine Road provides a dedicated left-turn lane, two through lanes, and a shared through/right-turn lane. A 35 MPH speed limit is posted on Palatine Road through the study area. Palatine Road is under IDOT jurisdiction.

Lillian Avenue is an east-west roadway which extends west of Arlington Heights Road. Classified as a local roadway, Lillian Avenue generally provides a single travel lane in each direction. At its signalized intersection with Arlington Heights Road, Lillian Avenue provides a dedicated left-turn lane and a shared through/right-turn lane. A speed limit is not posted on Lillian Avenue; therefore, a 25 MPH speed limit was assumed for the purposes of this analysis. Lillian Avenue is under the jurisdiction of the Village of Arlington Heights.

Site Access Driveways for the Town & Country Center are currently provided along Arlington Heights Road, Palatine Road, and Rand Road. For purposes of this analysis, the driveways are labeled Access A through Access E in a clockwise orientation. Two full-access driveways are provided on Arlington Heights Road; the south access driveway (Access A) facilitates loading activity in the rear of the inline commercial buildings, and the north access driveway (Access B) provides customer and employee access to the shopping center. A right-in/right-out (RIRO) access driveway (Access C) is provided on Palatine Road. Two site access driveways are provided on Rand Road, including a RIRO access driveway (Access D) and a full-access driveway (Access E) located opposite the Southpoint shopping center. Each site access driveway provides a single inbound lane and a single outbound lane, with the exception of Access B and Access E. Access B provides a dedicated left-turn lane, a single through lane, and a dedicated right-turn lane in the outbound direction; a single lane is provided in the inbound direction. Access E provides a dedicated left-turn lane and a shared through/right-turn lane in the outbound direction, and two lanes for inbound traffic. For purposes of this analysis, a 25 MPH speed limit was assumed for each site access driveway.

Private Access Driveway, providing access to the Southpoint shopping center, is located on the east side of Rand Road opposite Access E. This driveway provides a dedicated left-turn lane and shared through/right-turn lane in the outbound direction, and a single lane for inbound traffic. For purposes of this analysis, a 25 MPH speed limit was assumed.

2.3. Data Collection

Based on discussions with Village of Arlington Heights, data collection efforts for this study included traffic counts at study area intersections, as well as trip generation counts and drive-through queue observations at an existing Raising Cane's restaurant. A summary of the data collection performed for this study is provided in the following sections.

Study Area Traffic Counts

Turning movement count data was collected in January 2019 at the intersections listed below. Counts were conducted on a typical weekday from 7:00 to 9:00AM and 4:00 to 6:00PM in order to capture peak traffic conditions. In addition, counts were conducted from 11:00AM to 1:00PM on a typical Saturday.

- Arlington Heights Road / Access A
- Arlington Heights Road / Lillian Avenue / Access B
- Arlington Heights Road / Palatine Road
- Palatine Road / Access C
- Rand Road / Access D
- Rand Road / Access E

The traffic count data indicates that peak traffic volumes occur within the study area on weekdays from 7:15 to 8:15AM and 4:15 to 5:15PM. During the Saturday midday period, the peak hour occurs from 11:45AM to 12:45PM. Existing peak hour vehicle traffic volumes are presented in **Exhibit 2**. A summary of the traffic count data is provided in the appendix.

Weekday count data reveals traffic volumes on Palatine Road at Arlington Heights Road are higher in the eastbound direction during the morning peak hour. During the evening and Saturday midday peak hours, traffic volumes on Palatine Road are generally evenly distributed. During the evening peak hour, traffic volumes in the westbound direction are slightly higher as compared to the eastbound direction. During the Saturday midday peak hour, traffic volumes in the eastbound direction are slightly higher as compared to the westbound direction. Traffic volumes on Arlington Heights Road are generally evenly distributed during each peak hour. South of Palatine Road, traffic volumes on Rand Road are higher in the southbound direction during the morning peak hour and higher in the northbound direction during the evening peak hour. Traffic volumes on Rand Road during the Saturday midday peak hour are generally evenly distributed.

Existing Raising Cane's Restaurant

Kimley-Horn conducted traffic counts at an existing Raising Cane's restaurant in Oak Lawn, Illinois. The Oak Lawn restaurant was selected as comparable to the proposed Arlington Heights location based

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EXHIBIT 2

EXISTING (2019) TRAFFIC PROJECTIONS

on its size and location. The existing 3,575 square-foot restaurant occupies an outlot on the northwest quadrant of Cicero Avenue/111th Street. According to IDOT, the average daily traffic volume along the segment of Cicero Avenue fronting the restaurant is 45,800 vehicles, which is generally comparable to the estimated 39,000 average daily vehicles on Palatine Road.

Traffic counts were conducted at the existing Raising Cane's access driveways in January 2019 in order to evaluate empirical trip generation characteristics (*Section 3.3. Trip Generation*). The counts were conducted on a typical weekday from 7:00 to 9:00AM and 4:00 to 6:00PM. In addition, counts were conducted from 11:00AM to 1:00PM on a typical Saturday. A summary of the traffic counts conducted at the existing Raising Cane's restaurant is provided in the appendix.

Observations of drive-through operations were also performed at the existing Raising Cane's restaurant in Oak Lawn, Illinois. The drive-through observations were conducted from 11:00AM to 8:00PM on a typical weekday, and from 11:00AM to 7:00PM on a typical Saturday. A summary of the drive-through observations is presented in *Section 3.2. Site Plan Evaluation*; detailed counts are provided in the appendix.

2.4. Existing Capacity Analyses

Per IDOT standards, Synchro capacity software was used to evaluate existing operational conditions at the study intersections during the weekday and Saturday peak hours. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The lowest LOS grade typically accepted by jurisdictional transportation agencies in Northeastern Illinois is LOS D.

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2.2**.

Table 2.1. Level of Service Grading Descriptions[1]

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

[1] Highway Capacity Manual 2010

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 2.3**. Because signalized intersections are expected to carry a higher volume of vehicles and stopping is required during red time, note that higher delays are tolerated for the corresponding LOS ratings.

Table 2.2. Level of Service Grading Criteria[1]

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F[2]	> 50	> 80

[1] Highway Capacity Manual 2010

[2] All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on these standards, capacity results were identified for the study intersections under existing conditions. In order to evaluate existing traffic operation, signal timings for the Arlington Heights Road/Palatine Road intersection were obtained from IDOT. The intersection of Arlington Heights Road/Lilliane Avenue/Access B and Rand Road/Access E were assumed to be “free” running stand-alone traffic signals and do not currently operate on a coordinated signal system. In order to evaluate traffic conditions and reflect the responsive nature of the signal cycles, the signal was optimized with an assumed minimum cycle length of 90 seconds. Per IDOT requirements, right-turn-on-red (RTOR) movements were not included in the capacity analysis.

The results of capacity analysis for existing conditions are summarized in **Table 2.4**. In this table, operation on each approach is quantified according to the average delay per vehicle and the corresponding level of service. Overall intersection operations are reported for the signalized intersections of Arlington Heights Road/Palatine Road, Arlington Heights Road/Lilliane Avenue/Access B, and Rand Road/Access E. Overall intersection level of service is not reported for

minor-leg stop-controlled intersections, since the majority of vehicles are able to move through the intersection with little to no delay. The results presented in Table 2.4 are based on Synchro's HCM 2010 reports with the exception of Arlington Heights Road/Palatine Road, which is reported using Synchro's Lanes, Volumes, Timings Report. Due to the presence of U-turn movements on the east and west legs, the Synchro HCM 2010 report is not available for this intersection.

Table 2.3. Existing (Year 2018) Levels of Service

Intersection	Weekday				Saturday	
	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Arlington Heights Road / Access A (Loading Dock) △						
Westbound	26	D	34	D	19	C
Southbound (Left)	12	B	11	B	11	B
Arlington Heights Road / Lillian Avenue / Access B ★						
Eastbound	28	C	29	C	25	C
Westbound	30	C	33	C	31	C
Northbound	11	B	14	B	15	B
Southbound	13	B	11	B	13	B
Intersection	*14*	*B*	*15*	*B*	*17*	*B*
Arlington Heights Road / Palatine Road ★						
Eastbound	98	F	65	E[1]	43	D[2]
Westbound	42	D[1]	79	E[1]	51	D[2]
Northbound	61	E[1]	60	E[1]	49	D[1]
Southbound	64	E	55+	E[1]	44	D[2]
Intersection	*74*	*E*	*66*	*E*	*47*	*D*
Palatine Road / Access C (RIRO) △						
Northbound (Right)	28	D	20	C	16	C
Rand Road / Access D (RIRO) △						
Eastbound (Right)	19	C	16	C	16	C
Rand Road / Access E ★						
Eastbound	32	C	38	D	29	C
Westbound	32	C	36	D	27	C
Northbound	5	A	9	A	8	A
Southbound	6	A	7	A	8	A
Intersection	*6*	*A*	*11*	*B*	*10-*	*A*

★ – Signalized Intersection △ – Minor-Leg Stop-Controlled Intersection

[1] Left-turn operates at LOS F.

[2] Left-turn operates at LOS E.

The intersection of Arlington Heights Road/Palatine Road operates at LOS E during the weekday peak hours, and LOS D during the Saturday midday peak hours. During the morning peak hour, the northbound and southbound approaches operate at LOS E, and the eastbound approach operates at LOS F. During the evening peak hour, each approach operates at LOS E. The delay estimated for the weekday peak hours is likely a function of a relatively long cycle length (140 seconds during the morning peak hour and 150 seconds during the evening peak hour) and priority given to east-west

traffic on Palatine Road. As a result, long periods of green time are allocated to the east-west through movements and the minor street (Arlington Heights Road) approach receives shorter green times.

According to the capacity analysis completed for the intersection of Arlington Heights Road/Palatine Road, the 95th percentile queue estimated for the eastbound left-turn movement exceeds the existing storage lane by approximately 145 feet (6 vehicles) during the morning peak hour. Similarly, the queue estimated for the northbound left-turn movement exceeds the existing storage lane by approximately 210 feet (8 vehicles), and the southbound right-turn movement exceeds the storage lane by approximately 120 feet (5 vehicles). During the evening peak hour, 95th percentile queues exceed the storage lanes for the eastbound and westbound left-turn movements by approximately 130 feet (5 vehicles) and 60 feet (2 vehicles), respectively. The queues estimated for the northbound left-turn movement exceeds the storage lane by 185 feet (7 vehicles), and the southbound right-turn movement exceeds the storage lane by roughly 110 feet (4 vehicles). During the Saturday midday peak hour, the 95th percentile queues are generally accommodated within the storage lanes with the exception of the northbound left-turn movement which exceeds the turn lane by approximately 160 feet (6 vehicles). The estimated queues are generally higher than the maximum queues observed in the field. The maximum queues observed in the field were accommodated within the storage lanes provided with the exception of the northbound left-turn movement which exceeded the existing storage by approximately 50 feet (2 vehicles) in the morning peak hour and 100 feet (4 vehicles) in the evening peak hour. The results of the capacity analysis are considered conservative as they do not reflect RTOR movements, which were observed in the field.

The signalized intersections of Arlington Heights Road/Lillian Avenue/Access B and Rand Road/Access E operate at LOS B or better during each peak hour, with each approach operating at LOS D or better. During each peak hour, the 95th percentile queues are accommodated within the existing storage lanes.

The approaches and turn movements at the unsignalized intersections operate at LOS D or better. The 95th percentile queues estimated for the Town & Country Center access driveways are approximately 75 feet (3 vehicles) or less during each peak hour with two exceptions. At Access B, the estimated 95th percentile queue for the westbound (outbound) right-turn movement is approximately 125 feet (5 vehicles) during the evening peak hour and 175 feet (7 vehicles) during the Saturday midday peak hour.

3. FUTURE CONDITIONS

This section of the report outlines the proposed site plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

3.1. Development Characteristics & Site Access

The proposed redevelopment would include an approximately 3,735 square-foot restaurant with a drive-through window. Existing site access for the Town & Country Center would be maintained with the outlot redevelopment; internal cross-access would be provided in order to facilitate access to the proposed restaurant.

The proposed outlot redevelopment would provide two full-access driveways to the internal Town & Country Center access drive, and cross-access with the bank to the west would be maintained. With the outlot redevelopment, two internal full-access driveways would be removed. A copy of the site plan is provided in the appendix.

3.2. Site Plan Evaluation

For purposes of this analysis, the proposed site plan was evaluated based on several characteristics including onsite circulation, drive-through window access and vehicle stacking, and pedestrian access. A summary of the key benefits of the proposed site plan are summarized below.

- Utilizes existing Town & Country Center site access driveways; new access to the public roadway network is not proposed.
- Eliminates two full-access driveways to the internal Town & Country Center access drive, thereby reducing turning movement conflicts at the shopping center.
- Maintains cross-access with the existing bank to the west of the site.
- Includes a designated onsite crosswalk to provide an accessible route between the ADA parking spaces and the proposed Raising Cane's entryway.
- Maintains sidewalk along the Palatine Road frontage.
- Dedicates drive-through lanes separate from the parking lot drive aisle in order to optimize drive-through operations and minimize impacts to the parking lot.
- Provides queue storage for approximately 18 vehicles (12 inside lane, 6 outside lane) in the dedicated drive-through lanes. Between the menu order board and pick-up window, queue storage for approximately 10 vehicles (8 inside lane, 2 outside lane) is provided. As noted in *Section 3.5. Drive-Through Operations*, the maximum observed queue at the existing Raising Cane's restaurant in Oak Lawn was 9 vehicles; therefore, the proposed queue storage is expected to accommodate demand without spillback to the parking lot.
- Provides a total of 46 parking spaces, which exceeds the Village of Arlington Heights requirement of 39 spaces for the proposed restaurant.

3.3. Trip Generation

In order to calculate trips generated by the proposed restaurant, data was referenced from the Institute of Transportation Engineers (ITE) manual titled Trip Generation, Tenth Edition. Trip generation rates for the ITE Land Use Code (LUC) corresponding to the proposed use are shown in **Table 3.1**. Copies of the ITE data are provided in the appendix.

Table 3.1. ITE Trip Generation Data by Land Use

ITE Land Use	Unit	Weekday			Saturday
		Daily	AM Peak Hour	PM Peak Hour	Midday Peak Hour
Fast-Food Restaurant with Drive-Through Window (LUC 934)	Per 1,000 sq. ft.	470.95 50% in / 50% out	40.19 51% in / 49% out	32.67 52% in / 48% out	54.86 51% in / 49% out

For the purpose of this study, site generated trips are expected to exhibit multiple routing patterns when traveling to and from the subject site, as described below:

- **Pass-by** – Pass-by traffic reflects the travel patterns of motorists who are already traveling on the adjacent study roadways and stop at the site en-route to another destination. Data in the ITE Trip Generation Handbook, Third Edition, reveals that 49 percent of vehicles at a Fast-Food Restaurant with Drive-Through Window (LUC 934) during the morning peak hour and 50 percent of trips during the evening peak hour are pass-by trips. ITE data is not provided for Daily trips and Saturday peak hour trips; therefore, an average of the morning and evening peak hour data (50 percent) was used to estimate pass-by trips during these periods.
- **Primary Trips** – Vehicles that travel to the subject redevelopment and then return directly to their place of origin are called "primary trips." Primary trips reflect new traffic volumes generated by the proposed redevelopment that would approach and depart on the same route. Trips to/from the site that are not pass-by trips are expected to be primary trips.

Per these assumptions, site-generated traffic projections are presented in **Table 3.2**.

Table 3.2. Site-Generated Traffic Projections

Land Use	Size	Weekday							Saturday		
		Daily	AM Peak			PM Peak			Midday Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant with Drive-Through Window	3,736 sq. ft.	1,760	75	75	150	65	60	125	105	100	205
Less Pass-by Trips[1]		*-880*	*-35*	*-35*	*-70*	*-30*	*-30*	*-60*	*-50*	*-50*	*-100*
Total New Trips to the Study Area		*880*	*40*	*40*	*80*	*35*	*30*	*65*	*55*	*50*	*105*

[1] Pass-by trips were applied at a rate of 49 percent during the morning peak hour and 50 percent during the evening peak hour, based on data provided in ITE's Trip Generation Handbook, Third Edition. ITE data is not provided for Daily and Saturday midday peak hour; therefore, an average of 50 percent was assumed to estimate pass-by trips during these periods.

For purposes of this analysis, the ITE trip generation was compared to empirical data collected at the existing Raising Cane's restaurant in Oak Lawn. A comparison of the trip generation is presented in **Table 3.3** below. The empirical trip generation reflects the peak hour of generator (i.e., highest volume of site-generated traffic during a one-hour period); and therefore, ITE data for peak hour of generator was reviewed for comparison.

Table 3.3. Trip Generation Comparison (Driveway Trips)

Land Use	Size	Weekday						Saturday		
		AM Peak			PM Peak			Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
ITE Peak Hour of Generator[1]	3,575 sq. ft.	95	85	180	95	90	185	100	95	195
Empirical Peak Hour of Generator[2]	3,575 sq. ft.	5	5	10	65	70	135	60	55	115

[1] Reflects trip generation based on ITE peak hour of generator provided for Fast-Food Restaurant with Drive-Through Window (LUC 934) as presented in Trip Generation, Tenth Edition.

[2] Reflects empirical peak hour of generator per observations conducted at an existing Raising Cane's restaurant in Oak Lawn, Illinois.

As shown, the ITE data provides a higher estimate of site-generated traffic during each peak hour. Therefore, use of the ITE data for the proposed Raising Cane's restaurant is assumed to provide a conservative estimate of site-generated traffic during the peak hour of adjacent street traffic (Table 3.2). As such, the empirical data was set aside and the standard ITE trip generation was used for the capacity analysis.

3.4. Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of surrounding land uses, prevailing traffic volumes/patterns, characteristics of the street system, and the ease with which motorists can travel over various sections of that system. The anticipated directional distributions estimated for primary trips are outlined in **Table 3.4.**

Table 3.4. Estimated Trip Distribution

Traveling to/from:	Portion of Primary Trips
North on Arlington Heights Road	15%
South on Arlington Heights Road	15%
North on Rand Road	15%
South on Rand Road	15%
East on Palatine Road	20%
West on Palatine Road	20%
Total	100%

Pass-by trips are expected to travel to and from the site in a manner that is proportional to existing travel patterns. Pass-by trip distribution estimates account for the expectation that site trips are likely to travel along Palatine Road and Arlington Heights Road. Based on the preceding trip distribution

assumptions, the site trip assignments for primary trips and pass-by trips are illustrated on **Exhibits 3 and 4,** respectively. Total site trip assignment is depicted in **Exhibit 5**.

3.5. Drive-Through Operations

The proposed restaurant redevelopment would provide a drive-through window on the east side of the building. Two drive-through lanes would be provided with stacking for a total of 18 vehicles (12 inside lane, 6 outside lane). In order to evaluate the proposed drive-through lane stacking, observations were conducted at the Raising Cane's restaurant in Oak Lawn. A summary of the drive-through observations is presented in **Table 3.5** below.

Table 3.5 Drive-Through Observations – Raising Cane's Restaurant Oak Lawn, IL

Drive-Through Lane Queue	Weekday	Saturday
Maximum	9 vehicles (4:00PM)	9 vehicles (1:30PM)

As shown above, a maximum queue of nine (9) vehicles occurred during both the weekday and Saturday observations. During the weekday, the maximum queue was observed at 4:00PM. On Saturday, the maximum queue occurred at 1:30PM. During the weekday and Saturday observation periods when vehicles were present in the drive-through lanes, an average of three (3) vehicles or less was observed. The maximum queue conditions represent periods when vehicles arrived in groups or platoons; throughout most of the observation periods, drive-through vehicle arrivals were staggered. Based on observations conducted at the existing Raising Cane's restaurant in Oak Lawn, the proposed drive-through window stacking is expected to accommodate demand without impacting site access, internal circulation, or parking maneuvers. Queue spillback to the Raising Cane's parking lot or Town & Country Center circulation network is not anticipated.

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EXHIBIT 3

SITE TRIP ASSIGNMENT - PRIMARY TRIPS

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EXHIBIT 4

SITE TRIP ASSIGNMENT - PASS-BY

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EXHIBIT 5

SITE TRIP ASSIGNMENT - TOTAL

3.6. Future Capacity Analysis

The proposed redevelopment is expected to be constructed by Year 2020; Kimley-Horn therefore evaluated future traffic conditions for a Year 2025 design horizon (build-plus-five conditions, per typical IDOT requirements).

Future No-Build Traffic Projections

Based on information received from the Chicago Metropolitan Agency for Planning (CMAP), traffic growth on Arlington Heights Road north of Palatine Road is projected at a compounded rate of roughly 0.38 percent annually through Year 2050; south of Palatine Road, growth on Arlington Heights Road is projected at a rate of 0.35 percent. Palatine Road has a projected growth rate of 0.15 percent, and Rand Road south of Palatine Road has a projected growth rate of 0.18 percent. An official letter from CMAP documenting the projected Year 2050 traffic volumes on the study roadways is included in the appendix. Background traffic volumes are depicted in **Exhibit 6**.

In addition to the background traffic growth, trips estimated for future occupancy of currently vacant tenant spaces was added to the roadway network. A total of 93,057 square feet of retail use is currently vacant. Per direction from Village of Arlington Heights staff, approximately 35,000 square feet of the vacant space is assumed to be a future grocery store and the remaining square footage is assumed to be retail use. In order to calculate trips generated by the vacant tenant spaces, data was referenced from the ITE Trip Generation, Tenth Edition manual. Trip generation rates for the ITE Land Use Code (LUC) corresponding to the vacant tenant spaces are shown in **Table 3.6**. Copies of the ITE data are provided in the appendix.

Table 3.6. ITE Trip Generation Data by Land Use – Vacant Tenant Spaces

ITE Land Use	Unit	Weekday			Saturday
		Daily	AM Peak Hour	PM Peak Hour	Midday Peak Hour
Shopping Center (LUC 820)	Per 1,000 sq. ft.	Ln(T) = 0.68 Ln(X) + 5.57 50% in/50% out	T = 0.50(X) + 151.78 62% in/38% out	Ln(T) = 0.74 Ln(X) + 2.89 48% in/52% out	Ln(T) = 0.79 Ln(X) +2.79 52% in/48% out
Supermarket (LUC 850)	Per 1,000 sq. ft.	T = 70.89(X) + 1212.64 50% in/50% out	3.82 60% in/40% out	Ln(T) = 0.75 Ln(X) + 3.21 51% in / 49% out	Ln(T) = 0.69 Ln(X) + 3.61 51% in/49% out

T – Site-generated trips X – 1,000 square feet gross floor area

Based on this data, the trip generation estimated for the vacant tenant spaces is presented in **Table 3.7**. Similar to trips estimated for the proposed restaurant, the traffic estimated for the vacant tenant spaces is also expected to exhibit a diverse range of travel patterns when traveling to and from Town & Country Center. Pass-by trips and primary trips are anticipated. In addition, the future retail and grocery store tenants are expected to complement other uses in the Town & Country Center; thus, it is likely that some patrons that visit the retail and grocery store uses will also visit other tenants. To reflect these “internally captured” trips, a 10 percent reduction was assumed for the future retail and grocery store uses.

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EXHIBIT 6

FUTURE (2025) BACKGROUND TRAFFIC VOLUMES

Table 3.7. Site-Generated Traffic Projections – Vacant Tenant Spaces

Land Use	Size	Weekday							Saturday		
		Daily	AM Peak			PM Peak			Midday Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center (LUC 820)	58,057 sq. ft.	4,150	110	70	180	175	190	365	210	195	405
Supermarket (LUC 850)	35,000 sq. ft.	3,690	80	55	135	180	175	355	220	210	430
Total Trips		*7,840*	*190*	*125*	*315*	*355*	*365*	*720*	*430*	*405*	*835*
Less 10% Internal Capture		*-840*	*-20*	*-10*	*-30*	*-40*	*-40*	*-80*	*-40*	*-40*	*-80*
Total Driveway Trips		*7,000*	*170*	*115*	*285*	*315*	*325*	*640*	*390*	*365*	*755*
Less Pass-by Trips[1]		*-2,470*	*-30*	*-30*	*-60*	*-115*	*-115*	*-230*	*-115*	*-115*	*-230*
Total New Trips to the Study Area		*4,530*	*140*	*85*	*225*	*200*	*210*	*410*	*275*	*250*	*525*

[1] Pass-by trips were applied at a rate of 34 percent during the evening peak hour and 26 percent during the Saturday midday peak hour for the Shopping Center (LUC 820). ITE data is not provided for Daily and morning peak hour; therefore, 34 percent was applied to estimate pass-by trips during these periods. For the Supermarket (LUC 850), pass-by trips were applied at a rate of 36 percent during the evening peak hour. ITE data is not provided for Daily and Saturday midday peak hour; therefore, 36 percent was assumed. For purposes of the analysis, pass-by trips were not assumed during the morning peak hour.

For purposes of the analysis, the directional distributions summarized in Table 3.4 were assumed for the site-generated trips outlined above. Pass-by trips are expected to travel to and from the site in a manner that is proportional to existing travel patterns. Based on the preceding trip distribution assumptions, the total site trip assignments for primary trips and pass-by trips are illustrated on **Exhibit 7**. Detailed trip assignments for primary trips and pass-by trips are provided in the appendix.

The site-generated trips were added to the background traffic volumes depicted in Exhibit 6 to estimate the Future (2025) No-Build traffic volumes, which are depicted in **Exhibit 8**. Based on these assumptions, future capacity results for the no-build condition are provided in **Table 3.8**. Consistent with existing conditions, the results are based on Synchro's HCM 2010 reports with the exception of Arlington Heights Road/Palatine Road, which is reported using Synchro's Lanes, Volumes, Timings Report. Due to the presence of U-turn movements on the east and west legs, the Synchro HCM 2010 report is not available for this intersection. Additional capacity analysis details are included in the appendix.

Kimley»Horn

EXHIBIT 7

VACANT TENANT SPACES TRIP ASSIGNMENT - TOTAL

Kimley»Horn

EXHIBIT 8

FUTURE (2025) NO-BUILD TRAFFIC VOLUMES

Table 3.8. Future (Year 2025) No-Build Levels of Service

Intersection	Weekday				Saturday	
	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Arlington Heights Road / Access A (Loading Dock) △						
Westbound	28	D	38	E	20	C
Southbound (Left)	12	B	12	B	12	B
Arlington Heights Road / Lillian Avenue / Access B ✱						
Eastbound	29	C	32	C	28	C
Westbound	32	C	46	D[5]	50	D[5]
Northbound	11	B	17	B	17	B
Southbound	13	B	12	B	14	B
Intersection	*15*	*B*	*20-*	*B*	*22*	*C*
Arlington Heights Road / Palatine Road ✱						
Eastbound	109	F	67	E[1]	44	D[3]
Westbound	42	D[1]	81	F	52	D[3]
Northbound	70	E[1]	81	F	68	E[1]
Southbound	71	E[2]	58	E[1]	49	D[4]
Intersection	*82*	*F*	*73*	*E*	*53*	*D*
Palatine Road / Access C (RIRO) △						
Northbound (Right)	39	E	33	D	26	D
Rand Road / Access D (RIRO) △						
Eastbound (Right)	21	C	18	C	19	C
Rand Road / Access E ✱						
Eastbound	33	C	39	D	29	C
Westbound	33	C	34	C	26	C
Northbound	5	A	11	B	10-	A
Southbound	6	A	9	A	10-	A
Intersection	*7*	*A*	*13*	*B*	*12*	*B*

✱ – Signalized Intersection △ – Minor-Leg Stop-Controlled Intersection

[1] Left-turn operates at LOS F.

[2] Thru movement operates at LOS F.

[3] Left-turn operates at LOS E.

[4] Left-turn and thru movements operate at LOS E.

[5] Right-turn movement operates at LOS E.

With the addition of background traffic growth and trips estimated for the currently vacant tenant spaces, the study intersections are expected to operate similar to existing conditions. The level of service for each approach and movement is consistent with existing conditions with some exceptions. The westbound approach at Arlington Heights/Access A is projected to operate at LOS E (compared to LOS D under existing conditions) during the evening peak hour. The 95th percentile queues projected for Arlington Heights/Access A are expected to be similar to existing conditions.

At Arlington Heights/Palatine Road, the overall intersection is projected to operate at LOS F (compared to LOS E under existing conditions) during the morning peak hour. During this same peak hour, the southbound through movement is projected to operate at LOS F (compared to LOS E under

existing conditions). During the evening peak hour, the westbound and northbound approaches are projected to operate at LOS F (compared to LOS E under existing conditions). During the Saturday midday peak hour, the northbound approach is projected to operate at LOS E (compared to LOS D under existing conditions). The 95th percentile queues projected for Arlington Heights/Palatine Road are projected to be generally consistent with existing conditions with some exceptions. During each peak hour, the 95th percentile queues projected for the northbound and southbound left-turn lanes are projected to increase as compared to existing conditions. The queues estimated for the northbound left-turn lane would continue to exceed the available storage, consistent with existing conditions.

At the intersection of Arlington Heights Road/Lillian Avenue/Access B, the projected level of service is consistent with existing conditions. The 95th percentile queues for the westbound right-turn movement are expected to exceed the available storage length during the weekday evening and Saturday midday peak hours. The results of the capacity analysis are considered conservative as they do not reflect RTOR movements, which were observed in the field. Furthermore, the current site access and onsite circulation configuration provides flexibility for motorists to select an alternate outbound access driveway if long delays or queues are observed at Access B.

At the intersection of Palatine Road/Access C, the northbound right-turn movement is projected to operate at LOS E (compared to LOS D under existing conditions) during the morning peak hour, and LOS D (compared to LOS C under existing conditions) during the evening and Saturday midday peak hours. During each peak hour, the 95th percentile queues are approximately 75 feet (3 vehicles) or less.

For the intersection of Rand Road/Access E, delay is shown to decrease for the westbound approach in the evening peak hour. This is attributable to the future traffic volumes and green time allocated to this movement. During the evening peak hour, the northbound approach is projected to operate at LOS B (compared to LOS A under existing conditions). During the Saturday midday peak hour, the overall intersection is projected to operate at LOS B (compared to LOS A under existing conditions). The projected 95th percentile queues are expected to be similar to existing conditions.

Future Build Traffic Projections

Total traffic projections for Year 2025 were calculated by adding site trips (Exhibit 5) to Future (2025) No-Build traffic volumes (Exhibit 8). Traffic projections for the Year 2025 future build scenario are illustrated in **Exhibit 9**.

For the analysis of future traffic conditions, turn lane warrants were evaluated for the study intersections and the proposed site access driveways using guidelines in the IDOT *Bureau of Design and Environment (BDE) Manual*. At the intersection of Arlington Heights Road/Palatine Road, dedicated left- and right-turn lanes are provided on each leg, with the exception of the east leg which provides a left-turn lane only. Based on the IDOT *BDE Manual* volume guidance provided for signalized intersections, projected future traffic volumes (Exhibit 9) do not meet warrant criteria for a right-turn lane on Palatine Road at Arlington Heights Road.

At the site access driveways, dedicated right-turn lanes are not currently provided. Based on the IDOT *BDE Manual* volume guidance for signalized intersections, projected future traffic volumes (Exhibit 9) meet the minimum warrant criteria for a northbound right-turn lane on Arlington Heights Road at Access B during Saturday midday peak hour conditions; however, based on a review of the corridor, exclusive right-turn lanes are generally not provided along the Arlington Heights Road corridor. Furthermore, the capacity analysis results indicate the northbound approach and northbound right-turn movement are projected to operate at LOS B during each peak hour. Therefore, a northbound right-turn lane was not included in the analysis of Arlington Heights/Lillian Avenue/Access B. At the intersection of Rand Road/Access E, the projected future traffic volumes (Exhibit 9) do not meet warrant criteria for a southbound right-turn lane on Rand Road. Therefore, a right-turn lane was not included in the analysis of future conditions at Rand Road/Access E.

Right-turn lanes were also evaluated for the unsignalized Town & Country Center access driveways. The IDOT *BDE Manual* does not provided specific volume guidance for four-lane roadways with a design speed less than 50 MPH (design speed on Arlington Heights Road is 40 MPH, posted speed limit is 35 MPH). Per IDOT guidance, a right-turn lane may also be considered to meet the level of service criteria or to provide uniform intersection design along a corridor. At Arlington Heights Road/Access A, the northbound right-turn is projected to operate under “free-flow” conditions and right-turn lanes are generally not provided along the corridor; therefore, a dedicated northbound right-turn lane was not included in the analysis of future conditions. The IDOT *BDE Manual* does not provide specific volume guidance for unsignalized intersections on a six-lane roadway with a design speed of 40 MPH (posted speed limit on Palatine Road and Rand Road is 35 MPH). Per guidance in the IDOT *BDE Manual*, a right-turn lane may also be considered where right-turn lanes are consistently provided along the corridor. Based on a review of the study area, right-turn lanes are generally not provided on Palatine Road or Rand Road at site access driveways. Therefore, an eastbound right-turn lane on Palatine Road at Access C was not included in the analysis of future conditions. Similarly, a southbound right-turn lane on Rand Road at Access D was not included in the analysis of future conditions.

At the internal site access driveways proposed for the Raising Cane’s restaurant, a single inbound lane and single outbound lane is recommended. Stop control should be posted for outbound traffic at each Raising Cane’s restaurant driveway. In addition, onsite wayfinding should be provided to direct motorists to the dedicated drive-through window lanes.

Kimley»Horn

EXHIBIT 9

FUTURE (2025) BUILD TRAFFIC PROJECTIONS

Based on the assumptions applied to the traffic projections for the future build scenario, future capacity results are provided in **Table 3.9**. The results are based on Synchro's HCM 2010 reports with the exception of Arlington Heights Road/Palatine Road, which is reported using Synchro's Lanes, Volumes, Timings Report. Due to the presence of U-turn movements on the east and west legs, the Synchro HCM 2010 report is not available for this intersection. Additional capacity analysis details are included in the appendix.

Table 3.9. Future (Year 2025) Build Levels of Service

Intersection	Weekday				Saturday	
	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Arlington Heights Road / Access A (Loading Dock) △						
Westbound	29	D	39	E	21	C
Southbound (Left)	12	B	12	B	12	B
Arlington Heights Road / Lillian Avenue / Access B ✱						
Eastbound	29	C	32	C	28	C
Westbound	32	C	51	D[5]	59	E
Northbound	12	B	17	B	18	B
Southbound	13	B	12	B	14	B
Intersection	*15*	*B*	*21*	*C*	*25*	*C*
Arlington Heights Road / Palatine Road ✱						
Eastbound	107	F	67	E[1]	44	D[3]
Westbound	42	D[1]	81	F	52	D[3]
Northbound	75	E[1]	83	F	72	E[1]
Southbound	71	E[2]	59	E[1]	50	D[4]
Intersection	*82*	*F*	*73*	*E*	*54*	*D*
Palatine Road / Access C (RIRO) △						
Northbound (Right)	56	F	41	E	31	D
Rand Road / Access D (RIRO) △						
Eastbound (Right)	21	C	19	C	20	C
Rand Road / Access E ✱						
Eastbound	33	C	41	D	29	C
Westbound	33	C	34	C	26	C
Northbound	5	A	11	B	10-	A
Southbound	6	A	9	A	11	B
Intersection	*7*	*A*	*13*	*B*	*12*	*B*

✱ – Signalized Intersection △ – Minor-Leg Stop-Controlled Intersection

[1] Left-turn operates at LOS F.

[2] Thru movement operates at LOS F.

[3] Left-turn operates at LOS E.

[4] Left-turn and thru movement operate at LOS E.

[5] Right-turn movement operates at LOS E.

With the addition of site-generated traffic, the study intersections are expected to operate similar to future-no build conditions. The level of service for each approach and movement is consistent with some exceptions. At the intersection of Arlington Heights Road/Lillian Avenue/Access B, the overall intersection is projected to operate at LOS C (compared to LOS B under future no-build conditions) during the evening peak hour. During the Saturday midday peak hour, the westbound approach is projected to operate at LOS E (compared to LOS D under future no-build conditions).

At the intersection of Palatine Road/Access C, the northbound right-turn movement is projected to operate at LOS F (compared to LOS E under future no-build conditions) during the morning peak hour. During the evening peak hour, the northbound right-turn movement is projected to operate at LOS E (compared to LOS D under future no-build conditions). The projected delay is not unusual for a minor-street stop-controlled intersection with a heavily traveled arterial such as Palatine Road. The projected 95th percentile queues are approximately 125 feet (5 vehicles) or less during each peak hour. The queue is expected to be accommodated within the existing throat length provided for Access C; therefore, impacts to onsite circulation are not anticipated. Furthermore, the current site access and onsite circulation configuration provides flexibility for motorists to select an alternate outbound access driveway if long delays or queues are observed at Access C.

At the intersection of Rand Road/Access E, the southbound approach is projected to operate at LOS B (compared to LOS A under future no-build conditions) during the Saturday midday peak hour.

For each study intersection, the projected 95th percentile queues are expected to be similar to existing conditions. The 95th percentile queues projected for the existing Town & Country Center access driveways are approximately 125 feet (5 vehicles) or less during each peak hour with some exceptions. Consistent with future no-build conditions, the 95th percentile queue for the westbound (outbound) right-turn movement at Access B is projected to exceed the storage length during the weekday evening and Saturday midday peak hours. The results of the capacity analysis are considered conservative as they do not reflect RTOR movements, which were observed in the field.

4. RECOMMENDATIONS & CONCLUSIONS

Based on Kimley-Horn's review of the proposed site plan and evaluation of existing and future traffic conditions, the study intersections are expected to adequately accommodate the proposed redevelopment with the following recommendations:

- Provide a single inbound lane and a single outbound lane at the internal site access driveways proposed for the Raising Cane's restaurant.
- Install minor-leg stop control for outbound traffic at the internal site access driveways.
- Consider onsite wayfinding to direct motorists to the dedicated drive-through window lanes.

Regardless of the final configuration of the intersection geometrics, several additional items should be taken into consideration when preparing site and roadway improvement plans for the subject redevelopment. As the site design progresses, care should be taken with landscaping, signage, and monumentation at the site access locations to ensure that adequate horizontal sight distance is provided from the new stop bars. If alterations to the site plan or land use should occur, changes to the analysis provided within this traffic impact study may be needed.

APPENDIX

Conceptual Site Plan

CMAP Year 2050 Projections

Existing Capacity Reports

Future No-Build Capacity Reports

Future Build Capacity Reports

Data from the ITE Manual Trip Generation, Tenth Edition

Data from the ITE Trip Generation Handbook, Third Edition

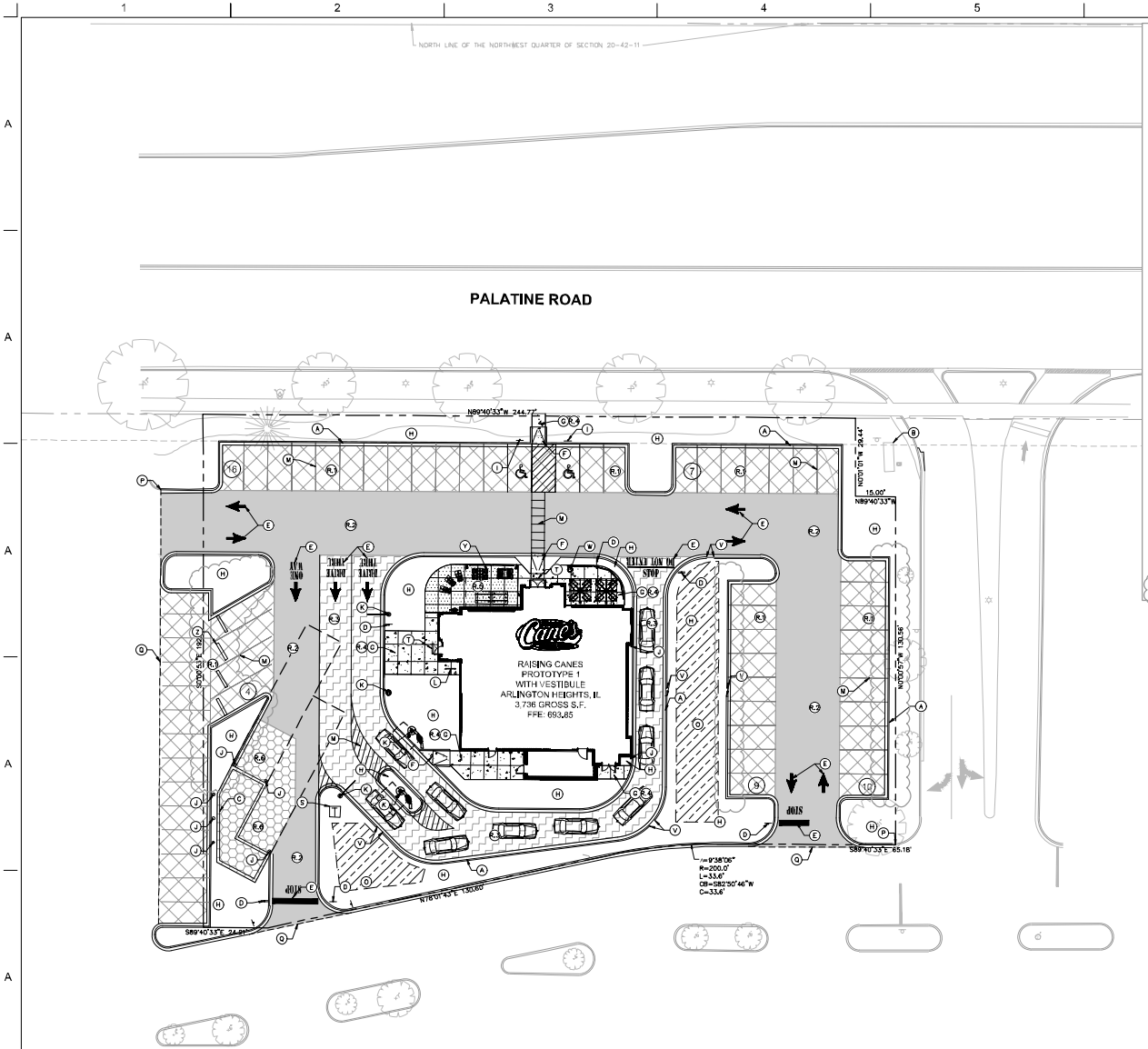
Vacant Tenant Spaces Trip Assignment – Primary Trips

Vacant Tenant Spaces Trip Assignment – Pass-By Trips

Traffic Counts – Study Intersections

Traffic Counts – Existing Raising Cane's Restaurant

CONCEPTUAL SITE PLAN



SITE LEGEND

A	6" TYP. BARRIER CURB AND GUTTER. SEE CONSTRUCTION DETAILS.
B	EXISTING MULTI-TENANT MONUMENT SIGN.
C	RECYCLING/TRASH DUMPSTER LOCATION. SEE ARCHITECTURAL PLANS FOR DETAILS OF SCREENING, GATES, BOLLARDS AND MASONRY.
D	SITE DIRECTIONAL SIGN. SEE SHEET C5.2 - STRIPING AND SIGNAGE PLAN.
L	DIRECTIONAL PAVEMENT MARKING. SEE SHEET C5.2 - STRIPING AND SIGNAGE PLAN.
F	BARRIER FREE RAMP. SEE CONSTRUCTION DETAILS.
G	CONCRETE SIDEWALK. SEE CONSTRUCTION DETAILS.
H	LANDSCAPE AREA. SEE LANDSCAPE PLANS FOR DETAILS.
I	ACCESSIBLE PARKING SIGN.
J	6" PIPE BOLLARD. SEE CONSTRUCTION DETAILS.
K	DRIVE THRU ORDER BOARD, PRE-ORDER BOARD OR HEIGHT DETECTION. SEE ARCHITECTURAL PLANS FOR DETAILS.
L	BIKE RACK. SEE ARCHITECTURAL PLANS FOR DETAILS.
M	PAVEMENT STRIPING. SEE SHEET C5.2 - STRIPING AND SIGNAGE PLAN.
N	PROPOSED FIRE HYDRANT. SEE SHEET C7.0 - UTILITY PLAN "OR DETAILS, IN/O" USED)
O	BIORETENTION FACILITY. SEE CONSTRUCTION DETAILS
P	TIE PROPOSED CURB AND GUTTER TO EXISTING CURB & GUTTER WITH SMOOTH, CONTINUOUS TRANSITIONS.
Q	SAWCUT LINE.
R-1	STANDARD DUTY ASPHALT PAVEMENT. SEE CONSTRUCTION DETAILS.
R-2	HEAVY DUTY ASPHALT PAVEMENT. SEE CONSTRUCTION DETAILS .
R-3	HEAVY DUTY INTEGRAL COLORED CONCRETE PAVEMENT. SEE CONSTRUCTION DETAILS AND GENERAL NOTES.
R-4	STANDARD DUTY CONCRETE PAVEMENT. FOR SIDEWALK, SEE CONSTRUCTION DETAILS .
R-5	PATIO AREA PAVING. SEE ARCHITECTURAL PLANS FOR DETAILS.
R-6	HEAVY DUTY INTEGRAL COLORED CONCRETE PAVEMENT A" TRASH ENCLOSURE. SEE CONSTRUCTION DETAILS.
S	TRANSFORMER PAD LOCATION. SEE ELECTRICAL PLANS FOR DETAILS.
T	NnLA TILES. SEE ARCHITECTURAL PLANS FOR DETAILS.
U	LIGHT POLE. SEE LIGHTING PLANS FOR DETAILS.
V	CURB CUT. SEE SHEET C5.0 - GRADING PLAN FOR DETAILS
W	TRASH PAD. SEE ARCHITECTURAL PLANS FOR DETAILS
X	GUIDE RAIL IN CURB. SEE ARCHITECTURAL PLANS FOR DETAILS. (NO" USED)
Y	COVERED PATIO. SEE ARCHITECTURAL PLANS FOR DETAILS.
Z	CONCRETE WHEEL STOPS. SEE CONSTRUCTION DETAILS.

SITE ANALYSIS TABLE

TOWN AND COUNTRY CENTER

EXISTING ZONING	R-2 GENERAL BUSINESS "OD	
PROPOSED USE	RESTAURANT W/ DRIVE THRU	
LOT AREA	44,334 SF / 1.32 AC	
GHOSS BUILDING AREA	3,736 SF	
NET SEATING AREA	1,704 SF	
	REQUIRED	PROVIDED
TOTAL PARKING	39 SPACES	46 SPACES
ACCESSIBLE	2 SPACES	2 SPACES

BENCHMARKS

LOCATIONS SHOWN ON SURVEY

REFERENCE BENCHMARK:
COOK COUNTY BENCHMARK DM2505, LOCATED IN PALATINE. 39 FEET NORTH OF THE CENTERLINE OF ANDERSON DRIVE, 7 FEET EAST OF THE CENTERLINE OF REYNOLDS DRIVE, 2.5 FEET WEST OF BACK OF SIDEWALK.
DATUM: NAVD88 ELEVATION = 719.509

SITE BENCHMARKS:

SITE BENCHMARK #1
SOUTHEAST BOLT ON FIRE HYDRANT AT THE NORTHWEST CORNER OF SITE
ELEVATION = 696.74

SITE BENCHMARK #2
SOUTHWEST BOLT ON FIRE HYDRANT AT THE ENTRANCE TO MALL, NEAR THE NORTHEAST CORNER OF SITE.
ELEVATION = 691.09

N

GRAPHIC SCALE IN FEET
20 10 0 20 40
1" = 20' @ 24X36

LEGEND

- LEASE LINE
- ADJACENT PROPERTY LINE
- PROPOSED CONCRETE CURB & GUTTER
- EXISTING CURB & GUTTER
- (#) PROPOSED PARKING COUNT
- R-1 STANDARD DUTY ASPHALT PAVEMENT. SEE CONSTRUCTION DETAILS.
- R-2 HEAVY DUTY ASPHALT PAVEMENT. SEE CONSTRUCTION DETAILS.
- R-3 HEAVY DUTY CONCRETE PAVEMENT, INTEGRAL COLOR 860 GRAPHITE (IRON OXIDE) SEE GENERAL NOTES - PAVING NOTES.
- R-4 STANDARD DUTY CONCRETE FOR SIDEWALKS. SEE CONSTRUCTION DETAILS.
- R-5 PATIO PAVEMENT, SEE ARCHITECTURAL PLANS.
- R-6 HEAVY DUTY CONCRETE PAVEMENT AT "TRASH ENCLOSURE, INTEGRAL COLOR 860 GRAPHITE (IRON OXIDE) SEE CONSTRUCTION DETAILS
- O BIORETENTION FACILITY. SEE CONSTRUCTION DETAILS

SITE NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL VILLAGE/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING & ELECTRICAL PLAN.
3. REFERENCE ARCHITECTURAL PLANS FOR DUMPSTER ENCLOSURE DETAILS.
4. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COSTS SHALL BE INCLUDED IN BASE BID.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS. (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCLUDED IN BASE BID.
6. EXISTING SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY COMPASS SURVEYING, LTD. DATED DECEMBER 17TH 20' 8, AND REVISED MARCH 14, 2019.
7. TOTAL LAND AREAS 1.02 ACRES.
8. ALL PROPOSED PAVING IN VILLAGE R.O.W. AND EASEMENTS TO CONFORM TO VILLAGE OF ARLINGTON HEIGHTS STANDARDS.
9. CONTRACTOR SHALL ADJUST EXISTING VALVES, MANHOLE RIMS, ETC. AS NECESSARY TO MATCH FINISHED GRADE.
10. REFERENCE LANDSCAPE PLANS FOR PROPOSED BUFFERS, SCREENING, AND PLANTING.
11. THERE ARE EXISTING TREES ONSITE, REFER TO LANDSCAPE PLAN AND TREE PRESERVATION PLAN FOR "TREES "O REMAIN.
12. CONTRACTOR SHALL SAWCUT ALONG ALL EXISTING PAVEMENT TO PROVIDE CLEAN UNIFORM SURFACE TO TIE INTO PROPOSED PAVEMENT.

Call Before You Dig
JULIE
1-800-892-0123

CAUTION!!
CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

Cane's Chicken Fingers
Restaurant Support Office
6800 Bishop Road Plano, TX 75024
Tele: 972-769-3100 Fax: 972-769-3101

Store:

RAISING CANE'S #484
225 E. PALETINE ROAD
ARLINGTON HEIGHTS, IL

Architect & Project Manager:
ADA ARCHITECTS, INC.
17710 Detroit Avenue Lakewood, Ohio 44107
Phone (216) 521-3134 Fax (216) 521-4824
www.adaarchitects.cc

Sc Control Information:
Setup / Update Date:
ADA Project Manager: JEFF POLNIEV

Engineer's Information:
Kimley»Horn
2019 KIMLEY-HORN AND ASSOCIATES, INC.
1001 WARRENVILLE ROAD, SUITE 350, IL 60532
PHONE: 630-487-9550
WWW.KIMLEY-HORN.COM

PRELIMINARY ENGINEERING

Sheet Provisions: (sheet specific per Designer)

#	Date	Description
1	5/24/2019	DEVELOPMENT REVIEW #2

Sheet Title:

SITE KEYNOTE PLAN

Date:	04/12/2019
Project Number:	168418012
Drawn By:	AEK
Checked By:	JCC

Sheet Number:

C5.0

REVIEW SET - NOT FOR CONSTRUCTION

CMAP YEAR 2050 PROJECTIONS

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

January 23, 2019

Rory S. Fancler-Splitt
Transportation Planner
1001 Warrenville Road
Suite 350
Lisle, IL 60532

Subject: ***Palatine Road @ Arlington Heights Road***
IDOT

Dear Ms. Fancler-Splitt:

In response to a request made on your behalf and dated January 22, 2019, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Arlington Hts Rd N of Palatine Rd	28,800	33,000
Arlington Hts Rd S of Palatine Rd	28,300	32,100
Palatine Rd E of Arlington Hts Rd	39,000	41,100
Palatine Rd W of Arlington Hts Rd	45,000	47,500
Rand Rd S of Palatine Rd	28,700	30,500

Traffic projections are developed using existing ADT data provided in the request letter and the results from the October 2018 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

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

cc: Quigley (IDOT)
Letters1

Kimley»Horn

January 22, 2019

Mr. Jose Rodriguez
Chicago Metropolitan Agency for Planning
233 S. Wacker Drive, Suite 800
Chicago, IL 60606

RE: Request for 2050 Traffic Projections
Arlington Heights, Illinois

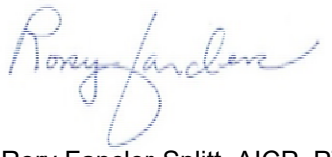
Dear Mr. Rodriguez:

Kimley-Horn is formally requesting Year 2050 traffic projections for roadway segments near the intersection of Palatine Road/Arlington Heights Road in Arlington Heights, Illinois. This information is requested for use in developing an annual growth rate for area traffic volumes. The existing Average Daily Traffic volumes on the requested roadway segments are identified by IDOT as follows:

Arlington Heights Road north of Palatine Road (Year 2014)	28,800
Arlington Heights Road south of Palatine Road (Year 2014)	28,300
Palatine Road east of Arlington Heights Road (Year 2014)	39,000
Palatine Road west of Arlington Heights Road (Year 2014)	45,000
Rand Road south of Palatine Road (Year 2017)	28,700

Please do not hesitate to contact me at (630) 487-3395 or via email at rory.fancler@kimley-horn.com should you have any questions on this matter.

Sincerely,



Rory Fancler-Splitt, AICP, PTP
Transportation Planner

EXISTING CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	860	10	5	1135
Future Vol, veh/h	5	5	860	10	5	1135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	25	4	10	40	3
Mvmt Flow	5	5	905	11	5	1195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1519	458	0	0	916	0
Stage 1	911	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.84	7.4	-	-	4.9	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.55	-	-	2.6	-
Pot Cap-1 Maneuver	110	492	-	-	544	-
Stage 1	352	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	109	492	-	-	544	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	506	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	109	492	544	-
HCM Lane V/C Ratio	-	-	0.048	0.011	0.01	-
HCM Control Delay (s)	-	-	39.7	12.4	11.7	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	30	10	50	50	775	40	25	1060	30
Future Volume (veh/h)	85	5	50	30	10	50	50	775	40	25	1060	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1818	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	32	11	53	53	816	42	26	1116	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	331	20	208	274	204	187	313	1877	97	397	1937	56
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.14	0.14	0.02	0.10	0.10	0.03	0.56	0.56	0.02	0.55	0.55
Ln Grp Delay, s/veh	26.4	0.0	29.3	29.0	30.0	31.3	8.8	10.8	10.7	7.7	13.3	13.2
Ln Grp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			96			911			1174	
Approach Delay, s/veh		27.6			30.4			10.7			13.2	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	4.7	47.4	5.0	16.6	5.5	46.7	7.9	13.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Allow Headway (MAH), s	3.8	9.1	3.9	7.7	3.8	9.1	3.9	6.3
Max Q Clear (g_c+I1), s	2.5	12.4	3.2	4.4	3.0	17.4	5.2	4.3
Green Ext Time (g_e), s	0.0	19.8	0.0	0.2	0.0	23.3	0.0	0.1
Prob of Phs Call (p_c)	0.41	1.00	0.48	0.99	0.66	1.00	0.84	0.96
Prob of Max Out (p_x)	1.00	0.38	1.00	1.00	1.00	0.71	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1740	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3342		137		3512		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		172		1455		101		1553

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	26	0	32	0	53	0	89	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1740	0
Q Serve Time (g_s), s	0.5	0.0	1.2	0.0	1.0	0.0	3.2	0.0
Cycle Q Clear Time (g_c), s	0.5	0.0	1.2	0.0	1.0	0.0	3.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	641	0	1340	0	488	0	1307	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	40.7	0.0	7.7	0.0	40.7	0.0	9.1	0.0
Perm LT Serve Time (g_u), s	31.0	0.0	7.7	0.0	25.3	0.0	7.3	0.0
Perm LT Q Serve Time (g_ps), s	0.4	0.0	0.0	0.0	1.9	0.0	0.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	397	0	274	0	313	0	331	0
V/C Ratio (X)	0.07	0.00	0.12	0.00	0.17	0.00	0.27	0.00
Avail Cap (c_a), veh/h	475	0	321	0	421	0	404	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	7.6	0.0	28.8	0.0	8.6	0.0	26.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.3	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.7	0.0	29.0	0.0	8.8	0.0	26.4	0.0
1st-Term Q (Q1), veh/ln	0.2	0.0	0.6	0.0	0.5	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	0.4	0.0	1.0	0.0	0.9	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.06	0.00	0.17	0.00	0.44	0.00	0.61	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	422	0	0	0	562	0	11
Grp Sat Flow (s), veh/h/ln	0	1727	0	0	0	1769	0	1961
Q Serve Time (g_s), s	0.0	10.4	0.0	0.0	0.0	15.4	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	10.4	0.0	0.0	0.0	15.4	0.0	0.4
Lane Grp Cap (c), veh/h	0	970	0	0	0	975	0	204
V/C Ratio (X)	0.00	0.43	0.00	0.00	0.00	0.58	0.00	0.05
Avail Cap (c_a), veh/h	0	1194	0	0	0	1175	0	213
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.4	0.0	0.0	0.0	10.9	0.0	29.8
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.0	2.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.8	0.0	0.0	0.0	13.3	0.0	30.0
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.0	0.0	7.5	0.0	0.2

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.71	0.00	1.00	0.00	1.57	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.1	0.0	0.0	0.0	12.8	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	0.00	0.00	0.64	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	436	0	58	0	586	0	53
Grp Sat Flow (s), veh/h/ln	0	1787	0	1592	0	1844	0	1553
Q Serve Time (g_s), s	0.0	10.4	0.0	2.4	0.0	15.4	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	10.4	0.0	2.4	0.0	15.4	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1552.9
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Prop RT Outside Lane (P_R)	0.00	0.10	0.00	0.91	0.00	0.05	0.00	1.00
Lane Grp Cap (c), veh/h	0	1004	0	228	0	1017	0	187
V/C Ratio (X)	0.00	0.43	0.00	0.25	0.00	0.58	0.00	0.28
Avail Cap (c_a), veh/h	0	1236	0	259	0	1225	0	195
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.4	0.0	28.1	0.0	10.9	0.0	29.5
Incr Delay (d2), s/veh	0.0	1.4	0.0	1.2	0.0	2.4	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.7	0.0	29.3	0.0	13.2	0.0	31.3
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	1.0	0.0	7.8	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.7	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.70	0.00	1.80	0.00	1.56	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.3	0.0	2.0	0.0	13.3	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	1.07	0.00	0.21	0.00	0.66	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	30	10	50	50	775	40	25	1060	30
Future Volume (veh/h)	85	5	50	30	10	50	50	775	40	25	1060	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1818	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	32	11	53	53	816	42	26	1116	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Cap, veh/h	331	20	208	274	204	187	313	1877	97	397	1937	56
Arrive On Green	0.06	0.14	0.14	0.02	0.10	0.10	0.03	0.56	0.56	0.02	0.55	0.55
Sat Flow, veh/h	1740	137	1455	1774	1961	1553	1774	3342	172	1774	3512	101
Grp Volume(v), veh/h	89	0	58	32	11	53	53	422	436	26	562	586
Grp Sat Flow(s),veh/h/ln	1740	0	1592	1774	1961	1553	1774	1727	1787	1774	1769	1844
Q Serve(g_s), s	3.2	0.0	2.4	1.2	0.4	2.3	1.0	10.4	10.4	0.5	15.4	15.4
Cycle Q Clear(g_c), s	3.2	0.0	2.4	1.2	0.4	2.3	1.0	10.4	10.4	0.5	15.4	15.4
Prop In Lane	1.00		0.91	1.00		1.00	1.00		0.10	1.00		0.05
Lane Grp Cap(c), veh/h	331	0	228	274	204	187	313	970	1004	397	975	1017
V/C Ratio(X)	0.27	0.00	0.25	0.12	0.05	0.28	0.17	0.43	0.43	0.07	0.58	0.58
Avail Cap(c_a), veh/h	404	0	259	321	213	195	421	1194	1236	475	1175	1225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	28.1	28.8	29.8	29.5	8.6	9.4	9.4	7.6	10.9	10.9
Incr Delay (d2), s/veh	0.4	0.0	1.2	0.2	0.2	1.7	0.3	1.4	1.4	0.1	2.5	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	2.0	1.0	0.4	1.9	0.9	9.1	9.3	0.4	12.8	13.3
LnGrp Delay(d),s/veh	26.4	0.0	29.3	29.0	30.0	31.3	8.8	10.8	10.7	7.7	13.3	13.2
LnGrp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			96			911			1174	
Approach Delay, s/veh		27.6			30.4			10.7			13.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	47.4	5.0	16.6	5.5	46.7	7.9	13.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Q Clear Time (g_c+I1), s	2.5	12.4	3.2	4.4	3.0	17.4	5.2	4.3
Green Ext Time (p_c), s	0.0	19.8	0.0	0.2	0.0	23.3	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	250	1900	150	180	855	10	150	620	140	35	785
Future Volume (vph)	10	250	1900	150	180	855	10	150	620	140	35	785
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.989			0.998				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	5029	0	1811	4932	0	1752	3654	1583	1752	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	5029	0	1811	4932	0	1752	3654	1583	1752	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	3%	5%	2%	3%	4%	2%	3%	2%
Adj. Flow (vph)	11	263	2000	158	189	900	11	158	653	147	37	826
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	2158	0	189	911	0	158	653	147	37	826
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	245
Future Volume (vph)	245
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1568
Flt Permitted	
Satd. Flow (perm)	1568
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	3%
Adj. Flow (vph)	258
Shared Lane Traffic (%)	
Lane Group Flow (vph)	258
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	24.0	24.0	60.0		24.0	60.0		17.0	39.0	24.0	17.0	39.0
Total Split (%)	17.1%	17.1%	42.9%		17.1%	42.9%		12.1%	27.9%	17.1%	12.1%	27.9%
Maximum Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.5	19.5	12.5	32.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		19.5	54.7		18.3	53.5		12.5	37.8	62.6	9.4	32.5
Actuated g/C Ratio		0.14	0.39		0.13	0.38		0.09	0.27	0.45	0.07	0.23
v/c Ratio		1.08	1.10		0.80	0.48		1.01	0.66	0.21	0.32	0.96
Control Delay		134.3	92.9		83.1	33.8		137.3	50.3	25.5	68.5	74.5
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		134.3	92.9		83.1	33.8		137.3	50.3	25.5	68.5	74.5
LOS		F	F		F	C		F	D	C	E	E
Approach Delay			97.5			42.3			60.9			64.2
Approach LOS			F			D			E			E
90th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.6	19.5	12.4	32.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Gap	Coord
70th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	34.4	19.5	10.6	32.5
70th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
50th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	35.7	19.5	9.3	32.5
50th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
30th %ile Green (s)	19.5	19.5	54.6		18.4	53.5		12.5	36.9	18.4	8.1	32.5
30th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Gap	Coord
10th %ile Green (s)	19.5	19.5	58.5		14.5	53.5		12.5	49.5	14.5	0.0	32.5
10th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Skip	Coord
Queue Length 50th (ft)		~277	~828		168	228		~148	285	81	33	393
Queue Length 95th (ft)		#460	#920		#279	272		#300	367	136	70	#523
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		254	1965		252	1884		156	986	721	156	864
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.08	1.10		0.75	0.48		1.01	0.66	0.20	0.24	0.96

Intersection Summary

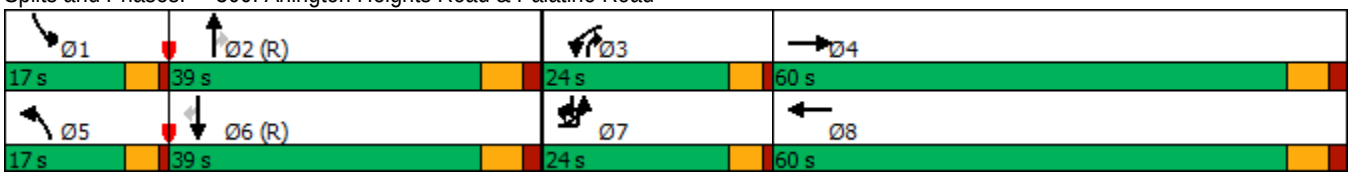
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 57.4 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.10		
Intersection Signal Delay: 73.8		Intersection LOS: E
Intersection Capacity Utilization 97.3%		ICU Level of Service F
Analysis Period (min) 15		

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	24.0
Total Split (%)	17.1%
Maximum Green (s)	19.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	58.5
Actuated g/C Ratio	0.42
v/c Ratio	0.39
Control Delay	30.7
Queue Delay	0.0
Total Delay	30.7
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	19.5
90th %ile Term Code	Max
70th %ile Green (s)	19.5
70th %ile Term Code	Max
50th %ile Green (s)	19.5
50th %ile Term Code	Max
30th %ile Green (s)	19.5
30th %ile Term Code	Max
10th %ile Green (s)	19.5
10th %ile Term Code	Max
Queue Length 50th (ft)	162
Queue Length 95th (ft)	239
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	655
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.39

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2050	25	0	1045	0	20
Future Vol, veh/h	2050	25	0	1045	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	4	2	4	2	2
Mvmt Flow	2158	26	0	1100	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1092
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	180
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	180
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	180	-	-	-
HCM Lane V/C Ratio	0.117	-	-	-
HCM Control Delay (s)	27.6	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	0	725	1515	20
Future Vol, veh/h	0	15	0	725	1515	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	6	2	3	2	2
Mvmt Flow	0	16	0	763	1595	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	808	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.96	-	-	-	-
Pot Cap-1 Maneuver	0	271	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	271	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	271	-	-
HCM Lane V/C Ratio	-	0.058	-	-
HCM Control Delay (s)	-	19.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	2	15	15	10	5	30	710	5	10	1510	10
Future Volume (veh/h)	10	2	15	15	10	5	30	710	5	10	1510	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	11	2	16	16	11	5	32	747	5	11	1589	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	195	14	111	187	94	43	309	2500	17	529	3594	25
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.02	0.70	0.70	0.01	0.69	0.69
Ln Grp Delay, s/veh	32.1	0.0	32.5	32.5	0.0	32.1	4.0	4.7	4.7	3.5	5.6	6.2
Ln Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		29			32			784			1611	
Approach Delay, s/veh		32.3			32.3			4.7			5.8	
Approach LOS		C			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.1	57.2		11.7	4.9	56.3		11.7
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Allow Headway (MAH), s	3.8	9.1		7.0	3.8	9.1		6.8
Max Q Clear (g_c+I1), s	2.1	7.8		3.2	2.4	11.9		3.6
Green Ext Time (g_e), s	0.0	19.0		0.1	0.0	38.4		0.1
Prob of Phs Call (p_c)	0.20	1.00		0.71	0.48	1.00		0.71
Prob of Max Out (p_x)	1.00	0.17		0.51	0.59	0.81		0.60

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1675			1392	1774			1312

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3564		179		5208		1214

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		24		1431		36		552

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	11	0	0	11	32	0	0	16
Grp Sat Flow (s), veh/h/ln	1675	0	0	1392	1774	0	0	1312
Q Serve Time (g_s), s	0.1	0.0	0.0	0.5	0.4	0.0	0.0	0.8
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.2	0.4	0.0	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	669	0	0	1392	316	0	0	1312
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	50.3	0.0	0.0	5.7	50.3	0.0	0.0	5.7
Perm LT Serve Time (g_u), s	45.4	0.0	0.0	5.1	40.4	0.0	0.0	4.9
Perm LT Q Serve Time (g_ps), s	0.1	0.0	0.0	0.5	1.1	0.0	0.0	0.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	529	0	0	195	309	0	0	187
V/C Ratio (X)	0.02	0.00	0.00	0.06	0.10	0.00	0.00	0.09
Avail Cap (c_a), veh/h	641	0	0	297	432	0	0	283
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	3.5	0.0	0.0	31.8	3.9	0.0	0.0	32.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	3.5	0.0	0.0	32.1	4.0	0.0	0.0	32.5
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.1	0.0	0.0	0.4	0.3	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.07	0.04	0.00	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	367	0	0	0	1034	0	0
Grp Sat Flow (s), veh/h/ln	0	1750	0	0	0	1694	0	0
Q Serve Time (g_s), s	0.0	5.8	0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	0.0	0.0	9.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1228	0	0	0	2338	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.00	0.00	0.44	0.00	0.00
Avail Cap (c_a), veh/h	0	1391	0	0	0	2648	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.1	0.0	0.0	0.0	5.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	0.0	0.0	5.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	0.0	0.0	4.6	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.75	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	5.3	0.0	0.0	0.0	8.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	385	0	18	0	566	0	16
Grp Sat Flow (s), veh/h/ln	0	1838	0	1610	0	1856	0	1765
Q Serve Time (g_s), s	0.0	5.8	0.0	0.8	0.0	9.9	0.0	0.6
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	0.8	0.0	9.9	0.0	0.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.89	0.00	0.02	0.00	0.31
Lane Grp Cap (c), veh/h	0	1289	0	125	0	1280	0	137
V/C Ratio (X)	0.00	0.30	0.00	0.14	0.00	0.44	0.00	0.12
Avail Cap (c_a), veh/h	0	1461	0	243	0	1450	0	266
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.1	0.0	31.4	0.0	5.0	0.0	31.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.1	0.0	1.1	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	32.5	0.0	6.2	0.0	32.1
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.3	0.0	5.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.70	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.6	0.0	0.7	0.0	9.2	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.09	0.00	0.64	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	2	15	15	10	5	30	710	5	10	1510	10
Future Volume (veh/h)	10	2	15	15	10	5	30	710	5	10	1510	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	11	2	16	16	11	5	32	747	5	11	1589	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Cap, veh/h	195	14	111	187	94	43	309	2500	17	529	3594	25
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.02	0.70	0.70	0.01	0.69	0.69
Sat Flow, veh/h	1392	179	1431	1312	1214	552	1774	3564	24	1675	5208	36
Grp Volume(v), veh/h	11	0	18	16	0	16	32	367	385	11	1034	566
Grp Sat Flow(s),veh/h/ln	1392	0	1610	1312	0	1765	1774	1750	1838	1675	1694	1856
Q Serve(g_s), s	0.5	0.0	0.8	0.8	0.0	0.6	0.4	5.8	5.8	0.1	9.9	9.9
Cycle Q Clear(g_c), s	1.2	0.0	0.8	1.6	0.0	0.6	0.4	5.8	5.8	0.1	9.9	9.9
Prop In Lane	1.00		0.89	1.00		0.31	1.00		0.01	1.00		0.02
Lane Grp Cap(c), veh/h	195	0	125	187	0	137	309	1228	1289	529	2338	1280
V/C Ratio(X)	0.06	0.00	0.14	0.09	0.00	0.12	0.10	0.30	0.30	0.02	0.44	0.44
Avail Cap(c_a), veh/h	297	0	243	283	0	266	432	1391	1461	641	2648	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	31.4	32.1	0.0	31.3	3.9	4.1	4.1	3.5	5.0	5.0
Incr Delay (d2), s/veh	0.3	0.0	1.1	0.4	0.0	0.8	0.1	0.6	0.6	0.0	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.7	0.6	0.0	0.6	0.3	5.3	5.6	0.1	8.4	9.2
LnGrp Delay(d),s/veh	32.1	0.0	32.5	32.5	0.0	32.1	4.0	4.7	4.7	3.5	5.6	6.2
LnGrp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		29			32			784			1611	
Approach Delay, s/veh		32.3			32.3			4.7			5.8	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	57.2		11.7	4.9	56.3		11.7
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Q Clear Time (g_c+I1), s	2.1	7.8		3.2	2.4	11.9		3.6
Green Ext Time (p_c), s	0.0	19.0		0.1	0.0	38.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	1140	20	2	995
Future Vol, veh/h	5	5	1140	20	2	995
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	2	2
Mvmt Flow	5	5	1200	21	2	1047

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1739	611	0	0	1221	0
Stage 1	1211	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	78	437	-	-	567	-
Stage 1	245	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	78	437	-	-	567	-
Mov Cap-2 Maneuver	78	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	556	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	78	437	567	-
HCM Lane V/C Ratio	-	-	0.067	0.012	0.004	-
HCM Control Delay (s)	-	-	54.5	13.3	11.4	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	65	30	130	25	1040	80	90	920	55
Future Volume (veh/h)	75	20	10	65	30	130	25	1040	80	90	920	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	68	32	137	26	1095	84	95	968	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	300	131	68	310	208	237	345	1818	139	325	1942	116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.11	0.11	0.05	0.11	0.11	0.02	0.55	0.55	0.04	0.57	0.57
Ln Grp Delay, s/veh	28.4	0.0	31.0	28.6	31.4	35.5	8.3	14.4	14.3	9.5	11.4	11.4
Ln Grp LOS	C		C	C	C	D	A	B	B	A	B	B
Approach Vol, veh/h		111			237			1205			1121	
Approach Delay, s/veh		29.1			32.9			14.2			11.2	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	6.8	47.2	7.0	14.6	4.8	49.2	7.5	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Allow Headway (MAH), s	3.8	9.1	3.9	7.5	3.8	9.1	3.9	6.3
Max Q Clear (g_c+I1), s	3.7	18.8	4.6	3.2	2.5	14.9	5.0	8.1
Green Ext Time (g_e), s	0.1	22.4	0.0	0.0	0.0	24.0	0.0	0.0
Prob of Phs Call (p_c)	0.86	1.00	0.76	1.00	0.42	1.00	0.81	1.00
Prob of Max Out (p_x)	0.33	0.76	1.00	1.00	1.00	0.54	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3332		1153		3393		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		255		604		203		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	95	0	68	0	26	0	79	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	1.7	0.0	2.6	0.0	0.5	0.0	3.0	0.0
Cycle Q Clear Time (g_c), s	1.7	0.0	2.6	0.0	0.5	0.0	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	474	0	1372	0	547	0	1211	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	41.7	0.0	8.0	0.0	41.2	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	24.4	0.0	7.3	0.0	30.3	0.0	6.9	0.0
Perm LT Q Serve Time (g_ps), s	4.3	0.0	0.0	0.0	0.5	0.0	0.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	325	0	310	0	345	0	300	0
V/C Ratio (X)	0.29	0.00	0.22	0.00	0.08	0.00	0.26	0.00
Avail Cap (c_a), veh/h	448	0	381	0	397	0	359	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	9.0	0.0	28.2	0.0	8.2	0.0	27.9	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.4	0.0	0.1	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.5	0.0	28.6	0.0	8.3	0.0	28.4	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	1.2	0.0	0.2	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.6	0.0	2.3	0.0	0.4	0.0	2.6	0.0
%ile Storage Ratio (RQ%)	0.21	0.00	0.37	0.00	0.22	0.00	0.56	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	581	0	0	0	505	0	32
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	16.8	0.0	0.0	0.0	12.9	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	16.8	0.0	0.0	0.0	12.9	0.0	1.1
Lane Grp Cap (c), veh/h	0	965	0	0	0	1013	0	208
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.50	0.00	0.15
Avail Cap (c_a), veh/h	0	1125	0	0	0	1242	0	208
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.6	0.0	0.0	0.0	9.7	0.0	30.7
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.0	0.0	1.8	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	0.0	0.0	11.4	0.0	31.4
1st-Term Q (Q1), veh/ln	0.0	8.1	0.0	0.0	0.0	6.2	0.0	0.6

2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.55	0.00	1.00	0.00	1.64	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	13.7	0.0	0.0	0.0	10.9	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	1.55	0.00	0.00	0.00	0.54	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	598	0	32	0	521	0	137
Grp Sat Flow (s), veh/h/ln	0	1818	0	1756	0	1827	0	1583
Q Serve Time (g_s), s	0.0	16.8	0.0	1.2	0.0	12.9	0.0	6.1
Cycle Q Clear Time (g_c), s	0.0	16.8	0.0	1.2	0.0	12.9	0.0	6.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	0.34	0.00	0.11	0.00	1.00
Lane Grp Cap (c), veh/h	0	992	0	199	0	1045	0	237
V/C Ratio (X)	0.00	0.60	0.00	0.16	0.00	0.50	0.00	0.58
Avail Cap (c_a), veh/h	0	1156	0	199	0	1283	0	237
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.6	0.0	30.2	0.0	9.7	0.0	29.9
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.8	0.0	1.7	0.0	5.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.3	0.0	31.0	0.0	11.4	0.0	35.5
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	0.6	0.0	6.4	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.5	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.55	0.00	1.80	0.00	1.63	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	14.0	0.0	1.2	0.0	11.2	0.0	5.4
%ile Storage Ratio (RQ%)	0.00	1.58	0.00	0.11	0.00	0.55	0.00	0.88
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	65	30	130	25	1040	80	90	920	55
Future Volume (veh/h)	75	20	10	65	30	130	25	1040	80	90	920	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	68	32	137	26	1095	84	95	968	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	131	68	310	208	237	345	1818	139	325	1942	116
Arrive On Green	0.05	0.11	0.11	0.05	0.11	0.11	0.02	0.55	0.55	0.04	0.57	0.57
Sat Flow, veh/h	1774	1153	604	1774	1961	1583	1774	3332	255	1774	3393	203
Grp Volume(v), veh/h	79	0	32	68	32	137	26	581	598	95	505	521
Grp Sat Flow(s),veh/h/ln	1774	0	1756	1774	1961	1583	1774	1770	1818	1774	1770	1827
Q Serve(g_s), s	3.0	0.0	1.2	2.6	1.1	6.1	0.5	16.8	16.8	1.7	12.9	12.9
Cycle Q Clear(g_c), s	3.0	0.0	1.2	2.6	1.1	6.1	0.5	16.8	16.8	1.7	12.9	12.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	300	0	199	310	208	237	345	965	992	325	1013	1045
V/C Ratio(X)	0.26	0.00	0.16	0.22	0.15	0.58	0.08	0.60	0.60	0.29	0.50	0.50
Avail Cap(c_a), veh/h	359	0	199	381	208	237	397	1125	1156	448	1242	1283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	30.2	28.2	30.7	29.9	8.2	11.6	11.6	9.0	9.7	9.7
Incr Delay (d2), s/veh	0.5	0.0	0.8	0.4	0.7	5.6	0.1	2.8	2.7	0.5	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	1.2	2.3	1.2	5.4	0.4	13.7	14.0	1.6	10.9	11.2
LnGrp Delay(d),s/veh	28.4	0.0	31.0	28.6	31.4	35.5	8.3	14.4	14.3	9.5	11.4	11.4
LnGrp LOS	C		C	C	C	D	A	B	B	A	B	B
Approach Vol, veh/h		111			237			1205			1121	
Approach Delay, s/veh		29.1			32.9			14.2			11.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	47.2	7.0	14.6	4.8	49.2	7.5	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Q Clear Time (g_c+I1), s	3.7	18.8	4.6	3.2	2.5	14.9	5.0	8.1
Green Ext Time (p_c), s	0.1	22.4	0.0	0.0	0.0	24.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	280	1205	140	185	1630	40	170	910	165	65	740
Future Volume (vph)	20	280	1205	140	185	1630	40	170	910	165	65	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.984			0.996				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	4960	0	1829	5064	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	4960	0	1829	5064	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	295	1268	147	195	1716	42	179	958	174	68	779
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	316	1415	0	195	1758	0	179	958	174	68	779
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	375
Future Volume (vph)	375
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	395
Shared Lane Traffic (%)	
Lane Group Flow (vph)	395
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	28.0	28.0	57.0		28.0	57.0		21.0	50.0	28.0	15.0	44.0
Total Split (%)	18.7%	18.7%	38.0%		18.7%	38.0%		14.0%	33.3%	18.7%	10.0%	29.3%
Maximum Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		23.5	53.4		20.6	50.5		16.5	46.5	73.7	9.9	37.5
Actuated g/C Ratio		0.16	0.36		0.14	0.34		0.11	0.31	0.49	0.07	0.25
v/c Ratio		1.10	0.80		0.78	1.03		0.92	0.83	0.22	0.59	0.84
Control Delay		140.6	48.3		82.9	78.6		112.2	56.0	23.1	88.0	62.5
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.2	0.0	0.0	0.0
Total Delay		140.6	48.3		82.9	78.6		112.2	56.2	23.1	88.0	62.5
LOS		F	D		F	E		F	E	C	F	E
Approach Delay			65.1			79.0			59.5			54.8
Approach LOS			E			E			E			D
90th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	23.5	23.5	52.0		22.0	50.5		16.5	43.5	22.0	10.5	37.5
50th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	23.5	23.5	54.8		19.2	50.5		16.5	43.7	19.2	10.3	37.5
30th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Gap	Coord
10th %ile Green (s)	23.5	23.5	59.0		15.0	50.5		16.5	58.5	15.0	0.0	37.5
10th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Skip	Coord
Queue Length 50th (ft)		~350	463		185	~672		176	473	98	66	383
Queue Length 95th (ft)		#547	534		273	#768		#326	#567	147	121	464
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		286	1764		286	1704		194	1155	807	123	931
Starvation Cap Reductn		0	0		0	0		0	17	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.10	0.80		0.68	1.03		0.92	0.84	0.22	0.55	0.84

Intersection Summary

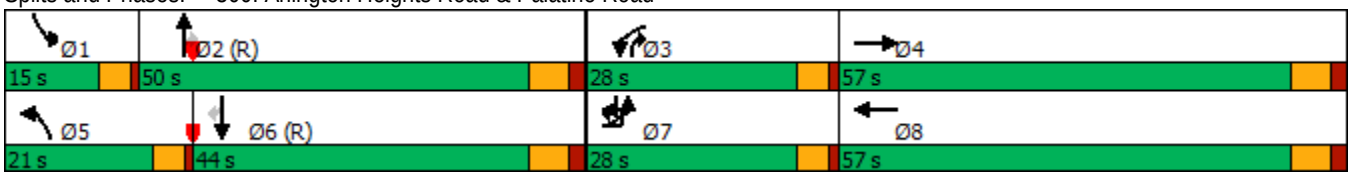
Area Type:	Other	
Cycle Length: 150		
Actuated Cycle Length: 150		
Offset: 61.5 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.10		
Intersection Signal Delay: 66.2	Intersection LOS: E	
Intersection Capacity Utilization 98.3%	ICU Level of Service F	
Analysis Period (min) 15		

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	28.0
Total Split (%)	18.7%
Maximum Green (s)	23.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	67.5
Actuated g/C Ratio	0.45
v/c Ratio	0.55
Control Delay	34.0
Queue Delay	0.0
Total Delay	34.0
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	23.5
90th %ile Term Code	Max
70th %ile Green (s)	23.5
70th %ile Term Code	Max
50th %ile Green (s)	23.5
50th %ile Term Code	Max
30th %ile Green (s)	23.5
30th %ile Term Code	Max
10th %ile Green (s)	23.5
10th %ile Term Code	Max
Queue Length 50th (ft)	280
Queue Length 95th (ft)	388
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	712
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.55

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1340	95	0	1855	0	55
Future Vol, veh/h	1340	95	0	1855	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1411	100	0	1953	0	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	756
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	301
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	301
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	301	-	-	-
HCM Lane V/C Ratio	0.192	-	-	-
HCM Control Delay (s)	19.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	35	0	1545	1115	90
Future Vol, veh/h	0	35	0	1545	1115	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	37	0	1626	1174	95

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	635	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	361	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	361	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	361	-	-
HCM Lane V/C Ratio	-	0.102	-	-
HCM Control Delay (s)	-	16.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	65	25	15	50	110	1435	25	25	1105	20
Future Volume (veh/h)	60	10	65	25	15	50	110	1435	25	25	1105	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	11	68	26	16	53	116	1511	26	26	1163	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	187	25	157	178	43	142	425	2414	42	267	3350	60
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.04	0.68	0.68	0.02	0.65	0.65
Ln Grp Delay, s/veh	38.5	0.0	36.7	36.5	0.0	35.7	4.8	9.7	9.6	6.6	6.8	7.1
Ln Grp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		142			95			1653			1210	
Approach Delay, s/veh		37.5			35.9			9.3			6.9	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.8	60.6		15.1	7.0	58.4		15.1
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Allow Headway (MAH), s	3.8	9.1		6.9	3.8	9.1		7.2
Max Q Clear (g_c+I1), s	2.4	21.1		8.9	3.7	10.2		7.2
Green Ext Time (g_e), s	0.0	33.4		0.3	0.1	30.0		0.2
Prob of Phs Call (p_c)	0.44	1.00		0.99	0.93	1.00		0.99
Prob of Max Out (p_x)	1.00	0.87		1.00	0.94	0.55		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1326	1774			1314

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3560		225		5144		380

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		61		1392		93		1260

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	26	0	0	63	116	0	0	26
Grp Sat Flow (s), veh/h/ln	1774	0	0	1326	1774	0	0	1314
Q Serve Time (g_s), s	0.4	0.0	0.0	3.7	1.7	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.4	0.0	0.0	6.9	1.7	0.0	0.0	5.2
Perm LT Sat Flow (s_l), veh/h/ln	336	0	0	1326	471	0	0	1314
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	52.4	0.0	0.0	9.1	53.1	0.0	0.0	9.1
Perm LT Serve Time (g_u), s	35.4	0.0	0.0	5.9	44.2	0.0	0.0	5.4
Perm LT Q Serve Time (g_ps), s	1.4	0.0	0.0	3.7	2.9	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	267	0	0	187	425	0	0	178
V/C Ratio (X)	0.10	0.00	0.00	0.34	0.27	0.00	0.00	0.15
Avail Cap (c_a), veh/h	315	0	0	236	514	0	0	226
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	6.4	0.0	0.0	36.2	4.5	0.0	0.0	35.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	2.2	0.3	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	6.6	0.0	0.0	38.5	4.8	0.0	0.0	36.5
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	1.4	0.8	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.4	0.0	0.0	2.7	1.5	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.45	0.16	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	750	0	0	0	766	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	19.1	0.0	0.0	0.0	8.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.1	0.0	0.0	0.0	8.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1200	0	0	0	2208	0	0
V/C Ratio (X)	0.00	0.63	0.00	0.00	0.00	0.35	0.00	0.00
Avail Cap (c_a), veh/h	0	1297	0	0	0	2317	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	0.0	0.0	6.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.7	0.0	0.0	0.0	6.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.2	0.0	0.0	0.0	3.8	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	15.2	0.0	0.0	0.0	7.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.62	0.00	0.00	0.00	0.50	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	787	0	79	0	418	0	69
Grp Sat Flow (s), veh/h/ln	0	1852	0	1617	0	1846	0	1640
Q Serve Time (g_s), s	0.0	19.1	0.0	3.7	0.0	8.2	0.0	3.1
Cycle Q Clear Time (g_c), s	0.0	19.1	0.0	3.7	0.0	8.2	0.0	3.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.86	0.00	0.05	0.00	0.77
Lane Grp Cap (c), veh/h	0	1256	0	182	0	1203	0	185
V/C Ratio (X)	0.00	0.63	0.00	0.43	0.00	0.35	0.00	0.37
Avail Cap (c_a), veh/h	0	1358	0	241	0	1262	0	245
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	33.3	0.0	6.3	0.0	33.1
Incr Delay (d2), s/veh	0.0	2.4	0.0	3.4	0.0	0.8	0.0	2.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.6	0.0	36.7	0.0	7.1	0.0	35.7
1st-Term Q (Q1), veh/ln	0.0	9.6	0.0	1.6	0.0	4.2	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.80	0.00	1.78	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	15.7	0.0	3.3	0.0	7.9	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.43	0.00	0.55	0.00	0.66
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	65	25	15	50	110	1435	25	25	1105	20
Future Volume (veh/h)	60	10	65	25	15	50	110	1435	25	25	1105	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	11	68	26	16	53	116	1511	26	26	1163	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	25	157	178	43	142	425	2414	42	267	3350	60
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.04	0.68	0.68	0.02	0.65	0.65
Sat Flow, veh/h	1326	225	1392	1314	380	1260	1774	3560	61	1774	5144	93
Grp Volume(v), veh/h	63	0	79	26	0	69	116	750	787	26	766	418
Grp Sat Flow(s),veh/h/ln	1326	0	1617	1314	0	1640	1774	1770	1852	1774	1695	1846
Q Serve(g_s), s	3.7	0.0	3.7	1.5	0.0	3.1	1.7	19.1	19.1	0.4	8.2	8.2
Cycle Q Clear(g_c), s	6.9	0.0	3.7	5.2	0.0	3.1	1.7	19.1	19.1	0.4	8.2	8.2
Prop In Lane	1.00		0.86	1.00		0.77	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	187	0	182	178	0	185	425	1200	1256	267	2208	1203
V/C Ratio(X)	0.34	0.00	0.43	0.15	0.00	0.37	0.27	0.63	0.63	0.10	0.35	0.35
Avail Cap(c_a), veh/h	236	0	241	226	0	245	514	1297	1358	315	2317	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	33.3	35.7	0.0	33.1	4.5	7.2	7.2	6.4	6.3	6.3
Incr Delay (d2), s/veh	2.2	0.0	3.4	0.8	0.0	2.6	0.3	2.5	2.4	0.2	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	3.3	1.1	0.0	2.8	1.5	15.2	15.7	0.4	7.1	7.9
LnGrp Delay(d),s/veh	38.5	0.0	36.7	36.5	0.0	35.7	4.8	9.7	9.6	6.6	6.8	7.1
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		142			95			1653			1210	
Approach Delay, s/veh		37.5			35.9			9.3			6.9	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	60.6		15.1	7.0	58.4		15.1
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Q Clear Time (g_c+I1), s	2.4	21.1		8.9	3.7	10.2		7.2
Green Ext Time (p_c), s	0.0	33.4		0.3	0.1	30.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	920	20	5	920
Future Vol, veh/h	5	15	920	20	5	920
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	7	2	2	25	2
Mvmt Flow	5	16	968	21	5	968

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1473	495	0	0	989	0
Stage 1	979	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.84	7.04	-	-	4.6	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.37	-	-	2.45	-
Pot Cap-1 Maneuver	118	507	-	-	571	-
Stage 1	325	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	507	-	-	571	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	117	507	571	-
HCM Lane V/C Ratio	-	-	0.045	0.031	0.009	-
HCM Control Delay (s)	-	-	37.2	12.3	11.4	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	80	25	180	50	815	70	90	825	55
Future Volume (veh/h)	90	10	20	80	25	180	50	815	70	90	825	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	84	26	189	53	858	74	95	868	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	354	79	151	369	256	283	353	1592	137	370	1693	113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.14	0.14	0.06	0.13	0.13	0.03	0.48	0.48	0.05	0.50	0.50
Ln Grp Delay, s/veh	24.1	0.0	26.7	24.3	26.8	34.3	9.6	14.9	14.8	9.7	13.6	13.5
Ln Grp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		127			299			985			1021	
Approach Delay, s/veh		24.8			30.8			14.6			13.2	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	6.8	39.3	7.4	15.5	5.4	40.7	7.8	15.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Allow Headway (MAH), s	3.8	9.1	3.9	7.6	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	3.8	14.5	4.8	3.2	3.0	13.9	5.1	9.7
Green Ext Time (g_e), s	0.1	17.0	0.0	0.1	0.0	20.8	0.0	0.0
Prob of Phs Call (p_c)	0.84	1.00	0.80	1.00	0.64	1.00	0.84	1.00
Prob of Max Out (p_x)	0.00	0.63	1.00	1.00	1.00	0.48	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3298		574		3368		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		284		1096		225		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	95	0	84	0	53	0	95	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	1.8	0.0	2.8	0.0	1.0	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	1.8	0.0	2.8	0.0	1.0	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	598	0	1372	0	602	0	1162	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	33.3	0.0	9.0	0.0	33.3	0.0	9.0	0.0
Perm LT Serve Time (g_u), s	20.8	0.0	8.3	0.0	22.8	0.0	8.2	0.0
Perm LT Q Serve Time (g_ps), s	2.4	0.0	0.0	0.0	1.0	0.0	0.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	370	0	369	0	353	0	354	0
V/C Ratio (X)	0.26	0.00	0.23	0.00	0.15	0.00	0.27	0.00
Avail Cap (c_a), veh/h	632	0	463	0	419	0	435	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	9.4	0.0	24.0	0.0	9.4	0.0	23.7	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.0	0.2	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.7	0.0	24.3	0.0	9.6	0.0	24.1	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	1.3	0.0	0.5	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.6	0.0	2.5	0.0	0.9	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.40	0.00	0.48	0.00	0.59	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	460	0	0	0	456	0	26
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	12.5	0.0	0.0	0.0	11.9	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	12.5	0.0	0.0	0.0	11.9	0.0	0.8
Lane Grp Cap (c), veh/h	0	855	0	0	0	890	0	256
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.51	0.00	0.10
Avail Cap (c_a), veh/h	0	1052	0	0	0	1283	0	256
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.5	0.0	0.0	0.0	11.5	0.0	26.4
Incr Delay (d2), s/veh	0.0	2.4	0.0	0.0	0.0	2.1	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.9	0.0	0.0	0.0	13.6	0.0	26.8
1st-Term Q (Q1), veh/ln	0.0	6.0	0.0	0.0	0.0	5.7	0.0	0.4

2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.00	0.00	1.66	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.8	0.0	0.0	0.0	10.3	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	1.22	0.00	0.00	0.00	0.51	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	472	0	32	0	470	0	189
Grp Sat Flow (s), veh/h/ln	0	1813	0	1669	0	1823	0	1583
Q Serve Time (g_s), s	0.0	12.5	0.0	1.2	0.0	11.9	0.0	7.7
Cycle Q Clear Time (g_c), s	0.0	12.5	0.0	1.2	0.0	11.9	0.0	7.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Prop RT Outside Lane (P_R)	0.00	0.16	0.00	0.66	0.00	0.12	0.00	1.00
Lane Grp Cap (c), veh/h	0	875	0	230	0	917	0	283
V/C Ratio (X)	0.00	0.54	0.00	0.14	0.00	0.51	0.00	0.67
Avail Cap (c_a), veh/h	0	1078	0	230	0	1322	0	283
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.5	0.0	26.2	0.0	11.5	0.0	26.4
Incr Delay (d2), s/veh	0.0	2.4	0.0	0.6	0.0	2.0	0.0	7.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.8	0.0	26.7	0.0	13.5	0.0	34.3
1st-Term Q (Q1), veh/ln	0.0	6.2	0.0	0.5	0.0	5.9	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.63	0.00	1.80	0.00	1.65	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	11.0	0.0	1.0	0.0	10.5	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	1.24	0.00	0.10	0.00	0.52	0.00	1.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	80	25	180	50	815	70	90	825	55
Future Volume (veh/h)	90	10	20	80	25	180	50	815	70	90	825	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	84	26	189	53	858	74	95	868	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	79	151	369	256	283	353	1592	137	370	1693	113
Arrive On Green	0.06	0.14	0.14	0.06	0.13	0.13	0.03	0.48	0.48	0.05	0.50	0.50
Sat Flow, veh/h	1774	574	1096	1774	1961	1583	1774	3298	284	1774	3368	225
Grp Volume(v), veh/h	95	0	32	84	26	189	53	460	472	95	456	470
Grp Sat Flow(s),veh/h/ln	1774	0	1669	1774	1961	1583	1774	1770	1813	1774	1770	1823
Q Serve(g_s), s	3.1	0.0	1.2	2.8	0.8	7.7	1.0	12.5	12.5	1.8	11.9	11.9
Cycle Q Clear(g_c), s	3.1	0.0	1.2	2.8	0.8	7.7	1.0	12.5	12.5	1.8	11.9	11.9
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.16	1.00		0.12
Lane Grp Cap(c), veh/h	354	0	230	369	256	283	353	855	875	370	890	917
V/C Ratio(X)	0.27	0.00	0.14	0.23	0.10	0.67	0.15	0.54	0.54	0.26	0.51	0.51
Avail Cap(c_a), veh/h	435	0	230	463	256	283	419	1052	1078	632	1283	1322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	26.2	24.0	26.4	26.4	9.4	12.5	12.5	9.4	11.5	11.5
Incr Delay (d2), s/veh	0.4	0.0	0.6	0.3	0.4	7.8	0.2	2.4	2.4	0.4	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	1.0	2.5	0.8	7.1	0.9	10.8	11.0	1.6	10.3	10.5
LnGrp Delay(d),s/veh	24.1	0.0	26.7	24.3	26.8	34.3	9.6	14.9	14.8	9.7	13.6	13.5
LnGrp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		127			299			985			1021	
Approach Delay, s/veh		24.8			30.8			14.6			13.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	39.3	7.4	15.5	5.4	40.7	7.8	15.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Q Clear Time (g_c+I1), s	3.8	14.5	4.8	3.2	3.0	13.9	5.1	9.7
Green Ext Time (p_c), s	0.1	17.0	0.0	0.1	0.0	20.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	15	300	875	110	150	810	40	190	755	140	80	710
Future Volume (vph)	15	300	875	110	150	810	40	190	755	140	80	710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.983			0.993				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	4999	0	1829	5050	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	4999	0	1829	5050	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	316	921	116	158	853	42	200	795	147	84	747
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	332	1037	0	158	895	0	200	795	147	84	747
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA
Protected Phases	7!	7	4		3	8		5	2	3	1	6

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	315
Future Volume (vph)	315
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	332
Shared Lane Traffic (%)	
Lane Group Flow (vph)	332
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov
Protected Phases	7!

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	34.0	34.0	44.0		22.0	32.0		19.0	38.0	22.0	16.0	35.0
Total Split (%)	28.3%	28.3%	36.7%		18.3%	26.7%		15.8%	31.7%	18.3%	13.3%	29.2%
Maximum Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		26.4	38.8		15.3	27.7		14.9	35.8	57.6	10.5	29.0
Actuated g/C Ratio		0.22	0.32		0.13	0.23		0.12	0.30	0.48	0.09	0.24
v/c Ratio		0.83	0.64		0.68	0.77		0.91	0.72	0.19	0.54	0.83
Control Delay		62.0	37.0		64.6	48.6		94.4	43.3	19.7	65.5	52.5
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		62.0	37.0		64.6	48.6		94.4	43.3	19.7	65.5	52.5
LOS		E	D		E	D		F	D	B	E	D
Approach Delay			43.1			51.0			49.2			44.0
Approach LOS			D			D			D			D
90th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	28.6	28.6	38.5		16.5	26.4		14.5	31.5	16.5	11.5	28.5
50th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	24.6	24.6	40.8		14.2	30.4		14.5	32.7	14.2	10.3	28.5
30th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Gap	Coord
10th %ile Green (s)	19.7	19.7	39.7		10.9	30.9		16.5	51.9	10.9	0.0	30.9
10th %ile Term Code	Gap	Gap	Hold		Gap	Gap		Gap	Coord	Gap	Skip	Coord
Queue Length 50th (ft)		241	251		117	242		156	304	67	63	292
Queue Length 95th (ft)		346	305		189	297		#302	381	109	117	#373
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		449	1616		266	1167		219	1111	789	169	899
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		0.74	0.64		0.59	0.77		0.91	0.72	0.19	0.50	0.83

Intersection Summary

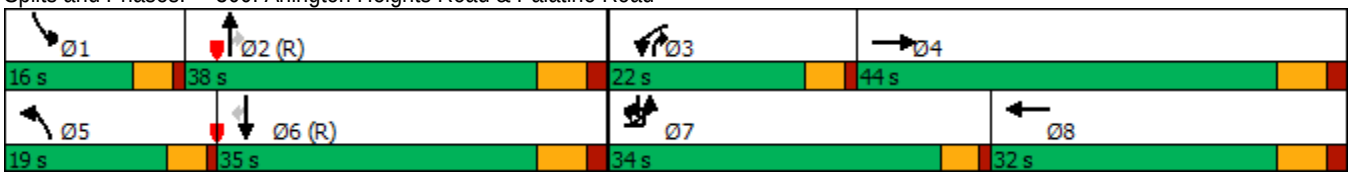
Lane Group	SBR
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	34.0
Total Split (%)	28.3%
Maximum Green (s)	29.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.9
Actuated g/C Ratio	0.52
v/c Ratio	0.41
Control Delay	19.2
Queue Delay	0.0
Total Delay	19.2
LOS	B
Approach Delay	
Approach LOS	
90th %ile Green (s)	29.5
90th %ile Term Code	Max
70th %ile Green (s)	29.5
70th %ile Term Code	Max
50th %ile Green (s)	28.6
50th %ile Term Code	Gap
30th %ile Green (s)	24.6
30th %ile Term Code	Gap
10th %ile Green (s)	19.7
10th %ile Term Code	Gap
Queue Length 50th (ft)	147
Queue Length 95th (ft)	214
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	856
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.39

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 21.6 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 46.5	Intersection LOS: D
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1015	80	0	1000	0	75
Future Vol, veh/h	1015	80	0	1000	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1068	84	0	1053	0	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	576
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	394
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	394
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	394	-	-	-
HCM Lane V/C Ratio	0.2	-	-	-
HCM Control Delay (s)	16.4	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	0	1085	1085	100
Future Vol, veh/h	0	50	0	1085	1085	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	0	1142	1142	105

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	624	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	367	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	367	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	367	-	-
HCM Lane V/C Ratio	-	0.143	-	-
HCM Control Delay (s)	-	16.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	5	90	30	5	45	110	985	35	35	1075	25
Future Volume (veh/h)	55	5	90	30	5	45	110	985	35	35	1075	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	58	5	95	32	5	47	116	1037	37	37	1132	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	243	10	189	200	19	182	427	2114	75	385	2954	68
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.05	0.61	0.61	0.02	0.58	0.58
Ln Grp Delay, s/veh	28.0	0.0	29.9	29.0	0.0	26.4	5.5	8.6	8.5	5.9	7.8	8.3
Ln Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		158			84			1190			1195	
Approach Delay, s/veh		29.2			27.4			8.2			7.9	
Approach LOS		C			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.9	44.3		13.9	6.8	42.4		13.9
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Allow Headway (MAH), s	3.8	9.1		7.1	3.8	9.1		7.1
Max Q Clear (g_c+I1), s	2.5	12.5		6.4	3.6	9.6		7.2
Green Ext Time (g_e), s	0.0	25.7		1.0	0.1	25.4		0.4
Prob of Phs Call (p_c)	0.48	1.00		0.99	0.87	1.00		0.99
Prob of Max Out (p_x)	1.00	0.57		0.19	0.04	0.62		0.15

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1347	1774			1290

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3486		80		5115		154

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		124		1516		117		1452

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	37	0	0	58	116	0	0	32
Grp Sat Flow (s), veh/h/ln	1774	0	0	1347	1774	0	0	1290
Q Serve Time (g_s), s	0.5	0.0	0.0	2.6	1.6	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.5	0.0	0.0	4.4	1.6	0.0	0.0	5.2
Perm LT Sat Flow (s_l), veh/h/ln	523	0	0	1347	483	0	0	1290
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.4	0.0	0.0	7.9	36.8	0.0	0.0	7.9
Perm LT Serve Time (g_u), s	27.7	0.0	0.0	6.0	28.9	0.0	0.0	4.2
Perm LT Q Serve Time (g_ps), s	0.7	0.0	0.0	2.6	2.5	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	385	0	0	243	427	0	0	200
V/C Ratio (X)	0.10	0.00	0.00	0.24	0.27	0.00	0.00	0.16
Avail Cap (c_a), veh/h	471	0	0	459	631	0	0	407
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	5.8	0.0	0.0	26.9	5.2	0.0	0.0	28.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.1	0.3	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	5.9	0.0	0.0	28.0	5.5	0.0	0.0	29.0
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	1.0	0.8	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.5	0.0	0.0	1.8	1.5	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.31	0.16	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	526	0	0	0	750	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	10.5	0.0	0.0	0.0	7.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.5	0.0	0.0	0.0	7.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1073	0	0	0	1958	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1459	0	0	0	2473	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.9	0.0	0.0	0.0	7.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.6	0.0	0.0	0.0	7.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	0.0	0.0	3.5	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.69	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	9.5	0.0	0.0	0.0	6.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.00	0.00	0.46	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	548	0	100	0	408	0	52
Grp Sat Flow (s), veh/h/ln	0	1841	0	1595	0	1842	0	1607
Q Serve Time (g_s), s	0.0	10.5	0.0	3.7	0.0	7.6	0.0	1.8
Cycle Q Clear Time (g_c), s	0.0	10.5	0.0	3.7	0.0	7.6	0.0	1.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	0.95	0.00	0.06	0.00	0.90
Lane Grp Cap (c), veh/h	0	1117	0	199	0	1064	0	201
V/C Ratio (X)	0.00	0.49	0.00	0.50	0.00	0.38	0.00	0.26
Avail Cap (c_a), veh/h	0	1518	0	455	0	1343	0	458
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	6.9	0.0	25.8	0.0	7.2	0.0	25.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	4.1	0.0	1.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.5	0.0	29.9	0.0	8.3	0.0	26.4
1st-Term Q (Q1), veh/ln	0.0	5.3	0.0	1.6	0.0	3.9	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.68	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.8	0.0	3.3	0.0	7.5	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.43	0.00	0.52	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	5	90	30	5	45	110	985	35	35	1075	25
Future Volume (veh/h)	55	5	90	30	5	45	110	985	35	35	1075	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	58	5	95	32	5	47	116	1037	37	37	1132	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	10	189	200	19	182	427	2114	75	385	2954	68
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.05	0.61	0.61	0.02	0.58	0.58
Sat Flow, veh/h	1347	80	1516	1290	154	1452	1774	3486	124	1774	5115	117
Grp Volume(v), veh/h	58	0	100	32	0	52	116	526	548	37	750	408
Grp Sat Flow(s),veh/h/ln	1347	0	1595	1290	0	1607	1774	1770	1841	1774	1695	1842
Q Serve(g_s), s	2.6	0.0	3.7	1.5	0.0	1.8	1.6	10.5	10.5	0.5	7.6	7.6
Cycle Q Clear(g_c), s	4.4	0.0	3.7	5.2	0.0	1.8	1.6	10.5	10.5	0.5	7.6	7.6
Prop In Lane	1.00		0.95	1.00		0.90	1.00		0.07	1.00		0.06
Lane Grp Cap(c), veh/h	243	0	199	200	0	201	427	1073	1117	385	1958	1064
V/C Ratio(X)	0.24	0.00	0.50	0.16	0.00	0.26	0.27	0.49	0.49	0.10	0.38	0.38
Avail Cap(c_a), veh/h	459	0	455	407	0	458	631	1459	1518	471	2473	1343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	25.8	28.2	0.0	25.0	5.2	6.9	6.9	5.8	7.2	7.2
Incr Delay (d2), s/veh	1.1	0.0	4.1	0.8	0.0	1.4	0.3	1.6	1.5	0.1	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	3.3	1.0	0.0	1.6	1.5	9.5	9.8	0.5	6.7	7.5
LnGrp Delay(d),s/veh	28.0	0.0	29.9	29.0	0.0	26.4	5.5	8.6	8.5	5.9	7.8	8.3
LnGrp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		158			84			1190			1195	
Approach Delay, s/veh		29.2			27.4			8.2			7.9	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	44.3		13.9	6.8	42.4		13.9
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Q Clear Time (g_c+I1), s	2.5	12.5		6.4	3.6	9.6		7.2
Green Ext Time (p_c), s	0.0	25.7		1.0	0.1	25.4		0.4

Intersection Summary		
HCM 2010 Ctrl Delay		10.0
HCM 2010 LOS		A

FUTURE NO-BUILD CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	905	10	5	1175
Future Vol, veh/h	5	5	905	10	5	1175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	25	4	10	40	3
Mvmt Flow	5	5	953	11	5	1237

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1588	482	0	0	964	0
Stage 1	959	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Critical Hdwy	6.84	7.4	-	-	4.9	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.55	-	-	2.6	-
Pot Cap-1 Maneuver	99	473	-	-	518	-
Stage 1	333	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	473	-	-	518	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	330	-	-	-	-	-
Stage 2	494	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.2	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	98	473	518	-
HCM Lane V/C Ratio	-	-	0.054	0.011	0.01	-
HCM Control Delay (s)	-	-	43.8	12.7	12	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	50	10	85	50	795	65	40	1080	30
Future Volume (veh/h)	85	5	50	50	10	85	50	795	65	40	1080	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1813	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	53	11	89	53	837	68	42	1137	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	329	18	190	291	207	200	306	1794	146	383	1942	55
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.13	0.13	0.04	0.11	0.11	0.03	0.56	0.56	0.02	0.55	0.55
Ln Grp Delay, s/veh	27.5	0.0	30.8	28.7	30.3	33.3	9.0	11.6	11.5	7.9	13.6	13.5
Ln Grp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			153			958			1211	
Approach Delay, s/veh		28.8			31.5			11.4			13.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	5.2	47.5	6.2	15.8	5.5	47.3	8.0	13.9
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Allow Headway (MAH), s	3.8	9.1	3.9	7.7	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	2.8	13.6	4.0	4.5	3.0	18.0	5.3	6.0
Green Ext Time (g_e), s	0.0	20.7	0.0	0.2	0.0	23.3	0.0	0.1
Prob of Phs Call (p_c)	0.58	1.00	0.67	0.99	0.67	1.00	0.84	0.99
Prob of Max Out (p_x)	1.00	0.44	1.00	1.00	1.00	0.73	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1740	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3226		137		3514		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		262		1455		99		1553

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	42	0	53	0	53	0	89	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1740	0
Q Serve Time (g_s), s	0.8	0.0	2.0	0.0	1.0	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	0.8	0.0	2.0	0.0	1.0	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	613	0	1340	0	478	0	1265	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	41.3	0.0	7.9	0.0	41.3	0.0	8.3	0.0
Perm LT Serve Time (g_u), s	29.9	0.0	7.3	0.0	25.3	0.0	7.5	0.0
Perm LT Q Serve Time (g_ps), s	0.8	0.0	0.0	0.0	2.0	0.0	0.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	383	0	291	0	306	0	329	0
V/C Ratio (X)	0.11	0.00	0.18	0.00	0.17	0.00	0.27	0.00
Avail Cap (c_a), veh/h	449	0	311	0	413	0	398	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	7.8	0.0	28.4	0.0	8.7	0.0	27.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.3	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.9	0.0	28.7	0.0	9.0	0.0	27.5	0.0
1st-Term Q (Q1), veh/ln	0.4	0.0	1.0	0.0	0.5	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	0.7	0.0	1.8	0.0	0.9	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.09	0.00	0.29	0.00	0.44	0.00	0.63	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	447	0	0	0	572	0	11
Grp Sat Flow (s), veh/h/ln	0	1722	0	0	0	1769	0	1961
Q Serve Time (g_s), s	0.0	11.6	0.0	0.0	0.0	16.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	0.0	0.0	16.0	0.0	0.4
Lane Grp Cap (c), veh/h	0	957	0	0	0	977	0	207
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.59	0.00	0.05
Avail Cap (c_a), veh/h	0	1176	0	0	0	1160	0	210
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.9	0.0	0.0	0.0	11.1	0.0	30.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	2.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.6	0.0	0.0	0.0	13.6	0.0	30.3
1st-Term Q (Q1), veh/ln	0.0	5.5	0.0	0.0	0.0	7.8	0.0	0.2

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.68	0.00	1.00	0.00	1.56	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.9	0.0	0.0	0.0	13.3	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	1.13	0.00	0.00	0.00	0.66	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	458	0	58	0	597	0	89
Grp Sat Flow (s), veh/h/ln	0	1766	0	1592	0	1844	0	1553
Q Serve Time (g_s), s	0.0	11.6	0.0	2.5	0.0	16.0	0.0	4.0
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	2.5	0.0	16.0	0.0	4.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1552.9
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Prop RT Outside Lane (P_R)	0.00	0.15	0.00	0.91	0.00	0.05	0.00	1.00
Lane Grp Cap (c), veh/h	0	982	0	208	0	1019	0	200
V/C Ratio (X)	0.00	0.47	0.00	0.28	0.00	0.59	0.00	0.44
Avail Cap (c_a), veh/h	0	1206	0	256	0	1210	0	203
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.9	0.0	29.3	0.0	11.1	0.0	30.1
Incr Delay (d2), s/veh	0.0	1.6	0.0	1.5	0.0	2.5	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	30.8	0.0	13.5	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	1.1	0.0	8.1	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.7	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.67	0.00	1.80	0.00	1.55	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.1	0.0	2.1	0.0	13.7	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	1.15	0.00	0.21	0.00	0.68	0.00	0.56
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	50	10	85	50	795	65	40	1080	30
Future Volume (veh/h)	85	5	50	50	10	85	50	795	65	40	1080	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1813	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	53	11	89	53	837	68	42	1137	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Cap, veh/h	329	18	190	291	207	200	306	1794	146	383	1942	55
Arrive On Green	0.06	0.13	0.13	0.04	0.11	0.11	0.03	0.56	0.56	0.02	0.55	0.55
Sat Flow, veh/h	1740	137	1455	1774	1961	1553	1774	3226	262	1774	3514	99
Grp Volume(v), veh/h	89	0	58	53	11	89	53	447	458	42	572	597
Grp Sat Flow(s),veh/h/ln	1740	0	1592	1774	1961	1553	1774	1722	1766	1774	1769	1844
Q Serve(g_s), s	3.3	0.0	2.5	2.0	0.4	4.0	1.0	11.6	11.6	0.8	16.0	16.0
Cycle Q Clear(g_c), s	3.3	0.0	2.5	2.0	0.4	4.0	1.0	11.6	11.6	0.8	16.0	16.0
Prop In Lane	1.00		0.91	1.00		1.00	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	329	0	208	291	207	200	306	957	982	383	977	1019
V/C Ratio(X)	0.27	0.00	0.28	0.18	0.05	0.44	0.17	0.47	0.47	0.11	0.59	0.59
Avail Cap(c_a), veh/h	398	0	256	311	210	203	413	1176	1206	449	1160	1210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	29.3	28.4	30.0	30.1	8.7	9.9	9.9	7.8	11.1	11.1
Incr Delay (d2), s/veh	0.4	0.0	1.5	0.3	0.2	3.3	0.3	1.6	1.6	0.1	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	2.1	1.8	0.4	3.4	0.9	9.9	10.1	0.7	13.3	13.7
LnGrp Delay(d),s/veh	27.5	0.0	30.8	28.7	30.3	33.3	9.0	11.6	11.5	7.9	13.6	13.5
LnGrp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			153			958			1211	
Approach Delay, s/veh		28.8			31.5			11.4			13.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	47.5	6.2	15.8	5.5	47.3	8.0	13.9
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Q Clear Time (g_c+I1), s	2.8	13.6	4.0	4.5	3.0	18.0	5.3	6.0
Green Ext Time (p_c), s	0.0	20.7	0.0	0.2	0.0	23.3	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	250	1945	150	180	865	10	170	650	145	45	820
Future Volume (vph)	10	250	1945	150	180	865	10	170	650	145	45	820
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.989			0.998				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	4984	0	1811	4932	0	1752	3585	1583	1752	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	4984	0	1811	4932	0	1752	3585	1583	1752	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	3%	2%	3%	5%	2%	3%	6%	2%	3%	2%
Adj. Flow (vph)	11	263	2047	158	189	911	11	179	684	153	47	863
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	2205	0	189	922	0	179	684	153	47	863
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	250
Future Volume (vph)	250
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1568
Flt Permitted	
Satd. Flow (perm)	1568
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	3%
Adj. Flow (vph)	263
Shared Lane Traffic (%)	
Lane Group Flow (vph)	263
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	24.0	24.0	60.0		24.0	60.0		17.0	39.0	24.0	17.0	39.0
Total Split (%)	17.1%	17.1%	42.9%		17.1%	42.9%		12.1%	27.9%	17.1%	12.1%	27.9%
Maximum Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.5	19.5	12.5	32.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		19.5	54.7		18.3	53.5		12.5	37.3	62.1	9.9	32.5
Actuated g/C Ratio		0.14	0.39		0.13	0.38		0.09	0.27	0.44	0.07	0.23
v/c Ratio		1.08	1.13		0.80	0.49		1.15	0.72	0.22	0.38	1.00
Control Delay		134.3	105.9		83.1	34.0		171.7	52.5	26.0	70.3	83.7
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		134.3	105.9		83.1	34.0		171.7	52.5	26.0	70.3	83.7
LOS		F	F		F	C		F	D	C	E	F
Approach Delay			109.0			42.3			69.5			71.3
Approach LOS			F			D			E			E
90th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.5	19.5	12.5	32.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	33.5	19.5	11.5	32.5
70th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
50th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	34.9	19.5	10.1	32.5
50th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
30th %ile Green (s)	19.5	19.5	54.6		18.4	53.5		12.5	36.3	18.4	8.7	32.5
30th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Gap	Coord
10th %ile Green (s)	19.5	19.5	58.5		14.5	53.5		12.5	49.5	14.5	0.0	32.5
10th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Skip	Coord
Queue Length 50th (ft)		~277	~867		168	232		~190	306	86	42	416
Queue Length 95th (ft)		#460	#958		#279	276		#347	389	141	84	#561
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		254	1947		252	1884		156	956	716	156	864
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.08	1.13		0.75	0.49		1.15	0.72	0.21	0.30	1.00

Intersection Summary

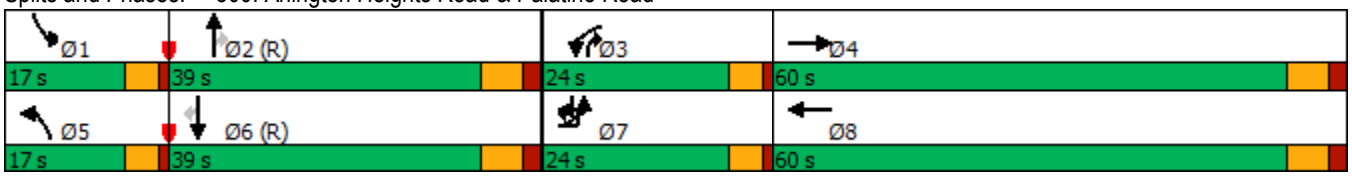
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 57.4 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 81.6		Intersection LOS: F	
Intersection Capacity Utilization 100.2%		ICU Level of Service G	
Analysis Period (min) 15			

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	24.0
Total Split (%)	17.1%
Maximum Green (s)	19.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	58.5
Actuated g/C Ratio	0.42
v/c Ratio	0.40
Control Delay	30.8
Queue Delay	0.0
Total Delay	30.8
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	19.5
90th %ile Term Code	Max
70th %ile Green (s)	19.5
70th %ile Term Code	Max
50th %ile Green (s)	19.5
50th %ile Term Code	Max
30th %ile Green (s)	19.5
30th %ile Term Code	Max
10th %ile Green (s)	19.5
10th %ile Term Code	Max
Queue Length 50th (ft)	166
Queue Length 95th (ft)	243
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	655
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.40

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2055	80	0	1055	0	65
Future Vol, veh/h	2055	80	0	1055	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	4	2	4	2	2
Mvmt Flow	2163	84	0	1111	0	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1124
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	171
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	171
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	39.4
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	171	-	-	-
HCM Lane V/C Ratio	0.4	-	-	-
HCM Control Delay (s)	39.4	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.8	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	0	745	1540	75
Future Vol, veh/h	0	20	0	745	1540	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	6	2	3	2	2
Mvmt Flow	0	21	0	784	1621	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	850	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.96	-	-	-	-
Pot Cap-1 Maneuver	0	254	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	254	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	254	-	-
HCM Lane V/C Ratio	-	0.083	-	-
HCM Control Delay (s)	-	20.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1	15	15	10	5	50	720	5	10	1540	10
Future Volume (veh/h)	20	1	15	15	10	5	50	720	5	10	1540	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	21	1	16	16	11	5	53	758	5	11	1621	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	199	8	123	191	100	45	310	2502	17	522	3560	24
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.70	0.70	0.01	0.68	0.68
Ln Grp Delay, s/veh	33.0	0.0	32.7	32.9	0.0	32.4	4.4	4.8	4.8	3.7	6.1	6.6
Ln Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		38			32			816			1643	
Approach Delay, s/veh		32.9			32.7			4.8			6.3	
Approach LOS		C			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.1	58.4		12.1	5.5	57.0		12.1
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Allow Headway (MAH), s	3.8	9.1		6.7	3.8	9.1		6.8
Max Q Clear (g_c+I1), s	2.2	8.0		3.7	2.7	12.7		3.6
Green Ext Time (g_e), s	0.0	19.4		0.1	0.0	38.3		0.1
Prob of Phs Call (p_c)	0.20	1.00		0.77	0.67	1.00		0.77
Prob of Max Out (p_x)	1.00	0.18		0.62	0.92	0.82		0.60

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1675			1392	1774			1313

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3564		94		5209		1214

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		24		1503		35		552

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	11	0	0	21	53	0	0	16
Grp Sat Flow (s), veh/h/ln	1675	0	0	1392	1774	0	0	1313
Q Serve Time (g_s), s	0.2	0.0	0.0	1.1	0.7	0.0	0.0	0.9
Cycle Q Clear Time (g_c), s	0.2	0.0	0.0	1.7	0.7	0.0	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	662	0	0	1392	307	0	0	1313
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	51.0	0.0	0.0	6.1	51.0	0.0	0.0	6.1
Perm LT Serve Time (g_u), s	46.4	0.0	0.0	5.5	40.3	0.0	0.0	5.4
Perm LT Q Serve Time (g_ps), s	0.1	0.0	0.0	1.1	2.2	0.0	0.0	0.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	522	0	0	199	310	0	0	191
V/C Ratio (X)	0.02	0.00	0.00	0.11	0.17	0.00	0.00	0.08
Avail Cap (c_a), veh/h	631	0	0	290	417	0	0	277
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	3.7	0.0	0.0	32.5	4.2	0.0	0.0	32.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	3.7	0.0	0.0	33.0	4.4	0.0	0.0	32.9
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.4	0.3	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.1	0.0	0.0	0.8	0.6	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.13	0.07	0.00	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	372	0	0	0	1055	0	0
Grp Sat Flow (s), veh/h/ln	0	1750	0	0	0	1694	0	0
Q Serve Time (g_s), s	0.0	6.0	0.0	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.0	0.0	0.0	0.0	10.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1228	0	0	0	2316	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1360	0	0	0	2589	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	0.0	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.8	0.0	0.0	0.0	6.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	4.8	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.73	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	5.6	0.0	0.0	0.0	8.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.61	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	391	0	17	0	577	0	16
Grp Sat Flow (s), veh/h/ln	0	1838	0	1597	0	1856	0	1765
Q Serve Time (g_s), s	0.0	6.0	0.0	0.7	0.0	10.7	0.0	0.6
Cycle Q Clear Time (g_c), s	0.0	6.0	0.0	0.7	0.0	10.7	0.0	0.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.94	0.00	0.02	0.00	0.31
Lane Grp Cap (c), veh/h	0	1290	0	131	0	1268	0	145
V/C Ratio (X)	0.00	0.30	0.00	0.13	0.00	0.46	0.00	0.11
Avail Cap (c_a), veh/h	0	1429	0	236	0	1418	0	260
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	31.8	0.0	5.4	0.0	31.7
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.9	0.0	1.2	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.8	0.0	32.7	0.0	6.6	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	3.0	0.0	0.3	0.0	5.3	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.69	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.9	0.0	0.6	0.0	9.6	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.08	0.00	0.67	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1	15	15	10	5	50	720	5	10	1540	10
Future Volume (veh/h)	20	1	15	15	10	5	50	720	5	10	1540	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	21	1	16	16	11	5	53	758	5	11	1621	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Cap, veh/h	199	8	123	191	100	45	310	2502	17	522	3560	24
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.70	0.70	0.01	0.68	0.68
Sat Flow, veh/h	1392	94	1503	1313	1214	552	1774	3564	24	1675	5209	35
Grp Volume(v), veh/h	21	0	17	16	0	16	53	372	391	11	1055	577
Grp Sat Flow(s),veh/h/ln	1392	0	1597	1313	0	1765	1774	1750	1838	1675	1694	1856
Q Serve(g_s), s	1.1	0.0	0.7	0.9	0.0	0.6	0.7	6.0	6.0	0.2	10.7	10.7
Cycle Q Clear(g_c), s	1.7	0.0	0.7	1.6	0.0	0.6	0.7	6.0	6.0	0.2	10.7	10.7
Prop In Lane	1.00		0.94	1.00		0.31	1.00		0.01	1.00		0.02
Lane Grp Cap(c), veh/h	199	0	131	191	0	145	310	1228	1290	522	2316	1268
V/C Ratio(X)	0.11	0.00	0.13	0.08	0.00	0.11	0.17	0.30	0.30	0.02	0.46	0.46
Avail Cap(c_a), veh/h	290	0	236	277	0	260	417	1360	1429	631	2589	1418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	31.8	32.5	0.0	31.7	4.2	4.2	4.2	3.7	5.4	5.4
Incr Delay (d2), s/veh	0.5	0.0	0.9	0.4	0.0	0.7	0.3	0.6	0.6	0.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.6	0.6	0.0	0.6	0.6	5.6	5.9	0.1	8.7	9.6
LnGrp Delay(d),s/veh	33.0	0.0	32.7	32.9	0.0	32.4	4.4	4.8	4.8	3.7	6.1	6.6
LnGrp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		38			32			816			1643	
Approach Delay, s/veh		32.9			32.7			4.8			6.3	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	58.4		12.1	5.5	57.0		12.1
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Q Clear Time (g_c+I1), s	2.2	8.0		3.7	2.7	12.7		3.6
Green Ext Time (p_c), s	0.0	19.4		0.1	0.0	38.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	1200	20	2	1050
Future Vol, veh/h	5	5	1200	20	2	1050
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	2	2
Mvmt Flow	5	5	1263	21	2	1105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1831	642	0	0	1284	0
Stage 1	1274	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	68	417	-	-	536	-
Stage 1	226	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	68	417	-	-	536	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	225	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	68	417	536	-
HCM Lane V/C Ratio	-	-	0.077	0.013	0.004	-
HCM Control Delay (s)	-	-	62.3	13.7	11.7	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	115	30	230	25	1045	135	125	925	55
Future Volume (veh/h)	75	20	10	115	30	230	25	1045	135	125	925	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	121	32	242	26	1100	142	132	974	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	292	114	60	341	243	283	335	1682	217	312	1940	116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.10	0.10	0.08	0.12	0.12	0.02	0.53	0.53	0.05	0.57	0.57
Ln Grp Delay, s/veh	31.0	0.0	34.6	29.6	32.1	55.7	9.2	17.0	17.1	11.9	12.2	12.2
Ln Grp LOS	C		C	C	C	E	A	B	B	B	B	B
Approach Vol, veh/h		111			395			1268			1164	
Approach Delay, s/veh		32.0			45.8			16.9			12.1	
Approach LOS		C			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	7.9	49.2	9.9	14.0	4.8	52.3	7.8	16.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Allow Headway (MAH), s	3.8	9.2	3.9	7.5	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	4.6	22.3	6.8	3.4	2.5	16.0	5.2	12.1
Green Ext Time (g_e), s	0.1	20.9	0.0	0.0	0.0	23.7	0.0	0.0
Prob of Phs Call (p_c)	0.95	1.00	0.93	1.00	0.44	1.00	0.83	1.00
Prob of Max Out (p_x)	0.85	0.83	1.00	1.00	1.00	0.56	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3154		1153		3395		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		406		604		202		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	132	0	121	0	26	0	79	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	2.6	0.0	4.8	0.0	0.5	0.0	3.2	0.0
Cycle Q Clear Time (g_c), s	2.6	0.0	4.8	0.0	0.5	0.0	3.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	446	0	1372	0	544	0	1101	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	44.8	0.0	8.6	0.0	43.2	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	22.9	0.0	6.6	0.0	32.3	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	9.2	0.0	0.2	0.0	0.5	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	312	0	341	0	335	0	292	0
V/C Ratio (X)	0.42	0.00	0.35	0.00	0.08	0.00	0.27	0.00
Avail Cap (c_a), veh/h	401	0	344	0	383	0	340	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	10.9	0.0	29.0	0.0	9.1	0.0	30.5	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.6	0.0	0.1	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.9	0.0	29.6	0.0	9.2	0.0	31.0	0.0
1st-Term Q (Q1), veh/ln	1.2	0.0	2.4	0.0	0.3	0.0	1.5	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.4	0.0	4.3	0.0	0.5	0.0	2.8	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.71	0.00	0.25	0.00	0.60	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	616	0	0	0	508	0	32
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	20.2	0.0	0.0	0.0	14.0	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	20.2	0.0	0.0	0.0	14.0	0.0	1.2
Lane Grp Cap (c), veh/h	0	944	0	0	0	1011	0	243
V/C Ratio (X)	0.00	0.65	0.00	0.00	0.00	0.50	0.00	0.13
Avail Cap (c_a), veh/h	0	1048	0	0	0	1157	0	243
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.5	0.0	0.0	0.0	10.4	0.0	31.6
Incr Delay (d2), s/veh	0.0	3.5	0.0	0.0	0.0	1.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	0.0	0.0	12.2	0.0	32.1
1st-Term Q (Q1), veh/ln	0.0	9.8	0.0	0.0	0.0	6.8	0.0	0.6

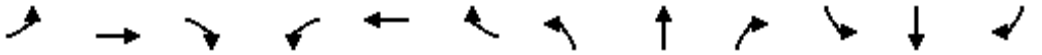
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.00	0.00	1.61	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	16.0	0.0	0.0	0.0	11.7	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	1.81	0.00	0.00	0.00	0.58	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	626	0	32	0	524	0	242
Grp Sat Flow (s), veh/h/ln	0	1791	0	1756	0	1827	0	1583
Q Serve Time (g_s), s	0.0	20.3	0.0	1.4	0.0	14.0	0.0	10.1
Cycle Q Clear Time (g_c), s	0.0	20.3	0.0	1.4	0.0	14.0	0.0	10.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	0.34	0.00	0.11	0.00	1.00
Lane Grp Cap (c), veh/h	0	955	0	173	0	1044	0	283
V/C Ratio (X)	0.00	0.65	0.00	0.18	0.00	0.50	0.00	0.86
Avail Cap (c_a), veh/h	0	1061	0	173	0	1195	0	283
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	33.5	0.0	10.4	0.0	32.3
Incr Delay (d2), s/veh	0.0	3.5	0.0	1.1	0.0	1.7	0.0	23.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	34.6	0.0	12.2	0.0	55.7
1st-Term Q (Q1), veh/ln	0.0	9.9	0.0	0.7	0.0	7.0	0.0	5.2
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.1	0.0	0.5	0.0	1.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.80	0.00	1.60	0.00	1.62
%ile Back of Q (95%), veh/ln	0.0	16.2	0.0	1.3	0.0	12.0	0.0	11.4
%ile Storage Ratio (RQ%)	0.00	1.83	0.00	0.12	0.00	0.59	0.00	1.87
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	115	30	230	25	1045	135	125	925	55
Future Volume (veh/h)	75	20	10	115	30	230	25	1045	135	125	925	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	121	32	242	26	1100	142	132	974	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	114	60	341	243	283	335	1682	217	312	1940	116
Arrive On Green	0.05	0.10	0.10	0.08	0.12	0.12	0.02	0.53	0.53	0.05	0.57	0.57
Sat Flow, veh/h	1774	1153	604	1774	1961	1583	1774	3154	406	1774	3395	202
Grp Volume(v), veh/h	79	0	32	121	32	242	26	616	626	132	508	524
Grp Sat Flow(s),veh/h/ln	1774	0	1756	1774	1961	1583	1774	1770	1791	1774	1770	1827
Q Serve(g_s), s	3.2	0.0	1.4	4.8	1.2	10.1	0.5	20.2	20.3	2.6	14.0	14.0
Cycle Q Clear(g_c), s	3.2	0.0	1.4	4.8	1.2	10.1	0.5	20.2	20.3	2.6	14.0	14.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.23	1.00		0.11
Lane Grp Cap(c), veh/h	292	0	173	341	243	283	335	944	955	312	1011	1044
V/C Ratio(X)	0.27	0.00	0.18	0.35	0.13	0.86	0.08	0.65	0.65	0.42	0.50	0.50
Avail Cap(c_a), veh/h	340	0	173	344	243	283	383	1048	1061	401	1157	1195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	0.0	33.5	29.0	31.6	32.3	9.1	13.5	13.6	10.9	10.4	10.4
Incr Delay (d2), s/veh	0.5	0.0	1.1	0.6	0.5	23.5	0.1	3.5	3.5	0.9	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	1.3	4.3	1.2	11.4	0.5	16.0	16.2	2.4	11.7	12.0
LnGrp Delay(d),s/veh	31.0	0.0	34.6	29.6	32.1	55.7	9.2	17.0	17.1	11.9	12.2	12.2
LnGrp LOS	C		C	C	C	E	A	B	B	B	B	B
Approach Vol, veh/h		111			395			1268			1164	
Approach Delay, s/veh		32.0			45.8			16.9			12.1	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	49.2	9.9	14.0	4.8	52.3	7.8	16.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Q Clear Time (g_c+I1), s	4.6	22.3	6.8	3.4	2.5	16.0	5.2	12.1
Green Ext Time (p_c), s	0.1	20.9	0.0	0.0	0.0	23.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	285	1255	140	185	1645	40	220	960	170	80	780
Future Volume (vph)	20	285	1255	140	185	1645	40	220	960	170	80	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.985			0.996				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	4965	0	1829	5064	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	4965	0	1829	5064	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	300	1321	147	195	1732	42	232	1011	179	84	821
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	321	1468	0	195	1774	0	232	1011	179	84	821
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	385
Future Volume (vph)	385
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	405
Shared Lane Traffic (%)	
Lane Group Flow (vph)	405
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	28.0	28.0	57.0		28.0	57.0		21.0	50.0	28.0	15.0	44.0
Total Split (%)	18.7%	18.7%	38.0%		18.7%	38.0%		14.0%	33.3%	18.7%	10.0%	29.3%
Maximum Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		23.5	53.4		20.6	50.5		16.5	43.8	70.9	10.2	37.5
Actuated g/C Ratio		0.16	0.36		0.14	0.34		0.11	0.29	0.47	0.07	0.25
v/c Ratio		1.12	0.83		0.78	1.04		1.20	0.93	0.24	0.70	0.88
Control Delay		145.7	49.6		82.9	81.2		181.7	66.5	24.1	97.4	66.1
Queue Delay		0.0	0.0		0.0	0.0		0.0	1.2	0.0	0.0	0.0
Total Delay		145.7	49.6		82.9	81.2		181.7	67.7	24.1	97.4	66.1
LOS		F	D		F	F		F	E	C	F	E
Approach Delay			66.9			81.4			80.8			58.3
Approach LOS			E			F			F			E
90th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	23.5	23.5	52.0		22.0	50.5		16.5	43.5	22.0	10.5	37.5
50th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	23.5	23.5	54.8		19.2	50.5		16.5	43.5	19.2	10.5	37.5
30th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Max	Coord
10th %ile Green (s)	23.5	23.5	59.0		15.0	50.5		16.5	45.0	15.0	9.0	37.5
10th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Gap	Coord
Queue Length 50th (ft)		~361	487		185	~684		~273	510	101	82	410
Queue Length 95th (ft)		#559	561		273	#779		#452	#640	151	#162	#513
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		286	1766		286	1704		194	1087	778	123	931
Starvation Cap Reductn		0	0		0	0		0	17	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.12	0.83		0.68	1.04		1.20	0.94	0.23	0.68	0.88

Intersection Summary

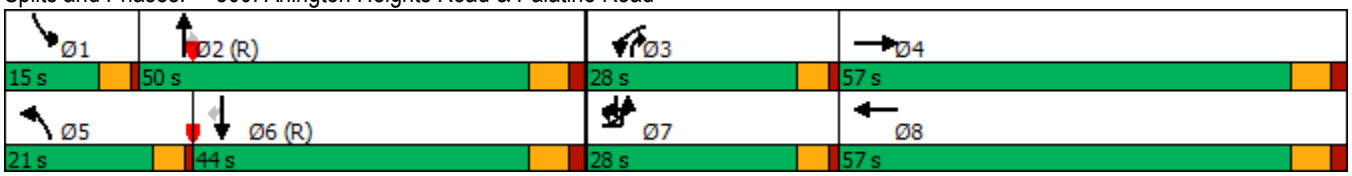
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 61.5 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 72.6		Intersection LOS: E	
Intersection Capacity Utilization 102.3%		ICU Level of Service G	
Analysis Period (min) 15			

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	28.0
Total Split (%)	18.7%
Maximum Green (s)	23.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	67.5
Actuated g/C Ratio	0.45
v/c Ratio	0.57
Control Delay	34.4
Queue Delay	0.0
Total Delay	34.4
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	23.5
90th %ile Term Code	Max
70th %ile Green (s)	23.5
70th %ile Term Code	Max
50th %ile Green (s)	23.5
50th %ile Term Code	Max
30th %ile Green (s)	23.5
30th %ile Term Code	Max
10th %ile Green (s)	23.5
10th %ile Term Code	Max
Queue Length 50th (ft)	289
Queue Length 95th (ft)	400
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	712
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.57

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1325	180	0	1870	0	155
Future Vol, veh/h	1325	180	0	1870	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1395	189	0	1968	0	163

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	792
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	285
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	285
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	33.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	285	-	-	-
HCM Lane V/C Ratio	0.572	-	-	-
HCM Control Delay (s)	33.3	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	3.3	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	0	1620	1140	200
Future Vol, veh/h	0	50	0	1620	1140	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	0	1705	1200	211

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	706	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	324	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	324	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	324	-	-
HCM Lane V/C Ratio	-	0.162	-	-
HCM Control Delay (s)	-	18.3	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	10	65	25	15	50	140	1450	25	25	1145	20
Future Volume (veh/h)	120	10	65	25	15	50	140	1450	25	25	1145	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	126	11	68	26	16	53	147	1526	26	26	1205	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	225	32	199	215	54	180	406	2339	40	247	3201	56
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.66	0.66	0.02	0.62	0.62
Ln Grp Delay, s/veh	42.5	0.0	34.4	35.4	0.0	33.7	6.0	11.5	11.4	8.0	8.4	8.8
Ln Grp LOS	D		C	D		C	A	B	B	A	A	A
Approach Vol, veh/h		205			95			1699			1252	
Approach Delay, s/veh		39.3			34.2			11.0			8.5	
Approach LOS		D			C			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.9	61.2		18.0	7.8	58.3		18.0
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Allow Headway (MAH), s	3.8	9.1		6.6	3.8	9.1		7.2
Max Q Clear (g_c+I1), s	2.5	23.7		13.1	4.4	11.7		7.2
Green Ext Time (g_e), s	0.0	31.6		0.0	0.1	30.2		0.2
Prob of Phs Call (p_c)	0.46	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	1.00	0.89		1.00	1.00	0.60		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1326	1774			1314

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3561		225		5147		380

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		61		1392		90		1260

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	26	0	0	126	147	0	0	26
Grp Sat Flow (s), veh/h/ln	1774	0	0	1326	1774	0	0	1314
Q Serve Time (g_s), s	0.5	0.0	0.0	7.9	2.4	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.5	0.0	0.0	11.1	2.4	0.0	0.0	5.2
Perm LT Sat Flow (s_l), veh/h/ln	331	0	0	1326	453	0	0	1314
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	52.3	0.0	0.0	12.0	53.7	0.0	0.0	12.0
Perm LT Serve Time (g_u), s	33.6	0.0	0.0	8.8	42.6	0.0	0.0	8.3
Perm LT Q Serve Time (g_ps), s	1.6	0.0	0.0	7.9	5.4	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	247	0	0	225	406	0	0	215
V/C Ratio (X)	0.11	0.00	0.00	0.56	0.36	0.00	0.00	0.12
Avail Cap (c_a), veh/h	292	0	0	225	473	0	0	215
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	7.9	0.0	0.0	37.2	5.5	0.0	0.0	34.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	5.2	0.5	0.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.0	0.0	0.0	42.5	6.0	0.0	0.0	35.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	2.9	1.1	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.4	0.0	0.0	5.8	2.2	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.07	0.00	0.00	0.99	0.24	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	758	0	0	0	794	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	21.6	0.0	0.0	0.0	9.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	21.6	0.0	0.0	0.0	9.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1162	0	0	0	2108	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1241	0	0	0	2217	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	0.0	0.0	7.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	0.0	0.0	8.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	0.0	0.0	4.5	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.49	0.00	1.00	0.00	1.76	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	16.7	0.0	0.0	0.0	8.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.69	0.00	0.00	0.00	0.57	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	794	0	79	0	432	0	69
Grp Sat Flow (s), veh/h/ln	0	1852	0	1617	0	1847	0	1640
Q Serve Time (g_s), s	0.0	21.7	0.0	3.7	0.0	9.7	0.0	3.2
Cycle Q Clear Time (g_c), s	0.0	21.7	0.0	3.7	0.0	9.7	0.0	3.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.86	0.00	0.05	0.00	0.77
Lane Grp Cap (c), veh/h	0	1216	0	231	0	1148	0	234
V/C Ratio (X)	0.00	0.65	0.00	0.34	0.00	0.38	0.00	0.29
Avail Cap (c_a), veh/h	0	1299	0	231	0	1208	0	234
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	32.5	0.0	7.9	0.0	32.3
Incr Delay (d2), s/veh	0.0	2.7	0.0	1.9	0.0	0.9	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.4	0.0	34.4	0.0	8.8	0.0	33.7
1st-Term Q (Q1), veh/ln	0.0	10.8	0.0	1.6	0.0	4.9	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.1	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.48	0.00	1.80	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	17.4	0.0	3.2	0.0	9.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.41	0.00	0.62	0.00	0.65
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	10	65	25	15	50	140	1450	25	25	1145	20
Future Volume (veh/h)	120	10	65	25	15	50	140	1450	25	25	1145	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	126	11	68	26	16	53	147	1526	26	26	1205	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	32	199	215	54	180	406	2339	40	247	3201	56
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.66	0.66	0.02	0.62	0.62
Sat Flow, veh/h	1326	225	1392	1314	380	1260	1774	3561	61	1774	5147	90
Grp Volume(v), veh/h	126	0	79	26	0	69	147	758	794	26	794	432
Grp Sat Flow(s),veh/h/ln	1326	0	1617	1314	0	1640	1774	1770	1852	1774	1695	1847
Q Serve(g_s), s	7.9	0.0	3.7	1.5	0.0	3.2	2.4	21.6	21.7	0.5	9.7	9.7
Cycle Q Clear(g_c), s	11.1	0.0	3.7	5.2	0.0	3.2	2.4	21.6	21.7	0.5	9.7	9.7
Prop In Lane	1.00		0.86	1.00		0.77	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	225	0	231	215	0	234	406	1162	1216	247	2108	1148
V/C Ratio(X)	0.56	0.00	0.34	0.12	0.00	0.29	0.36	0.65	0.65	0.11	0.38	0.38
Avail Cap(c_a), veh/h	225	0	231	215	0	234	473	1241	1299	292	2217	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	32.5	34.9	0.0	32.3	5.5	8.7	8.7	7.9	7.9	7.9
Incr Delay (d2), s/veh	5.2	0.0	1.9	0.5	0.0	1.5	0.5	2.8	2.7	0.2	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	0.0	3.2	1.1	0.0	2.8	2.2	16.7	17.4	0.4	8.2	9.0
LnGrp Delay(d),s/veh	42.5	0.0	34.4	35.4	0.0	33.7	6.0	11.5	11.4	8.0	8.4	8.8
LnGrp LOS	D		C	D		C	A	B	B	A	A	A
Approach Vol, veh/h		205			95			1699			1252	
Approach Delay, s/veh		39.3			34.2			11.0			8.5	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	61.2		18.0	7.8	58.3		18.0
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Q Clear Time (g_c+I1), s	2.5	23.7		13.1	4.4	11.7		7.2
Green Ext Time (p_c), s	0.0	31.6		0.0	0.1	30.2		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		12.5
HCM 2010 LOS		B

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	985	20	5	980
Future Vol, veh/h	5	15	985	20	5	980
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	7	2	2	25	2
Mvmt Flow	5	16	1037	21	5	1032

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1574	529	0	0	1058	0
Stage 1	1048	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	6.84	7.04	-	-	4.6	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.37	-	-	2.45	-
Pot Cap-1 Maneuver	101	481	-	-	533	-
Stage 1	299	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	100	481	-	-	533	-
Mov Cap-2 Maneuver	100	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	100	481	533	-
HCM Lane V/C Ratio	-	-	0.053	0.033	0.01	-
HCM Control Delay (s)	-	-	43	12.7	11.8	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	145	25	295	50	815	135	135	820	55
Future Volume (veh/h)	90	10	20	145	25	295	50	815	135	135	820	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	153	26	311	53	858	142	142	863	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	326	63	120	397	280	330	350	1419	235	360	1696	114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.11	0.11	0.10	0.14	0.14	0.03	0.47	0.47	0.07	0.50	0.50
Ln Grp Delay, s/veh	26.7	0.0	30.3	24.9	27.4	63.7	10.5	17.7	17.7	11.2	14.1	14.1
Ln Grp LOS	C		C	C	C	E	B	B	B	B	B	B
Approach Vol, veh/h		127			490			1053			1063	
Approach Delay, s/veh		27.7			49.7			17.3			13.7	
Approach LOS		C			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	8.3	40.0	10.5	14.0	5.6	42.7	8.1	16.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Allow Headway (MAH), s	3.8	9.2	3.9	7.6	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	4.9	17.3	7.4	3.3	3.1	14.4	5.4	12.4
Green Ext Time (g_e), s	0.2	16.7	0.0	0.1	0.0	20.5	0.0	0.0
Prob of Phs Call (p_c)	0.94	1.00	0.95	1.00	0.66	1.00	0.85	1.00
Prob of Max Out (p_x)	0.01	0.72	1.00	1.00	1.00	0.48	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3040		574		3366		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		503		1096		226		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	142	0	153	0	53	0	95	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	2.9	0.0	5.4	0.0	1.1	0.0	3.4	0.0
Cycle Q Clear Time (g_c), s	2.9	0.0	5.4	0.0	1.1	0.0	3.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	561	0	1372	0	604	0	1039	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	35.2	0.0	8.9	0.0	34.0	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	18.7	0.0	6.7	0.0	24.2	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	5.6	0.0	0.3	0.0	0.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	360	0	397	0	350	0	326	0
V/C Ratio (X)	0.39	0.00	0.39	0.00	0.15	0.00	0.29	0.00
Avail Cap (c_a), veh/h	572	0	409	0	410	0	396	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	10.5	0.0	24.3	0.0	10.3	0.0	26.3	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.0	0.2	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.2	0.0	24.9	0.0	10.5	0.0	26.7	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	2.6	0.0	0.5	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.5	0.0	4.9	0.0	1.0	0.0	3.0	0.0
%ile Storage Ratio (RQ%)	0.35	0.00	0.80	0.00	0.50	0.00	0.64	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	499	0	0	0	454	0	26
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	15.3	0.0	0.0	0.0	12.4	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	0.0	0.0	12.4	0.0	0.8
Lane Grp Cap (c), veh/h	0	826	0	0	0	892	0	280
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.51	0.00	0.09
Avail Cap (c_a), veh/h	0	997	0	0	0	1216	0	280
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	0.0	0.0	12.0	0.0	27.1
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.0	0.0	2.1	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	0.0	0.0	14.1	0.0	27.4
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	0.0	0.0	6.0	0.0	0.5

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.58	0.00	1.00	0.00	1.64	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	12.8	0.0	0.0	0.0	10.8	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	1.44	0.00	0.00	0.00	0.53	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	501	0	32	0	467	0	311
Grp Sat Flow (s), veh/h/ln	0	1774	0	1669	0	1823	0	1583
Q Serve Time (g_s), s	0.0	15.3	0.0	1.3	0.0	12.4	0.0	10.4
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	1.3	0.0	12.4	0.0	10.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Prop RT Outside Lane (P_R)	0.00	0.28	0.00	0.66	0.00	0.12	0.00	1.00
Lane Grp Cap (c), veh/h	0	828	0	183	0	919	0	330
V/C Ratio (X)	0.00	0.60	0.00	0.17	0.00	0.51	0.00	0.94
Avail Cap (c_a), veh/h	0	999	0	206	0	1252	0	330
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	29.4	0.0	12.0	0.0	28.4
Incr Delay (d2), s/veh	0.0	3.3	0.0	1.0	0.0	2.0	0.0	35.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	30.3	0.0	14.1	0.0	63.7
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	0.6	0.0	6.2	0.0	6.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.5	0.0	3.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.58	0.00	1.80	0.00	1.63	0.00	1.54
%ile Back of Q (95%), veh/ln	0.0	12.8	0.0	1.1	0.0	11.0	0.0	14.3
%ile Storage Ratio (RQ%)	0.00	1.44	0.00	0.11	0.00	0.54	0.00	2.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	145	25	295	50	815	135	135	820	55
Future Volume (veh/h)	90	10	20	145	25	295	50	815	135	135	820	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	153	26	311	53	858	142	142	863	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	63	120	397	280	330	350	1419	235	360	1696	114
Arrive On Green	0.06	0.11	0.11	0.10	0.14	0.14	0.03	0.47	0.47	0.07	0.50	0.50
Sat Flow, veh/h	1774	574	1096	1774	1961	1583	1774	3040	503	1774	3366	226
Grp Volume(v), veh/h	95	0	32	153	26	311	53	499	501	142	454	467
Grp Sat Flow(s),veh/h/ln	1774	0	1669	1774	1961	1583	1774	1770	1774	1774	1770	1823
Q Serve(g_s), s	3.4	0.0	1.3	5.4	0.8	10.4	1.1	15.3	15.3	2.9	12.4	12.4
Cycle Q Clear(g_c), s	3.4	0.0	1.3	5.4	0.8	10.4	1.1	15.3	15.3	2.9	12.4	12.4
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.28	1.00		0.12
Lane Grp Cap(c), veh/h	326	0	183	397	280	330	350	826	828	360	892	919
V/C Ratio(X)	0.29	0.00	0.17	0.39	0.09	0.94	0.15	0.60	0.60	0.39	0.51	0.51
Avail Cap(c_a), veh/h	396	0	206	409	280	330	410	997	999	572	1216	1252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	29.4	24.3	27.1	28.4	10.3	14.4	14.4	10.5	12.0	12.0
Incr Delay (d2), s/veh	0.5	0.0	1.0	0.6	0.3	35.3	0.2	3.3	3.3	0.7	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.0	1.1	4.9	0.9	14.3	1.0	12.8	12.8	2.5	10.8	11.0
LnGrp Delay(d),s/veh	26.7	0.0	30.3	24.9	27.4	63.7	10.5	17.7	17.7	11.2	14.1	14.1
LnGrp LOS	C		C	C	C	E	B	B	B	B	B	B
Approach Vol, veh/h		127			490			1053			1063	
Approach Delay, s/veh		27.7			49.7			17.3			13.7	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	40.0	10.5	14.0	5.6	42.7	8.1	16.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Q Clear Time (g_c+I1), s	4.9	17.3	7.4	3.3	3.1	14.4	5.4	12.4
Green Ext Time (p_c), s	0.2	16.7	0.0	0.1	0.0	20.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	15	305	940	110	150	820	40	245	810	145	105	750
Future Volume (vph)	15	305	940	110	150	820	40	245	810	145	105	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.984			0.993				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	5004	0	1829	5050	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	5004	0	1829	5050	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	321	989	116	158	863	42	258	853	153	111	789
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	1105	0	158	905	0	258	853	153	111	789
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA
Protected Phases	7!	7	4		3	8		5	2	3	1	6

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	320
Future Volume (vph)	320
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	337
Shared Lane Traffic (%)	
Lane Group Flow (vph)	337
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov
Protected Phases	7!

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	34.0	34.0	44.0		22.0	32.0		19.0	38.0	22.0	16.0	35.0
Total Split (%)	28.3%	28.3%	36.7%		18.3%	26.7%		15.8%	31.7%	18.3%	13.3%	29.2%
Maximum Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		26.8	38.9		15.3	27.5		15.3	32.7	54.6	11.0	28.5
Actuated g/C Ratio		0.22	0.32		0.13	0.23		0.13	0.27	0.46	0.09	0.24
v/c Ratio		0.83	0.68		0.68	0.78		1.15	0.84	0.21	0.69	0.89
Control Delay		61.6	37.9		64.6	49.4		153.4	50.2	20.6	74.3	57.9
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		61.6	37.9		64.6	49.4		153.4	50.2	20.6	74.3	57.9
LOS		E	D		E	D		F	D	C	E	E
Approach Delay			43.5			51.7			67.7			48.9
Approach LOS			D			D			E			D
90th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	29.0	29.0	38.5		16.5	26.0		14.5	31.5	16.5	11.5	28.5
50th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	25.7	25.7	40.8		14.2	29.3		14.5	31.5	14.2	11.5	28.5
30th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Max	Coord
10th %ile Green (s)	20.1	20.1	40.3		10.9	31.1		18.3	37.7	10.9	9.1	28.5
10th %ile Term Code	Gap	Gap	Hold		Gap	Gap		Max	Coord	Gap	Gap	Coord
Queue Length 50th (ft)		244	272		117	246		~244	333	70	84	312
Queue Length 95th (ft)		#355	329		189	301		#413	#436	114	#161	#420
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		449	1622		266	1156		224	1016	748	169	884
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		0.75	0.68		0.59	0.78		1.15	0.84	0.20	0.66	0.89

Intersection Summary

Lane Group	SBR
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	34.0
Total Split (%)	28.3%
Maximum Green (s)	29.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.8
Actuated g/C Ratio	0.52
v/c Ratio	0.41
Control Delay	19.3
Queue Delay	0.0
Total Delay	19.3
LOS	B
Approach Delay	
Approach LOS	
90th %ile Green (s)	29.5
90th %ile Term Code	Max
70th %ile Green (s)	29.5
70th %ile Term Code	Max
50th %ile Green (s)	29.0
50th %ile Term Code	Gap
30th %ile Green (s)	25.7
30th %ile Term Code	Gap
10th %ile Green (s)	20.1
10th %ile Term Code	Gap
Queue Length 50th (ft)	149
Queue Length 95th (ft)	217
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	850
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.40

Intersection Summary

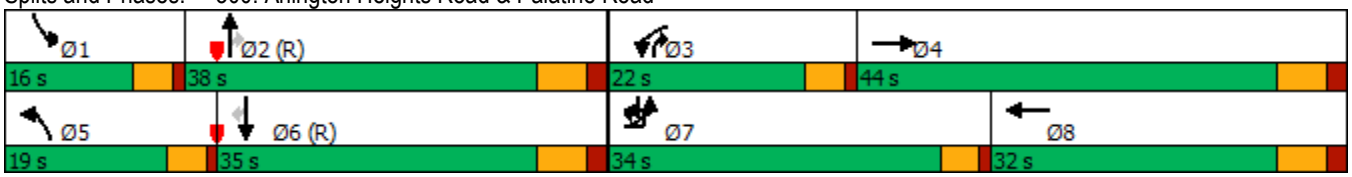
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 21.6 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 52.7	Intersection LOS: D
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1000	190	0	1010	0	185
Future Vol, veh/h	1000	190	0	1010	0	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1053	200	0	1063	0	195

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	627
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	365
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	365
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	25.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	365	-	-	-
HCM Lane V/C Ratio	0.534	-	-	-
HCM Control Delay (s)	25.6	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	3	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	65	0	1155	1115	230
Future Vol, veh/h	0	65	0	1155	1115	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	68	0	1216	1174	242

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	708	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	324	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	324	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	324	-	-
HCM Lane V/C Ratio	-	0.211	-	-
HCM Control Delay (s)	-	19.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	5	90	30	5	45	150	995	35	35	1120	25
Future Volume (veh/h)	115	5	90	30	5	45	150	995	35	35	1120	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	121	5	95	32	5	47	158	1047	37	37	1179	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	284	13	241	240	25	231	412	2049	72	360	2788	61
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.07	0.59	0.59	0.02	0.54	0.54
Ln Grp Delay, s/veh	30.0	0.0	27.4	28.2	0.0	25.3	6.9	10.0	9.9	7.2	9.7	10.3
Ln Grp LOS	C		C	C		C	A	A	A	A	A	B
Approach Vol, veh/h		221			84			1242			1242	
Approach Delay, s/veh		28.8			26.4			9.5			9.9	
Approach LOS		C			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	5.0	45.4		16.7	7.9	42.5		16.7
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Allow Headway (MAH), s	3.8	9.1		6.7	3.8	9.1		7.1
Max Q Clear (g_c+I1), s	2.6	13.9		9.6	4.4	11.1		7.3
Green Ext Time (g_e), s	0.0	25.4		1.1	0.2	25.4		0.4
Prob of Phs Call (p_c)	0.50	1.00		1.00	0.95	1.00		1.00
Prob of Max Out (p_x)	1.00	0.59		0.59	0.13	0.67		0.15

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1347	1774			1290

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3487		80		5120		154

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		123		1516		113		1452

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	37	0	0	121	158	0	0	32
Grp Sat Flow (s), veh/h/ln	1774	0	0	1347	1774	0	0	1290
Q Serve Time (g_s), s	0.6	0.0	0.0	5.8	2.4	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.6	0.0	0.0	7.6	2.4	0.0	0.0	5.3
Perm LT Sat Flow (s_l), veh/h/ln	518	0	0	1347	462	0	0	1290
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.5	0.0	0.0	10.7	37.9	0.0	0.0	10.7
Perm LT Serve Time (g_u), s	27.5	0.0	0.0	8.8	27.4	0.0	0.0	6.9
Perm LT Q Serve Time (g_ps), s	0.7	0.0	0.0	5.8	5.5	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	360	0	0	284	412	0	0	240
V/C Ratio (X)	0.10	0.00	0.00	0.43	0.38	0.00	0.00	0.13
Avail Cap (c_a), veh/h	439	0	0	431	574	0	0	381
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	7.1	0.0	0.0	27.8	6.3	0.0	0.0	27.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.2	0.6	0.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.2	0.0	0.0	30.0	6.9	0.0	0.0	28.2
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	2.1	1.1	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.6	0.0	0.0	4.1	2.2	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.09	0.00	0.00	0.70	0.24	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	531	0	0	0	781	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	1040	0	0	0	1846	0	0
V/C Ratio (X)	0.00	0.51	0.00	0.00	0.00	0.42	0.00	0.00
Avail Cap (c_a), veh/h	0	1372	0	0	0	2325	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	0.0	0.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	0.0	0.0	9.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	0.0	0.0	4.2	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.65	0.00	1.00	0.00	1.78	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	10.4	0.0	0.0	0.0	7.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.43	0.00	0.00	0.00	0.55	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	553	0	100	0	424	0	52
Grp Sat Flow (s), veh/h/ln	0	1841	0	1595	0	1843	0	1607
Q Serve Time (g_s), s	0.0	11.9	0.0	3.8	0.0	9.1	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	3.8	0.0	9.1	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	0.95	0.00	0.06	0.00	0.90
Lane Grp Cap (c), veh/h	0	1082	0	254	0	1004	0	256
V/C Ratio (X)	0.00	0.51	0.00	0.39	0.00	0.42	0.00	0.20
Avail Cap (c_a), veh/h	0	1427	0	428	0	1264	0	431
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	25.3	0.0	9.0	0.0	24.5
Incr Delay (d2), s/veh	0.0	1.7	0.0	2.1	0.0	1.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.9	0.0	27.4	0.0	10.3	0.0	25.3
1st-Term Q (Q1), veh/ln	0.0	6.0	0.0	1.7	0.0	4.6	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.1	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.80	0.00	1.74	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.7	0.0	3.3	0.0	8.6	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.44	0.00	0.43	0.00	0.60	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	5	90	30	5	45	150	995	35	35	1120	25
Future Volume (veh/h)	115	5	90	30	5	45	150	995	35	35	1120	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	121	5	95	32	5	47	158	1047	37	37	1179	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	13	241	240	25	231	412	2049	72	360	2788	61
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.07	0.59	0.59	0.02	0.54	0.54
Sat Flow, veh/h	1347	80	1516	1290	154	1452	1774	3487	123	1774	5120	113
Grp Volume(v), veh/h	121	0	100	32	0	52	158	531	553	37	781	424
Grp Sat Flow(s),veh/h/ln	1347	0	1595	1290	0	1607	1774	1770	1841	1774	1695	1843
Q Serve(g_s), s	5.8	0.0	3.8	1.5	0.0	1.9	2.4	11.9	11.9	0.6	9.1	9.1
Cycle Q Clear(g_c), s	7.6	0.0	3.8	5.3	0.0	1.9	2.4	11.9	11.9	0.6	9.1	9.1
Prop In Lane	1.00		0.95	1.00		0.90	1.00		0.07	1.00		0.06
Lane Grp Cap(c), veh/h	284	0	254	240	0	256	412	1040	1082	360	1846	1004
V/C Ratio(X)	0.43	0.00	0.39	0.13	0.00	0.20	0.38	0.51	0.51	0.10	0.42	0.42
Avail Cap(c_a), veh/h	431	0	428	381	0	431	574	1372	1427	439	2325	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	25.3	27.7	0.0	24.5	6.3	8.2	8.2	7.1	9.0	9.0
Incr Delay (d2), s/veh	2.2	0.0	2.1	0.5	0.0	0.8	0.6	1.8	1.7	0.1	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	0.0	3.3	1.0	0.0	1.6	2.2	10.4	10.7	0.6	7.9	8.6
LnGrp Delay(d),s/veh	30.0	0.0	27.4	28.2	0.0	25.3	6.9	10.0	9.9	7.2	9.7	10.3
LnGrp LOS	C		C	C		C	A	A	A	A	A	B
Approach Vol, veh/h		221			84			1242			1242	
Approach Delay, s/veh		28.8			26.4			9.5			9.9	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	45.4		16.7	7.9	42.5		16.7
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Q Clear Time (g_c+I1), s	2.6	13.9		9.6	4.4	11.1		7.3
Green Ext Time (p_c), s	0.0	25.4		1.1	0.2	25.4		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

FUTURE BUILD CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	910	10	5	1180
Future Vol, veh/h	5	5	910	10	5	1180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	25	4	10	40	3
Mvmt Flow	5	5	958	11	5	1242

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1595	485	0	0	969	0
Stage 1	964	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.84	7.4	-	-	4.9	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.55	-	-	2.6	-
Pot Cap-1 Maneuver	98	471	-	-	515	-
Stage 1	331	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	471	-	-	515	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	328	-	-	-	-	-
Stage 2	492	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.5	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	97	471	515	-
HCM Lane V/C Ratio	-	-	0.054	0.011	0.01	-
HCM Control Delay (s)	-	-	44.2	12.7	12.1	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	65	10	105	50	790	75	50	1070	30
Future Volume (veh/h)	85	5	50	65	10	105	50	790	75	50	1070	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1810	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	68	11	111	53	832	79	53	1126	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	328	17	177	296	209	207	308	1748	166	383	1934	55
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.12	0.12	0.05	0.11	0.11	0.03	0.55	0.55	0.03	0.55	0.55
Ln Grp Delay, s/veh	27.6	0.0	31.6	28.2	30.1	35.0	9.0	11.9	11.9	8.1	13.6	13.5
Ln Grp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			190			964			1211	
Approach Delay, s/veh		29.2			32.3			11.7			13.3	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	5.5	47.0	6.9	15.1	5.5	47.0	8.0	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Allow Headway (MAH), s	3.8	9.2	3.9	7.7	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	3.0	13.9	4.5	4.5	3.0	17.8	5.3	7.0
Green Ext Time (g_e), s	0.0	20.8	0.0	0.2	0.0	23.2	0.0	0.1
Prob of Phs Call (p_c)	0.67	1.00	0.76	1.00	0.67	1.00	0.84	0.99
Prob of Max Out (p_x)	1.00	0.45	1.00	1.00	1.00	0.72	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1740	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3175		137		3513		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		301		1455		100		1553

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	53	0	68	0	53	0	89	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1740	0
Q Serve Time (g_s), s	1.0	0.0	2.5	0.0	1.0	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	1.0	0.0	2.5	0.0	1.0	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	610	0	1340	0	483	0	1240	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	41.0	0.0	8.0	0.0	41.0	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	29.1	0.0	6.6	0.0	25.2	0.0	7.6	0.0
Perm LT Q Serve Time (g_ps), s	1.1	0.0	0.1	0.0	1.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	383	0	296	0	308	0	328	0
V/C Ratio (X)	0.14	0.00	0.23	0.00	0.17	0.00	0.27	0.00
Avail Cap (c_a), veh/h	442	0	299	0	415	0	398	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	7.9	0.0	27.8	0.0	8.7	0.0	27.2	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.3	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.1	0.0	28.2	0.0	9.0	0.0	27.6	0.0
1st-Term Q (Q1), veh/ln	0.5	0.0	1.2	0.0	0.5	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	0.9	0.0	2.2	0.0	0.9	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.12	0.00	0.37	0.00	0.44	0.00	0.63	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	451	0	0	0	567	0	11
Grp Sat Flow (s), veh/h/ln	0	1720	0	0	0	1769	0	1961
Q Serve Time (g_s), s	0.0	11.9	0.0	0.0	0.0	15.8	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	0.0	0.0	15.8	0.0	0.4
Lane Grp Cap (c), veh/h	0	947	0	0	0	974	0	209
V/C Ratio (X)	0.00	0.48	0.00	0.00	0.00	0.58	0.00	0.05
Avail Cap (c_a), veh/h	0	1177	0	0	0	1163	0	211
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.2	0.0	0.0	0.0	11.1	0.0	29.9
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	2.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.9	0.0	0.0	0.0	13.6	0.0	30.1
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	0.0	0.0	7.6	0.0	0.2

2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.66	0.00	1.00	0.00	1.57	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.1	0.0	0.0	0.0	13.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	1.16	0.00	0.00	0.00	0.64	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	460	0	58	0	591	0	111
Grp Sat Flow (s), veh/h/ln	0	1757	0	1592	0	1844	0	1553
Q Serve Time (g_s), s	0.0	11.9	0.0	2.5	0.0	15.8	0.0	5.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	2.5	0.0	15.8	0.0	5.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1552.9
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	0.91	0.00	0.05	0.00	1.00
Lane Grp Cap (c), veh/h	0	967	0	194	0	1015	0	207
V/C Ratio (X)	0.00	0.48	0.00	0.30	0.00	0.58	0.00	0.54
Avail Cap (c_a), veh/h	0	1203	0	256	0	1213	0	208
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.2	0.0	29.8	0.0	11.1	0.0	30.1
Incr Delay (d2), s/veh	0.0	1.7	0.0	1.8	0.0	2.4	0.0	4.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.9	0.0	31.6	0.0	13.5	0.0	35.0
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	1.1	0.0	7.9	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.1	0.0	0.7	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.66	0.00	1.80	0.00	1.56	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.3	0.0	2.1	0.0	13.4	0.0	4.3
%ile Storage Ratio (RQ%)	0.00	1.18	0.00	0.22	0.00	0.66	0.00	0.72
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	5	50	65	10	105	50	790	75	50	1070	30
Future Volume (veh/h)	85	5	50	65	10	105	50	790	75	50	1070	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1849	1900	1863	1961	1827	1863	1810	1900	1863	1862	1900
Adj Flow Rate, veh/h	89	5	53	68	11	111	53	832	79	53	1126	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	11	11	2	2	4	2	4	4	2	2	2
Cap, veh/h	328	17	177	296	209	207	308	1748	166	383	1934	55
Arrive On Green	0.06	0.12	0.12	0.05	0.11	0.11	0.03	0.55	0.55	0.03	0.55	0.55
Sat Flow, veh/h	1740	137	1455	1774	1961	1553	1774	3175	301	1774	3513	100
Grp Volume(v), veh/h	89	0	58	68	11	111	53	451	460	53	567	591
Grp Sat Flow(s),veh/h/ln	1740	0	1592	1774	1961	1553	1774	1720	1757	1774	1769	1844
Q Serve(g_s), s	3.3	0.0	2.5	2.5	0.4	5.0	1.0	11.9	11.9	1.0	15.8	15.8
Cycle Q Clear(g_c), s	3.3	0.0	2.5	2.5	0.4	5.0	1.0	11.9	11.9	1.0	15.8	15.8
Prop In Lane	1.00		0.91	1.00		1.00	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	328	0	194	296	209	207	308	947	967	383	974	1015
V/C Ratio(X)	0.27	0.00	0.30	0.23	0.05	0.54	0.17	0.48	0.48	0.14	0.58	0.58
Avail Cap(c_a), veh/h	398	0	256	299	211	208	415	1177	1203	442	1163	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	29.8	27.8	29.9	30.1	8.7	10.2	10.2	7.9	11.1	11.1
Incr Delay (d2), s/veh	0.4	0.0	1.8	0.4	0.2	4.9	0.3	1.7	1.7	0.2	2.5	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	2.1	2.2	0.4	4.3	0.9	10.1	10.3	0.9	13.0	13.4
LnGrp Delay(d),s/veh	27.6	0.0	31.6	28.2	30.1	35.0	9.0	11.9	11.9	8.1	13.6	13.5
LnGrp LOS	C		C	C	C	C	A	B	B	A	B	B
Approach Vol, veh/h		147			190			964			1211	
Approach Delay, s/veh		29.2			32.3			11.7			13.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	47.0	6.9	15.1	5.5	47.0	8.0	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	4.5	51.0	3.5	12.0	6.5	49.0	7.5	8.0
Max Q Clear Time (g_c+I1), s	3.0	13.9	4.5	4.5	3.0	17.8	5.3	7.0
Green Ext Time (p_c), s	0.0	20.8	0.0	0.2	0.0	23.2	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	250	1955	150	180	865	10	180	655	145	50	820
Future Volume (vph)	10	250	1955	150	180	865	10	180	655	145	50	820
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.989			0.998				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	5029	0	1811	4932	0	1752	3585	1583	1752	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	5029	0	1811	4932	0	1752	3585	1583	1752	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	3%	5%	2%	3%	6%	2%	3%	2%
Adj. Flow (vph)	11	263	2058	158	189	911	11	189	689	153	53	863
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	2216	0	189	922	0	189	689	153	53	863
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	250
Future Volume (vph)	250
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1568
Flt Permitted	
Satd. Flow (perm)	1568
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	3%
Adj. Flow (vph)	263
Shared Lane Traffic (%)	
Lane Group Flow (vph)	263
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	24.0	24.0	60.0		24.0	60.0		17.0	39.0	24.0	17.0	39.0
Total Split (%)	17.1%	17.1%	42.9%		17.1%	42.9%		12.1%	27.9%	17.1%	12.1%	27.9%
Maximum Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.5	19.5	12.5	32.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		19.5	54.7		18.3	53.5		12.5	37.1	61.8	10.2	32.5
Actuated g/C Ratio		0.14	0.39		0.13	0.38		0.09	0.26	0.44	0.07	0.23
v/c Ratio		1.08	1.13		0.80	0.49		1.21	0.73	0.22	0.42	1.00
Control Delay		134.3	104.1		83.1	34.0		191.7	53.1	26.2	71.3	83.7
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		134.3	104.1		83.1	34.0		191.7	53.1	26.2	71.3	83.7
LOS		F	F		F	C		F	D	C	E	F
Approach Delay			107.4			42.3			74.5			71.3
Approach LOS			F			D			E			E
90th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	32.5	19.5	12.5	32.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	33.0	19.5	12.0	32.5
70th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
50th %ile Green (s)	19.5	19.5	53.5		19.5	53.5		12.5	34.4	19.5	10.6	32.5
50th %ile Term Code	Max	Max	Max		Max	Hold		Max	Coord	Max	Gap	Coord
30th %ile Green (s)	19.5	19.5	54.6		18.4	53.5		12.5	35.9	18.4	9.1	32.5
30th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Gap	Coord
10th %ile Green (s)	19.5	19.5	58.5		14.5	53.5		12.5	49.5	14.5	0.0	32.5
10th %ile Term Code	Max	Max	Max		Gap	Hold		Max	Coord	Gap	Skip	Coord
Queue Length 50th (ft)		~277	~868		168	232		~209	310	87	47	416
Queue Length 95th (ft)		#460	#960		#279	276		#370	392	141	92	#561
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		254	1965		252	1884		156	949	712	156	864
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.08	1.13		0.75	0.49		1.21	0.73	0.21	0.34	1.00

Intersection Summary

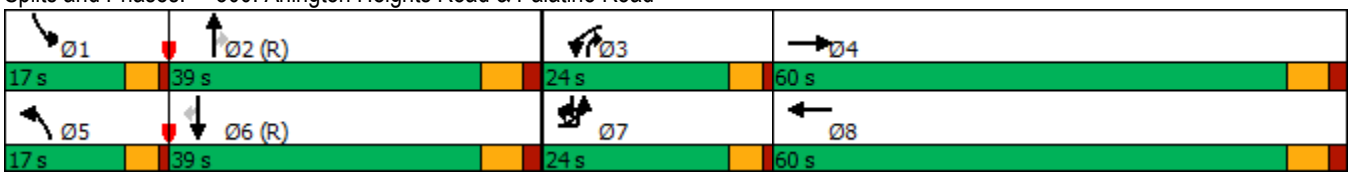
Area Type:	Other	
Cycle Length: 140		
Actuated Cycle Length: 140		
Offset: 57.4 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.21		
Intersection Signal Delay: 81.8	Intersection LOS: F	
Intersection Capacity Utilization 100.9%	ICU Level of Service G	
Analysis Period (min) 15		

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	24.0
Total Split (%)	17.1%
Maximum Green (s)	19.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	58.5
Actuated g/C Ratio	0.42
v/c Ratio	0.40
Control Delay	30.8
Queue Delay	0.0
Total Delay	30.8
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	19.5
90th %ile Term Code	Max
70th %ile Green (s)	19.5
70th %ile Term Code	Max
50th %ile Green (s)	19.5
50th %ile Term Code	Max
30th %ile Green (s)	19.5
30th %ile Term Code	Max
10th %ile Green (s)	19.5
10th %ile Term Code	Max
Queue Length 50th (ft)	166
Queue Length 95th (ft)	243
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	655
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.40

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2040	110	0	1055	0	100
Future Vol, veh/h	2040	110	0	1055	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	4	2	4	2	2
Mvmt Flow	2147	116	0	1111	0	105

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1132
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	169
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	169
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	56.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	169	-	-	-
HCM Lane V/C Ratio	0.623	-	-	-
HCM Control Delay (s)	56.2	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	3.5	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	0	750	1545	95
Future Vol, veh/h	0	20	0	750	1545	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	6	2	3	2	2
Mvmt Flow	0	21	0	789	1626	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	863	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.96	-	-	-	-
Pot Cap-1 Maneuver	0	249	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	249	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	249	-	-
HCM Lane V/C Ratio	-	0.085	-	-
HCM Control Delay (s)	-	20.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1	15	15	10	5	55	720	5	10	1545	10
Future Volume (veh/h)	25	1	15	15	10	5	55	720	5	10	1545	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	26	1	16	16	11	5	58	758	5	11	1626	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	8	127	194	102	47	309	2498	16	520	3548	24
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.70	0.70	0.01	0.68	0.68
Ln Grp Delay, s/veh	33.3	0.0	32.7	32.9	0.0	32.4	4.5	4.9	4.9	3.8	6.2	6.7
Ln Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		43			32			821			1648	
Approach Delay, s/veh		33.0			32.7			4.9			6.4	
Approach LOS		C			C			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.1	58.6		12.3	5.6	57.1		12.3
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Allow Headway (MAH), s	3.8	9.1		6.6	3.8	9.1		6.8
Max Q Clear (g_c+I1), s	2.2	8.1		3.9	2.7	12.9		3.6
Green Ext Time (g_e), s	0.0	19.4		0.1	0.0	38.2		0.1
Prob of Phs Call (p_c)	0.20	1.00		0.79	0.70	1.00		0.79
Prob of Max Out (p_x)	1.00	0.18		0.70	1.00	0.83		0.60

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1675			1392	1774			1313

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3564		94		5209		1214

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		24		1503		35		552

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	11	0	0	26	58	0	0	16
Grp Sat Flow (s), veh/h/ln	1675	0	0	1392	1774	0	0	1313
Q Serve Time (g_s), s	0.2	0.0	0.0	1.3	0.7	0.0	0.0	0.9
Cycle Q Clear Time (g_c), s	0.2	0.0	0.0	1.9	0.7	0.0	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	662	0	0	1392	305	0	0	1313
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	51.1	0.0	0.0	6.3	51.1	0.0	0.0	6.3
Perm LT Serve Time (g_u), s	46.5	0.0	0.0	5.7	40.2	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.1	0.0	0.0	1.3	2.5	0.0	0.0	0.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	520	0	0	202	309	0	0	194
V/C Ratio (X)	0.02	0.00	0.00	0.13	0.19	0.00	0.00	0.08
Avail Cap (c_a), veh/h	629	0	0	288	413	0	0	276
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	3.8	0.0	0.0	32.6	4.3	0.0	0.0	32.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	3.8	0.0	0.0	33.3	4.5	0.0	0.0	32.9
1st-Term Q (Q1), veh/ln	0.1	0.0	0.0	0.5	0.3	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.1	0.0	0.0	1.0	0.7	0.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.02	0.00	0.00	0.16	0.07	0.00	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	372	0	0	0	1058	0	0
Grp Sat Flow (s), veh/h/ln	0	1750	0	0	0	1694	0	0
Q Serve Time (g_s), s	0.0	6.1	0.0	0.0	0.0	10.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.1	0.0	0.0	0.0	10.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1227	0	0	0	2308	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	1353	0	0	0	2575	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.3	0.0	0.0	0.0	5.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.9	0.0	0.0	0.0	6.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	0.0	0.0	5.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.72	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	5.6	0.0	0.0	0.0	8.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.62	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	391	0	17	0	579	0	16
Grp Sat Flow (s), veh/h/ln	0	1838	0	1597	0	1856	0	1765
Q Serve Time (g_s), s	0.0	6.1	0.0	0.7	0.0	10.9	0.0	0.6
Cycle Q Clear Time (g_c), s	0.0	6.1	0.0	0.7	0.0	10.9	0.0	0.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.94	0.00	0.02	0.00	0.31
Lane Grp Cap (c), veh/h	0	1288	0	135	0	1264	0	149
V/C Ratio (X)	0.00	0.30	0.00	0.13	0.00	0.46	0.00	0.11
Avail Cap (c_a), veh/h	0	1421	0	234	0	1410	0	259
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.3	0.0	31.8	0.0	5.5	0.0	31.7
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.9	0.0	1.2	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.9	0.0	32.7	0.0	6.7	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	3.0	0.0	0.3	0.0	5.5	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.68	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.9	0.0	0.6	0.0	9.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	0.08	0.00	0.69	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1	15	15	10	5	55	720	5	10	1545	10
Future Volume (veh/h)	25	1	15	15	10	5	55	720	5	10	1545	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1759	1863	1900	1863	1842	1900	1759	1862	1900
Adj Flow Rate, veh/h	26	1	16	16	11	5	58	758	5	11	1626	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	8	2	2	2	3	3	8	2	2
Cap, veh/h	202	8	127	194	102	47	309	2498	16	520	3548	24
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.70	0.70	0.01	0.68	0.68
Sat Flow, veh/h	1392	94	1503	1313	1214	552	1774	3564	24	1675	5209	35
Grp Volume(v), veh/h	26	0	17	16	0	16	58	372	391	11	1058	579
Grp Sat Flow(s),veh/h/ln	1392	0	1597	1313	0	1765	1774	1750	1838	1675	1694	1856
Q Serve(g_s), s	1.3	0.0	0.7	0.9	0.0	0.6	0.7	6.1	6.1	0.2	10.9	10.9
Cycle Q Clear(g_c), s	1.9	0.0	0.7	1.6	0.0	0.6	0.7	6.1	6.1	0.2	10.9	10.9
Prop In Lane	1.00		0.94	1.00		0.31	1.00		0.01	1.00		0.02
Lane Grp Cap(c), veh/h	202	0	135	194	0	149	309	1227	1288	520	2308	1264
V/C Ratio(X)	0.13	0.00	0.13	0.08	0.00	0.11	0.19	0.30	0.30	0.02	0.46	0.46
Avail Cap(c_a), veh/h	288	0	234	276	0	259	413	1353	1421	629	2575	1410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	31.8	32.5	0.0	31.7	4.3	4.3	4.3	3.8	5.5	5.5
Incr Delay (d2), s/veh	0.6	0.0	0.9	0.4	0.0	0.7	0.3	0.6	0.6	0.0	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.6	0.6	0.0	0.6	0.7	5.6	5.9	0.1	8.9	9.9
LnGrp Delay(d),s/veh	33.3	0.0	32.7	32.9	0.0	32.4	4.5	4.9	4.9	3.8	6.2	6.7
LnGrp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		43			32			821			1648	
Approach Delay, s/veh		33.0			32.7			4.9			6.4	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	58.6		12.3	5.6	57.1		12.3
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	5.5	58.0		11.0	6.5	57.0		11.0
Max Q Clear Time (g_c+I1), s	2.2	8.1		3.9	2.7	12.9		3.6
Green Ext Time (p_c), s	0.0	19.4		0.1	0.0	38.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	1205	20	2	1055
Future Vol, veh/h	5	5	1205	20	2	1055
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	2	2
Mvmt Flow	5	5	1268	21	2	1111

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1839	645	0	0	1289	0
Stage 1	1279	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	67	415	-	-	534	-
Stage 1	225	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	67	415	-	-	534	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	224	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.6	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	67	415	534	-
HCM Lane V/C Ratio	-	-	0.079	0.013	0.004	-
HCM Control Delay (s)	-	-	63.3	13.8	11.8	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	125	30	245	25	1040	145	130	920	55
Future Volume (veh/h)	75	20	10	125	30	245	25	1040	145	130	920	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	132	32	258	26	1095	153	137	968	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	290	113	59	342	244	286	337	1663	232	312	1942	116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.10	0.10	0.08	0.12	0.12	0.02	0.53	0.53	0.06	0.57	0.57
Ln Grp Delay, s/veh	31.2	0.0	34.8	29.9	32.2	63.6	9.2	17.3	17.3	12.1	12.2	12.1
Ln Grp LOS	C		C	C	C	E	A	B	B	B	B	B
Approach Vol, veh/h		111			422			1274			1163	
Approach Delay, s/veh		32.2			50.7			17.1			12.1	
Approach LOS		C			D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	8.1	49.4	10.0	14.0	4.8	52.6	7.9	16.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Allow Headway (MAH), s	3.8	9.2	3.9	7.5	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	4.7	22.6	7.3	3.4	2.5	15.9	5.2	12.1
Green Ext Time (g_e), s	0.1	20.8	0.0	0.0	0.0	23.6	0.0	0.0
Prob of Phs Call (p_c)	0.95	1.00	0.95	1.00	0.44	1.00	0.83	1.00
Prob of Max Out (p_x)	0.93	0.83	1.00	1.00	1.00	0.55	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3120		1153		3393		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		435		604		203		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	137	0	132	0	26	0	79	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	2.7	0.0	5.3	0.0	0.5	0.0	3.2	0.0
Cycle Q Clear Time (g_c), s	2.7	0.0	5.3	0.0	0.5	0.0	3.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	444	0	1372	0	547	0	1085	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	45.1	0.0	8.6	0.0	43.4	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	22.8	0.0	6.6	0.0	32.7	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	10.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	312	0	342	0	337	0	290	0
V/C Ratio (X)	0.44	0.00	0.39	0.00	0.08	0.00	0.27	0.00
Avail Cap (c_a), veh/h	398	0	342	0	384	0	337	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	11.2	0.0	29.2	0.0	9.1	0.0	30.7	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.7	0.0	0.1	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.1	0.0	29.9	0.0	9.2	0.0	31.2	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	2.6	0.0	0.3	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.4	0.0	4.8	0.0	0.5	0.0	2.9	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.79	0.00	0.25	0.00	0.61	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	620	0	0	0	505	0	32
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	20.5	0.0	0.0	0.0	13.9	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	20.5	0.0	0.0	0.0	13.9	0.0	1.2
Lane Grp Cap (c), veh/h	0	943	0	0	0	1013	0	244
V/C Ratio (X)	0.00	0.66	0.00	0.00	0.00	0.50	0.00	0.13
Avail Cap (c_a), veh/h	0	1043	0	0	0	1152	0	244
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.7	0.0	0.0	0.0	10.4	0.0	31.7
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.0	0.0	1.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.3	0.0	0.0	0.0	12.2	0.0	32.2
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	0.0	0.0	6.7	0.0	0.6

2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.00	0.00	1.61	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	16.4	0.0	0.0	0.0	11.6	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	1.85	0.00	0.00	0.00	0.58	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	628	0	32	0	521	0	258
Grp Sat Flow (s), veh/h/ln	0	1786	0	1756	0	1827	0	1583
Q Serve Time (g_s), s	0.0	20.6	0.0	1.4	0.0	13.9	0.0	10.1
Cycle Q Clear Time (g_c), s	0.0	20.6	0.0	1.4	0.0	13.9	0.0	10.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.34	0.00	0.11	0.00	1.00
Lane Grp Cap (c), veh/h	0	952	0	172	0	1046	0	286
V/C Ratio (X)	0.00	0.66	0.00	0.19	0.00	0.50	0.00	0.90
Avail Cap (c_a), veh/h	0	1053	0	173	0	1189	0	286
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.7	0.0	33.7	0.0	10.4	0.0	32.7
Incr Delay (d2), s/veh	0.0	3.6	0.0	1.1	0.0	1.7	0.0	30.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.3	0.0	34.8	0.0	12.1	0.0	63.6
1st-Term Q (Q1), veh/ln	0.0	10.1	0.0	0.7	0.0	6.9	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.1	0.0	0.5	0.0	2.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.49	0.00	1.80	0.00	1.60	0.00	1.58
%ile Back of Q (95%), veh/ln	0.0	16.5	0.0	1.3	0.0	11.9	0.0	12.8
%ile Storage Ratio (RQ%)	0.00	1.86	0.00	0.12	0.00	0.59	0.00	2.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

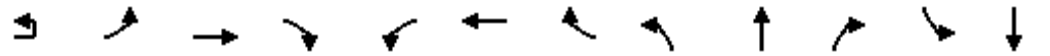
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	10	125	30	245	25	1040	145	130	920	55
Future Volume (veh/h)	75	20	10	125	30	245	25	1040	145	130	920	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	21	11	132	32	258	26	1095	153	137	968	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	113	59	342	244	286	337	1663	232	312	1942	116
Arrive On Green	0.05	0.10	0.10	0.08	0.12	0.12	0.02	0.53	0.53	0.06	0.57	0.57
Sat Flow, veh/h	1774	1153	604	1774	1961	1583	1774	3120	435	1774	3393	203
Grp Volume(v), veh/h	79	0	32	132	32	258	26	620	628	137	505	521
Grp Sat Flow(s),veh/h/ln	1774	0	1756	1774	1961	1583	1774	1770	1786	1774	1770	1827
Q Serve(g_s), s	3.2	0.0	1.4	5.3	1.2	10.1	0.5	20.5	20.6	2.7	13.9	13.9
Cycle Q Clear(g_c), s	3.2	0.0	1.4	5.3	1.2	10.1	0.5	20.5	20.6	2.7	13.9	13.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.24	1.00		0.11
Lane Grp Cap(c), veh/h	290	0	172	342	244	286	337	943	952	312	1013	1046
V/C Ratio(X)	0.27	0.00	0.19	0.39	0.13	0.90	0.08	0.66	0.66	0.44	0.50	0.50
Avail Cap(c_a), veh/h	337	0	173	342	244	286	384	1043	1053	398	1152	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	0.0	33.7	29.2	31.7	32.7	9.1	13.7	13.7	11.2	10.4	10.4
Incr Delay (d2), s/veh	0.5	0.0	1.1	0.7	0.5	30.9	0.1	3.6	3.6	1.0	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	1.3	4.8	1.2	12.8	0.5	16.4	16.5	2.4	11.6	11.9
LnGrp Delay(d),s/veh	31.2	0.0	34.8	29.9	32.2	63.6	9.2	17.3	17.3	12.1	12.2	12.1
LnGrp LOS	C		C	C	C	E	A	B	B	B	B	B
Approach Vol, veh/h		111			422			1274			1163	
Approach Delay, s/veh		32.2			50.7			17.1			12.1	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	49.4	10.0	14.0	4.8	52.6	7.9	16.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	8.5	48.0	6.5	8.0	3.5	53.0	6.5	8.0
Max Q Clear Time (g_c+I1), s	4.7	22.6	7.3	3.4	2.5	15.9	5.2	12.1
Green Ext Time (p_c), s	0.1	20.8	0.0	0.0	0.0	23.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	285	1265	140	185	1645	40	225	965	170	85	780
Future Volume (vph)	20	285	1265	140	185	1645	40	225	965	170	85	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.985			0.996				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	4965	0	1829	5064	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	4965	0	1829	5064	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	300	1332	147	195	1732	42	237	1016	179	89	821
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	321	1479	0	195	1774	0	237	1016	179	89	821
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	385
Future Volume (vph)	385
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	405
Shared Lane Traffic (%)	
Lane Group Flow (vph)	405
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Protected Phases	7!	7	4		3	8		5	2	3	1	6
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	28.0	28.0	57.0		28.0	57.0		21.0	50.0	28.0	15.0	44.0
Total Split (%)	18.7%	18.7%	38.0%		18.7%	38.0%		14.0%	33.3%	18.7%	10.0%	29.3%
Maximum Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		23.5	53.4		20.6	50.5		16.5	43.7	70.8	10.3	37.5
Actuated g/C Ratio		0.16	0.36		0.14	0.34		0.11	0.29	0.47	0.07	0.25
v/c Ratio		1.12	0.84		0.78	1.04		1.22	0.94	0.24	0.74	0.88
Control Delay		145.7	50.0		82.9	81.2		190.1	67.5	24.1	100.9	66.1
Queue Delay		0.0	0.0		0.0	0.0		0.0	1.3	0.0	0.0	0.0
Total Delay		145.7	50.0		82.9	81.2		190.1	68.8	24.1	100.9	66.1
LOS		F	D		F	F		F	E	C	F	E
Approach Delay			67.0			81.4			83.3			58.7
Approach LOS			E			F			F			E
90th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	23.5	23.5	50.5		23.5	50.5		16.5	43.5	23.5	10.5	37.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	23.5	23.5	52.0		22.0	50.5		16.5	43.5	22.0	10.5	37.5
50th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	23.5	23.5	54.8		19.2	50.5		16.5	43.5	19.2	10.5	37.5
30th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Max	Coord
10th %ile Green (s)	23.5	23.5	59.0		15.0	50.5		16.5	44.5	15.0	9.5	37.5
10th %ile Term Code	Max	Max	Max		Gap	Max		Max	Coord	Gap	Gap	Coord
Queue Length 50th (ft)		~361	493		185	~684		~283	513	101	87	410
Queue Length 95th (ft)		#559	566		273	#779		#462	#646	151	#177	#513
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		286	1766		286	1704		194	1085	777	123	931
Starvation Cap Reductn		0	0		0	0		0	17	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		1.12	0.84		0.68	1.04		1.22	0.95	0.23	0.72	0.88

Intersection Summary

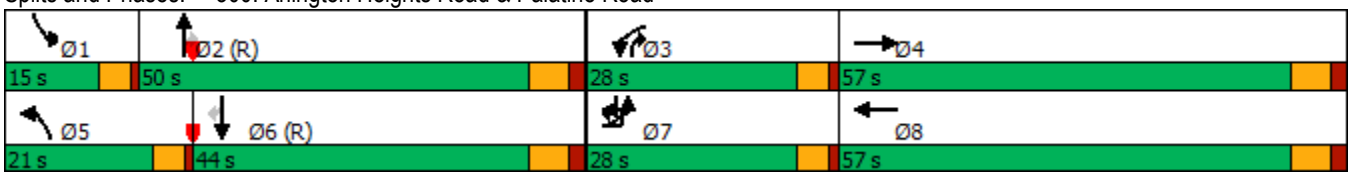
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 61.5 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 73.2	Intersection LOS: E
Intersection Capacity Utilization 102.5%	ICU Level of Service G
Analysis Period (min) 15	

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Lane Group	SBR
Protected Phases	7!
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	28.0
Total Split (%)	18.7%
Maximum Green (s)	23.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	67.5
Actuated g/C Ratio	0.45
v/c Ratio	0.57
Control Delay	34.4
Queue Delay	0.0
Total Delay	34.4
LOS	C
Approach Delay	
Approach LOS	
90th %ile Green (s)	23.5
90th %ile Term Code	Max
70th %ile Green (s)	23.5
70th %ile Term Code	Max
50th %ile Green (s)	23.5
50th %ile Term Code	Max
30th %ile Green (s)	23.5
30th %ile Term Code	Max
10th %ile Green (s)	23.5
10th %ile Term Code	Max
Queue Length 50th (ft)	289
Queue Length 95th (ft)	400
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	712
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.57

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1315	205	0	1870	0	180
Future Vol, veh/h	1315	205	0	1870	0	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1384	216	0	1968	0	189

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	800
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	281
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	281
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	40.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	281	-	-	-
HCM Lane V/C Ratio	0.674	-	-	-
HCM Control Delay (s)	40.7	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	4.5	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	0	1630	1145	220
Future Vol, veh/h	0	50	0	1630	1145	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	0	1716	1205	232

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	719	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	318	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	318	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	318	-	-
HCM Lane V/C Ratio	-	0.166	-	-
HCM Control Delay (s)	-	18.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	10	65	25	15	50	145	1450	25	25	1150	20
Future Volume (veh/h)	130	10	65	25	15	50	145	1450	25	25	1150	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	11	68	26	16	53	153	1526	26	26	1211	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	225	32	199	215	54	180	406	2339	40	247	3194	55
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.66	0.66	0.02	0.62	0.62
Ln Grp Delay, s/veh	44.5	0.0	34.4	35.4	0.0	33.7	6.1	11.5	11.4	8.1	8.4	8.9
Ln Grp LOS	D		C	D		C	A	B	B	A	A	A
Approach Vol, veh/h		216			95			1705			1258	
Approach Delay, s/veh		40.8			34.2			11.0			8.6	
Approach LOS		D			C			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	4.9	61.2		18.0	7.9	58.2		18.0
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Allow Headway (MAH), s	3.8	9.1		6.6	3.8	9.1		7.2
Max Q Clear (g_c+I1), s	2.5	23.7		13.8	4.4	11.8		7.2
Green Ext Time (g_e), s	0.0	31.6		0.0	0.1	30.3		0.2
Prob of Phs Call (p_c)	0.46	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	1.00	0.89		1.00	1.00	0.60		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1326	1774			1314

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3561		225		5148		380

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		61		1392		89		1260

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	26	0	0	137	153	0	0	26
Grp Sat Flow (s), veh/h/ln	1774	0	0	1326	1774	0	0	1314
Q Serve Time (g_s), s	0.5	0.0	0.0	8.7	2.4	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.5	0.0	0.0	11.8	2.4	0.0	0.0	5.2
Perm LT Sat Flow (s_l), veh/h/ln	331	0	0	1326	450	0	0	1314
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	52.2	0.0	0.0	12.0	53.7	0.0	0.0	12.0
Perm LT Serve Time (g_u), s	33.6	0.0	0.0	8.8	42.4	0.0	0.0	8.3
Perm LT Q Serve Time (g_ps), s	1.6	0.0	0.0	8.7	5.9	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	247	0	0	225	406	0	0	215
V/C Ratio (X)	0.11	0.00	0.00	0.61	0.38	0.00	0.00	0.12
Avail Cap (c_a), veh/h	292	0	0	225	471	0	0	215
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	7.9	0.0	0.0	37.6	5.5	0.0	0.0	34.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	7.0	0.6	0.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.1	0.0	0.0	44.5	6.1	0.0	0.0	35.4
1st-Term Q (Q1), veh/ln	0.2	0.0	0.0	3.2	1.2	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.4	0.0	0.0	6.5	2.3	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.07	0.00	0.00	1.10	0.25	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	758	0	0	0	797	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	21.6	0.0	0.0	0.0	9.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	21.6	0.0	0.0	0.0	9.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1162	0	0	0	2103	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1241	0	0	0	2217	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	0.0	0.0	7.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	0.0	0.0	8.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	0.0	0.0	4.5	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.49	0.00	1.00	0.00	1.76	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	16.7	0.0	0.0	0.0	8.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.69	0.00	0.00	0.00	0.57	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	794	0	79	0	435	0	69
Grp Sat Flow (s), veh/h/ln	0	1852	0	1617	0	1847	0	1640
Q Serve Time (g_s), s	0.0	21.7	0.0	3.7	0.0	9.8	0.0	3.2
Cycle Q Clear Time (g_c), s	0.0	21.7	0.0	3.7	0.0	9.8	0.0	3.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	0.86	0.00	0.05	0.00	0.77
Lane Grp Cap (c), veh/h	0	1216	0	231	0	1146	0	234
V/C Ratio (X)	0.00	0.65	0.00	0.34	0.00	0.38	0.00	0.29
Avail Cap (c_a), veh/h	0	1299	0	231	0	1208	0	234
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	32.5	0.0	7.9	0.0	32.3
Incr Delay (d2), s/veh	0.0	2.7	0.0	1.9	0.0	1.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.4	0.0	34.4	0.0	8.9	0.0	33.7
1st-Term Q (Q1), veh/ln	0.0	10.8	0.0	1.6	0.0	4.9	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.1	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.48	0.00	1.80	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	17.4	0.0	3.2	0.0	9.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.41	0.00	0.63	0.00	0.65
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	10	65	25	15	50	145	1450	25	25	1150	20
Future Volume (veh/h)	130	10	65	25	15	50	145	1450	25	25	1150	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	11	68	26	16	53	153	1526	26	26	1211	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	32	199	215	54	180	406	2339	40	247	3194	55
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.66	0.66	0.02	0.62	0.62
Sat Flow, veh/h	1326	225	1392	1314	380	1260	1774	3561	61	1774	5148	89
Grp Volume(v), veh/h	137	0	79	26	0	69	153	758	794	26	797	435
Grp Sat Flow(s),veh/h/ln	1326	0	1617	1314	0	1640	1774	1770	1852	1774	1695	1847
Q Serve(g_s), s	8.7	0.0	3.7	1.5	0.0	3.2	2.4	21.6	21.7	0.5	9.8	9.8
Cycle Q Clear(g_c), s	11.8	0.0	3.7	5.2	0.0	3.2	2.4	21.6	21.7	0.5	9.8	9.8
Prop In Lane	1.00		0.86	1.00		0.77	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	225	0	231	215	0	234	406	1162	1216	247	2103	1146
V/C Ratio(X)	0.61	0.00	0.34	0.12	0.00	0.29	0.38	0.65	0.65	0.11	0.38	0.38
Avail Cap(c_a), veh/h	225	0	231	215	0	234	471	1241	1299	292	2217	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	32.5	34.9	0.0	32.3	5.5	8.7	8.7	7.9	7.9	7.9
Incr Delay (d2), s/veh	7.0	0.0	1.9	0.5	0.0	1.5	0.6	2.8	2.7	0.2	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	0.0	3.2	1.1	0.0	2.8	2.3	16.7	17.4	0.4	8.2	9.0
LnGrp Delay(d),s/veh	44.5	0.0	34.4	35.4	0.0	33.7	6.1	11.5	11.4	8.1	8.4	8.9
LnGrp LOS	D		C	D		C	A	B	B	A	A	A
Approach Vol, veh/h		216			95			1705			1258	
Approach Delay, s/veh		40.8			34.2			11.0			8.6	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	61.2		18.0	7.9	58.2		18.0
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	3.5	59.0		12.0	7.5	55.0		12.0
Max Q Clear Time (g_c+I1), s	2.5	23.7		13.8	4.4	11.8		7.2
Green Ext Time (p_c), s	0.0	31.6		0.0	0.1	30.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	995	20	5	990
Future Vol, veh/h	5	15	995	20	5	990
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	7	2	2	25	2
Mvmt Flow	5	16	1047	21	5	1042

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1589	534	0	0	1068	0
Stage 1	1058	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.84	7.04	-	-	4.6	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.37	-	-	2.45	-
Pot Cap-1 Maneuver	98	478	-	-	528	-
Stage 1	295	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	478	-	-	528	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	97	478	528	-
HCM Lane V/C Ratio	-	-	0.054	0.033	0.01	-
HCM Control Delay (s)	-	-	44.2	12.8	11.9	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	165	25	325	50	805	155	150	810	55
Future Volume (veh/h)	90	10	20	165	25	325	50	805	155	150	810	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	174	26	342	53	847	163	158	853	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	62	118	401	285	342	354	1374	264	361	1703	116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.11	0.11	0.10	0.15	0.15	0.03	0.46	0.46	0.07	0.51	0.51
Ln Grp Delay, s/veh	27.4	0.0	31.1	25.4	27.7	77.8	10.7	18.4	18.4	11.7	14.1	14.0
Ln Grp LOS	C		C	C	C	F	B	B	B	B	B	B
Approach Vol, veh/h		127			542			1063			1069	
Approach Delay, s/veh		28.3			58.6			18.0			13.7	
Approach LOS		C			E			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phs Duration (G+Y+Rc), s	8.7	40.4	11.0	14.0	5.6	43.5	8.2	16.8
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Allow Headway (MAH), s	3.8	9.2	3.9	7.6	3.8	9.1	3.9	6.2
Max Q Clear (g_c+I1), s	5.2	17.9	8.2	3.3	3.2	14.4	5.5	12.8
Green Ext Time (g_e), s	0.2	16.5	0.0	0.1	0.0	20.2	0.0	0.0
Prob of Phs Call (p_c)	0.96	1.00	0.97	1.00	0.66	1.00	0.86	1.00
Prob of Max Out (p_x)	0.02	0.74	1.00	1.00	1.00	0.47	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2962		574		3363		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		570		1096		229		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	158	0	174	0	53	0	95	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1774	0
Q Serve Time (g_s), s	3.2	0.0	6.2	0.0	1.2	0.0	3.5	0.0
Cycle Q Clear Time (g_c), s	3.2	0.0	6.2	0.0	1.2	0.0	3.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	556	0	1372	0	610	0	1010	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.0	0.0	9.3	0.0	34.4	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	18.5	0.0	6.7	0.0	25.1	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	7.0	0.0	0.4	0.0	0.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	361	0	401	0	354	0	319	0
V/C Ratio (X)	0.44	0.00	0.43	0.00	0.15	0.00	0.30	0.00
Avail Cap (c_a), veh/h	559	0	401	0	411	0	386	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	10.9	0.0	24.7	0.0	10.5	0.0	26.9	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.7	0.0	0.2	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.7	0.0	25.4	0.0	10.7	0.0	27.4	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.0	0.0	0.6	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.9	0.0	5.5	0.0	1.0	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.40	0.00	0.91	0.00	0.53	0.00	0.65	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	506	0	0	0	449	0	26
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1770	0	1961
Q Serve Time (g_s), s	0.0	15.9	0.0	0.0	0.0	12.4	0.0	0.9
Cycle Q Clear Time (g_c), s	0.0	15.9	0.0	0.0	0.0	12.4	0.0	0.9
Lane Grp Cap (c), veh/h	0	821	0	0	0	896	0	285
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.50	0.00	0.09
Avail Cap (c_a), veh/h	0	979	0	0	0	1193	0	285
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.9	0.0	0.0	0.0	12.1	0.0	27.5
Incr Delay (d2), s/veh	0.0	3.5	0.0	0.0	0.0	2.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.4	0.0	0.0	0.0	14.1	0.0	27.7
1st-Term Q (Q1), veh/ln	0.0	7.7	0.0	0.0	0.0	6.0	0.0	0.5

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.00	0.00	1.64	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	13.3	0.0	0.0	0.0	10.7	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	1.50	0.00	0.00	0.00	0.53	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	504	0	32	0	462	0	342
Grp Sat Flow (s), veh/h/ln	0	1762	0	1669	0	1822	0	1583
Q Serve Time (g_s), s	0.0	15.9	0.0	1.3	0.0	12.4	0.0	10.8
Cycle Q Clear Time (g_c), s	0.0	15.9	0.0	1.3	0.0	12.4	0.0	10.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1583.3
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
Prop RT Outside Lane (P_R)	0.00	0.32	0.00	0.66	0.00	0.13	0.00	1.00
Lane Grp Cap (c), veh/h	0	818	0	180	0	923	0	342
V/C Ratio (X)	0.00	0.62	0.00	0.18	0.00	0.50	0.00	1.00
Avail Cap (c_a), veh/h	0	974	0	203	0	1229	0	342
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.9	0.0	30.1	0.0	12.1	0.0	29.1
Incr Delay (d2), s/veh	0.0	3.5	0.0	1.0	0.0	1.9	0.0	48.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.4	0.0	31.1	0.0	14.0	0.0	77.8
1st-Term Q (Q1), veh/ln	0.0	7.7	0.0	0.6	0.0	6.2	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.5	0.0	4.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.80	0.00	1.64	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	13.3	0.0	1.2	0.0	10.9	0.0	20.8
%ile Storage Ratio (RQ%)	0.00	1.50	0.00	0.11	0.00	0.54	0.00	3.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	165	25	325	50	805	155	150	810	55
Future Volume (veh/h)	90	10	20	165	25	325	50	805	155	150	810	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1961	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	11	21	174	26	342	53	847	163	158	853	58
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	62	118	401	285	342	354	1374	264	361	1703	116
Arrive On Green	0.06	0.11	0.11	0.10	0.15	0.15	0.03	0.46	0.46	0.07	0.51	0.51
Sat Flow, veh/h	1774	574	1096	1774	1961	1583	1774	2962	570	1774	3363	229
Grp Volume(v), veh/h	95	0	32	174	26	342	53	506	504	158	449	462
Grp Sat Flow(s),veh/h/ln	1774	0	1669	1774	1961	1583	1774	1770	1762	1774	1770	1822
Q Serve(g_s), s	3.5	0.0	1.3	6.2	0.9	10.8	1.2	15.9	15.9	3.2	12.4	12.4
Cycle Q Clear(g_c), s	3.5	0.0	1.3	6.2	0.9	10.8	1.2	15.9	15.9	3.2	12.4	12.4
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.32	1.00		0.13
Lane Grp Cap(c), veh/h	319	0	180	401	285	342	354	821	818	361	896	923
V/C Ratio(X)	0.30	0.00	0.18	0.43	0.09	1.00	0.15	0.62	0.62	0.44	0.50	0.50
Avail Cap(c_a), veh/h	386	0	203	401	285	342	411	979	974	559	1193	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	30.1	24.7	27.5	29.1	10.5	14.9	14.9	10.9	12.1	12.1
Incr Delay (d2), s/veh	0.5	0.0	1.0	0.7	0.3	48.8	0.2	3.5	3.5	0.8	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	0.0	1.2	5.5	0.9	20.8	1.0	13.3	13.3	2.9	10.7	10.9
LnGrp Delay(d),s/veh	27.4	0.0	31.1	25.4	27.7	77.8	10.7	18.4	18.4	11.7	14.1	14.0
LnGrp LOS	C		C	C	C	F	B	B	B	B	B	B
Approach Vol, veh/h		127			542			1063			1069	
Approach Delay, s/veh		28.3			58.6			18.0			13.7	
Approach LOS		C			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	40.4	11.0	14.0	5.6	43.5	8.2	16.8
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	13.5	41.0	7.5	9.0	4.5	50.0	7.5	9.0
Max Q Clear Time (g_c+I1), s	5.2	17.9	8.2	3.3	3.2	14.4	5.5	12.8
Green Ext Time (p_c), s	0.2	16.5	0.0	0.1	0.0	20.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	15	305	950	110	150	820	40	255	820	145	110	755
Future Volume (vph)	15	305	950	110	150	820	40	255	820	145	110	755
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Storage Length (ft)		415		0	215		0	140		175	150	
Storage Lanes		1		0	1		0	1		1	1	
Taper Length (ft)		120			180			170			250	
Lane Util. Factor	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	1.00	1.00	0.95
Frt			0.984			0.993				0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1829	5004	0	1829	5050	0	1770	3725	1583	1770	3725
Flt Permitted		0.950			0.950			0.950			0.950	
Satd. Flow (perm)	0	1829	5004	0	1829	5050	0	1770	3725	1583	1770	3725
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			35			35			35			35
Link Distance (ft)			601			560			640			500
Travel Time (s)			11.7			10.9			12.5			9.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	321	1000	116	158	863	42	268	863	153	116	795
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	1116	0	158	905	0	268	863	153	116	795
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			52			52			17			17
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	0.94	1.00	1.00	0.94
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2		1	2		1	2	1	1	2
Detector Template	Left	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100		20	100		20	100	20	20	100
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0		0	0	0	0	0
Detector 1 Size(ft)	20	20	6		20	6		20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	Prot	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA
Protected Phases	7!	7	4		3	8		5	2	3	1	6

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	320
Future Volume (vph)	320
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	280
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	337
Shared Lane Traffic (%)	
Lane Group Flow (vph)	337
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pm+ov
Protected Phases	7!

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases										2		
Detector Phase	7	7	4		3	8		5	2	3	1	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0
Minimum Split (s)	7.5	7.5	21.5		7.5	21.5		7.5	21.5	7.5	7.5	21.5
Total Split (s)	34.0	34.0	44.0		22.0	32.0		19.0	38.0	22.0	16.0	35.0
Total Split (%)	28.3%	28.3%	36.7%		18.3%	26.7%		15.8%	31.7%	18.3%	13.3%	29.2%
Maximum Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
Yellow Time (s)	3.5	3.5	4.5		3.5	4.5		3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.5		4.5	6.5		4.5	6.5	4.5	4.5	6.5
Lead/Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	7.0		4.0	7.0		4.0	7.0	4.0	4.0	7.0
Recall Mode	None	None	None		None	None		None	C-Min	None	None	C-Min
Walk Time (s)									7.0			7.0
Flash Dont Walk (s)									11.0			11.0
Pedestrian Calls (#/hr)									0			0
Act Effct Green (s)		26.8	38.9		15.3	27.5		15.3	32.7	54.5	11.1	28.5
Actuated g/C Ratio		0.22	0.32		0.13	0.23		0.13	0.27	0.45	0.09	0.24
v/c Ratio		0.83	0.69		0.68	0.78		1.20	0.85	0.21	0.71	0.90
Control Delay		61.6	38.1		64.6	49.4		168.1	51.1	20.7	76.4	58.6
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		61.6	38.1		64.6	49.4		168.1	51.1	20.7	76.4	58.6
LOS		E	D		E	D		F	D	C	E	E
Approach Delay			43.6			51.7			71.9			49.7
Approach LOS			D			D			E			D
90th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
90th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
70th %ile Green (s)	29.5	29.5	37.5		17.5	25.5		14.5	31.5	17.5	11.5	28.5
70th %ile Term Code	Max	Max	Max		Max	Max		Max	Coord	Max	Max	Coord
50th %ile Green (s)	29.0	29.0	38.5		16.5	26.0		14.5	31.5	16.5	11.5	28.5
50th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Max	Coord
30th %ile Green (s)	25.7	25.7	40.8		14.2	29.3		14.5	31.5	14.2	11.5	28.5
30th %ile Term Code	Gap	Gap	Max		Gap	Max		Max	Coord	Gap	Max	Coord
10th %ile Green (s)	20.1	20.1	40.3		10.9	31.1		18.3	37.3	10.9	9.5	28.5
10th %ile Term Code	Gap	Gap	Hold		Gap	Gap		Max	Coord	Gap	Gap	Coord
Queue Length 50th (ft)		244	275		117	246		~260	338	70	88	315
Queue Length 95th (ft)		#355	333		189	301		#431	#446	114	#173	#425
Internal Link Dist (ft)			521			480			560			420
Turn Bay Length (ft)		415			215			140		175	150	
Base Capacity (vph)		449	1622		266	1156		224	1013	747	169	884
Starvation Cap Reductn		0	0		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0		0	0	0	0	0
Reduced v/c Ratio		0.75	0.69		0.59	0.78		1.20	0.85	0.20	0.69	0.90

Intersection Summary

Lane Group	SBR
Permitted Phases	6
Detector Phase	7
Switch Phase	
Minimum Initial (s)	3.0
Minimum Split (s)	7.5
Total Split (s)	34.0
Total Split (%)	28.3%
Maximum Green (s)	29.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	4.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.8
Actuated g/C Ratio	0.52
v/c Ratio	0.41
Control Delay	19.3
Queue Delay	0.0
Total Delay	19.3
LOS	B
Approach Delay	
Approach LOS	
90th %ile Green (s)	29.5
90th %ile Term Code	Max
70th %ile Green (s)	29.5
70th %ile Term Code	Max
50th %ile Green (s)	29.0
50th %ile Term Code	Gap
30th %ile Green (s)	25.7
30th %ile Term Code	Gap
10th %ile Green (s)	20.1
10th %ile Term Code	Gap
Queue Length 50th (ft)	149
Queue Length 95th (ft)	217
Internal Link Dist (ft)	
Turn Bay Length (ft)	280
Base Capacity (vph)	850
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.40

Intersection Summary

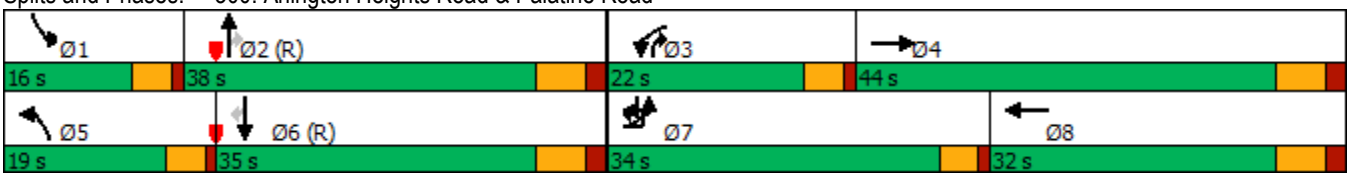
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 21.6 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 54.0	Intersection LOS: D
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

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

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

! Phase conflict between lane groups.

Splits and Phases: 300: Arlington Heights Road & Palatine Road



Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	985	220	0	1010	0	220
Future Vol, veh/h	985	220	0	1010	0	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1037	232	0	1063	0	232

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	635
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	361
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	361
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	31.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	361	-	-	-
HCM Lane V/C Ratio	0.641	-	-	-
HCM Control Delay (s)	31.2	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	4.3	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	65	0	1170	1120	260
Future Vol, veh/h	0	65	0	1170	1120	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	68	0	1232	1179	274

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	727	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	314	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	314	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	314	-	-
HCM Lane V/C Ratio	-	0.218	-	-
HCM Control Delay (s)	-	19.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	5	90	30	5	45	160	995	35	35	1125	25
Future Volume (veh/h)	130	5	90	30	5	45	160	995	35	35	1125	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	5	95	32	5	47	168	1047	37	37	1184	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	296	13	256	252	26	246	408	2032	72	353	2748	60
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.58	0.58	0.02	0.54	0.54
Ln Grp Delay, s/veh	30.5	0.0	27.0	28.1	0.0	25.2	7.3	10.4	10.3	7.6	10.3	10.9
Ln Grp LOS	C		C	C		C	A	B	B	A	B	B
Approach Vol, veh/h		237			84			1252			1247	
Approach Delay, s/veh		29.1			26.3			9.9			10.5	
Approach LOS		C			C			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		6.0	1.1	4.0		6.0
Phs Duration (G+Y+Rc), s	5.0	45.9		17.6	8.2	42.8		17.6
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Allow Headway (MAH), s	3.8	9.1		6.7	3.8	9.1		7.1
Max Q Clear (g_c+I1), s	2.6	14.3		10.6	4.7	11.6		7.4
Green Ext Time (g_e), s	0.0	25.2		1.1	0.2	25.2		0.4
Prob of Phs Call (p_c)	0.51	1.00		1.00	0.96	1.00		1.00
Prob of Max Out (p_x)	1.00	0.59		0.79	0.17	0.67		0.16

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1774			1347	1774			1290

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3487		80		5121		154

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		123		1516		112		1452

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	(Pr/Pm)				(Pr/Pm)			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	37	0	0	137	168	0	0	32
Grp Sat Flow (s), veh/h/ln	1774	0	0	1347	1774	0	0	1290
Q Serve Time (g_s), s	0.6	0.0	0.0	6.7	2.7	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	0.6	0.0	0.0	8.6	2.7	0.0	0.0	5.4
Perm LT Sat Flow (s_l), veh/h/ln	518	0	0	1347	460	0	0	1290
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.8	0.0	0.0	11.6	38.4	0.0	0.0	11.6
Perm LT Serve Time (g_u), s	27.7	0.0	0.0	9.7	27.2	0.0	0.0	7.8
Perm LT Q Serve Time (g_ps), s	0.7	0.0	0.0	6.7	6.5	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	353	0	0	296	408	0	0	252
V/C Ratio (X)	0.10	0.00	0.00	0.46	0.41	0.00	0.00	0.13
Avail Cap (c_a), veh/h	431	0	0	421	559	0	0	372
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	7.5	0.0	0.0	28.1	6.7	0.0	0.0	27.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.4	0.7	0.0	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.6	0.0	0.0	30.5	7.3	0.0	0.0	28.1
1st-Term Q (Q1), veh/ln	0.3	0.0	0.0	2.5	1.3	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.6	0.0	0.0	4.8	2.4	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.10	0.00	0.00	0.81	0.27	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	531	0	0	0	784	0	0
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1695	0	0
Q Serve Time (g_s), s	0.0	12.3	0.0	0.0	0.0	9.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.3	0.0	0.0	0.0	9.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1031	0	0	0	1819	0	0
V/C Ratio (X)	0.00	0.52	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1342	0	0	0	2274	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	0.0	0.0	9.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	0.0	0.0	10.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	0.0	0.0	4.5	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.65	0.00	1.00	0.00	1.76	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	10.6	0.0	0.0	0.0	8.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.44	0.00	0.00	0.00	0.57	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	553	0	100	0	426	0	52
Grp Sat Flow (s), veh/h/ln	0	1841	0	1595	0	1843	0	1607
Q Serve Time (g_s), s	0.0	12.3	0.0	3.8	0.0	9.6	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	12.3	0.0	3.8	0.0	9.6	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	0.95	0.00	0.06	0.00	0.90
Lane Grp Cap (c), veh/h	0	1073	0	270	0	989	0	272
V/C Ratio (X)	0.00	0.52	0.00	0.37	0.00	0.43	0.00	0.19
Avail Cap (c_a), veh/h	0	1396	0	419	0	1236	0	422
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	25.2	0.0	9.6	0.0	24.5
Incr Delay (d2), s/veh	0.0	1.8	0.0	1.8	0.0	1.4	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.3	0.0	27.0	0.0	10.9	0.0	25.2
1st-Term Q (Q1), veh/ln	0.0	6.1	0.0	1.7	0.0	4.9	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.1	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.80	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.9	0.0	3.2	0.0	9.0	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.42	0.00	0.62	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	5	90	30	5	45	160	995	35	35	1125	25
Future Volume (veh/h)	130	5	90	30	5	45	160	995	35	35	1125	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	5	95	32	5	47	168	1047	37	37	1184	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	13	256	252	26	246	408	2032	72	353	2748	60
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.58	0.58	0.02	0.54	0.54
Sat Flow, veh/h	1347	80	1516	1290	154	1452	1774	3487	123	1774	5121	112
Grp Volume(v), veh/h	137	0	100	32	0	52	168	531	553	37	784	426
Grp Sat Flow(s),veh/h/ln	1347	0	1595	1290	0	1607	1774	1770	1841	1774	1695	1843
Q Serve(g_s), s	6.7	0.0	3.8	1.5	0.0	1.9	2.7	12.3	12.3	0.6	9.6	9.6
Cycle Q Clear(g_c), s	8.6	0.0	3.8	5.4	0.0	1.9	2.7	12.3	12.3	0.6	9.6	9.6
Prop In Lane	1.00		0.95	1.00		0.90	1.00		0.07	1.00		0.06
Lane Grp Cap(c), veh/h	296	0	270	252	0	272	408	1031	1073	353	1819	989
V/C Ratio(X)	0.46	0.00	0.37	0.13	0.00	0.19	0.41	0.52	0.52	0.10	0.43	0.43
Avail Cap(c_a), veh/h	421	0	419	372	0	422	559	1342	1396	431	2274	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	25.2	27.6	0.0	24.5	6.7	8.5	8.5	7.5	9.6	9.6
Incr Delay (d2), s/veh	2.4	0.0	1.8	0.5	0.0	0.7	0.7	1.8	1.8	0.1	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	0.0	3.2	1.1	0.0	1.6	2.4	10.6	10.9	0.6	8.2	9.0
LnGrp Delay(d),s/veh	30.5	0.0	27.0	28.1	0.0	25.2	7.3	10.4	10.3	7.6	10.3	10.9
LnGrp LOS	C		C	C		C	A	B	B	A	B	B
Approach Vol, veh/h		237			84			1252			1247	
Approach Delay, s/veh		29.1			26.3			9.9			10.5	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	45.9		17.6	8.2	42.8		17.6
Change Period (Y+Rc), s	3.5	6.0		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s	4.5	52.0		18.0	10.5	46.0		18.0
Max Q Clear Time (g_c+I1), s	2.6	14.3		10.6	4.7	11.6		7.4
Green Ext Time (p_c), s	0.0	25.2		1.1	0.2	25.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

DATA FROM THE ITE MANUAL TRIP GENERATION, TENTH EDITION

Land Use: 820
Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

Shopping Center
(820)

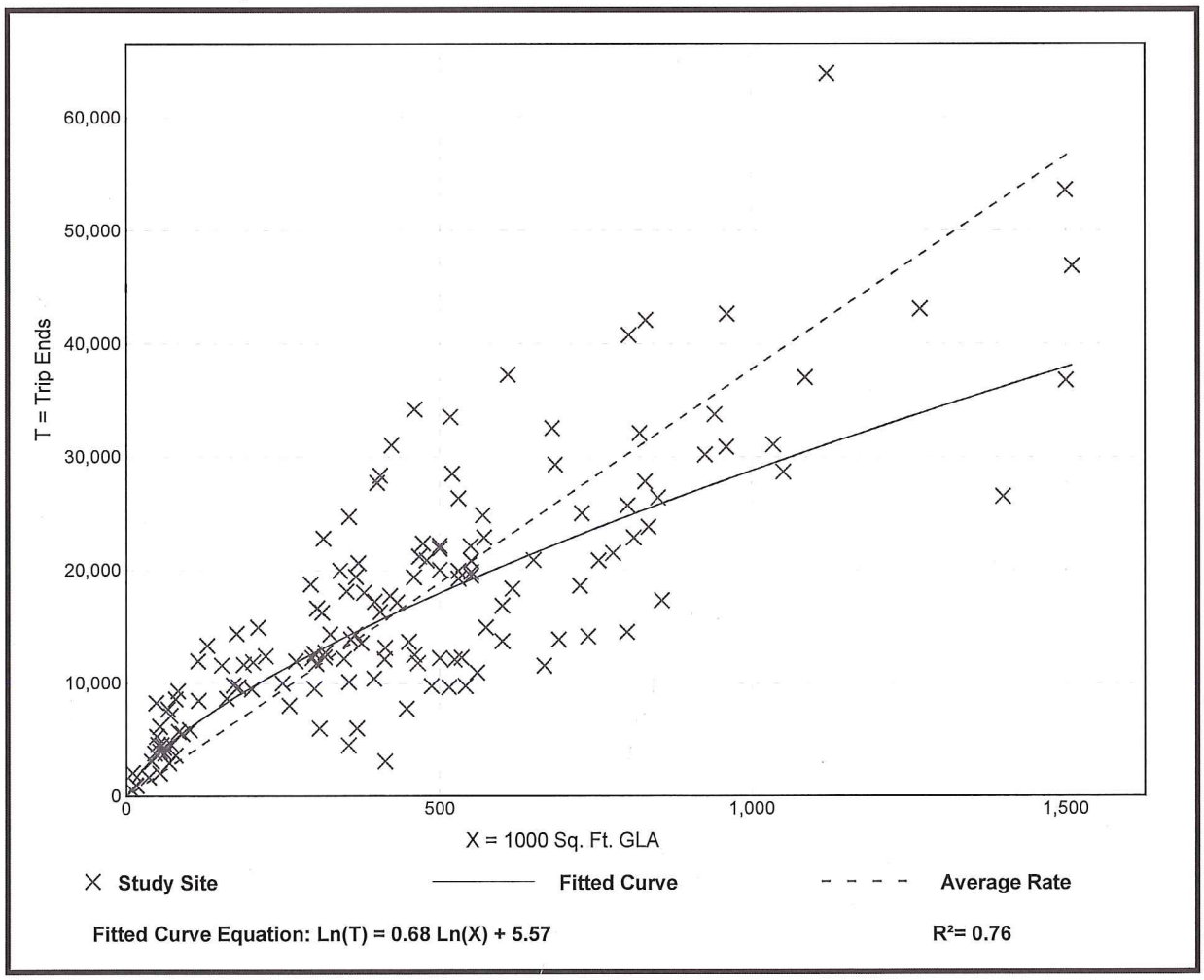
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.68 Ln(X) + 5.57

R^2= 0.76

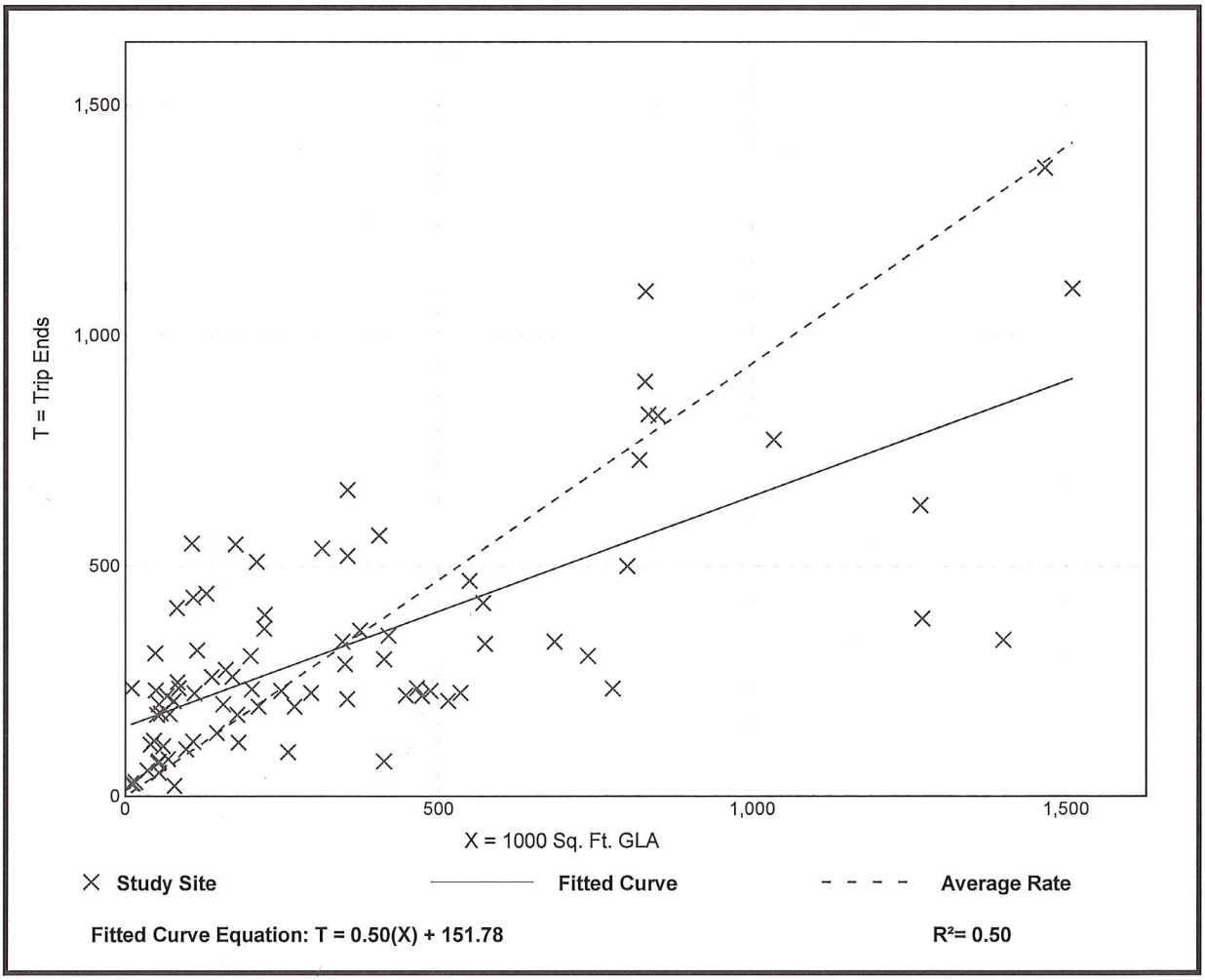
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 84
1000 Sq. Ft. GLA: 351
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Fitted Curve Equation: T = 0.50(X) + 151.78

R^2= 0.50

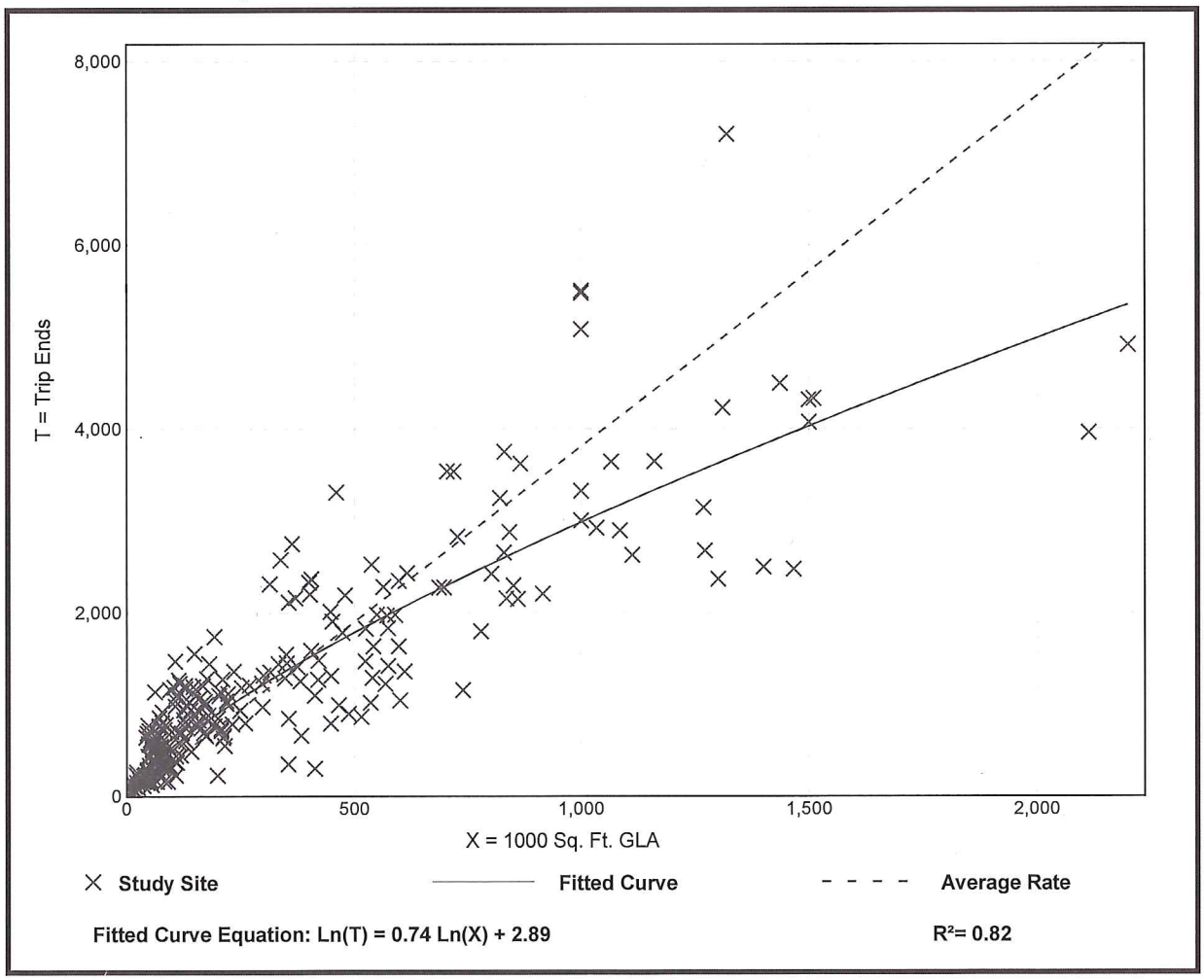
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 261
1000 Sq. Ft. GLA: 327
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.74 Ln(X) + 2.89

R^2= 0.82

Shopping Center
(820)

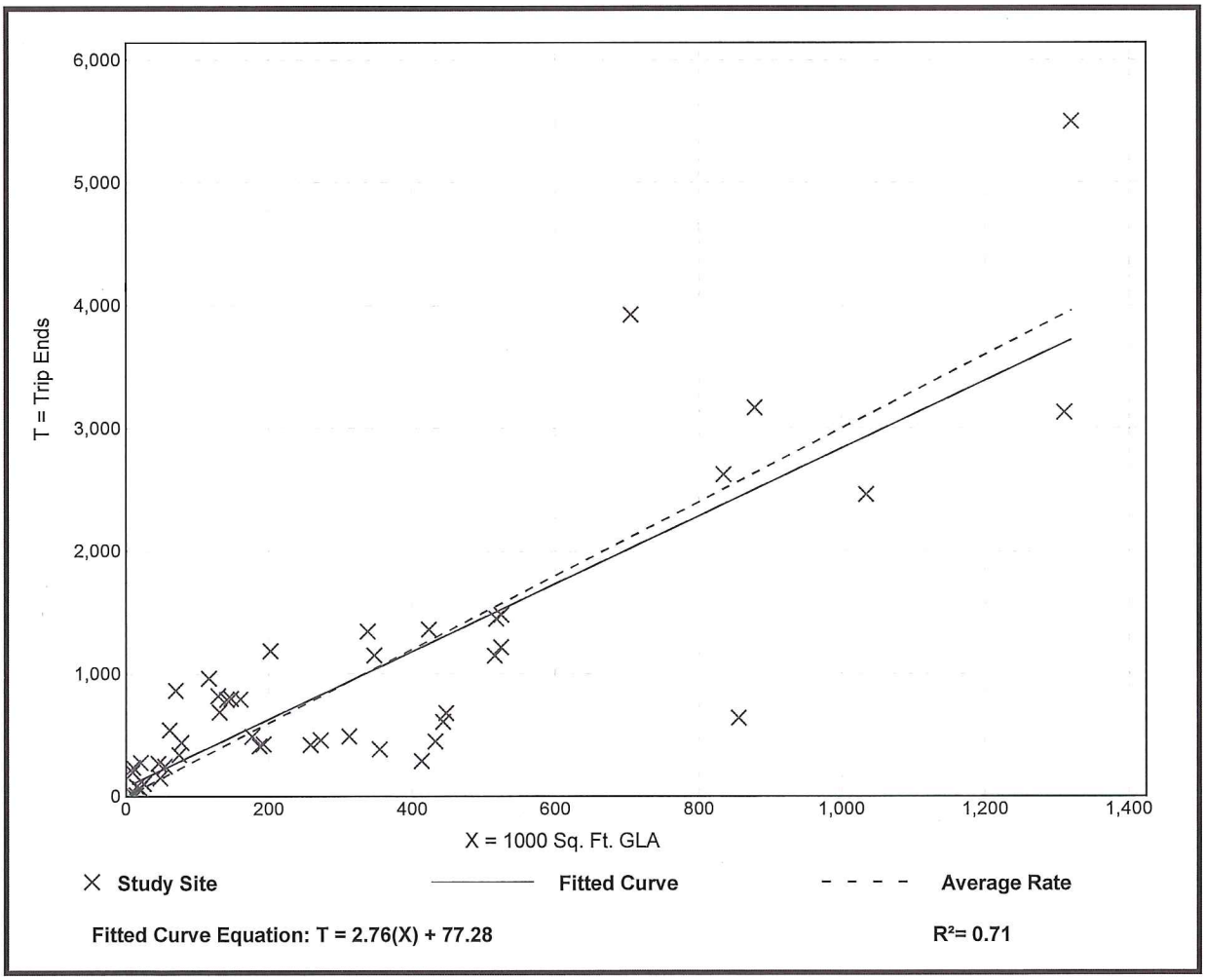
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 47
1000 Sq. Ft. GLA: 323
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.00	0.70 - 23.74	1.85

Data Plot and Equation



Fitted Curve Equation: T = 2.76(X) + 77.28

R^2= 0.71

Shopping Center
(820)

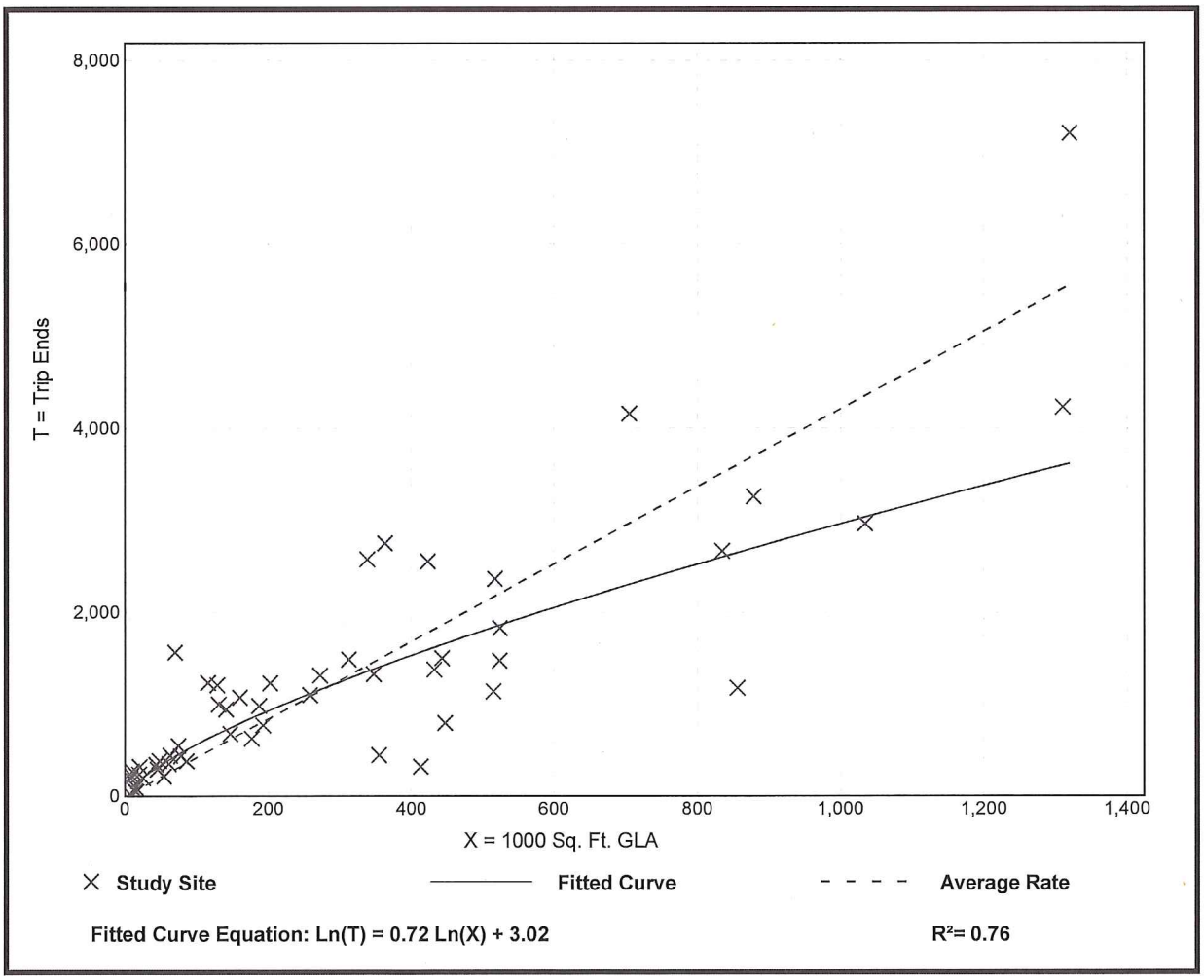
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 53
1000 Sq. Ft. GLA: 298
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.21	0.78 - 27.27	2.47

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.72 Ln(X) + 3.02

R^2= 0.76

Shopping Center
(820)

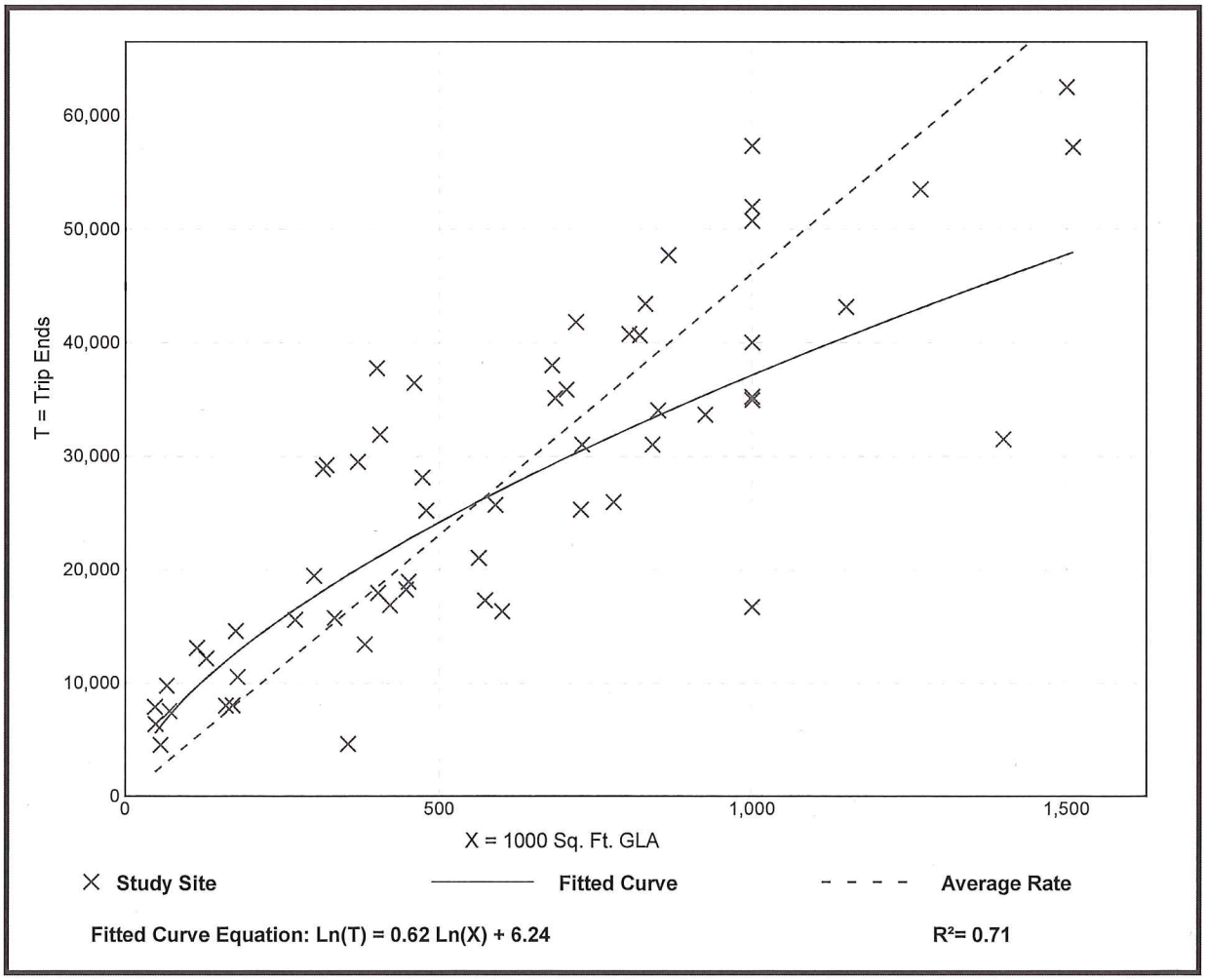
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 58
1000 Sq. Ft. GLA: 602
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
46.12	13.01 - 167.89	17.91

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.62 Ln(X) + 6.24

R^2= 0.71

Shopping Center
(820)

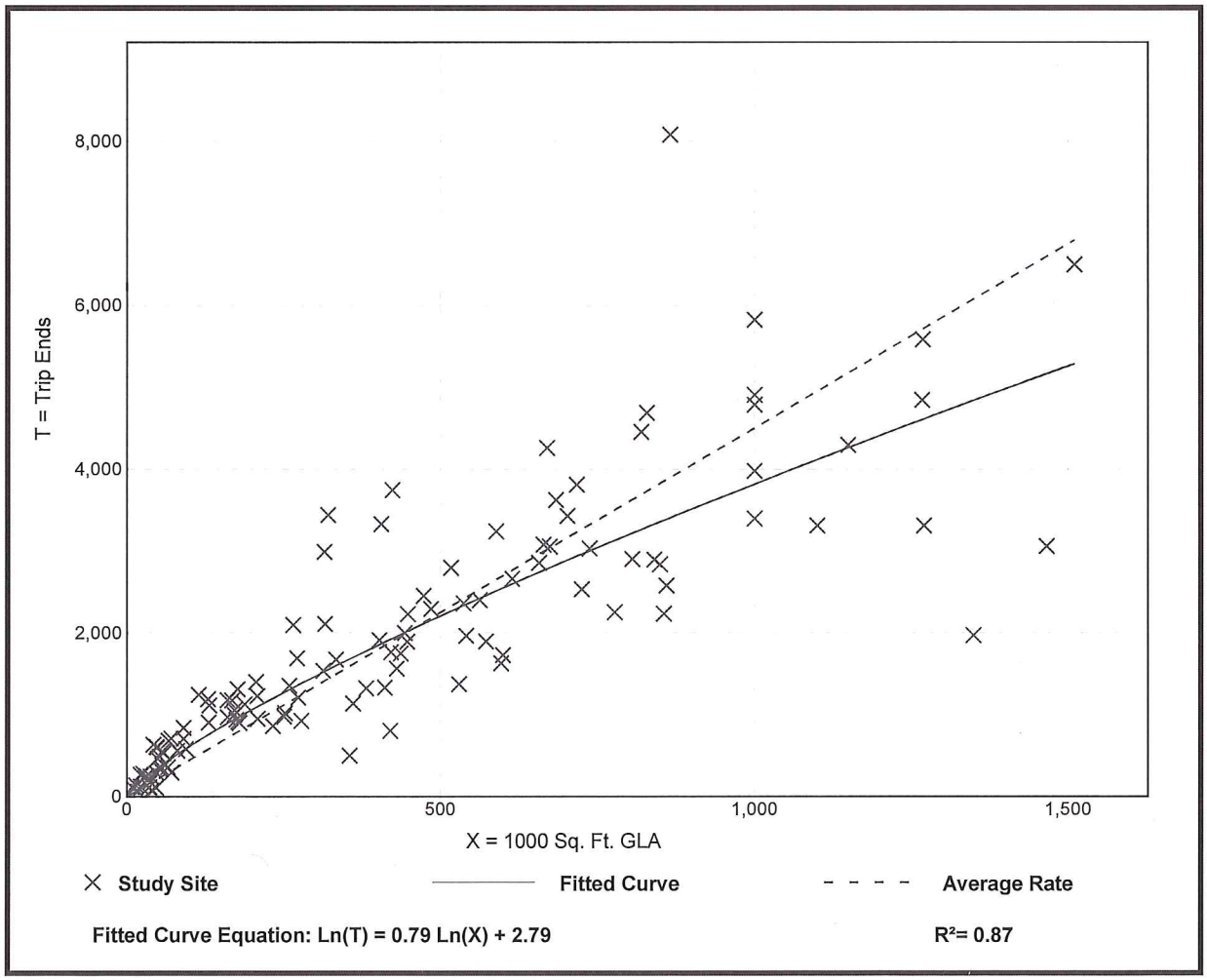
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 119
1000 Sq. Ft. GLA: 416
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.50	1.42 - 15.10	1.88

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.79 Ln(X) + 2.79

R^2= 0.87

Shopping Center
(820)

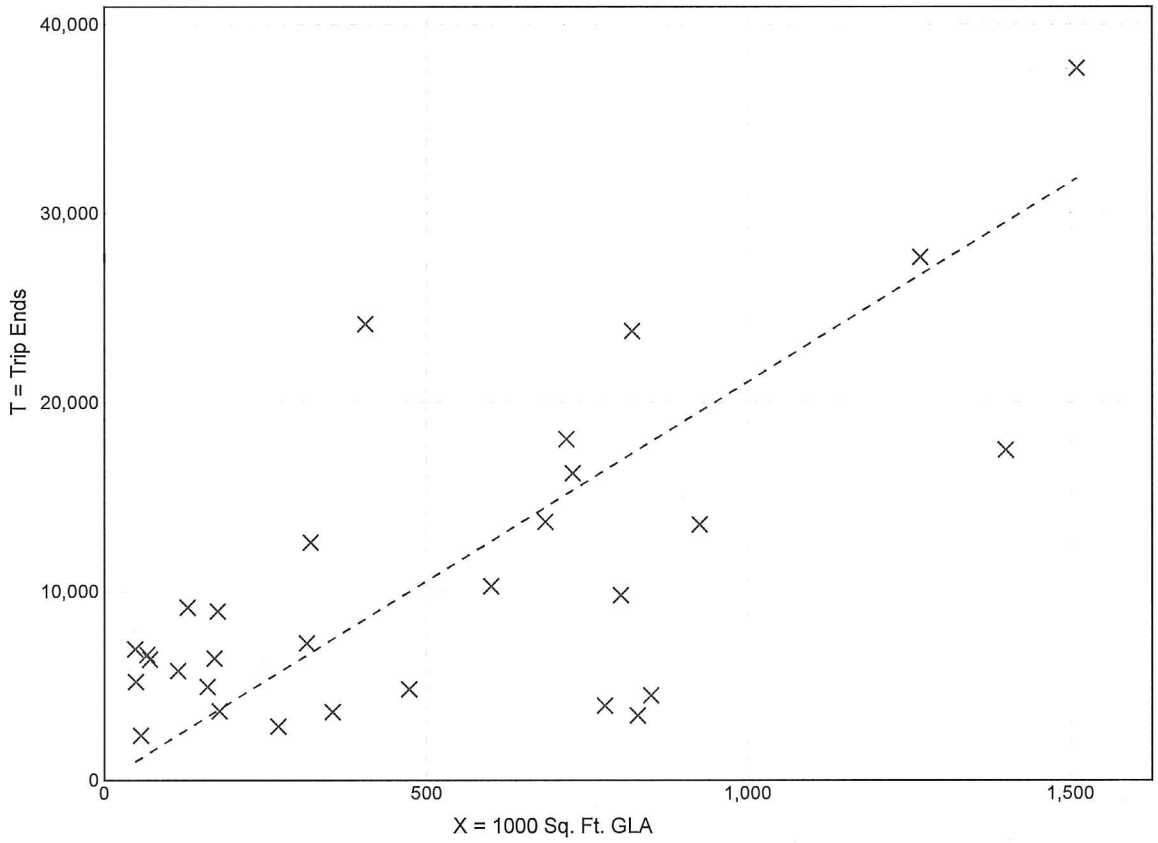
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Sunday

Setting/Location: General Urban/Suburban
Number of Studies: 30
1000 Sq. Ft. GLA: 509
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
21.10	4.15 - 148.15	17.18

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

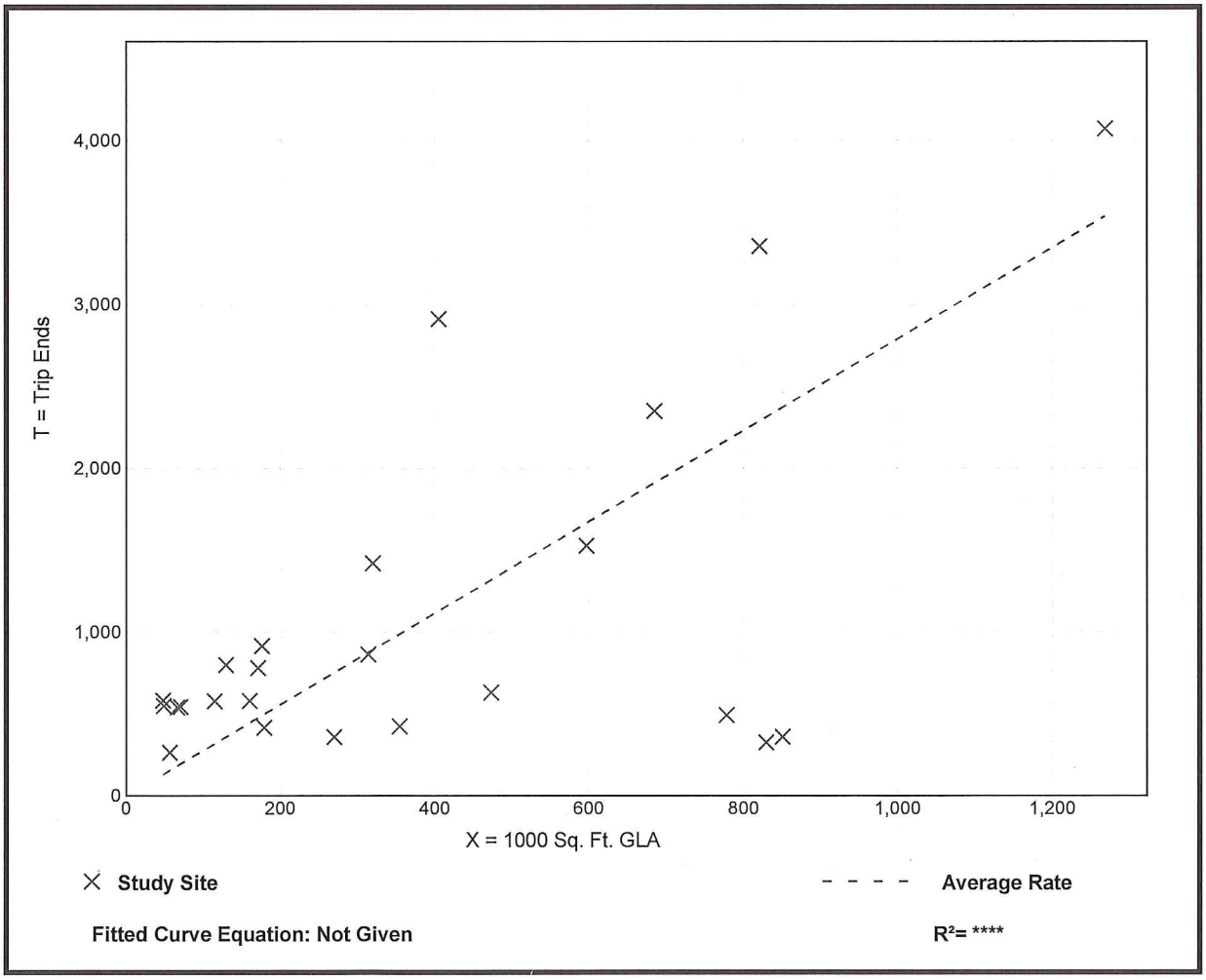
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Sunday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 24
1000 Sq. Ft. GLA: 382
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.79	0.39 - 12.40	2.18

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

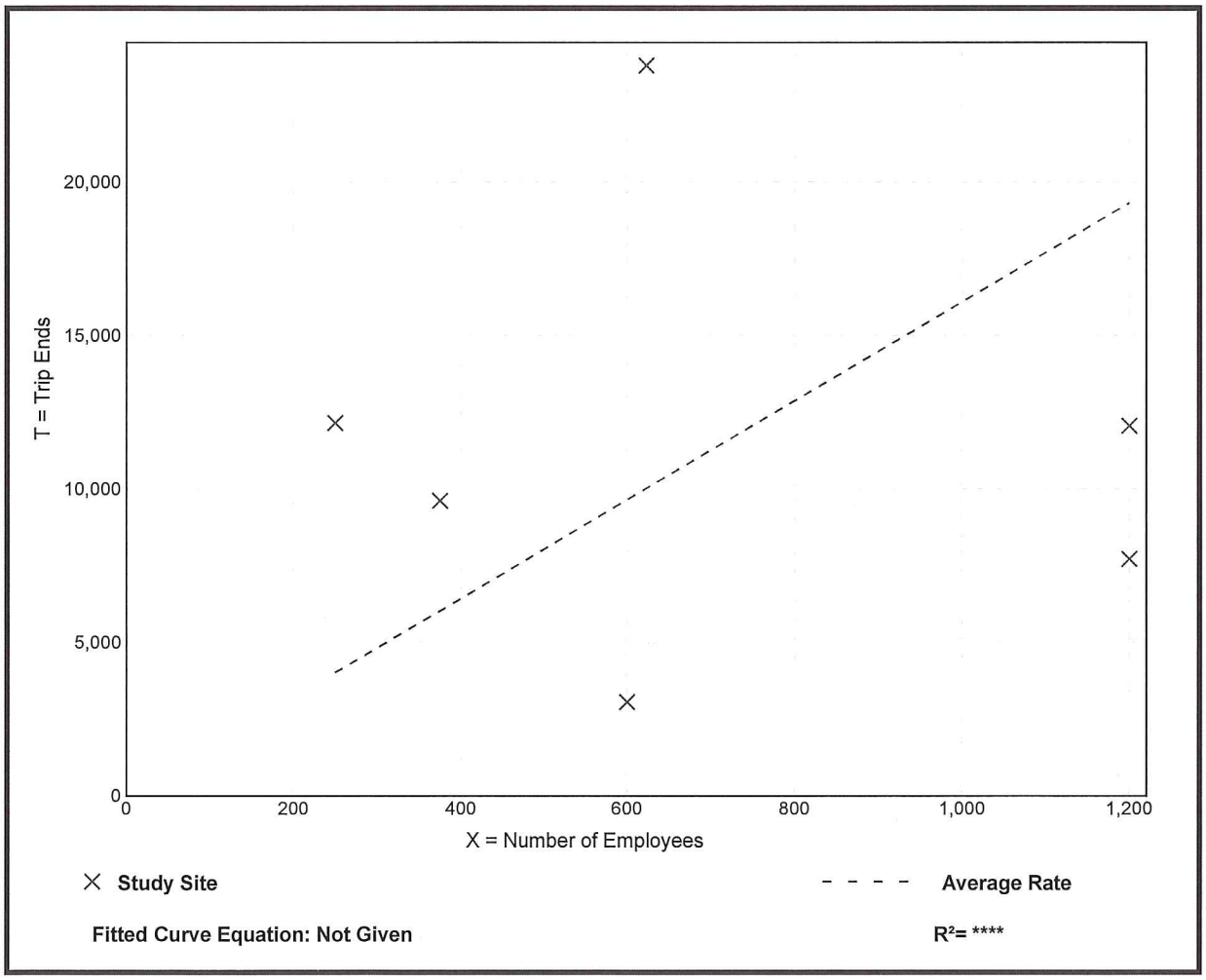
Vehicle Trip Ends vs: **Employees**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Employees: 708
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
16.11	5.11 - 48.63	15.33

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

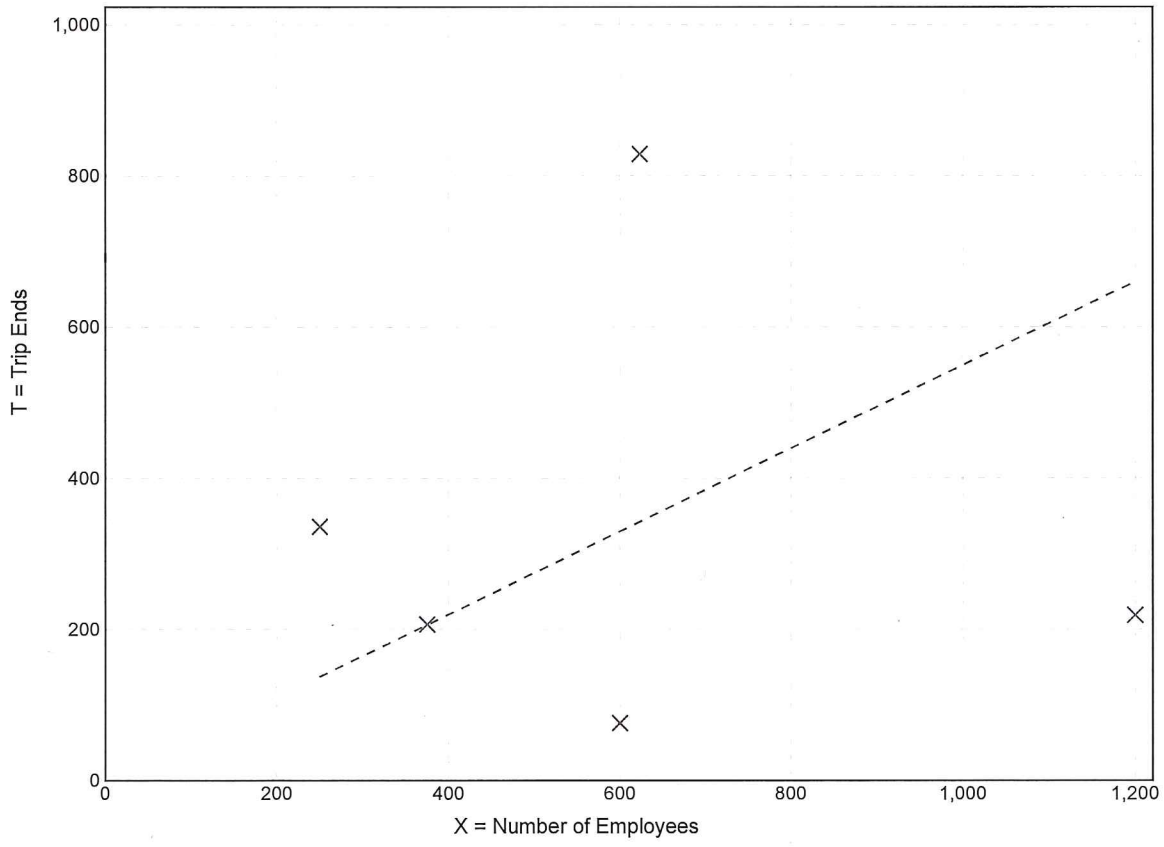
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Employees: 610
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.55	0.13 - 1.34	0.58

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

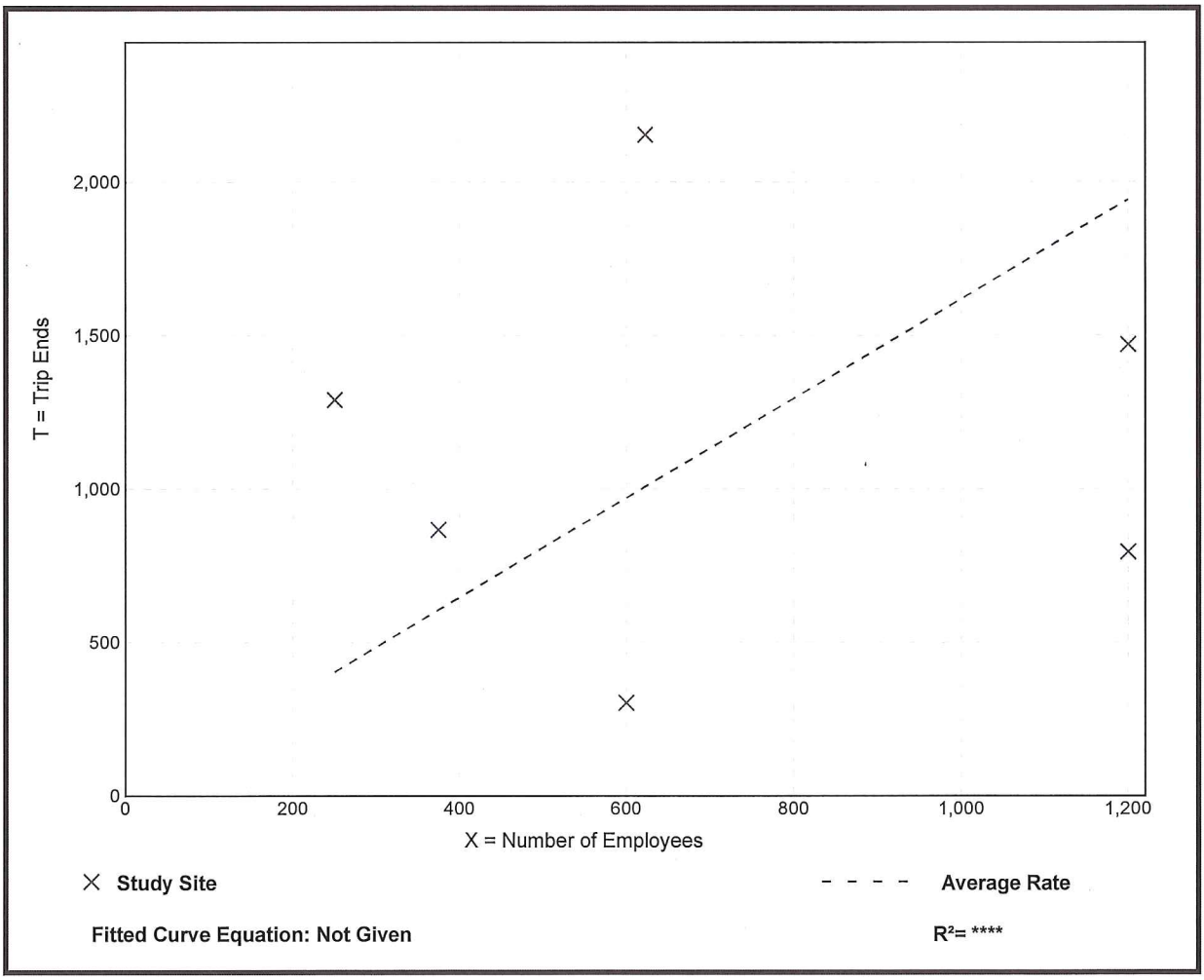
Shopping Center
(820)

Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Employees: 708
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.62	0.51 - 5.16	1.45

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

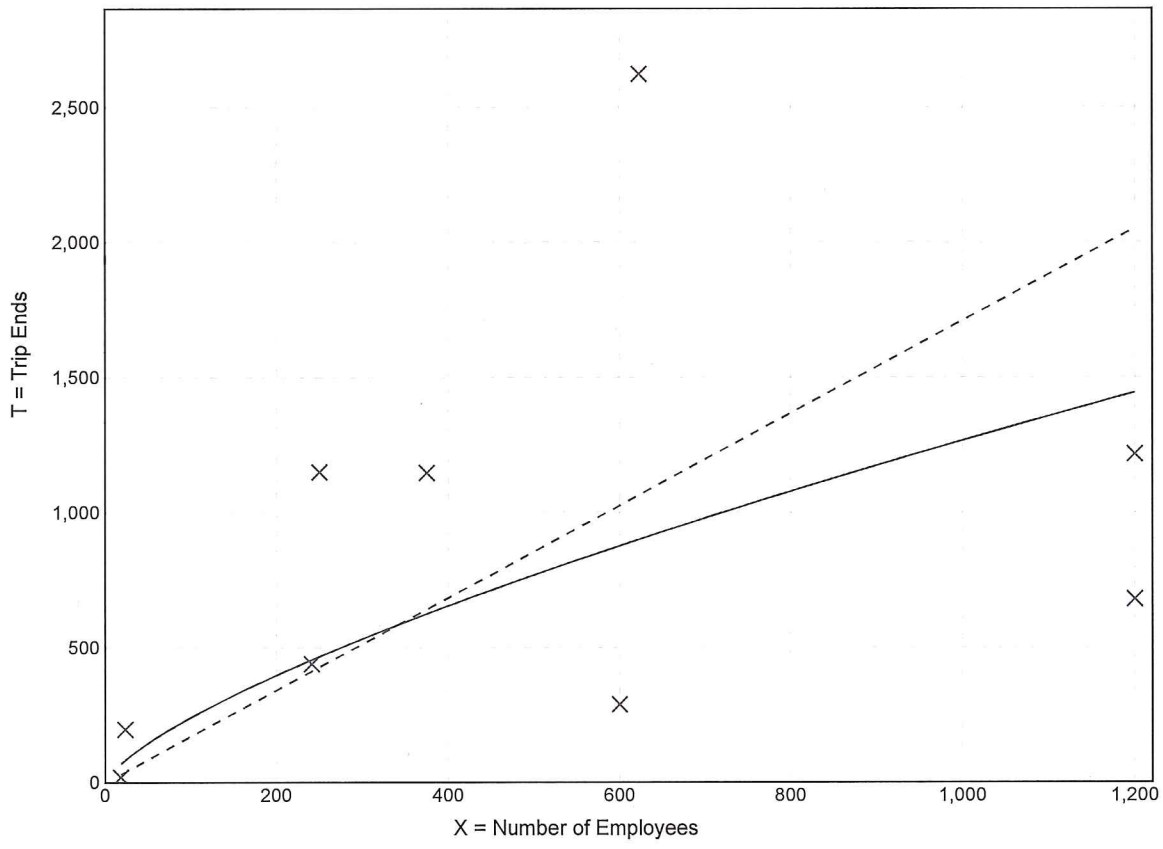
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 503
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.71	0.48 - 8.57	1.64

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.72 Ln(X) + 2.17

R^2= 0.61

Shopping Center
(820)

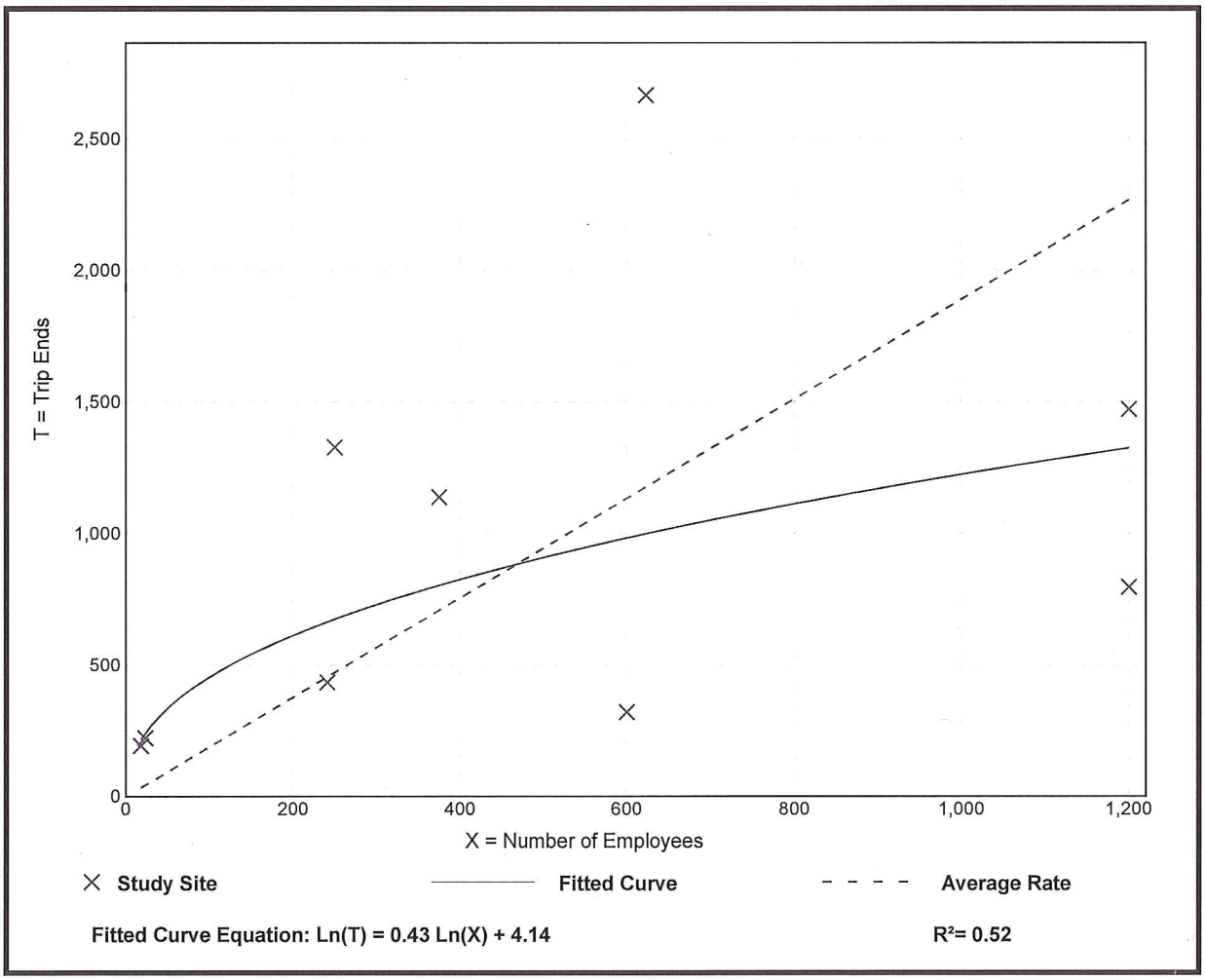
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 503
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.89	0.54 - 10.72	1.81

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.43 Ln(X) + 4.14

R^2= 0.52

Shopping Center
(820)

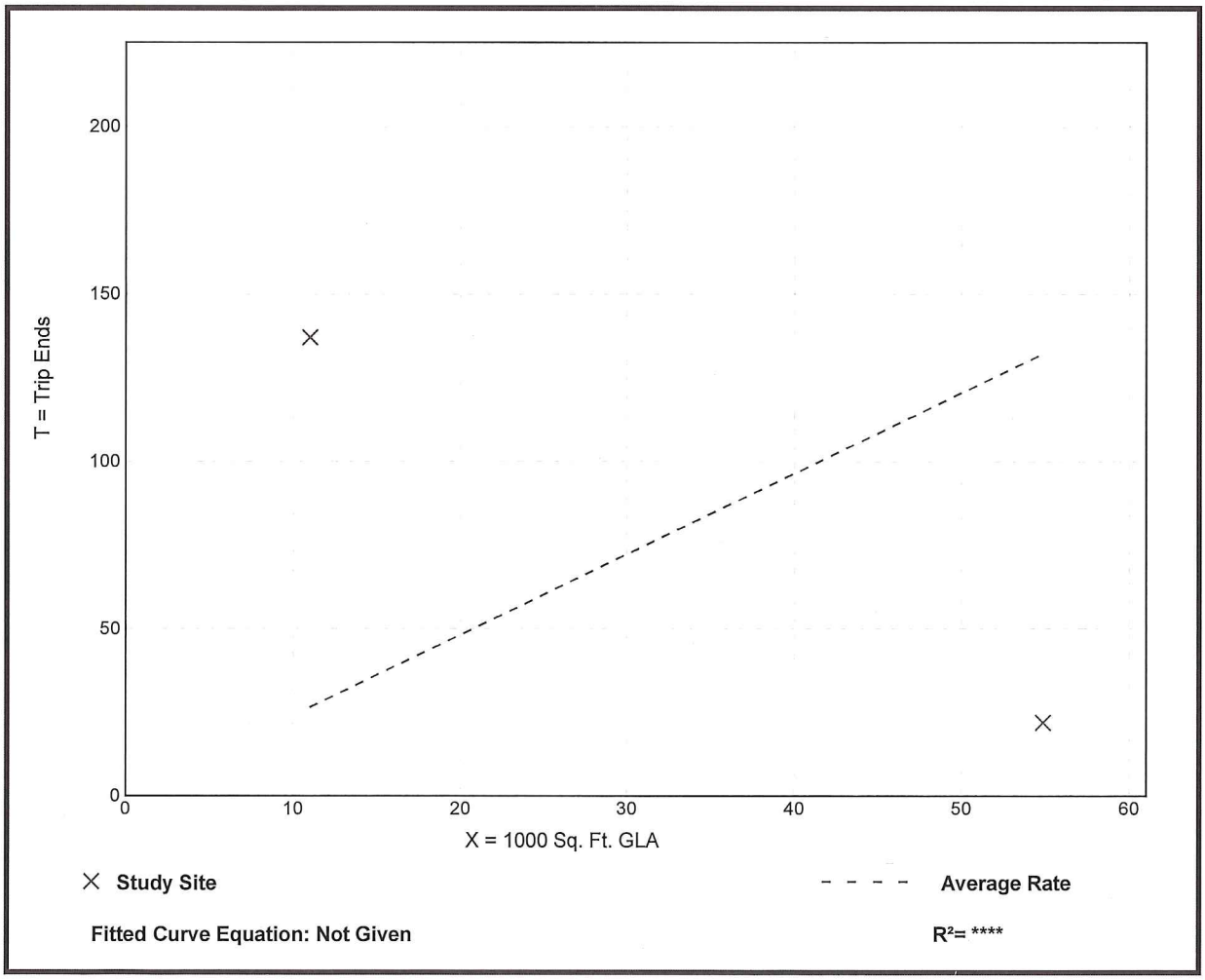
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 2
1000 Sq. Ft. GLA: 33
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.41	0.40 - 12.45	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

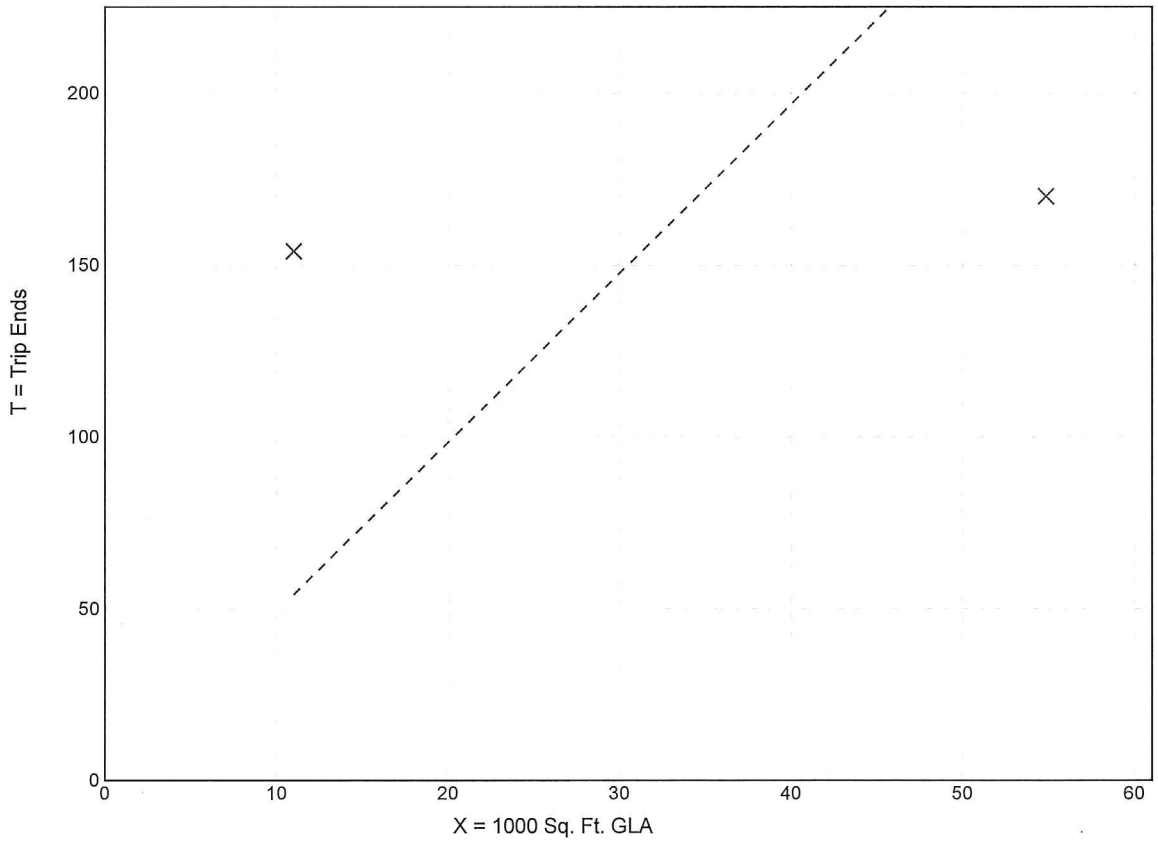
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 2
1000 Sq. Ft. GLA: 33
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.92	3.10 - 13.99	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

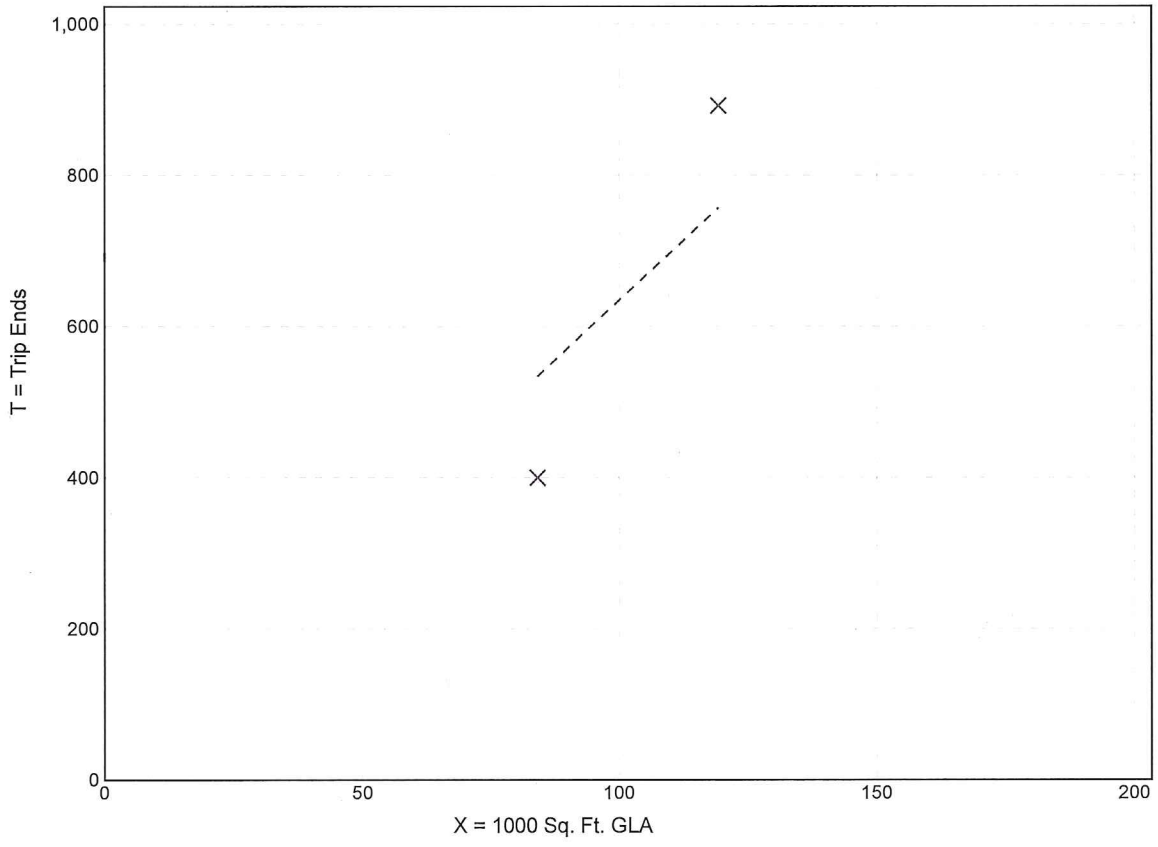
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 2
1000 Sq. Ft. GLA: 102
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.35	4.76 - 7.48	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

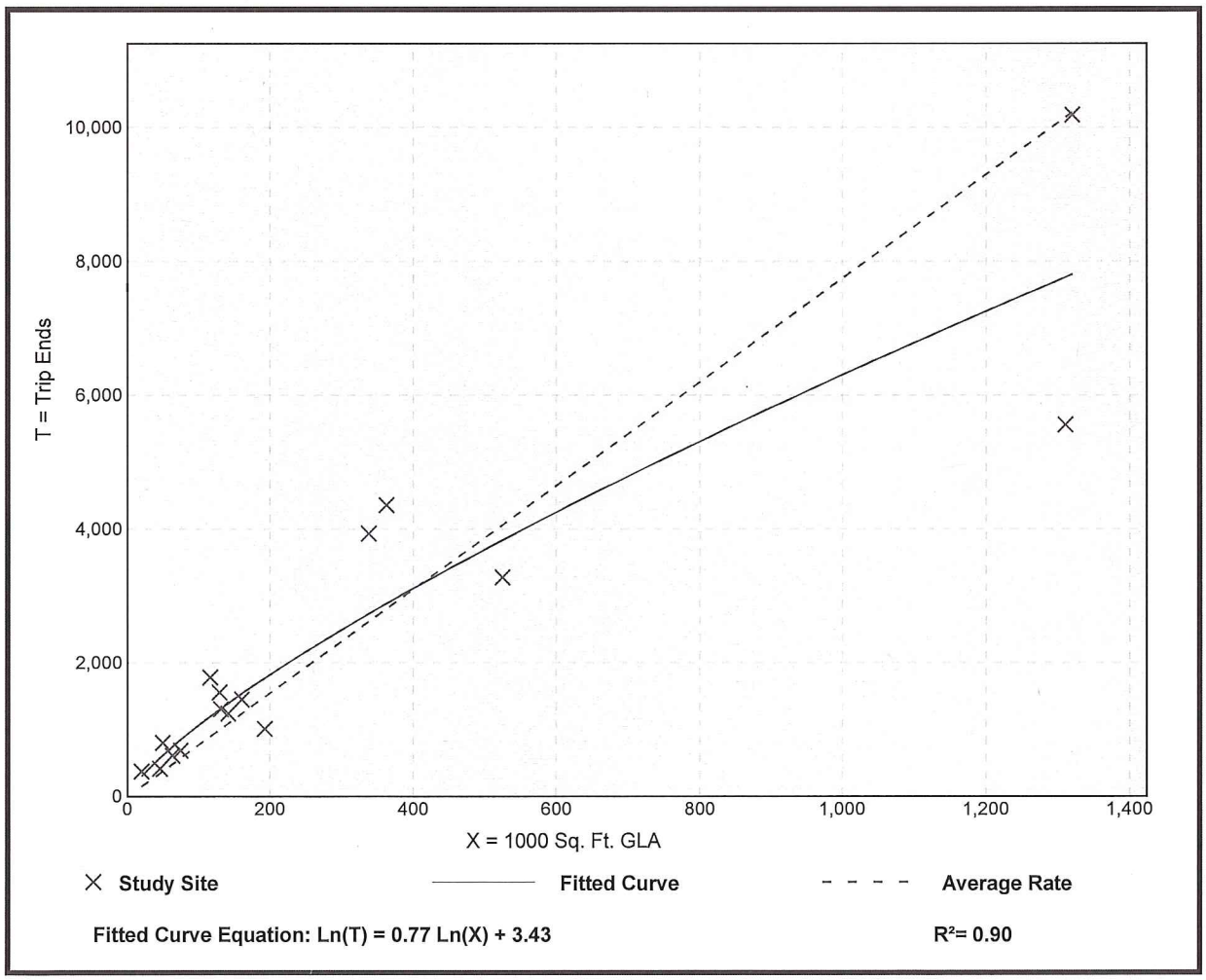
Shopping Center
(820)

Person Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 16
1000 Sq. Ft. GLA: 311
Directional Distribution: 50% entering, 50% exiting

Person Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
7.75	4.24 - 19.12	3.19

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.77 Ln(X) + 3.43

R^2= 0.90

Shopping Center
(820)

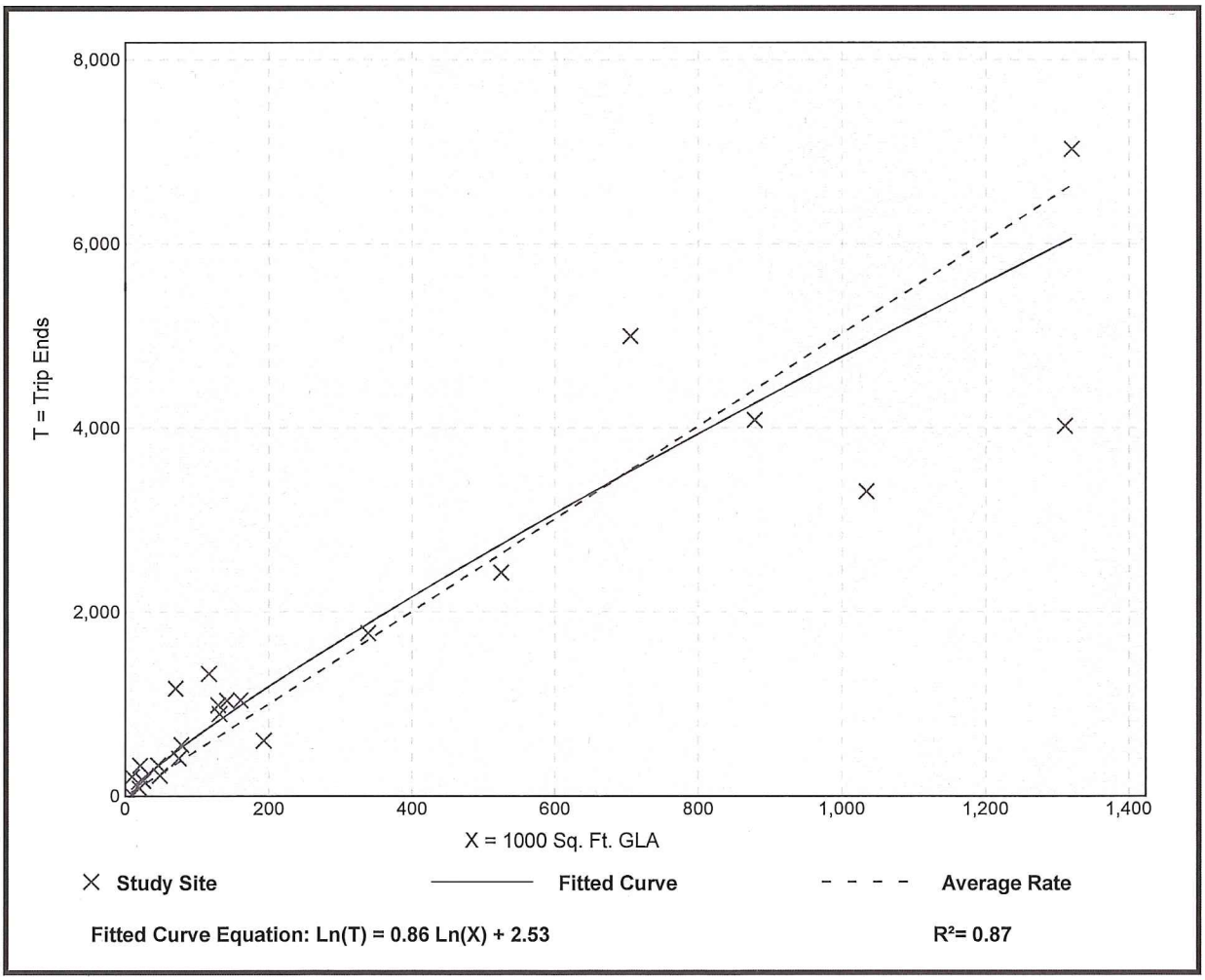
Person Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 23
1000 Sq. Ft. GLA: 321
Directional Distribution: 54% entering, 46% exiting

Person Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
5.03	2.52 - 23.03	2.25

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 2.53

R^2= 0.87

Shopping Center
(820)

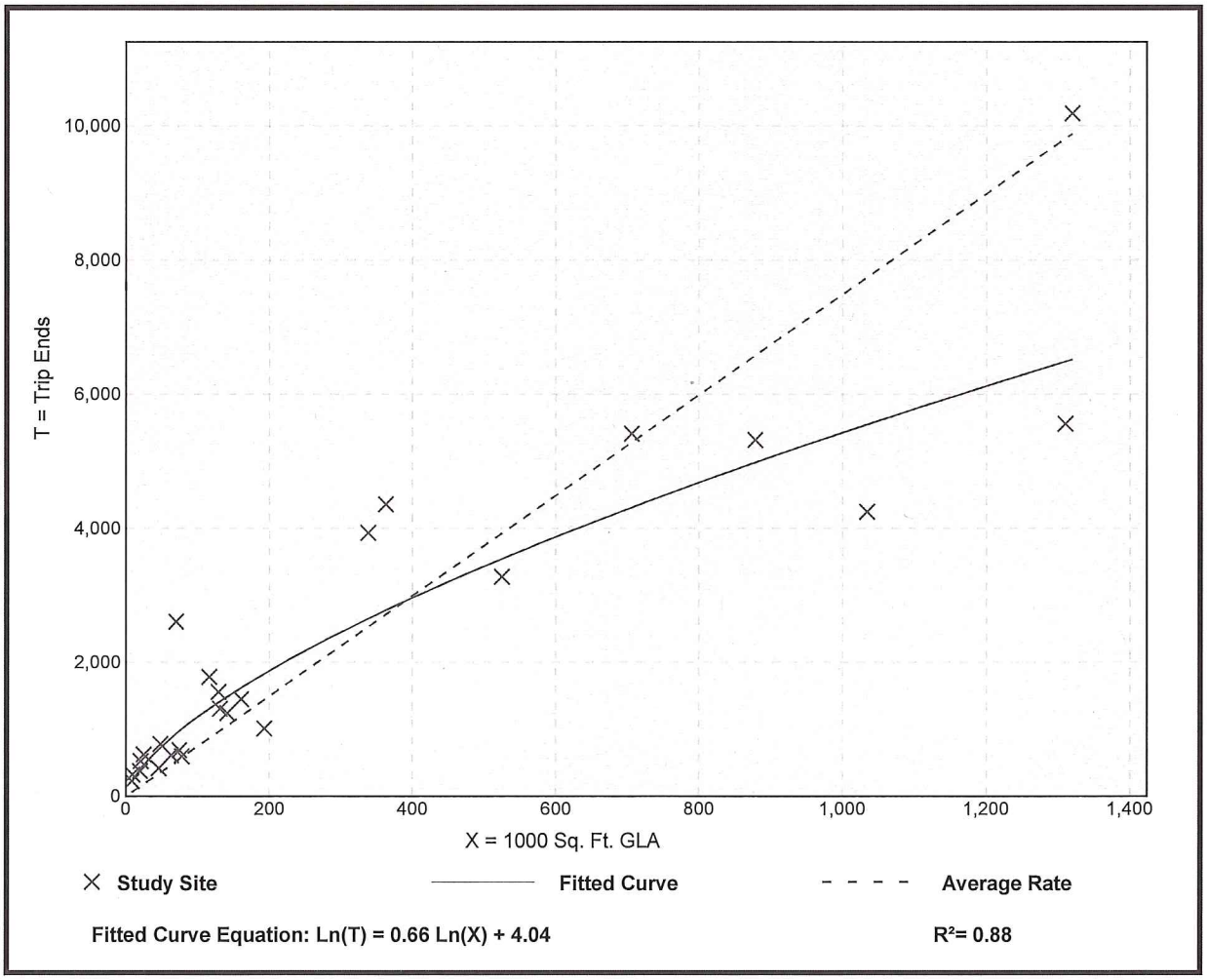
Person Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 25
1000 Sq. Ft. GLA: 312
Directional Distribution: 50% entering, 50% exiting

Person Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
7.49	4.11 - 37.41	4.45

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 4.04

R^2= 0.88

Shopping Center
(820)

Person Trip Ends vs: **Employees**
On a: **Weekday,**
AM Peak Hour of Generator

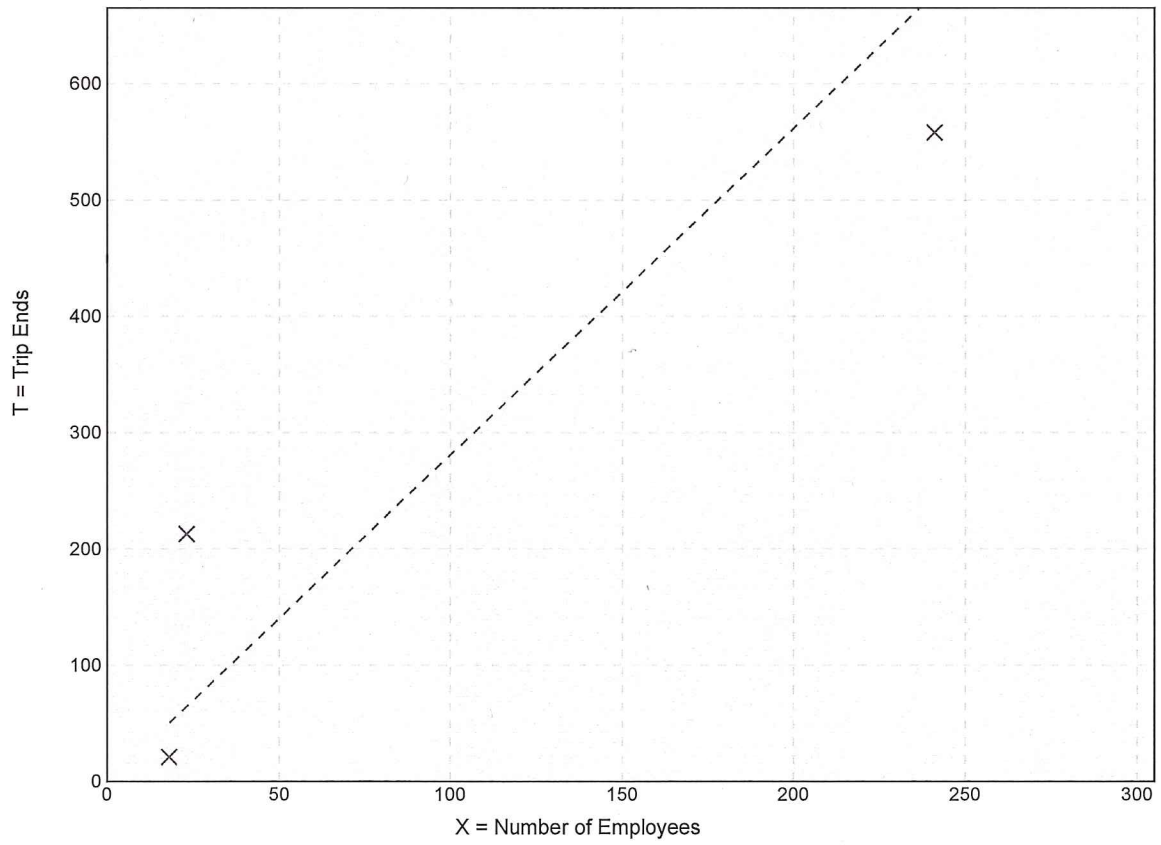
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. Num. of Employees: 94
Directional Distribution: 46% entering, 54% exiting

Person Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
2.81	1.17 - 9.26	6.80

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

Person Trip Ends vs: **Employees**
On a: **Weekday,**
PM Peak Hour of Generator

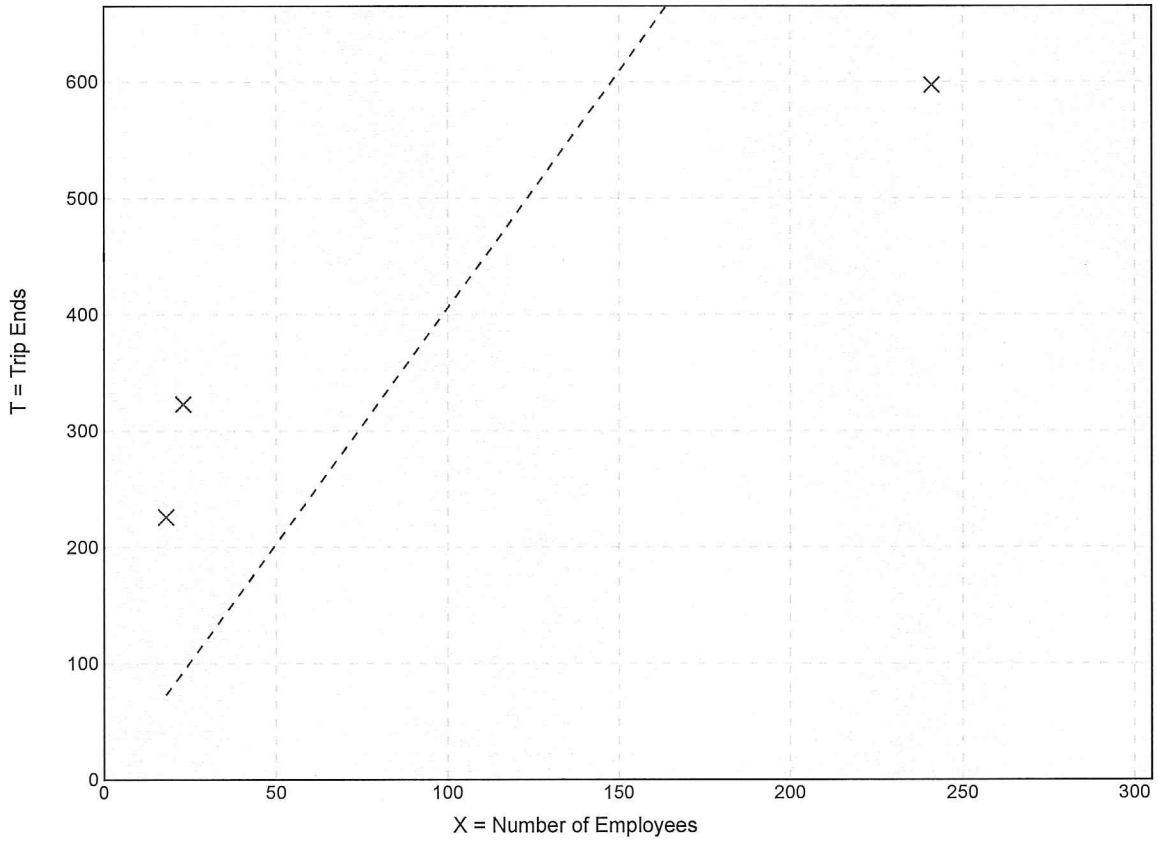
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. Num. of Employees: 94
Directional Distribution: 55% entering, 45% exiting

Person Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.06	2.48 - 14.04	13.43

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Shopping Center
(820)

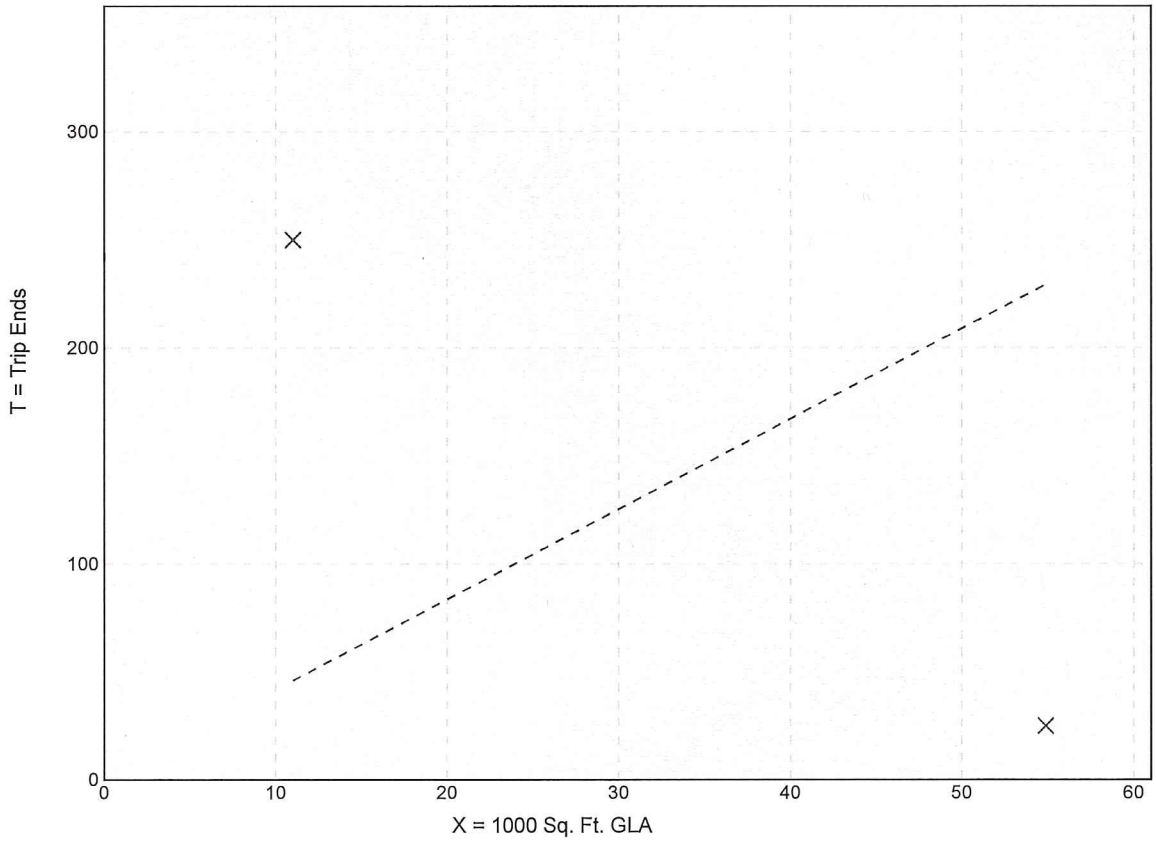
Person Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 2
1000 Sq. Ft. GLA: 33
Directional Distribution: 52% entering, 48% exiting

Person Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.18	0.46 - 22.72	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Shopping Center
(820)

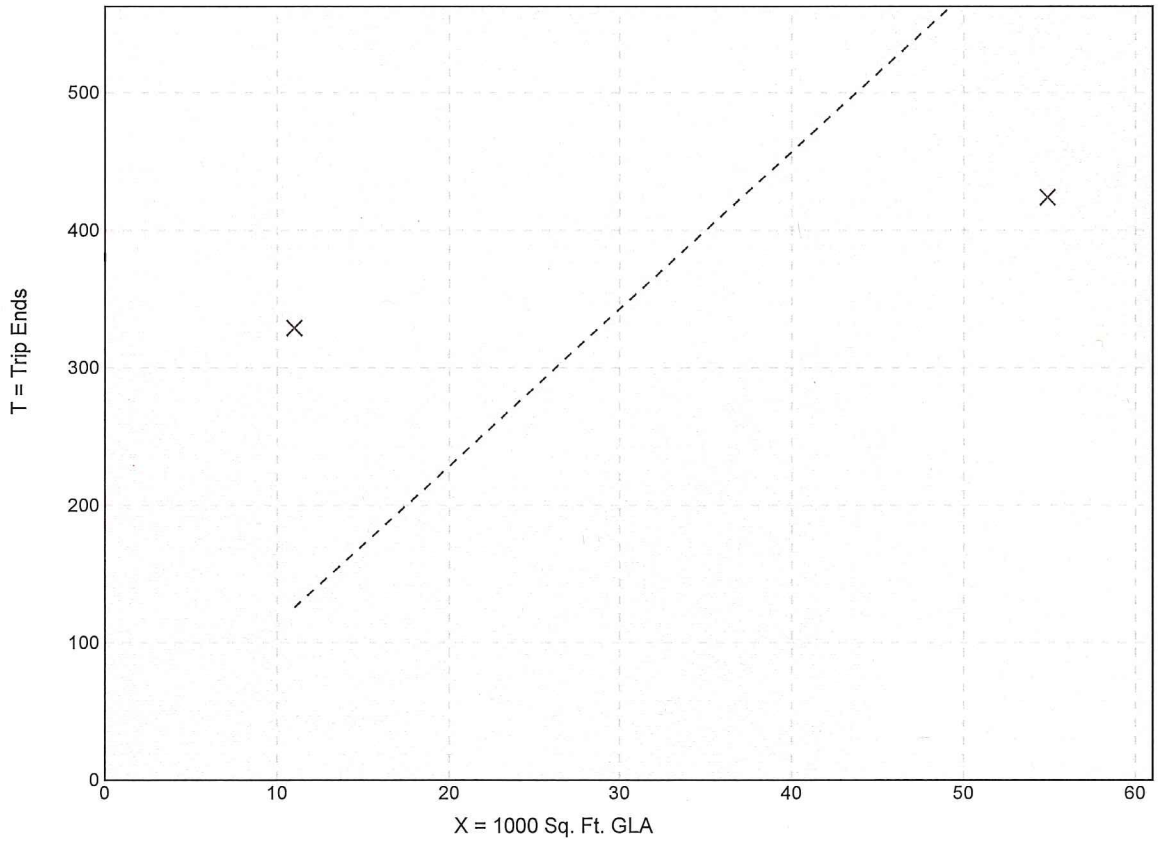
Person Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 2
1000 Sq. Ft. GLA: 33
Directional Distribution: 47% entering, 53% exiting

Person Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
11.43	7.73 - 29.90	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Land Use: 934
Fast-Food Restaurant with Drive-Through Window

Description

This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 46 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively. For the one dense multi-use urban site with data, the same AM and PM peak hours were observed.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

163, 164, 168, 180, 181, 241, 245, 278, 294, 300, 301, 319, 338, 340, 342, 358, 389, 438, 502, 552, 577, 583, 584, 617, 640, 641, 704, 715, 728, 810, 866, 867, 869, 885, 886, 927, 935, 962, 977

Fast-Food Restaurant with Drive-Through Window
(934)

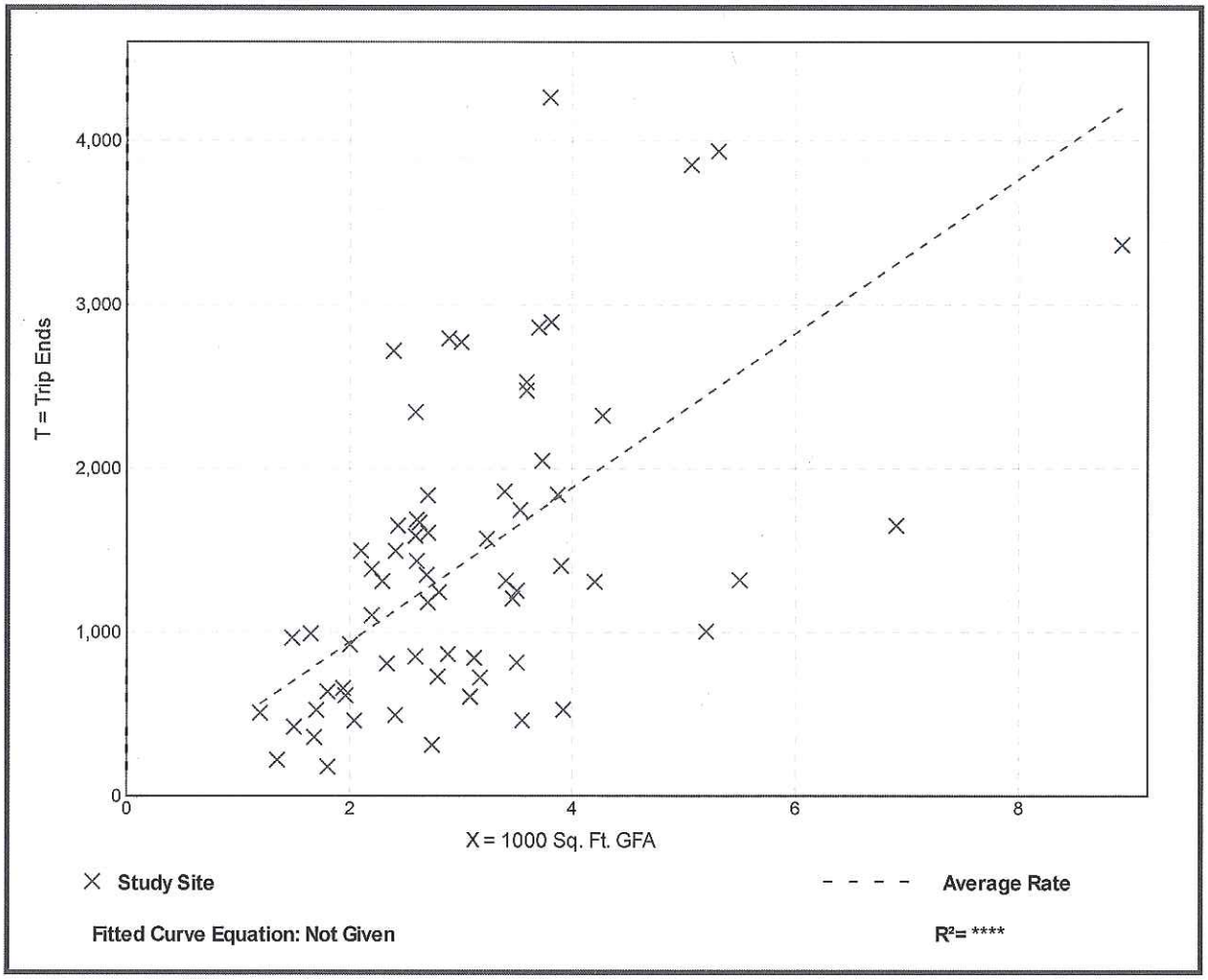
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 67
1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
470.95	98.89 - 1137.66	244.44

Data Plot and Equation



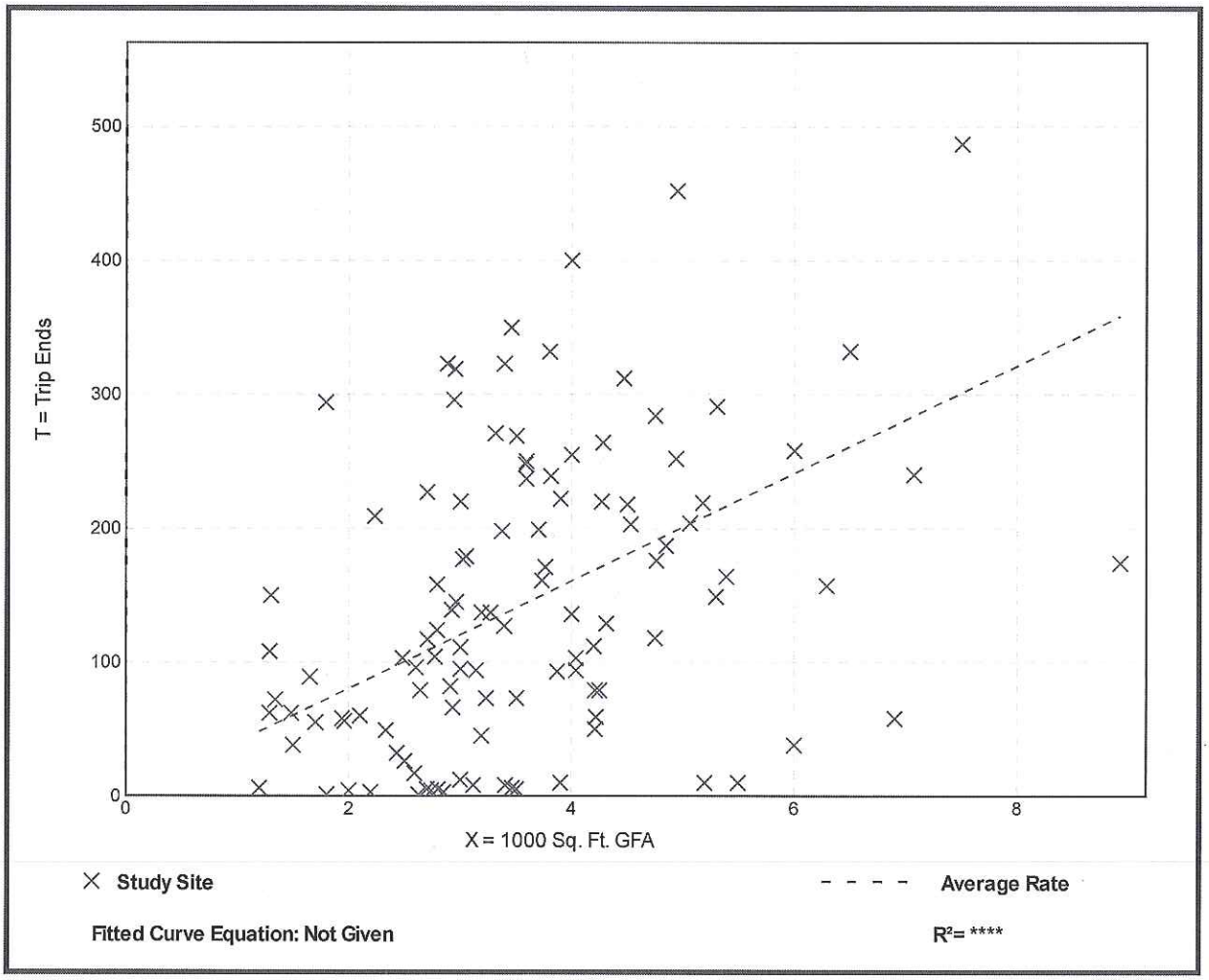
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	111
1000 Sq. Ft. GFA:	4
Directional Distribution:	51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
40.19	0.38 - 164.25	28.78

Data Plot and Equation



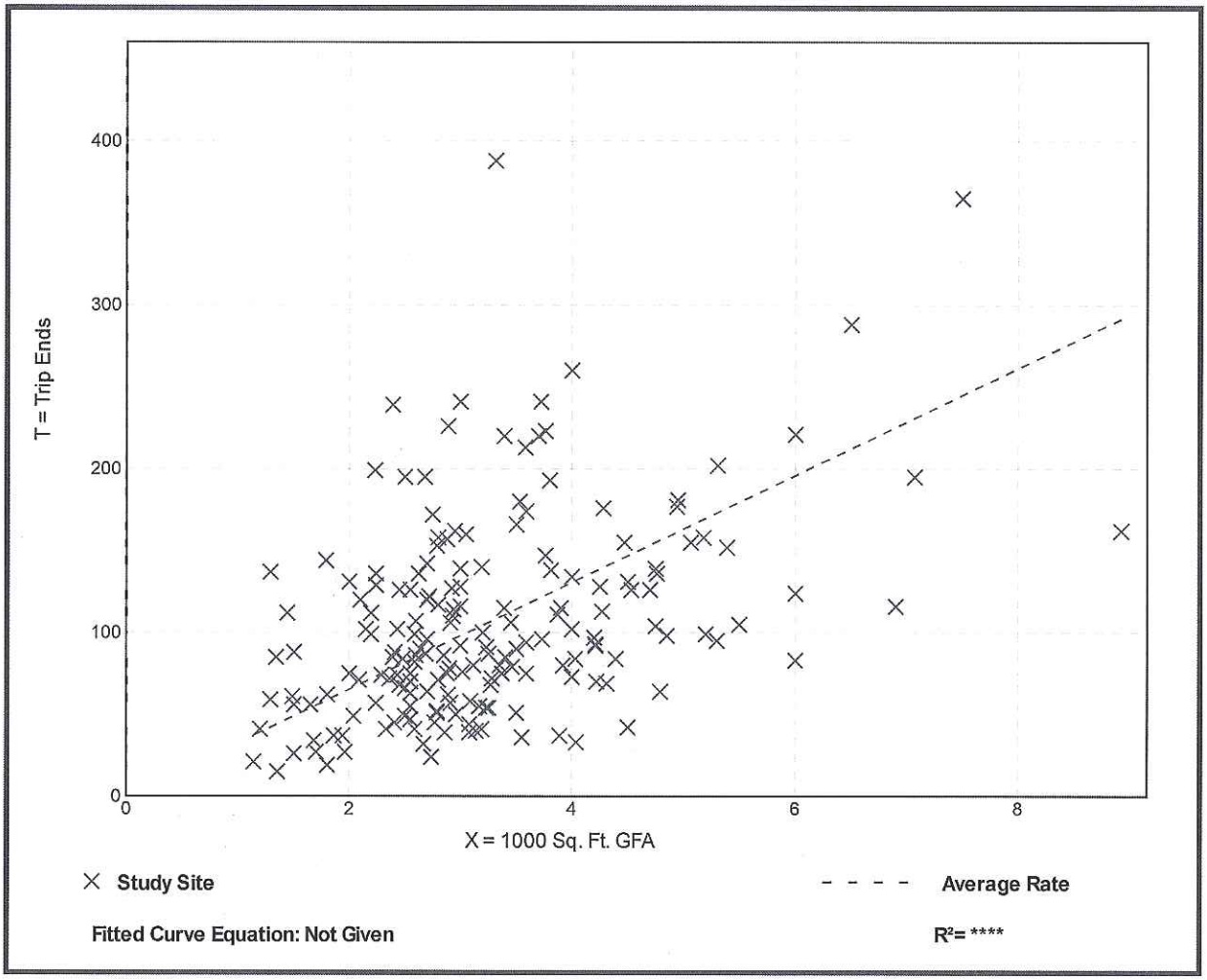
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 185
1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.67	8.17 - 117.22	17.87

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

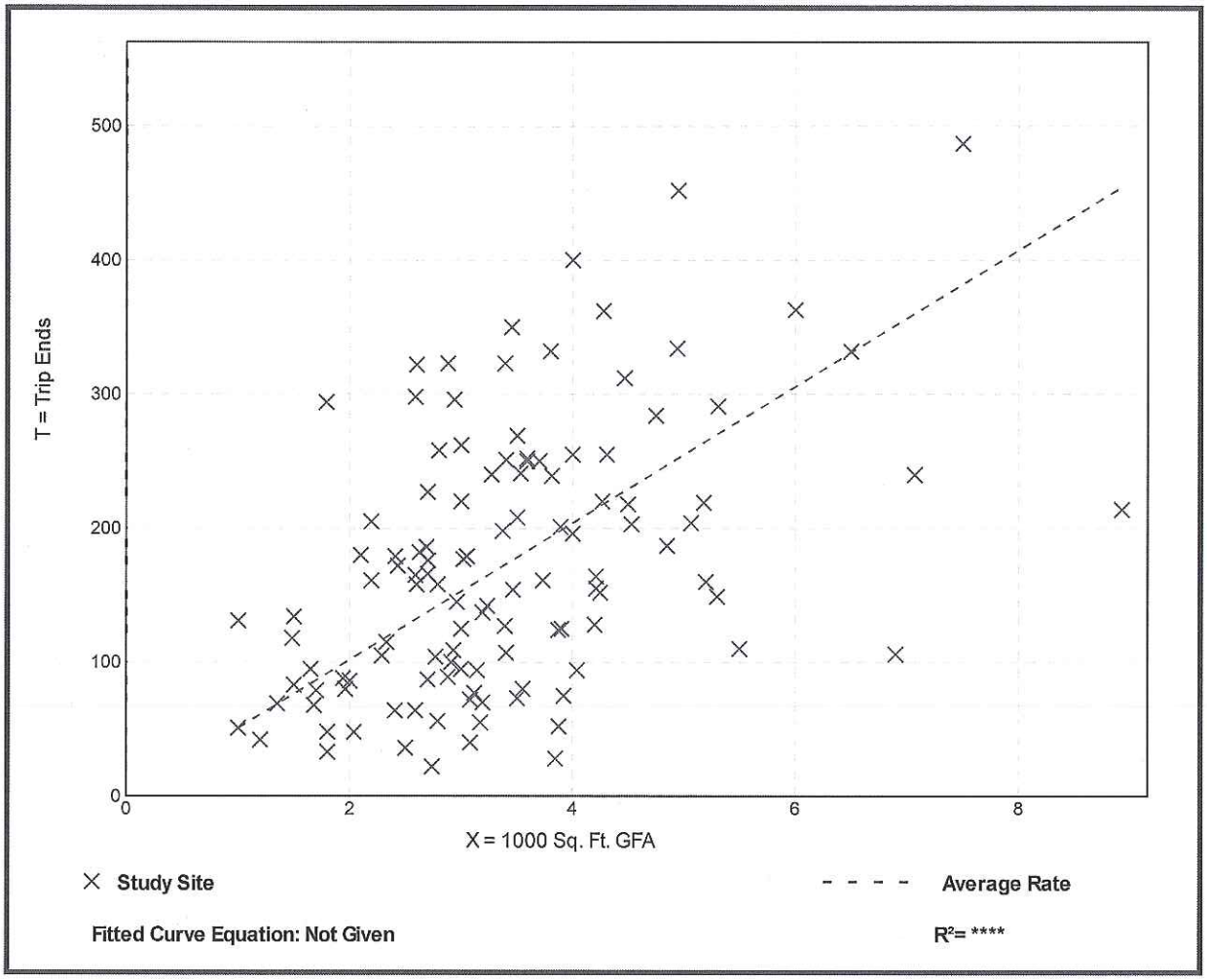
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 117
1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
50.97	7.28 - 164.25	26.22

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

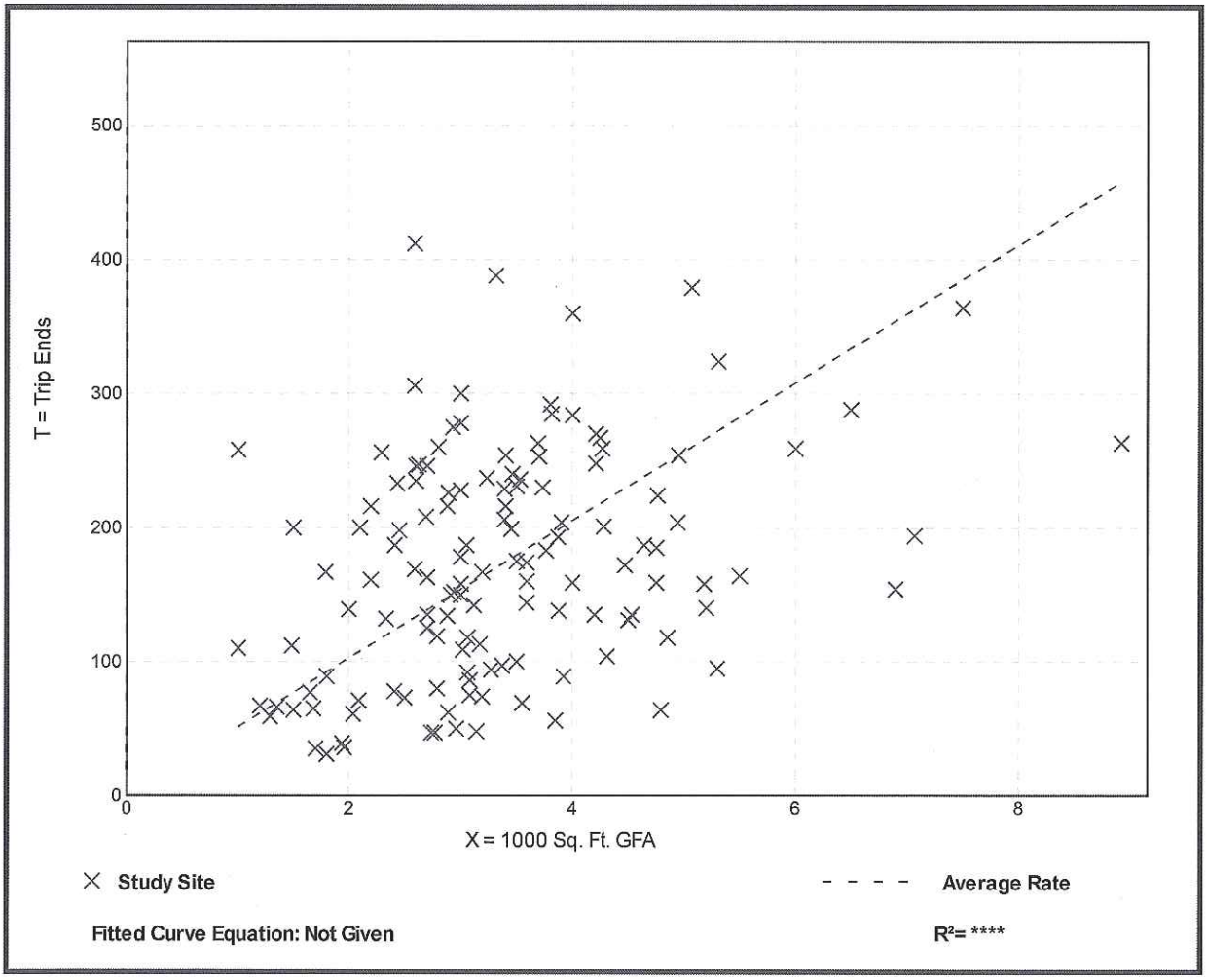
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 132
1000 Sq. Ft. GFA: 3
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
51.36	13.36 - 258.00	27.47

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

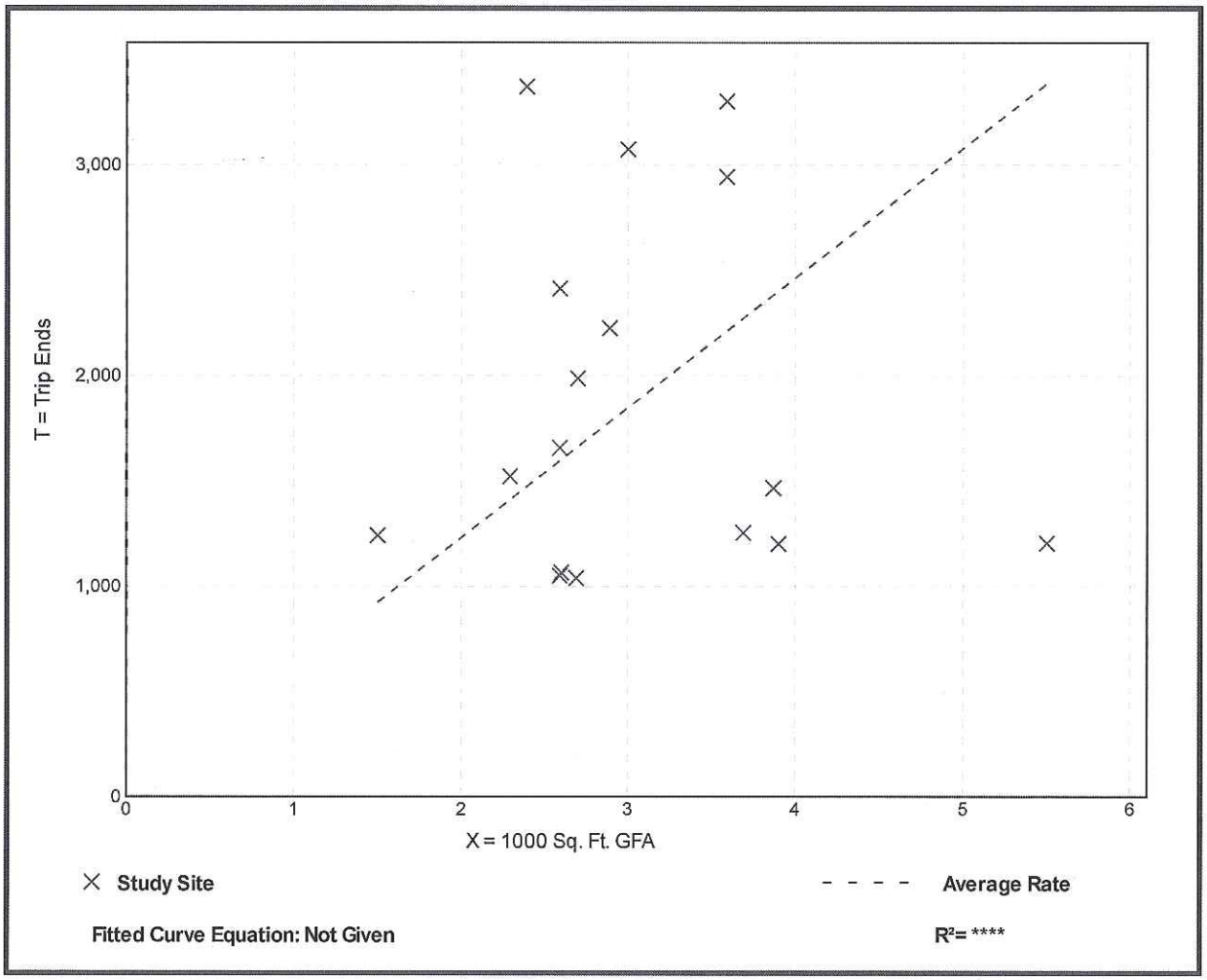
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 17
1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
616.12	218.91 - 1410.88	320.90

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

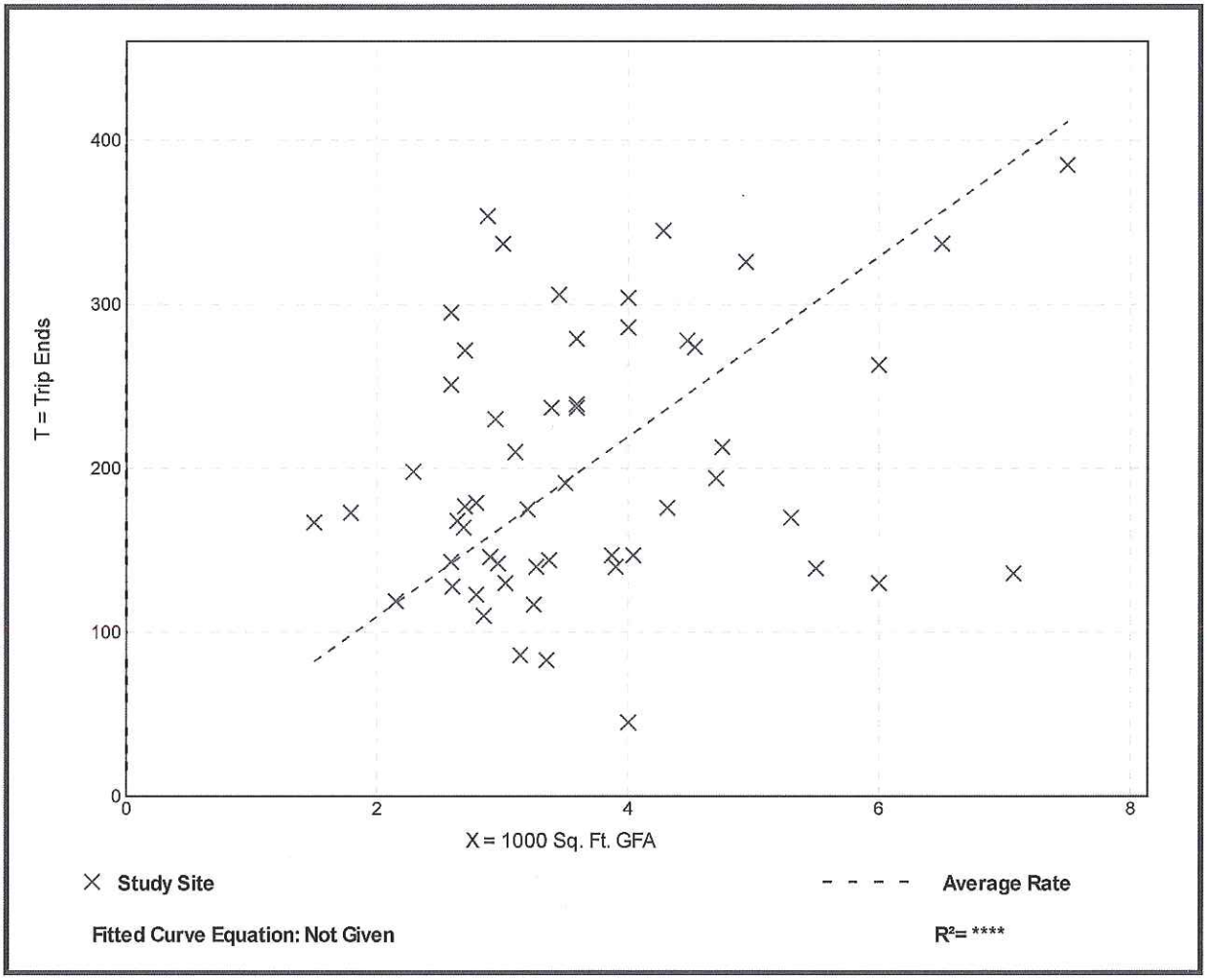
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.86	11.25 - 122.92	24.51

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

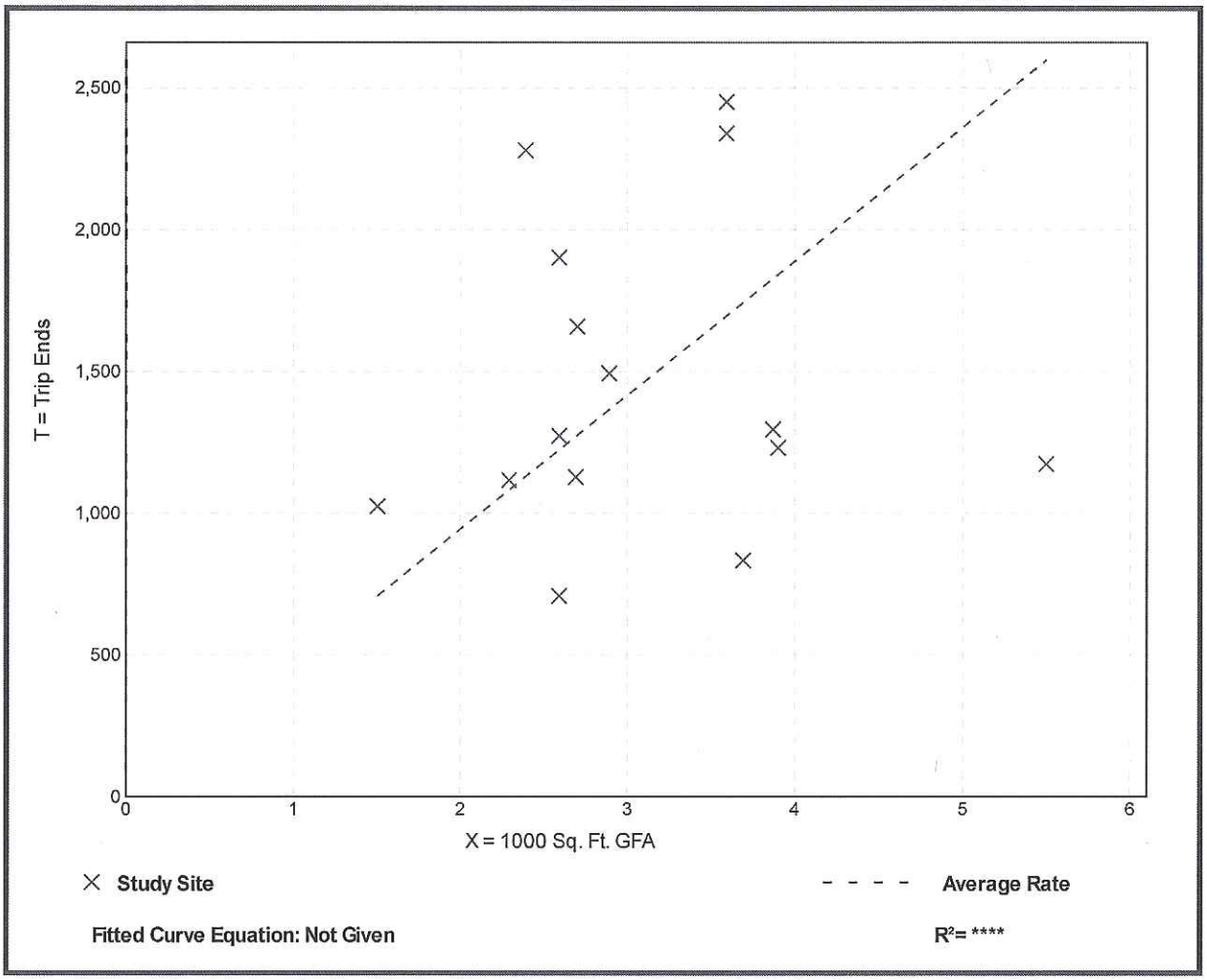
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Sunday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 15
1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
472.58	213.45 - 953.97	215.31

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

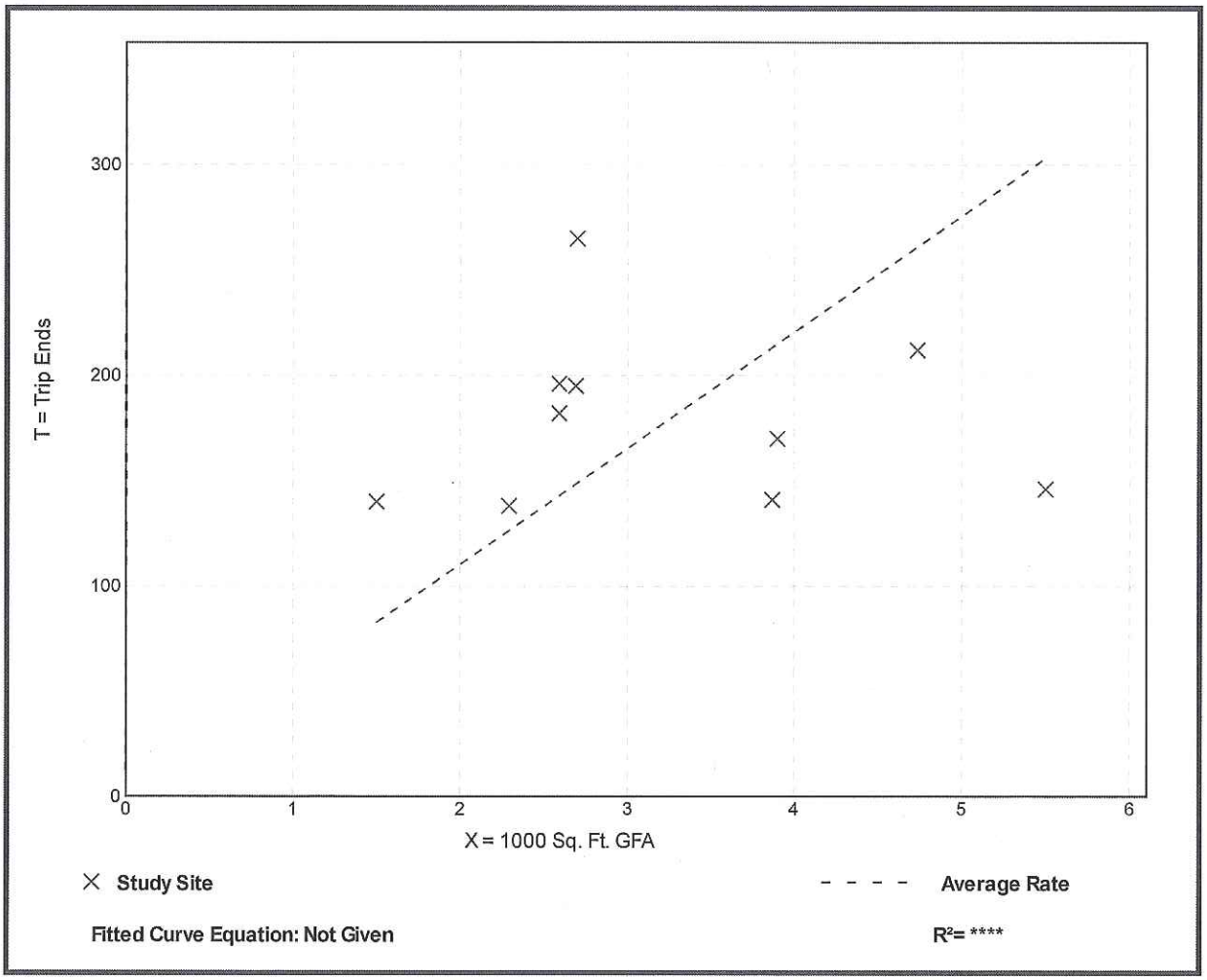
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Sunday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
1000 Sq. Ft. GFA: 3
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
55.15	26.55 - 98.15	23.88

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

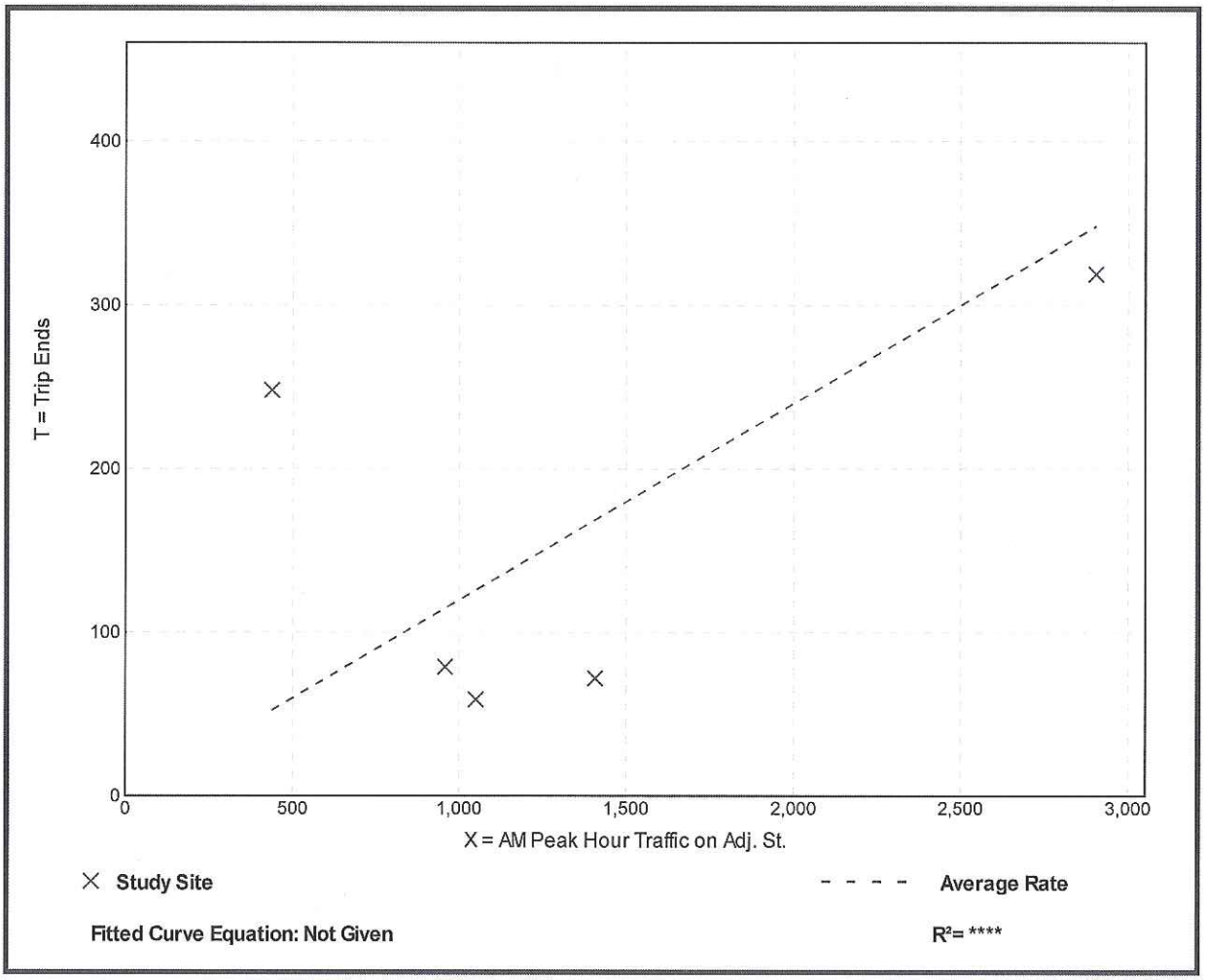
Vehicle Trip Ends vs:	**AM Peak Hour Traffic on Adj. St.**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	5
AM Peak Hour Traffic on Adj. St.:	1351
Directional Distribution:	54% entering, 46% exiting

Vehicle Trip Generation per AM Peak Hour Traffic on Adj. St.

Average Rate	Range of Rates	Standard Deviation
0.12	0.05 - 0.57	0.14

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

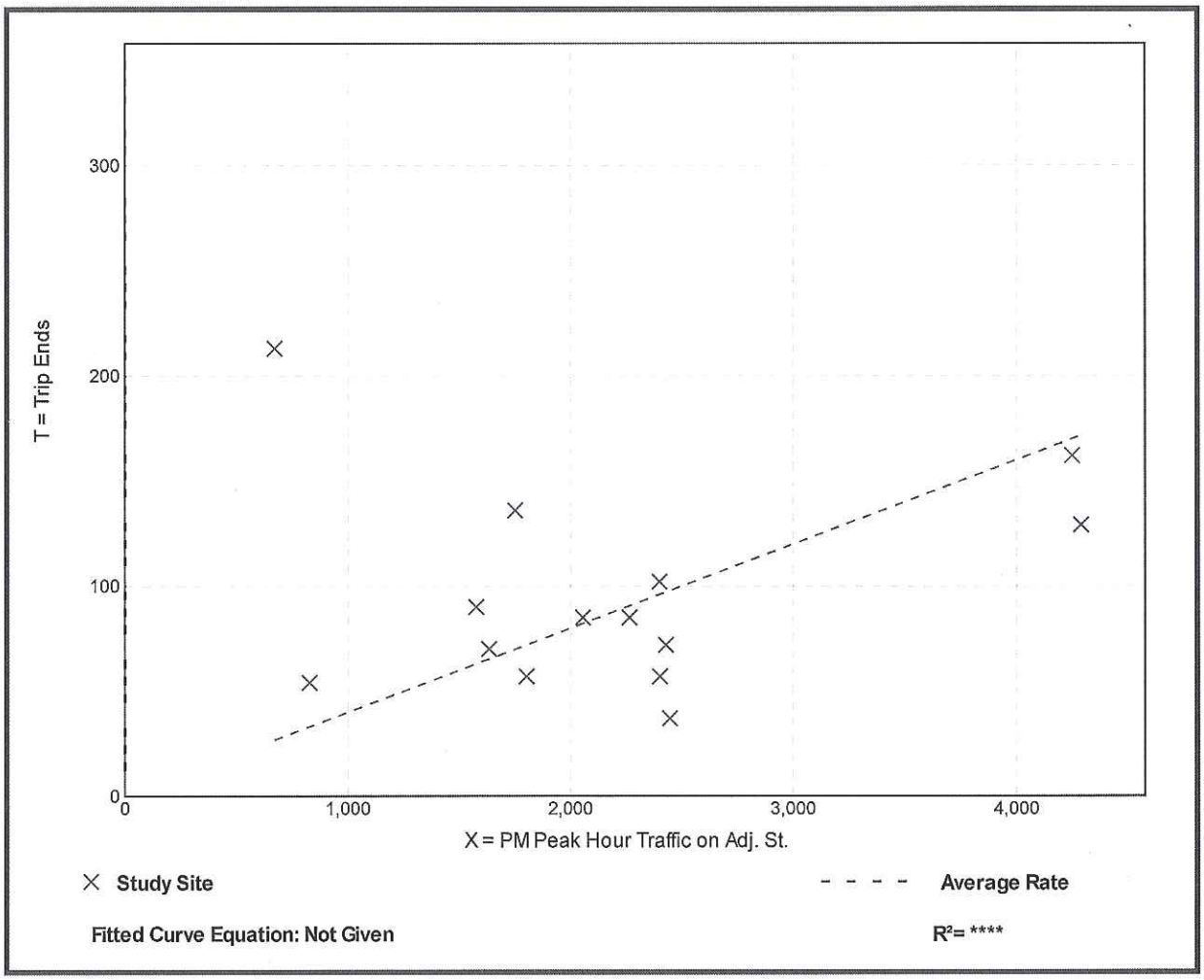
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**PM Peak Hour Traffic on Adj. St.**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	14
PM Peak Hour Traffic on Adj. St.:	2199
Directional Distribution:	53% entering, 47% exiting

Vehicle Trip Generation per PM Peak Hour Traffic on Adj. St.

Average Rate	Range of Rates	Standard Deviation
0.04	0.02 - 0.32	0.04

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

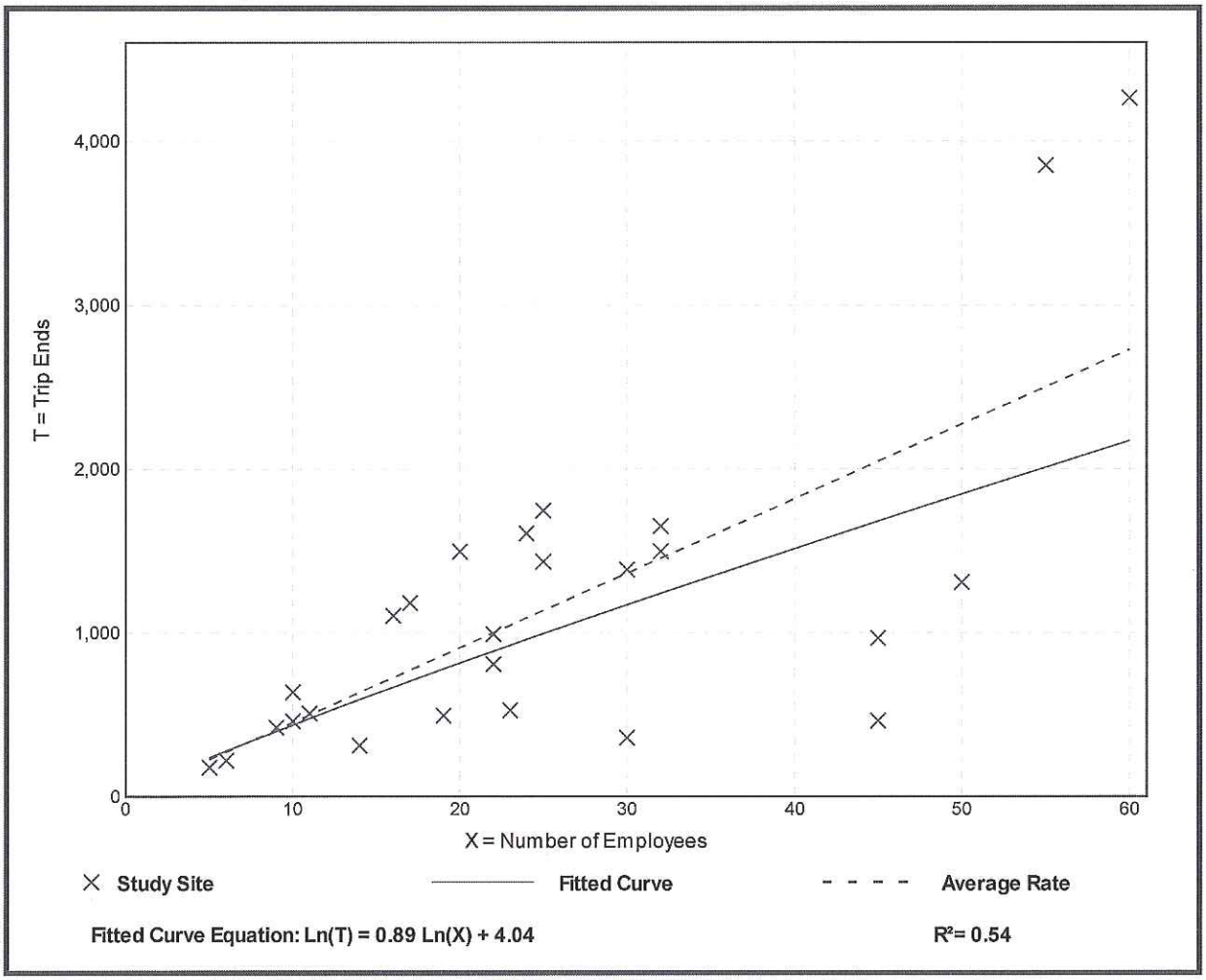
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 26
Avg. Num. of Employees: 25
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
45.49	10.27 - 74.85	22.00

Data Plot and Equation



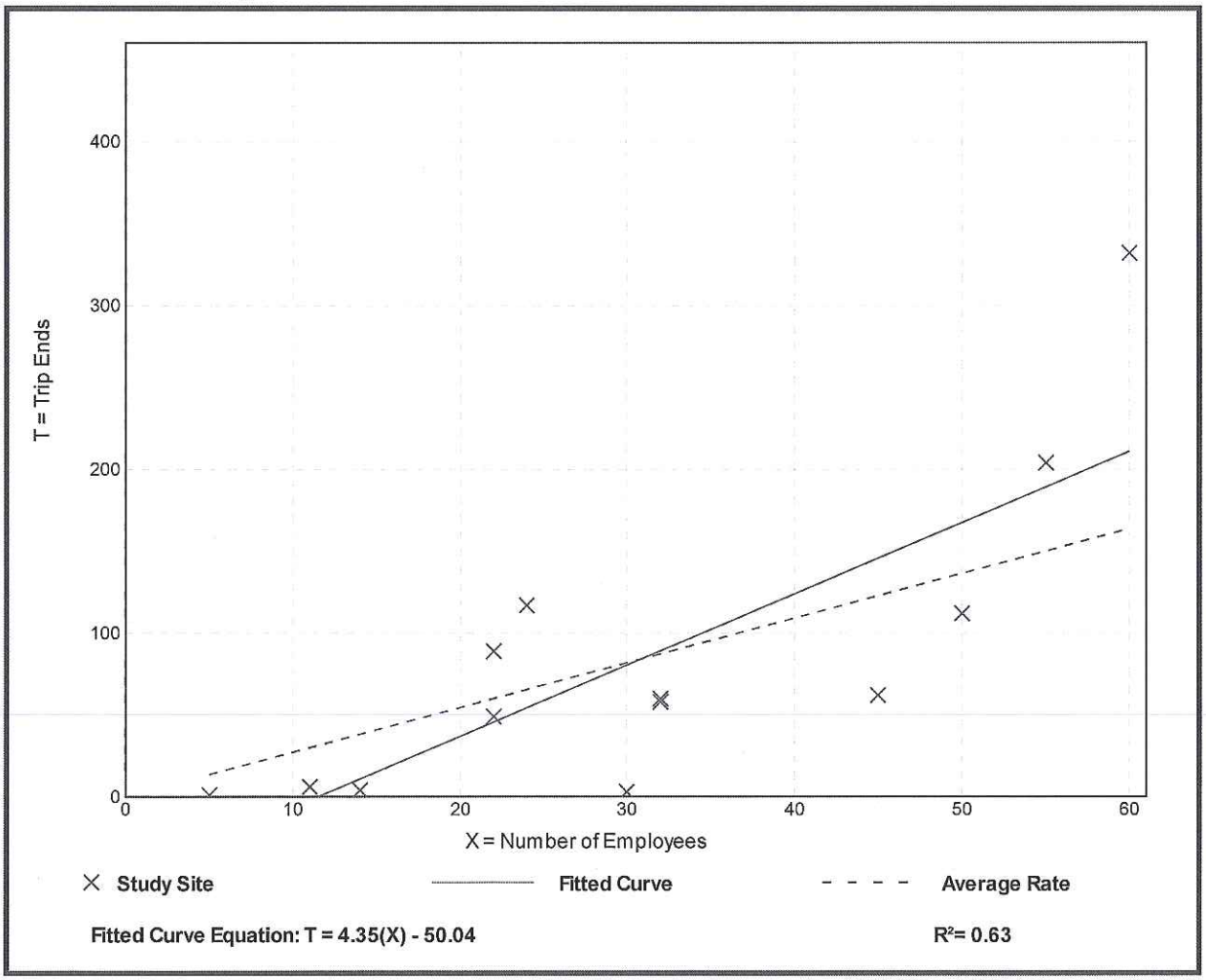
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**Employees**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	13
Avg. Num. of Employees:	31
Directional Distribution:	52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
2.73	0.10 - 5.53	1.80

Data Plot and Equation



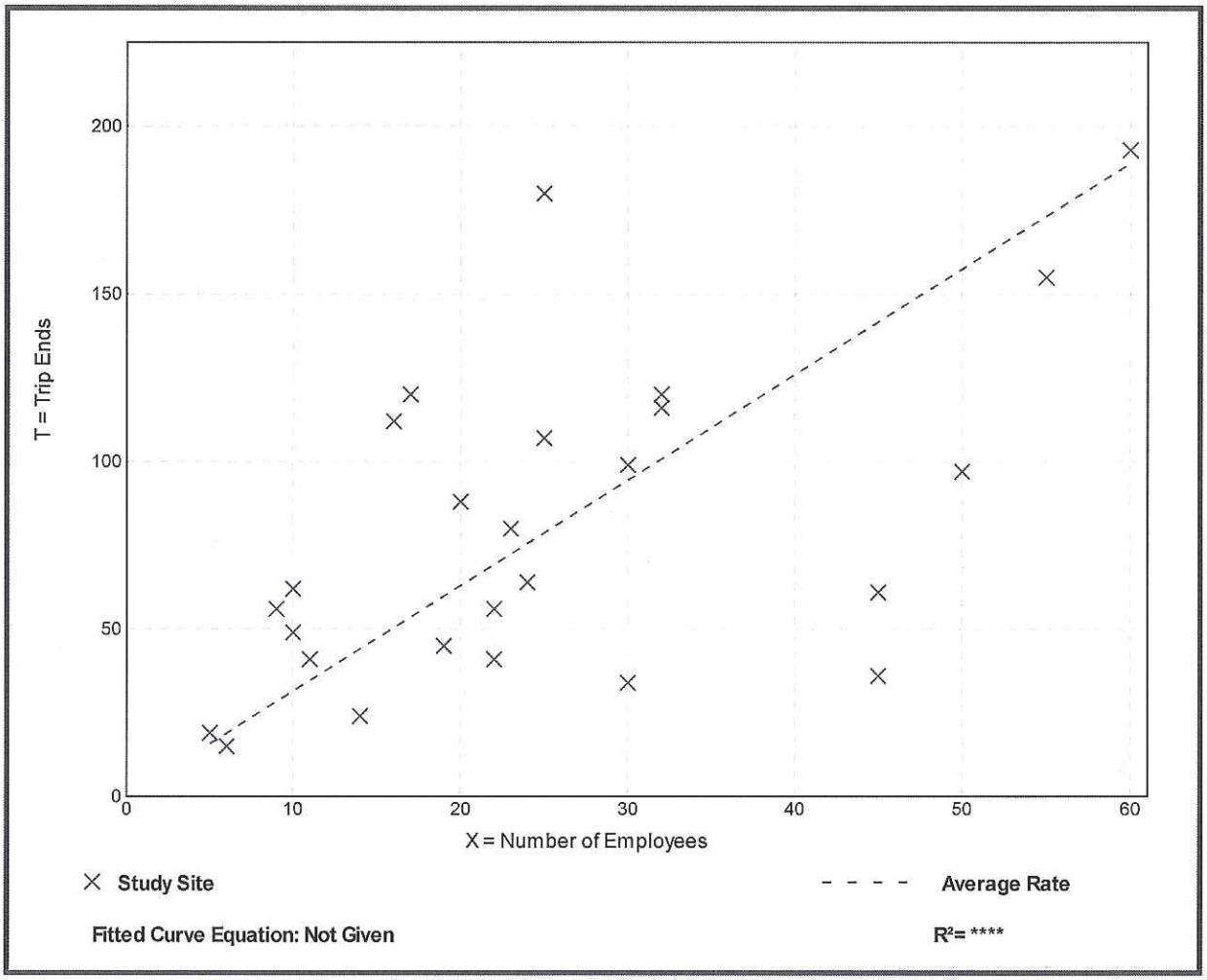
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**Employees**
On a:	**Weekday,** **Peak Hour of Adjacent Street Traffic,** **One Hour Between 4 and 6 p.m.**
Setting/Location:	**General Urban/Suburban**
Number of Studies:	26
Avg. Num. of Employees:	25
Directional Distribution:	52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.15	0.80 - 7.20	1.73

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

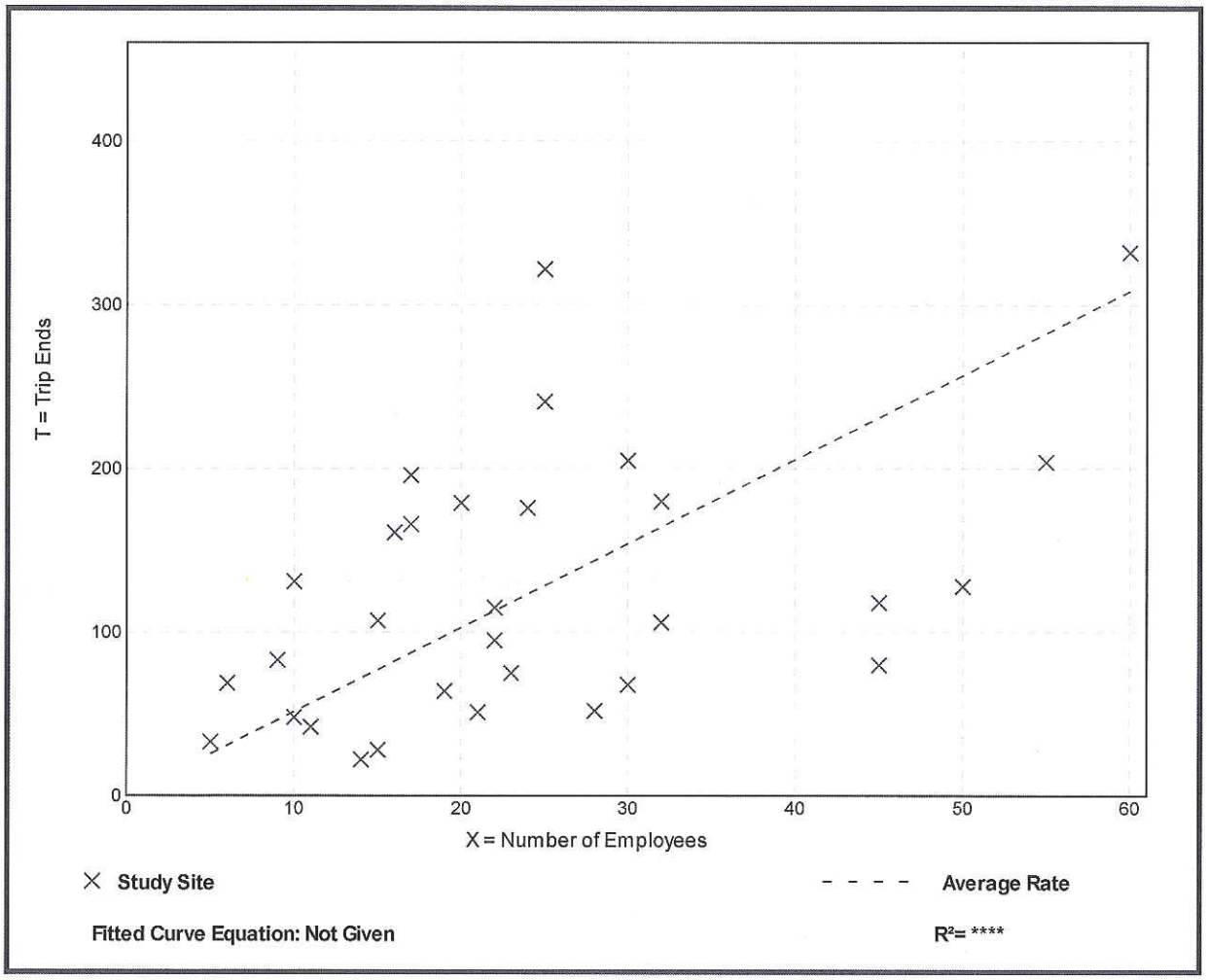
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 32
Avg. Num. of Employees: 24
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.14	1.57 - 13.10	3.21

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

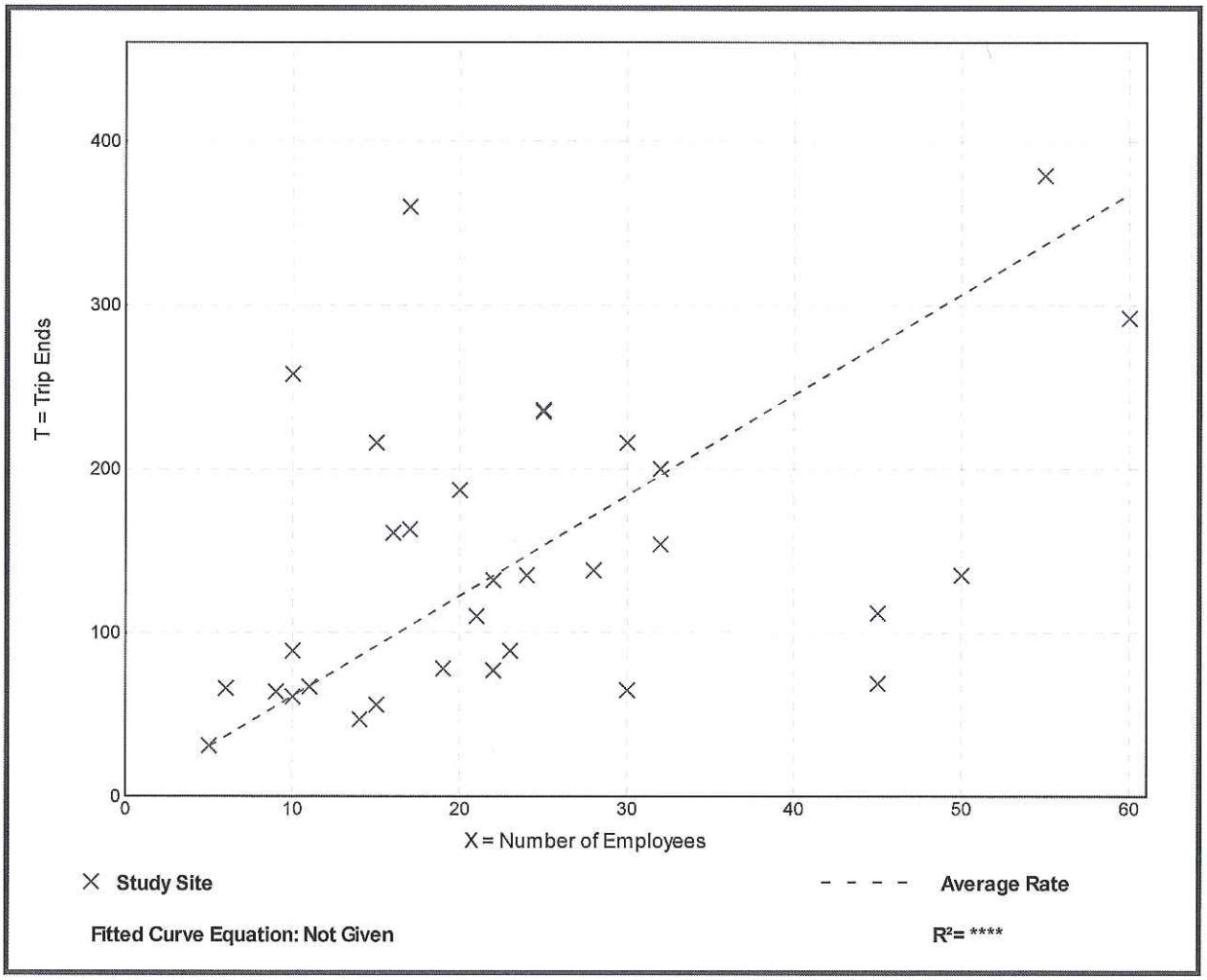
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 32
Avg. Num. of Employees: 24
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
6.13	1.53 - 25.80	4.29

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **Employees**
On a: **Sunday, Peak Hour of Generator**

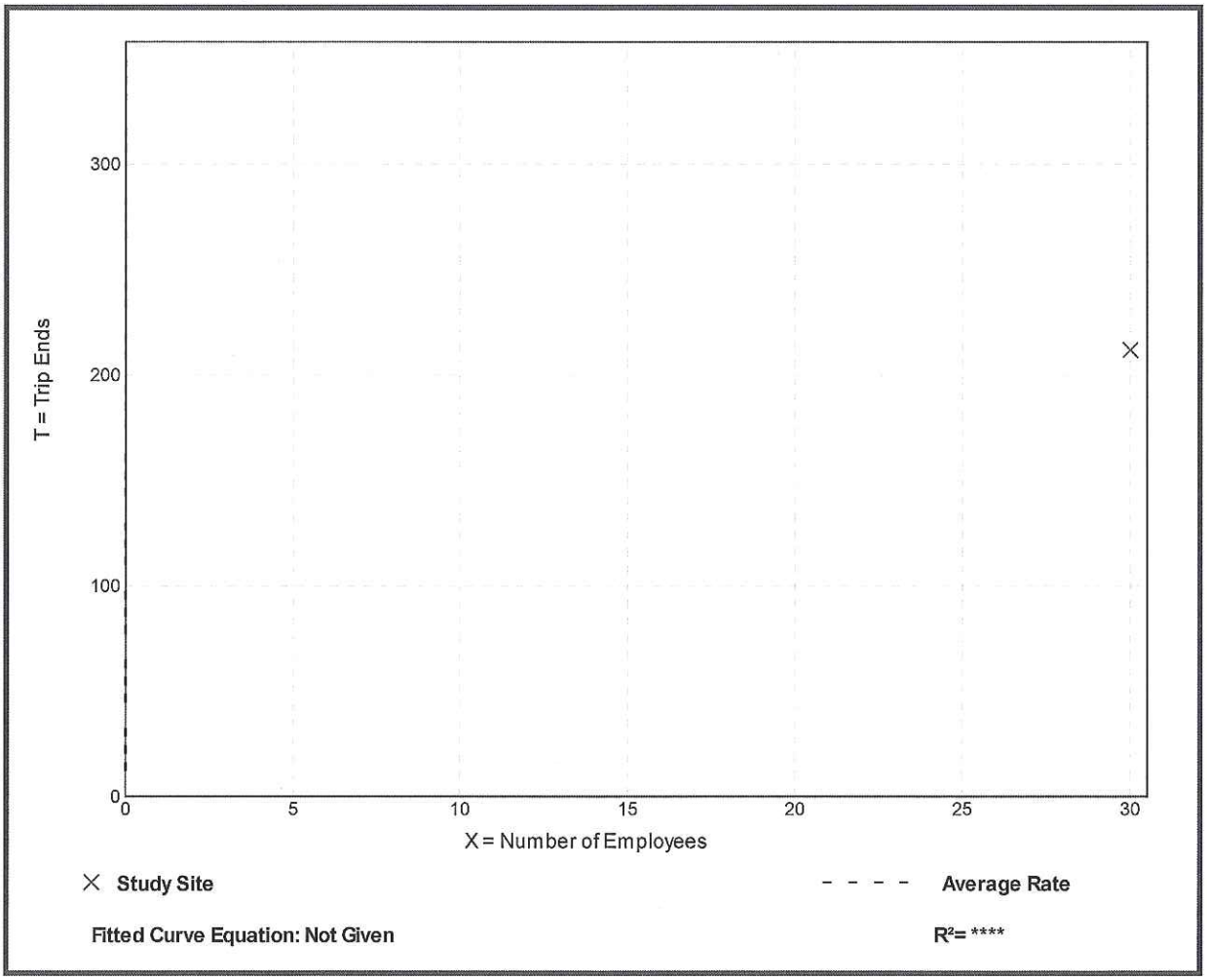
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Employees: 30
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
7.07	7.07 - 7.07	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

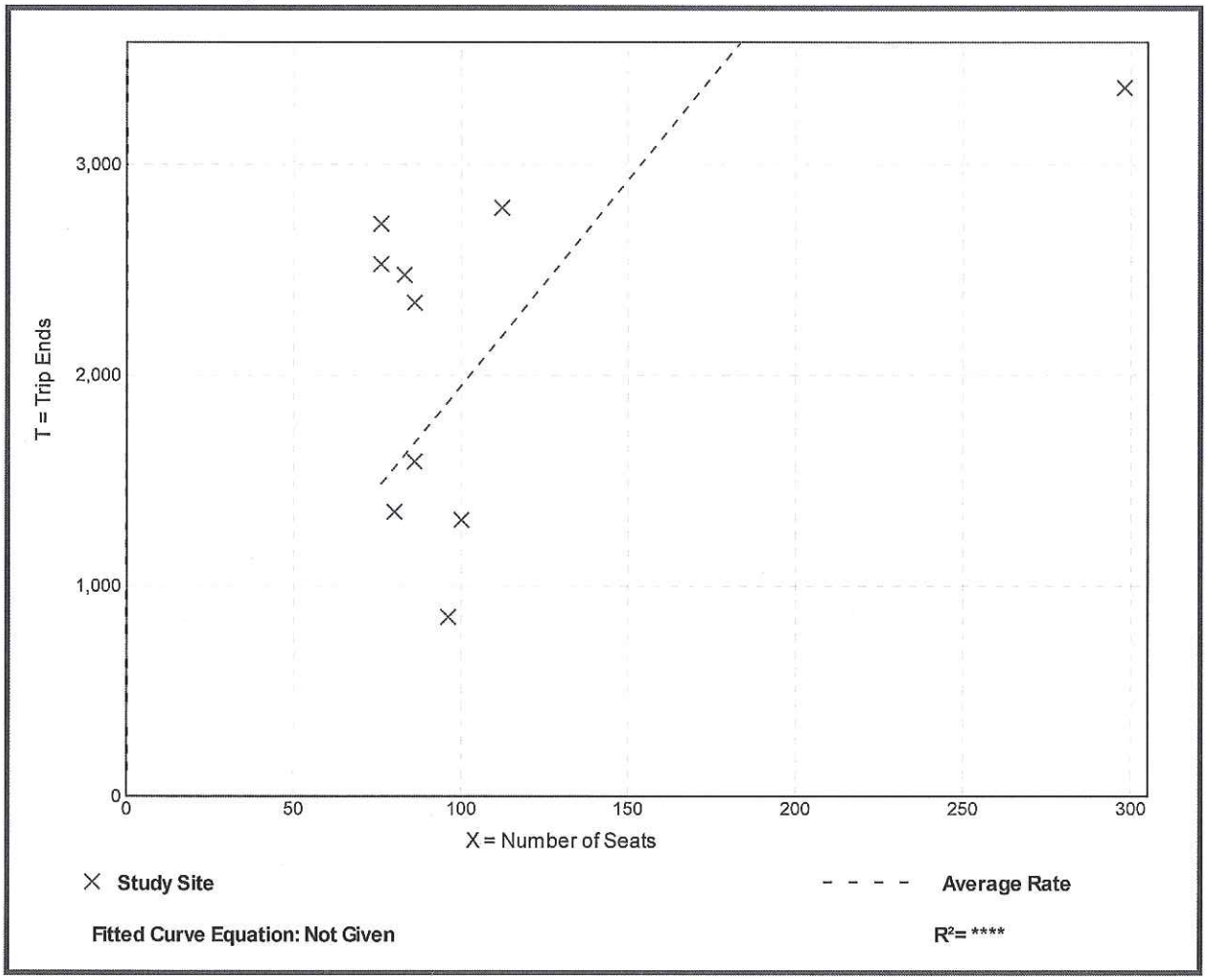
Vehicle Trip Ends vs: Seats
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 10
Avg. Num. of Seats: 109
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
19.52	8.88 - 35.78	9.43

Data Plot and Equation



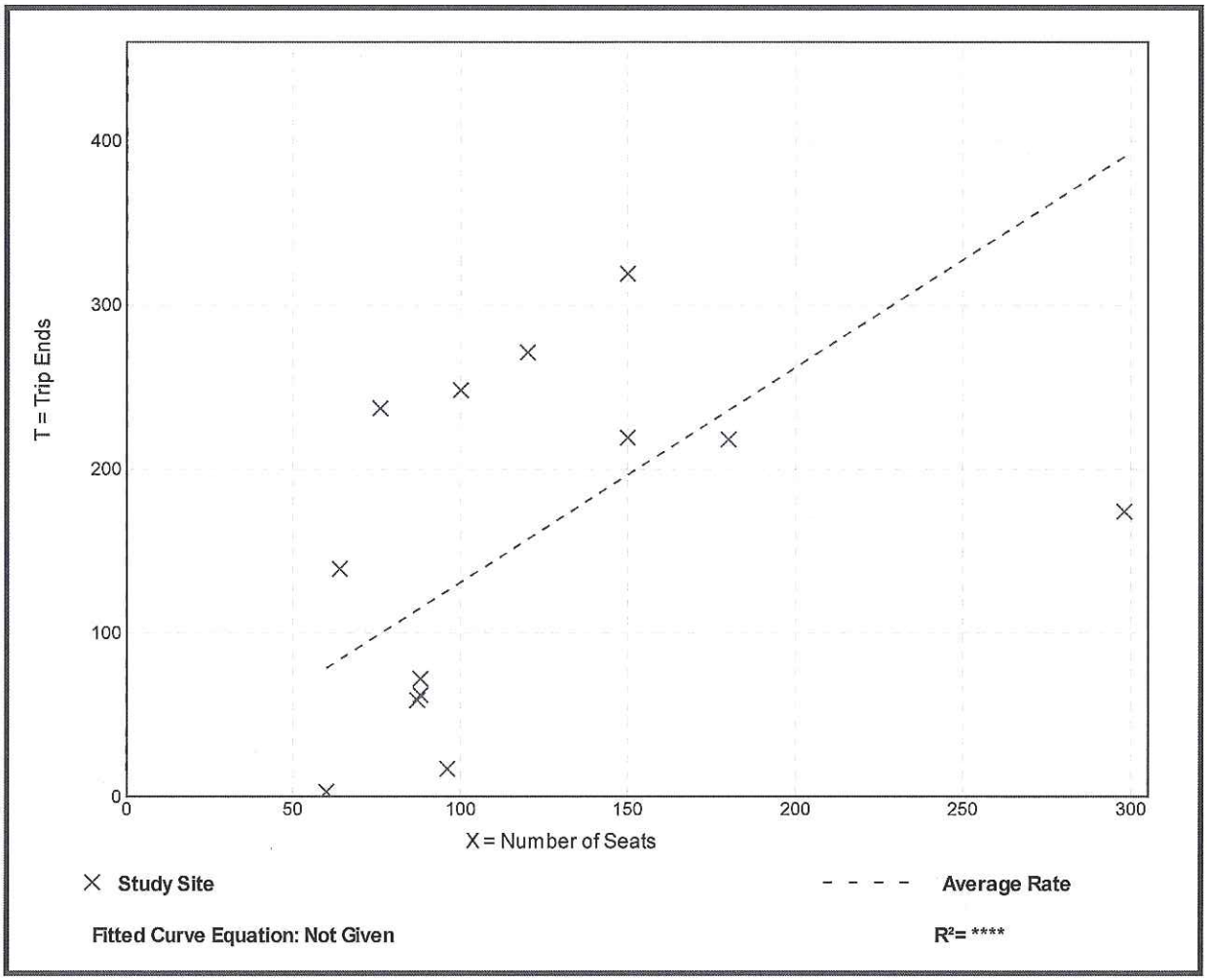
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**Seats**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	13
Avg. Num. of Seats:	120
Directional Distribution:	53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.31	0.05 - 3.12	0.88

Data Plot and Equation



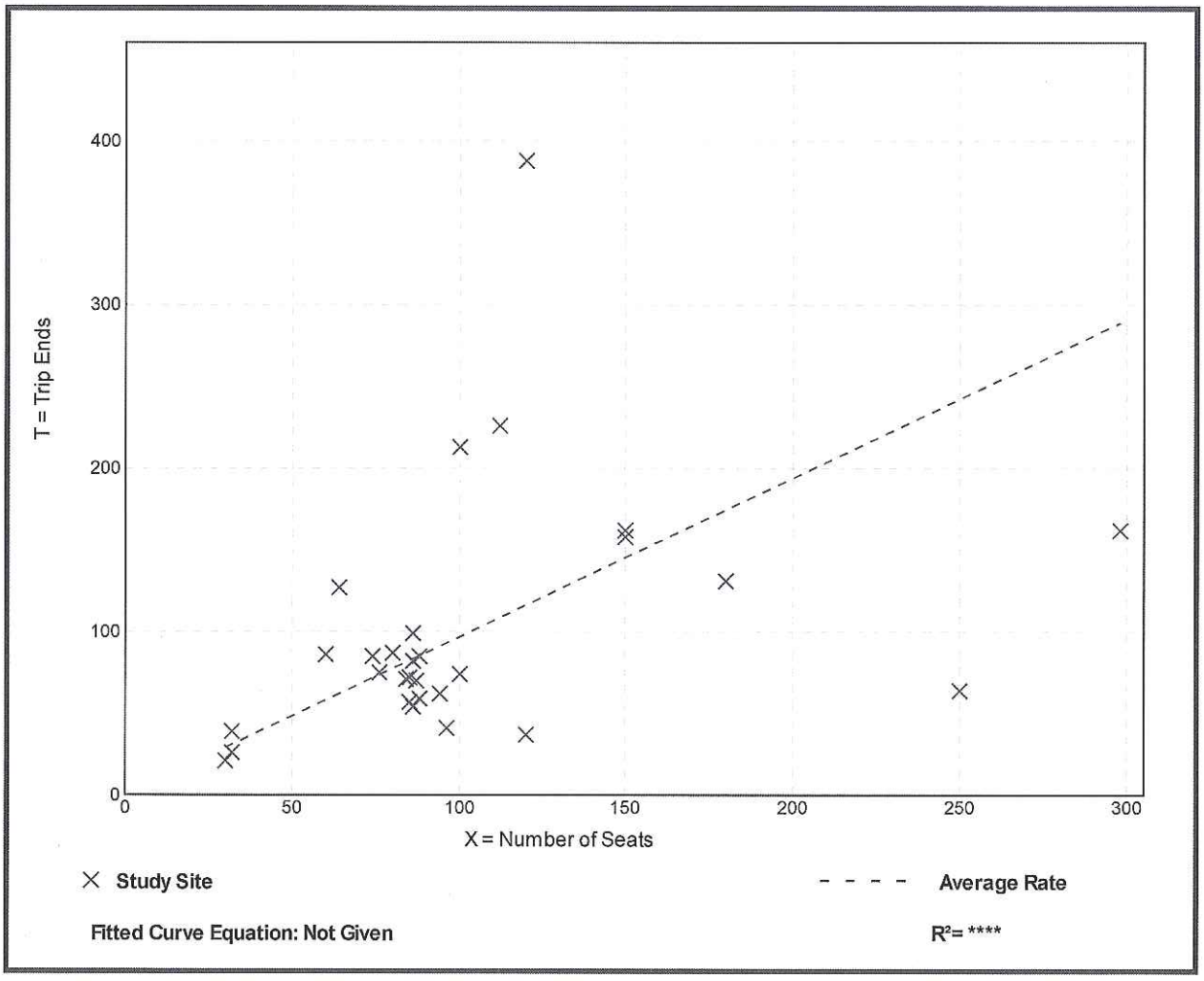
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**Seats**
On a:	**Weekday,** **Peak Hour of Adjacent Street Traffic,** **One Hour Between 4 and 6 p.m.**
Setting/Location:	**General Urban/Suburban**
Number of Studies:	29
Avg. Num. of Seats:	103
Directional Distribution:	53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.97	0.26 - 3.23	0.67

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

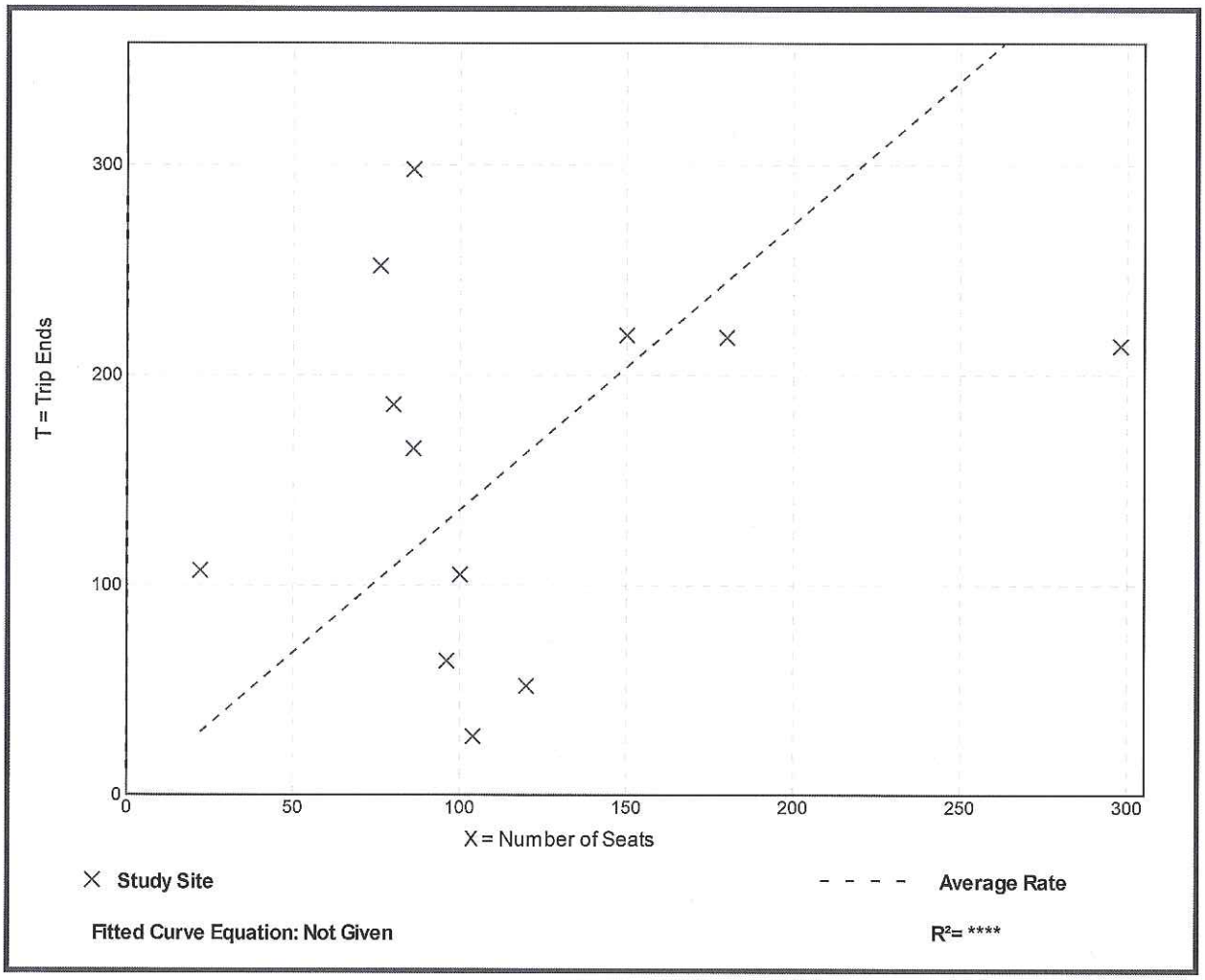
Vehicle Trip Ends vs: **Seats**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Seats: 117
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.36	0.27 - 4.86	1.07

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

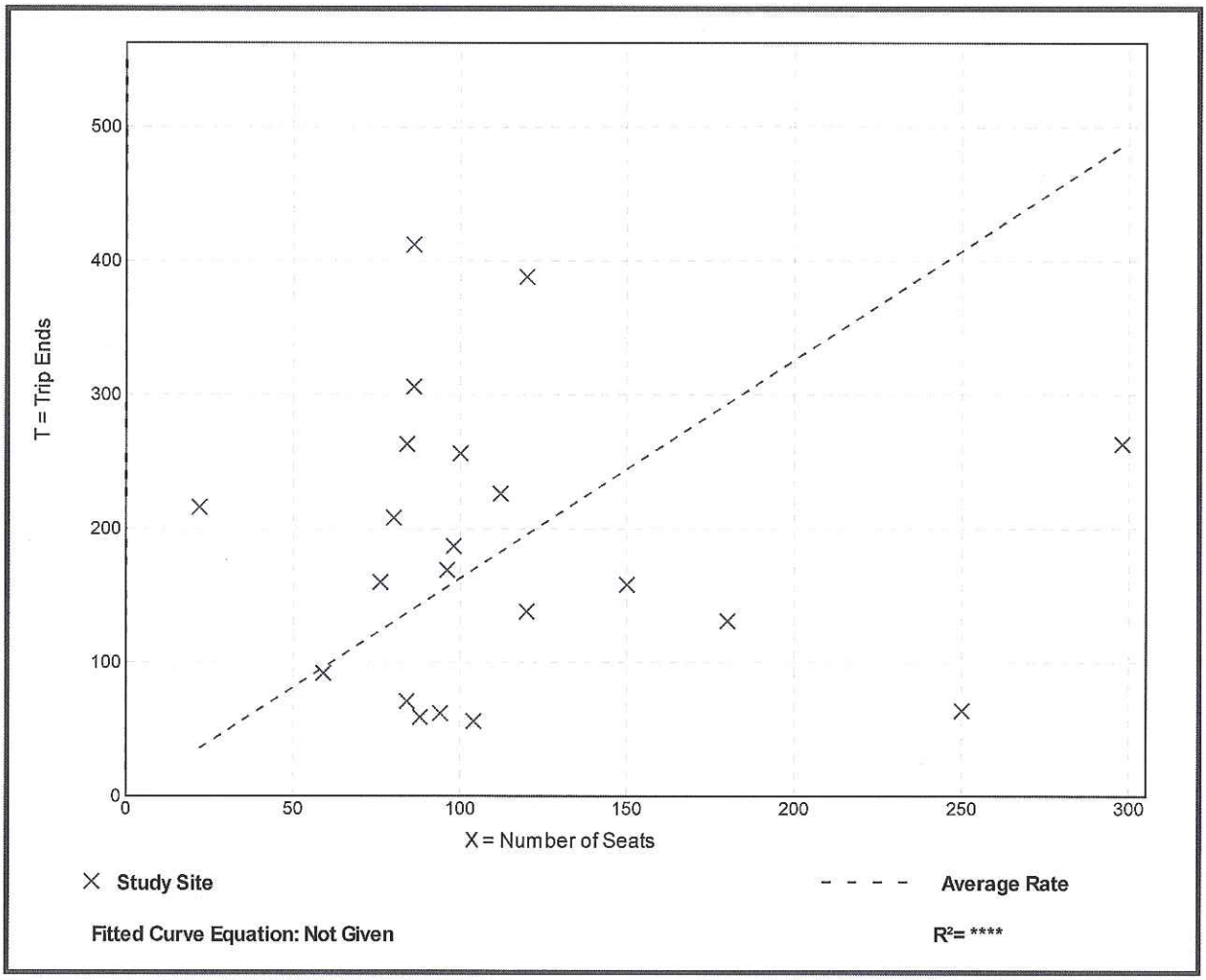
Vehicle Trip Ends vs: **Seats**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. Num. of Seats: 114
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.63	0.26 - 9.82	1.42

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

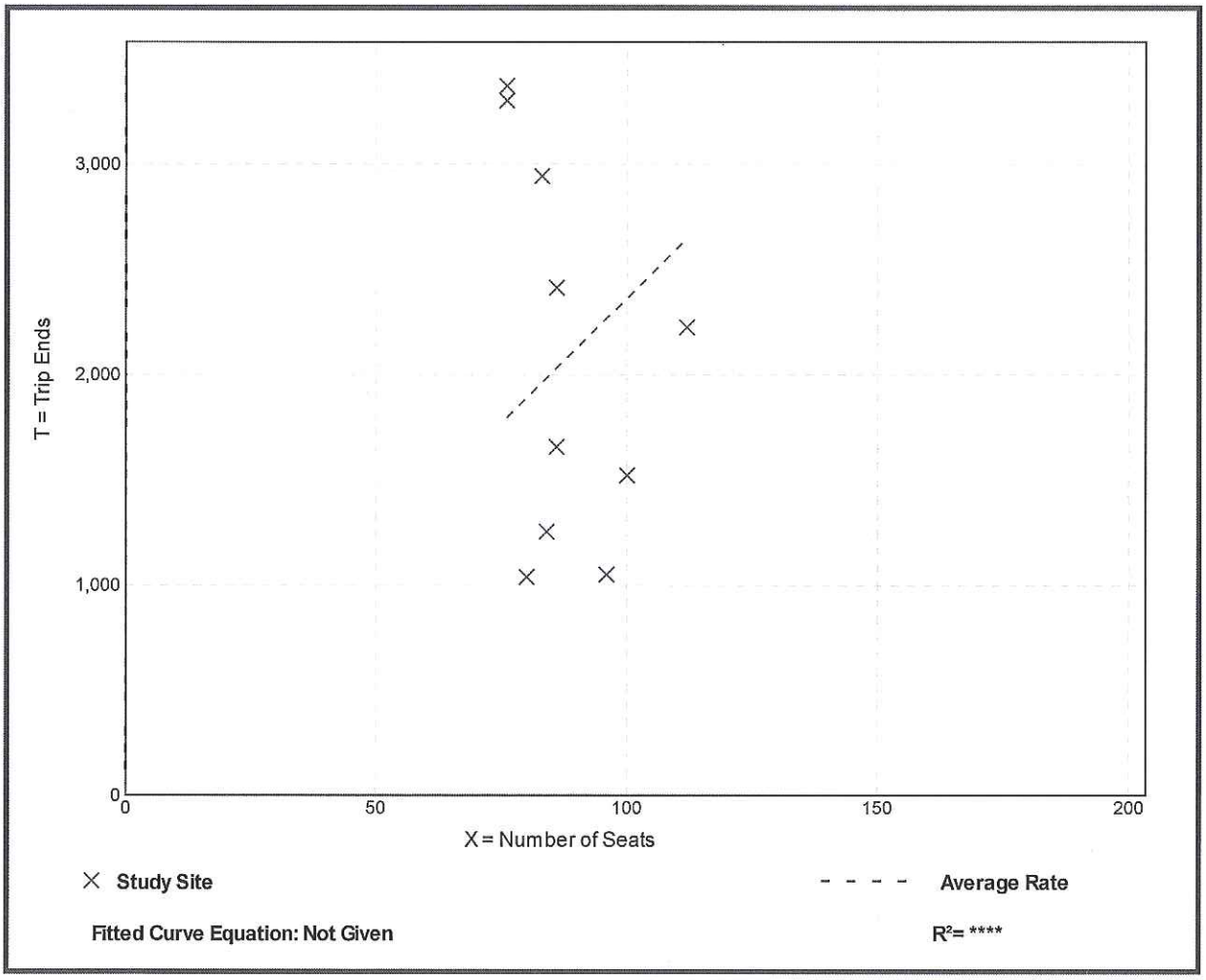
Vehicle Trip Ends vs: **Seats**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Seats: 88
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
23.64	10.94 - 44.37	12.17

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

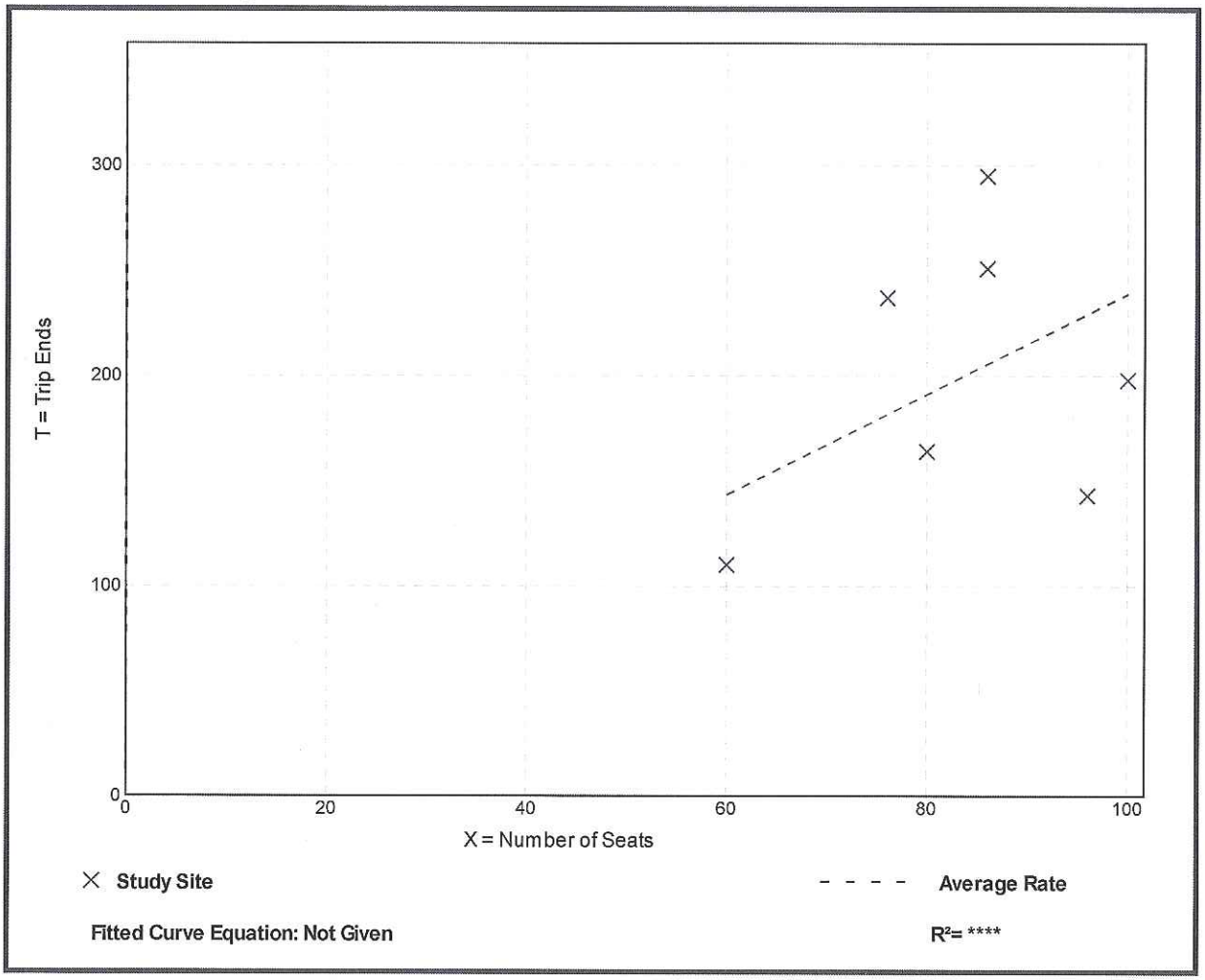
Vehicle Trip Ends vs: **Seats**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Seats: 83
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.39	1.49 - 3.43	0.75

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

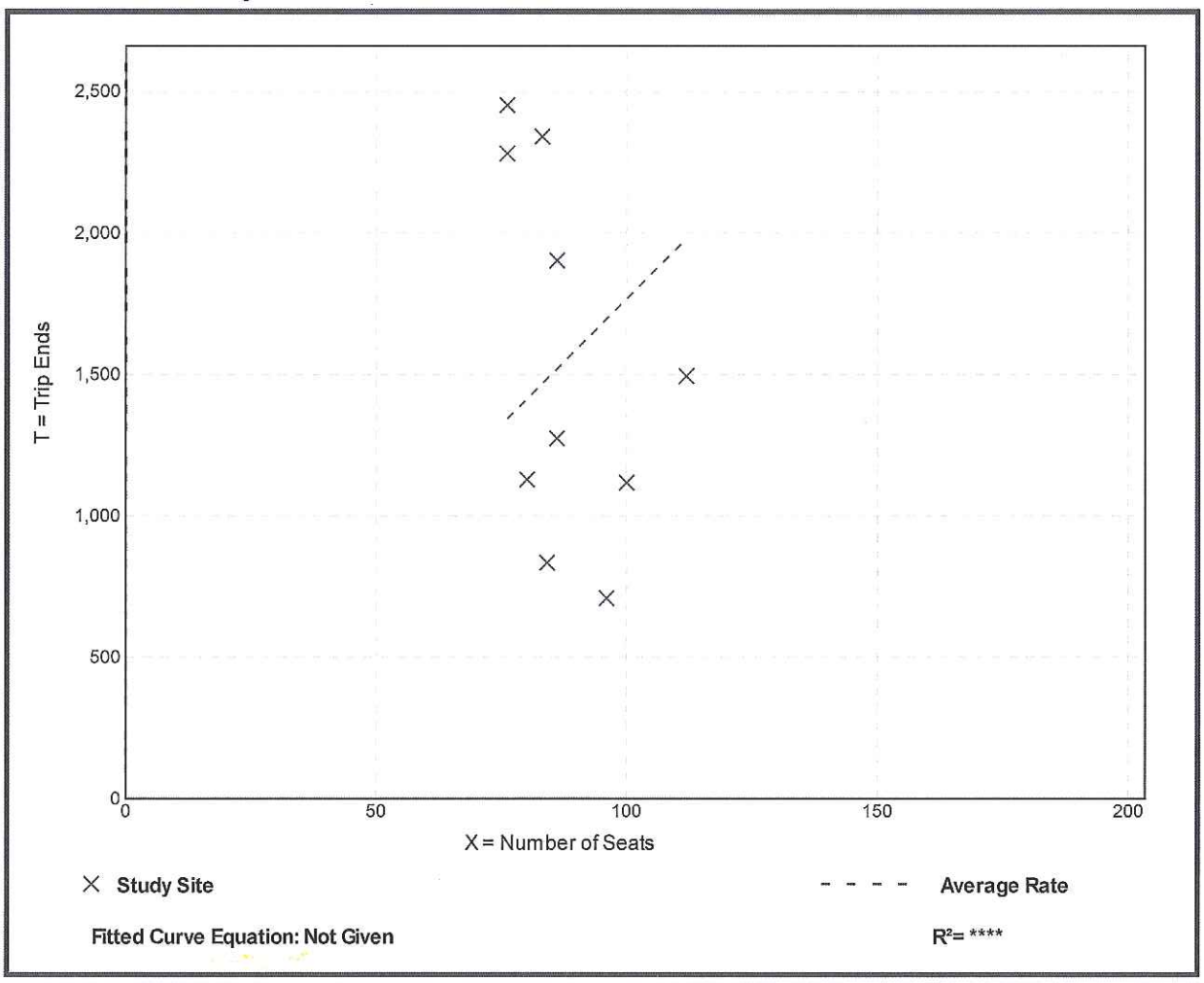
Vehicle Trip Ends vs: **Seats**
On a: **Sunday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Seats: 88
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
17.67	7.39 - 32.25	8.84

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **Seats**
On a: **Sunday, Peak Hour of Generator**

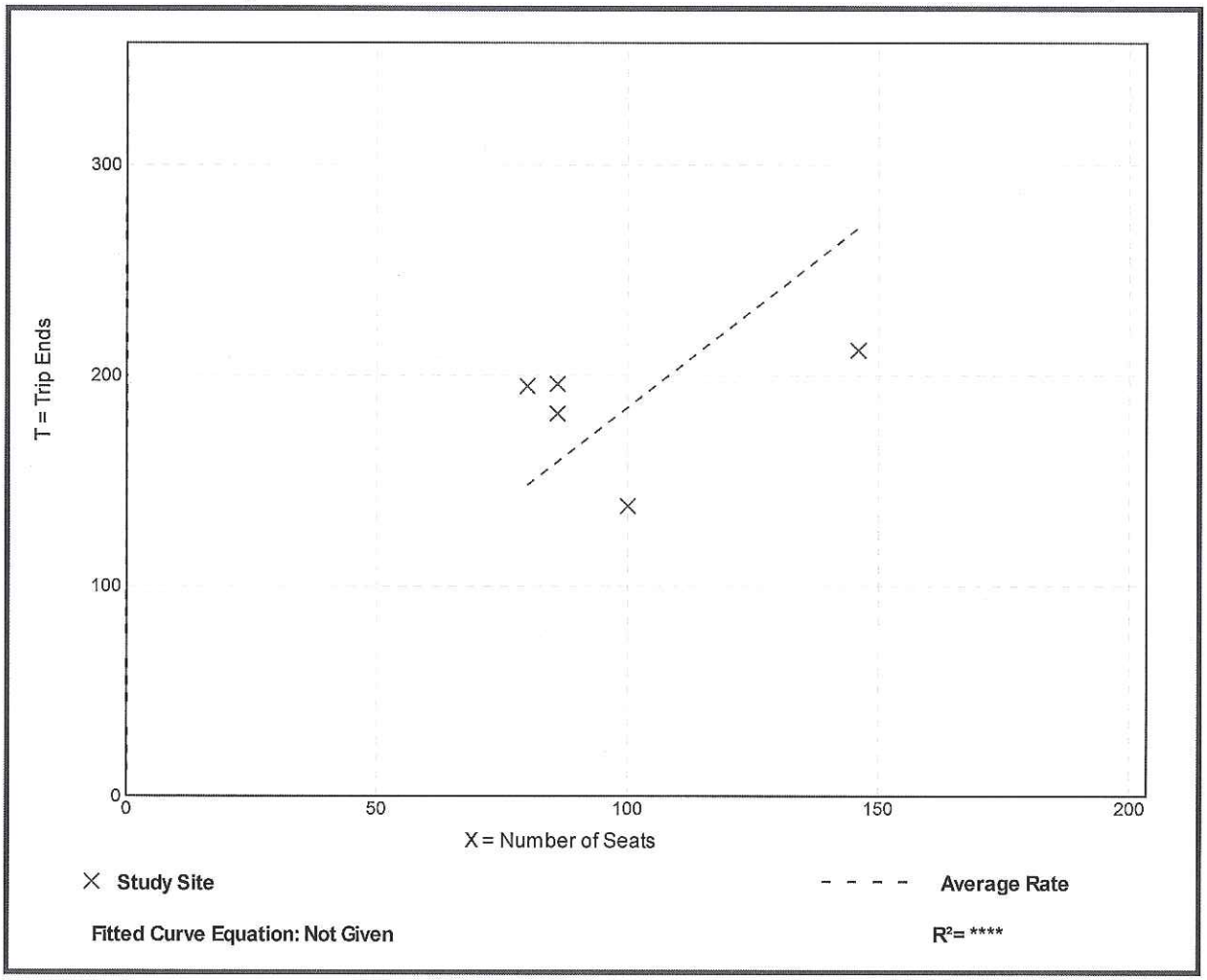
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Seats: 100
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.85	1.38 - 2.44	0.49

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

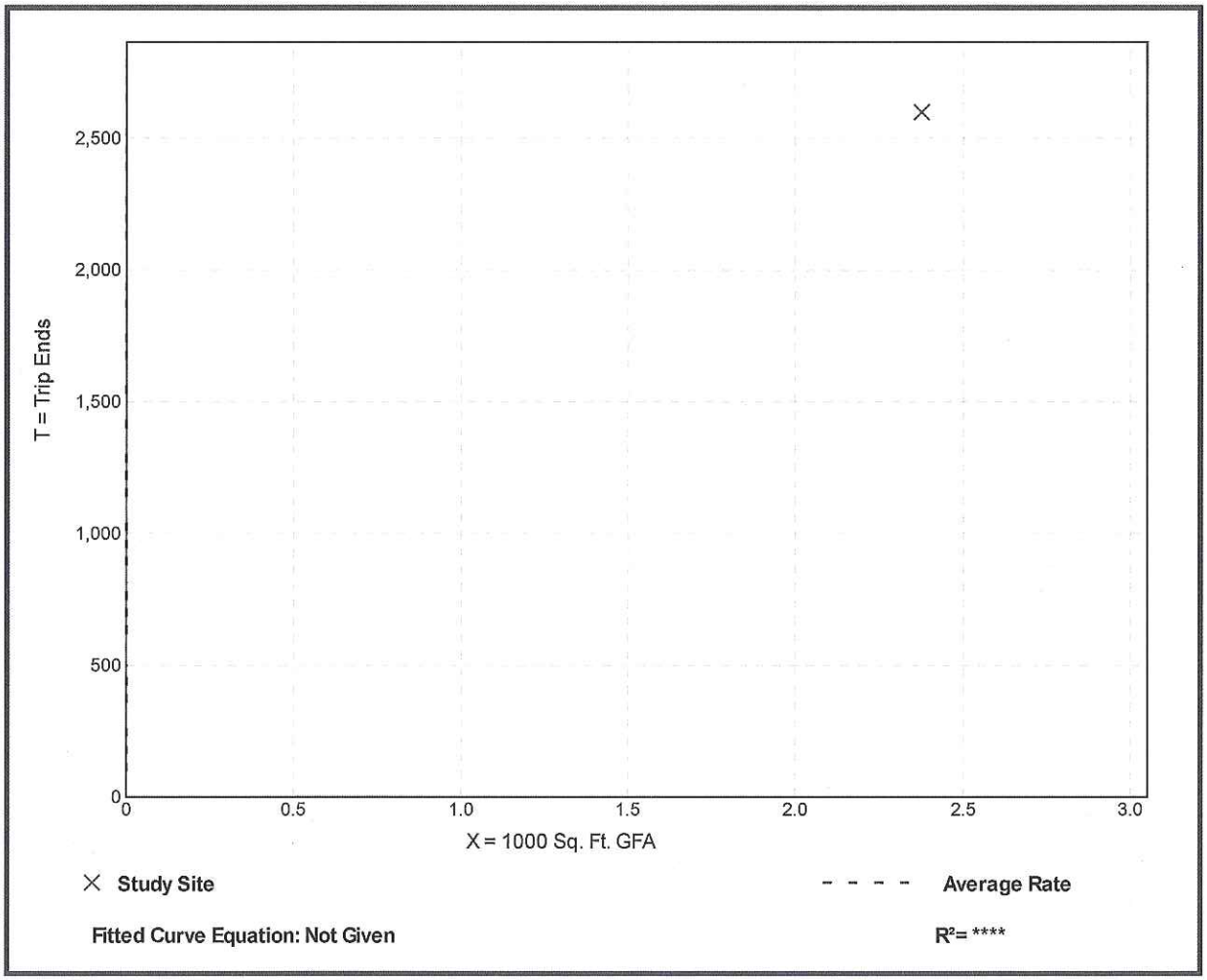
Setting/Location: Dense Multi-Use Urban
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1094.74	1094.74 - 1094.74	*

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

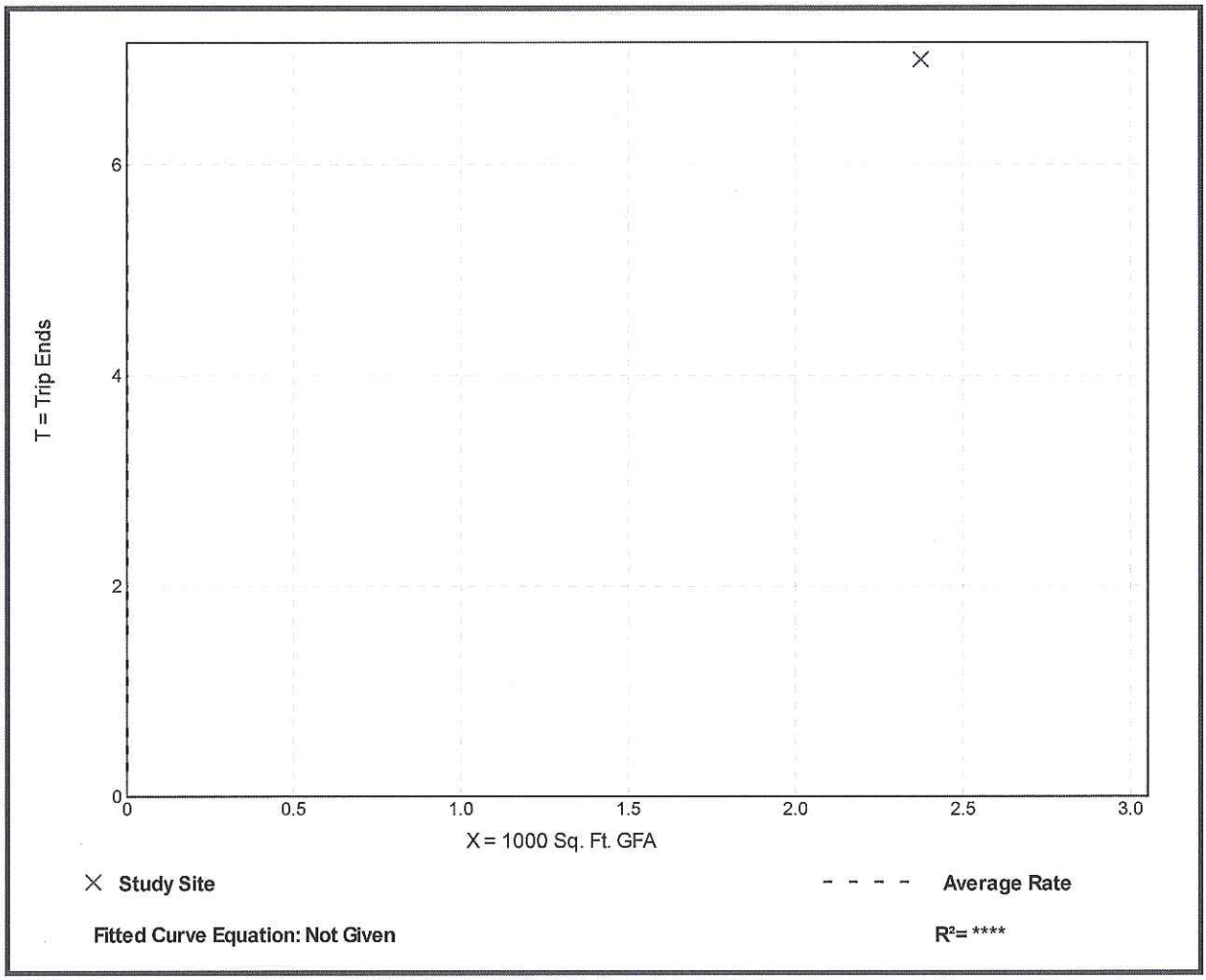
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 71% entering, 29% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.95	2.95 - 2.95	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

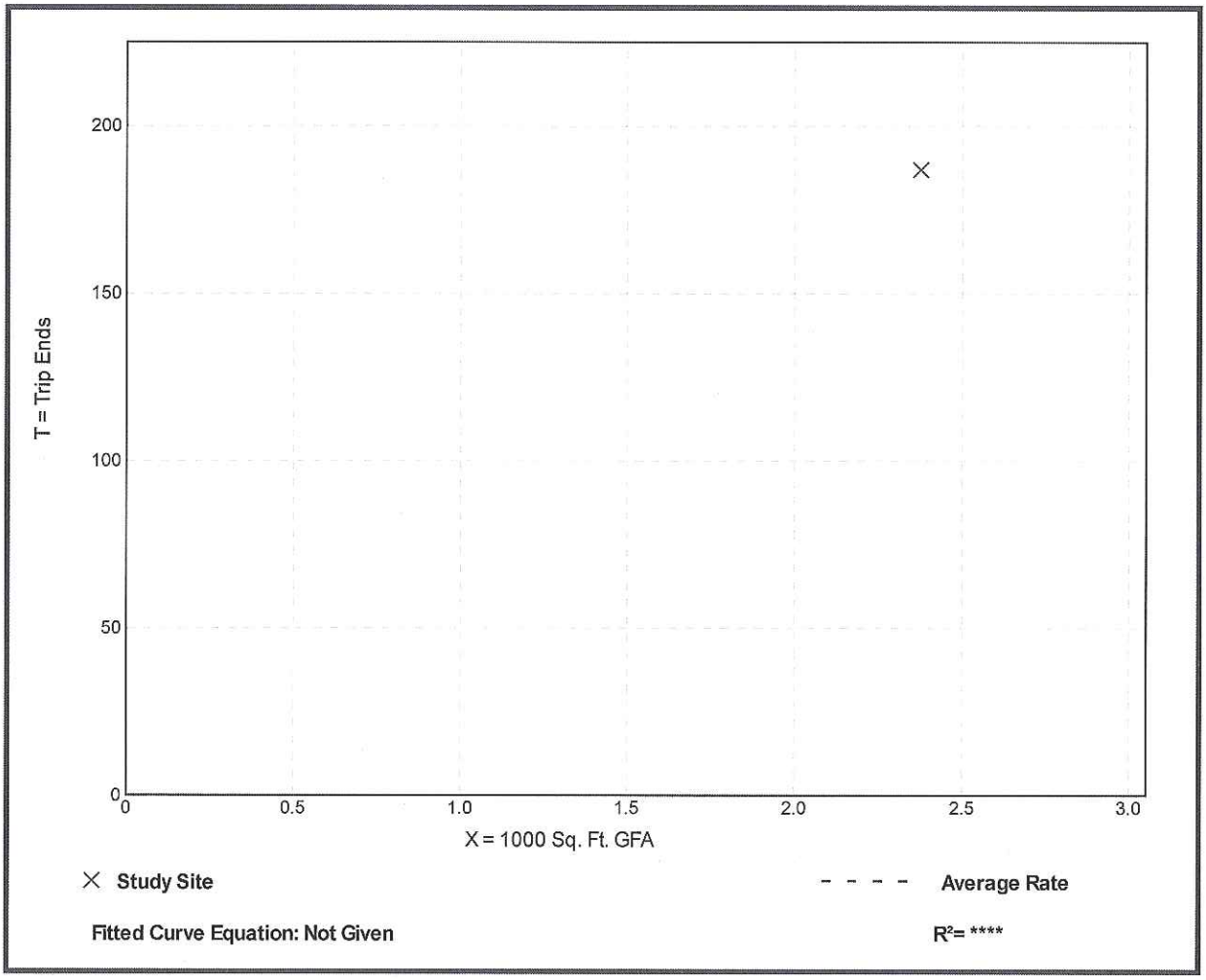
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
78.74	78.74 - 78.74	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

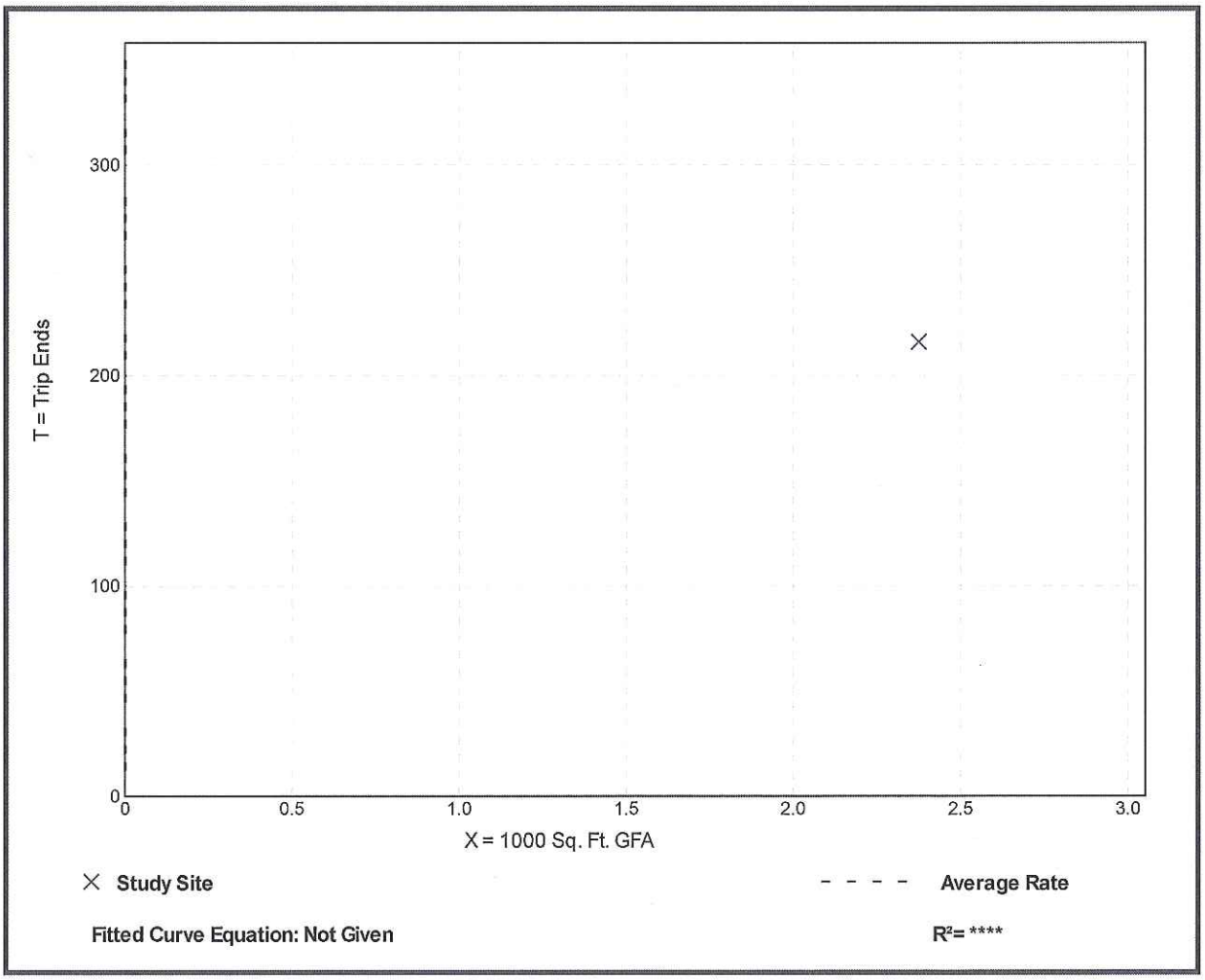
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
90.95	90.95 - 90.95	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

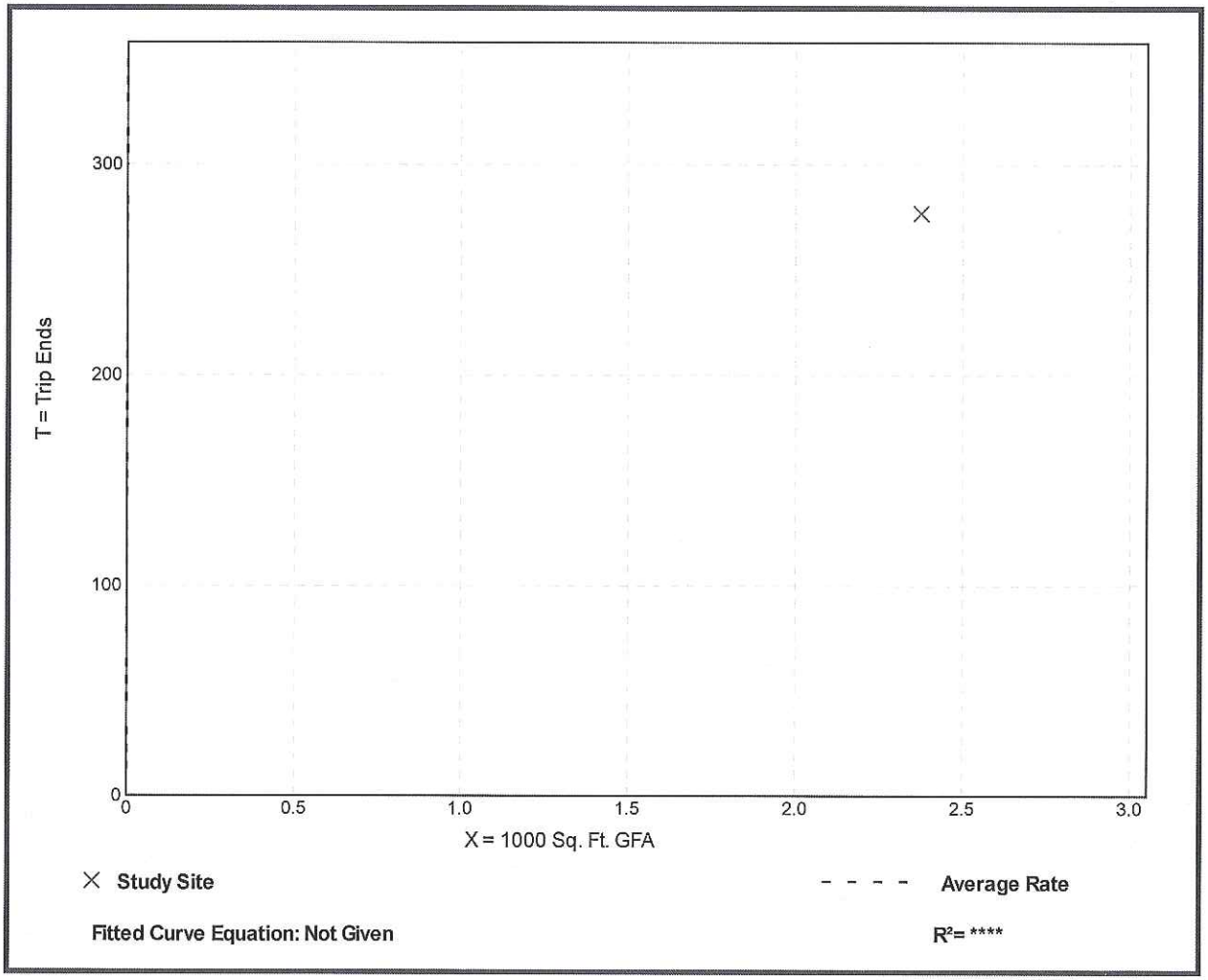
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
116.63	116.63 - 116.63	*

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday

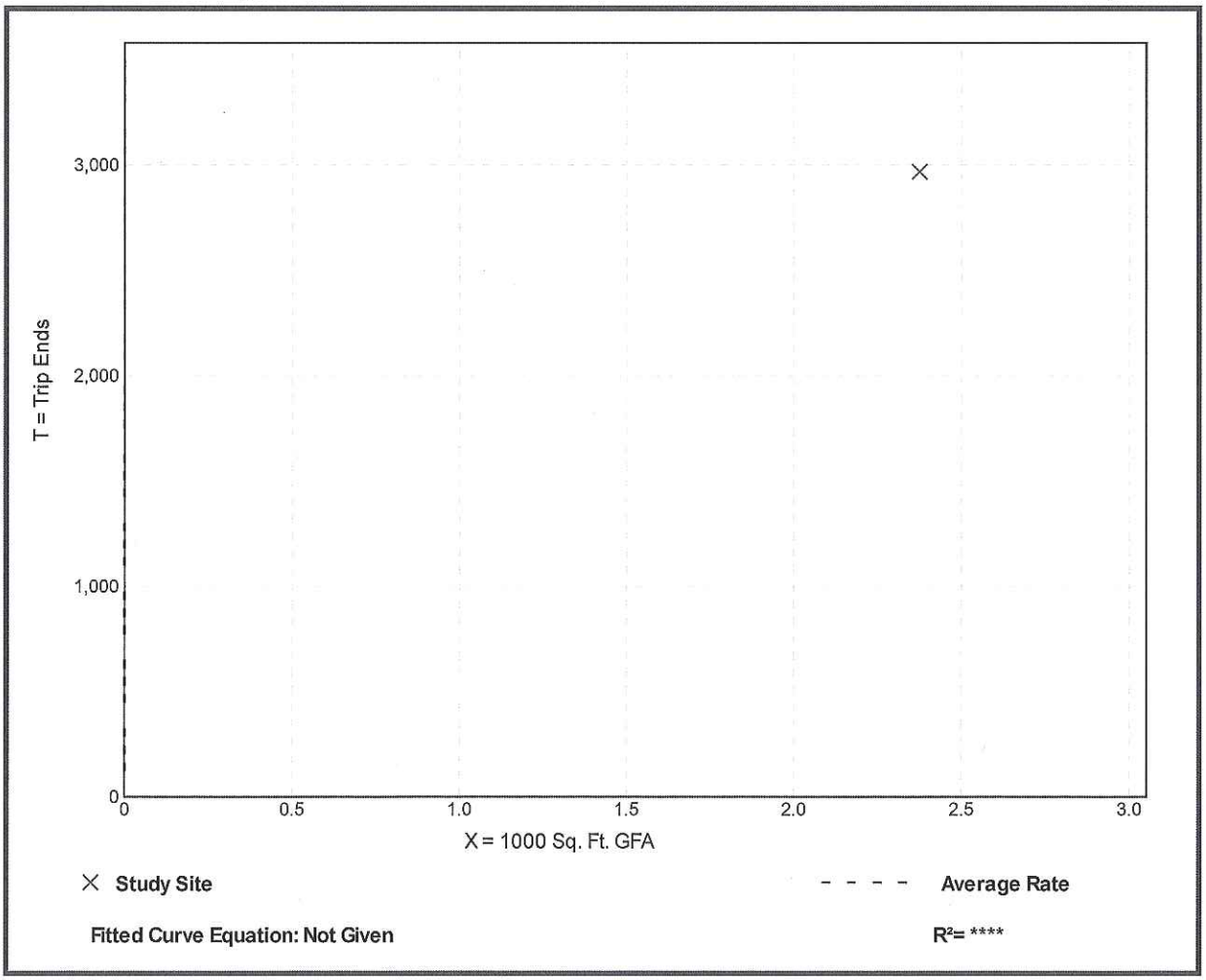
Setting/Location: Dense Multi-Use Urban
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1250.11	1250.11 - 1250.11	*

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

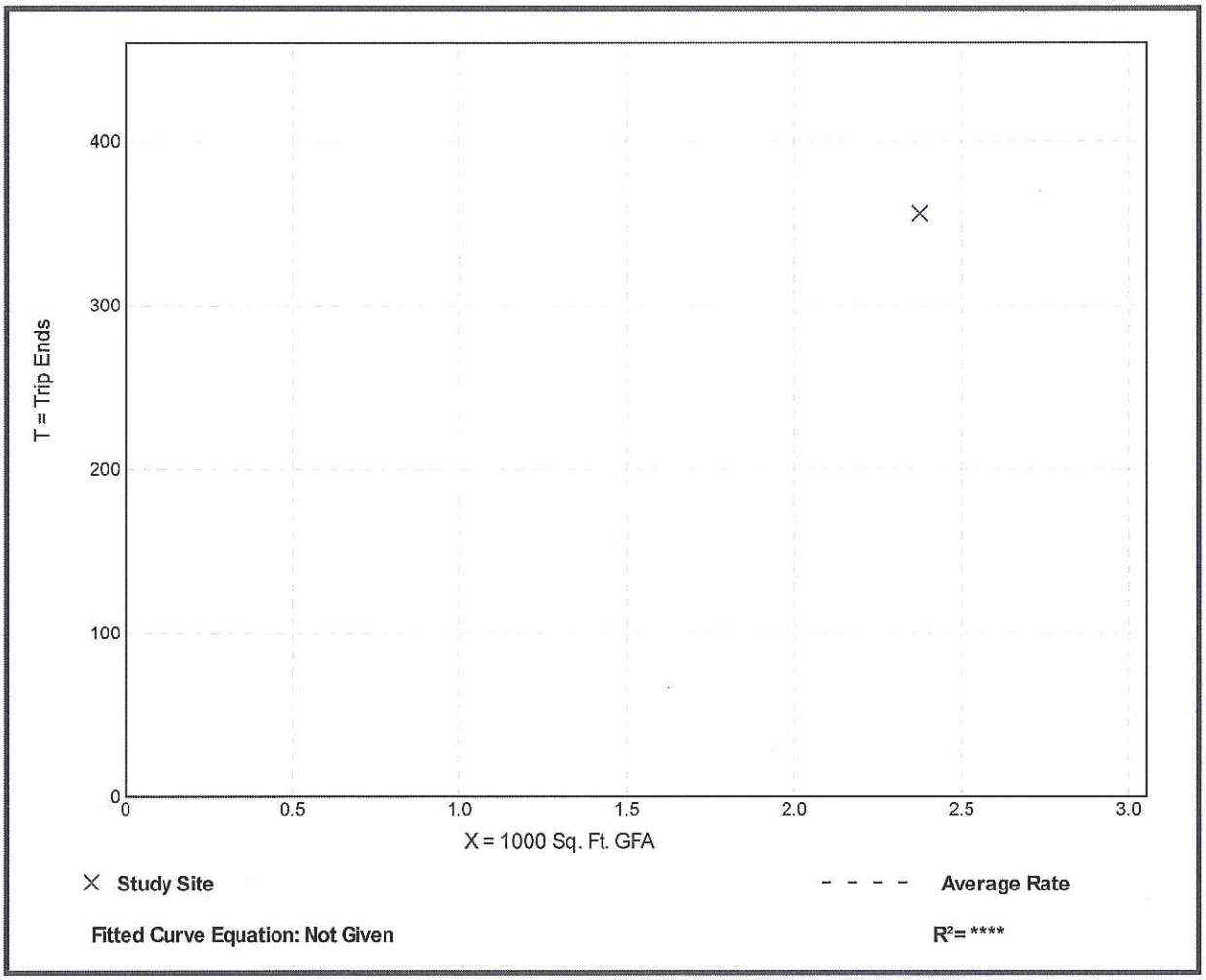
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 1
1000 Sq. Ft. GFA: 2
Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
149.89	149.89 - 149.89	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

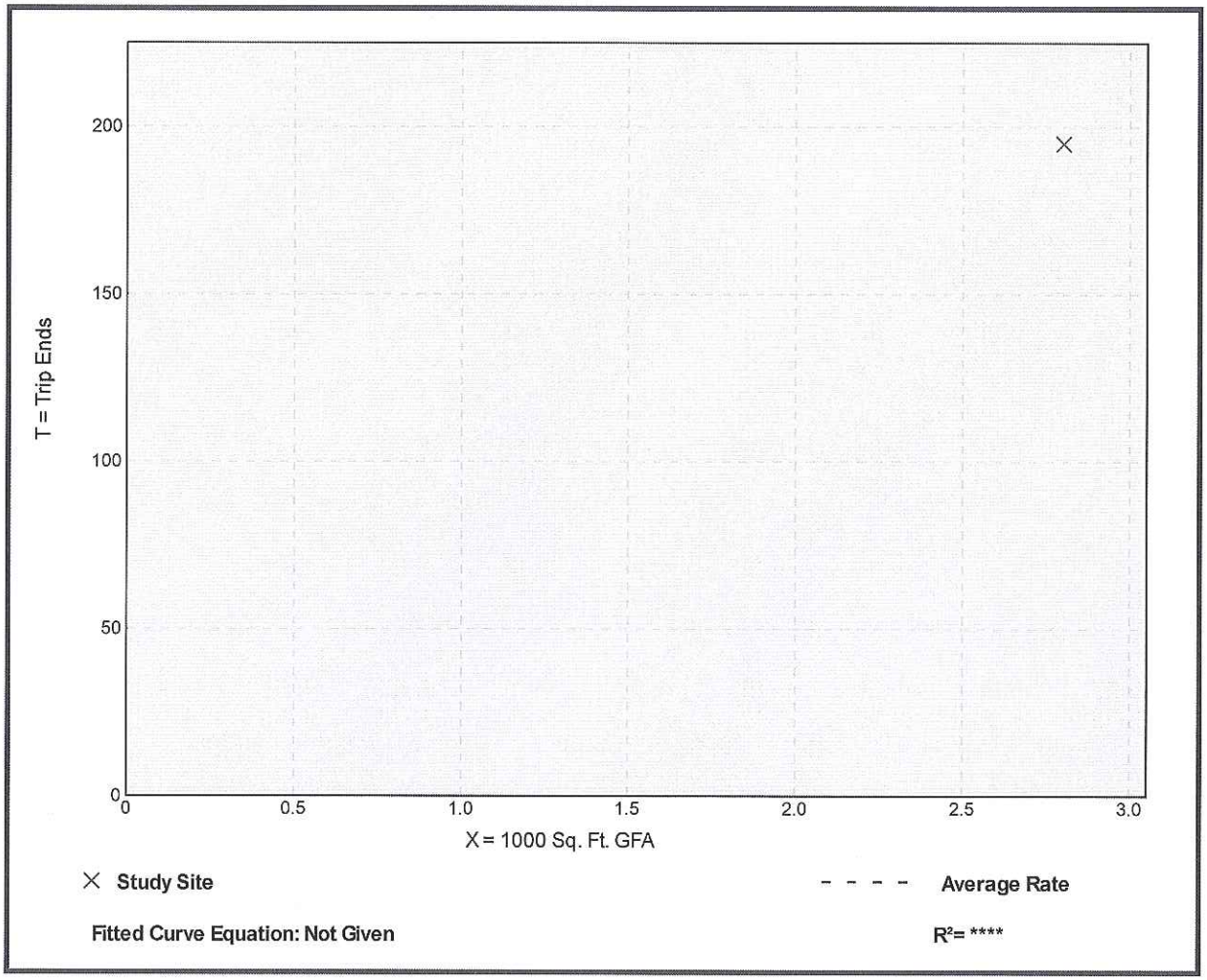
Person Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
1000 Sq. Ft. GFA: 3
Directional Distribution: 46% entering, 54% exiting

Person Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
69.64	69.64 - 69.64	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

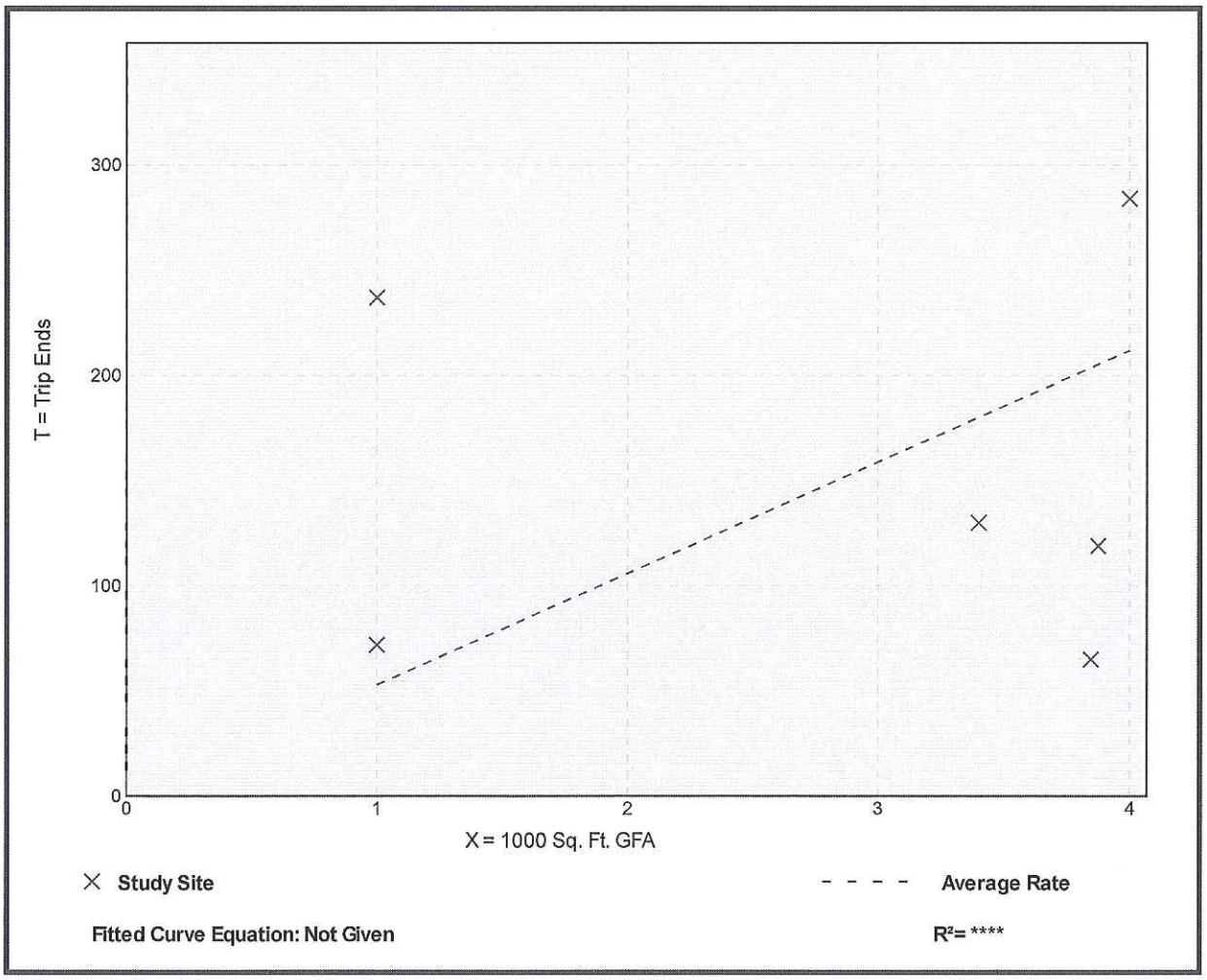
Person Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
1000 Sq. Ft. GFA: 3
Directional Distribution: 54% entering, 46% exiting

Person Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
52.98	16.91 - 237.00	55.02

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

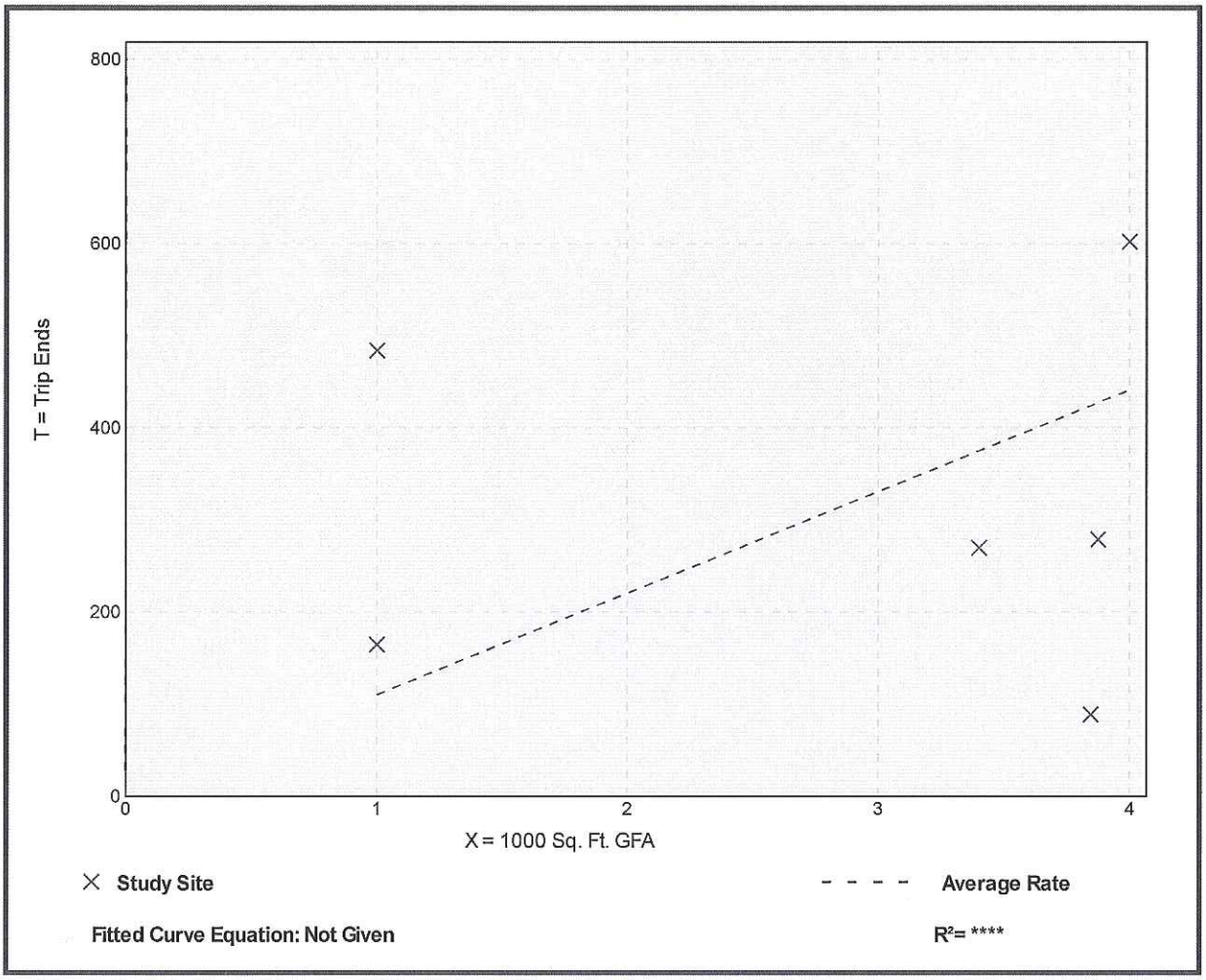
Person Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Person Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
110.34	23.15 - 484.00	114.56

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

Person Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Sunday, Peak Hour of Generator**

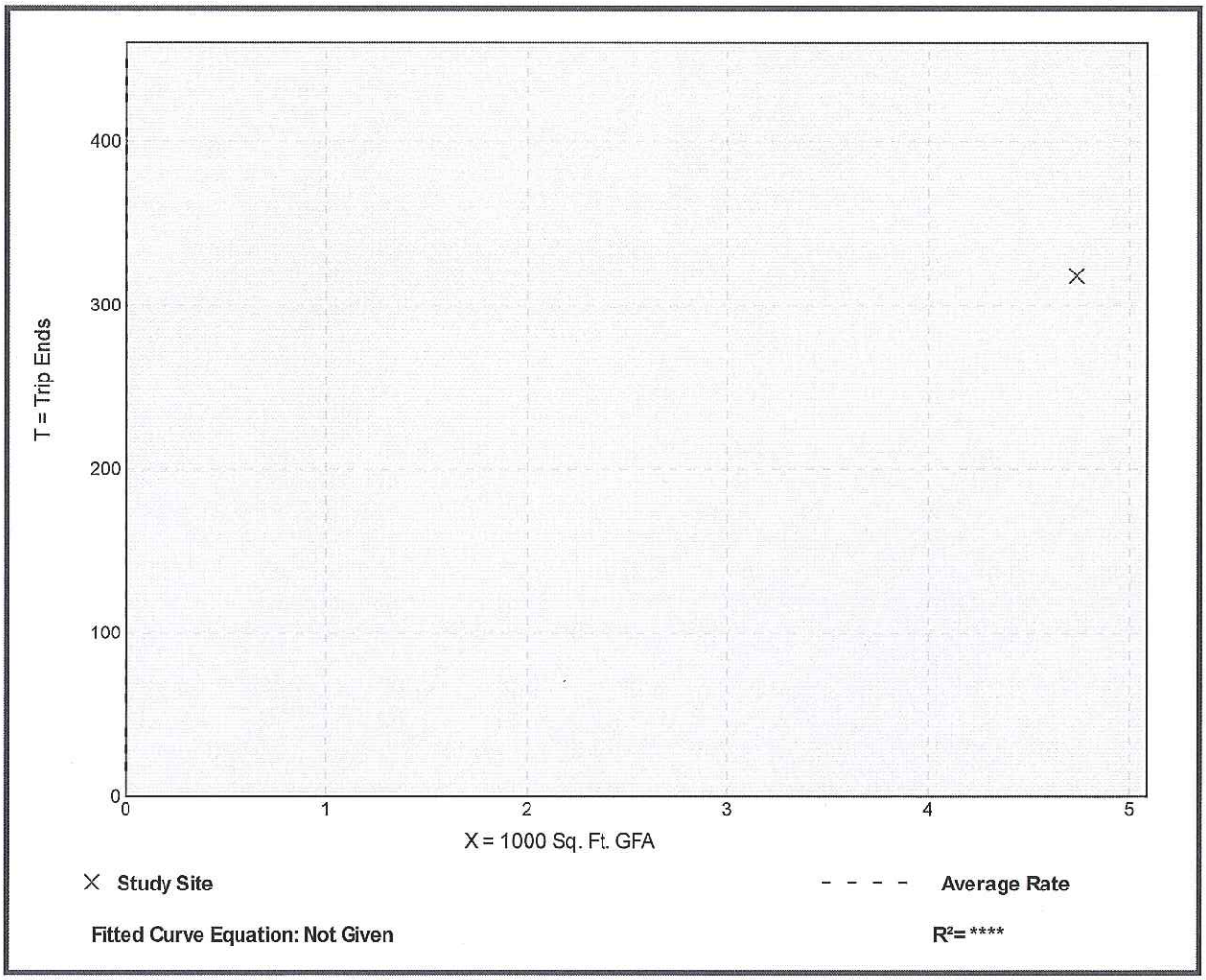
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Person Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
67.16	67.16 - 67.16	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Fast-Food Restaurant with Drive-Through Window
(934)

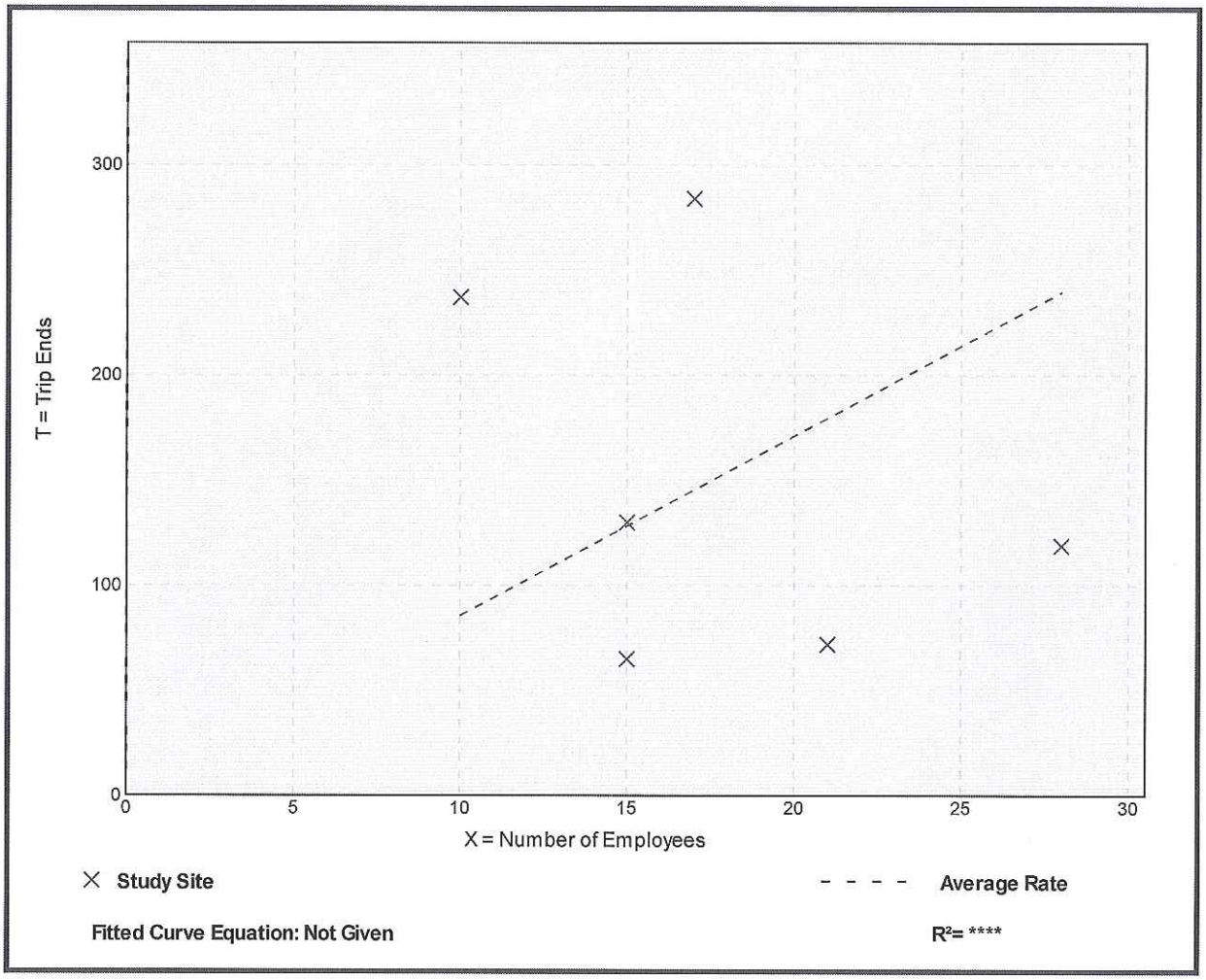
Person Trip Ends vs: **Employees**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Employees: 18
Directional Distribution: 54% entering, 46% exiting

Person Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
8.56	3.43 - 23.70	7.34

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

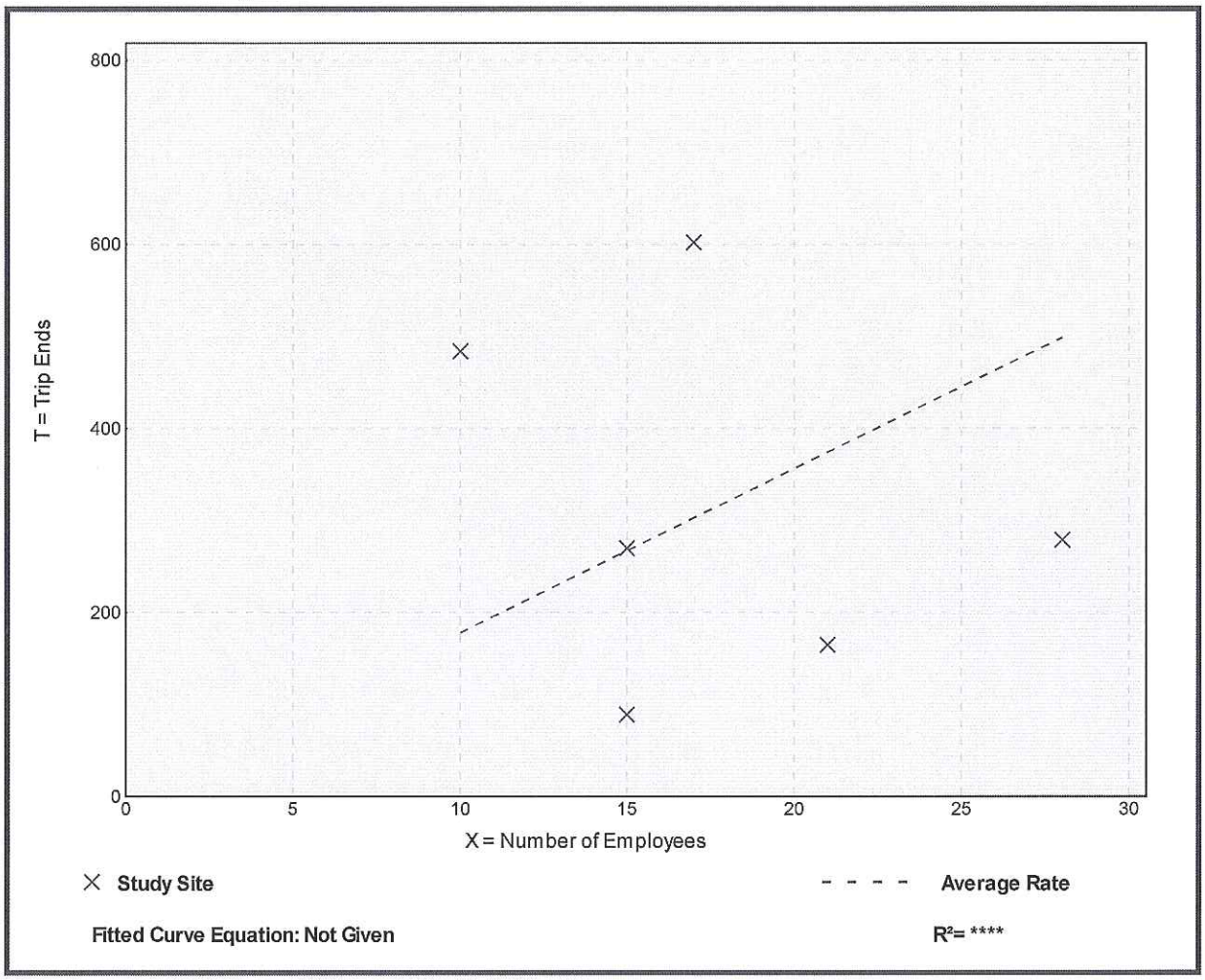
Person Trip Ends vs: **Employees**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Employees: 18
Directional Distribution: 50% entering, 50% exiting

Person Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
17.82	5.93 - 48.40	15.25

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

Person Trip Ends vs: **Employees**
On a: **Sunday, Peak Hour of Generator**

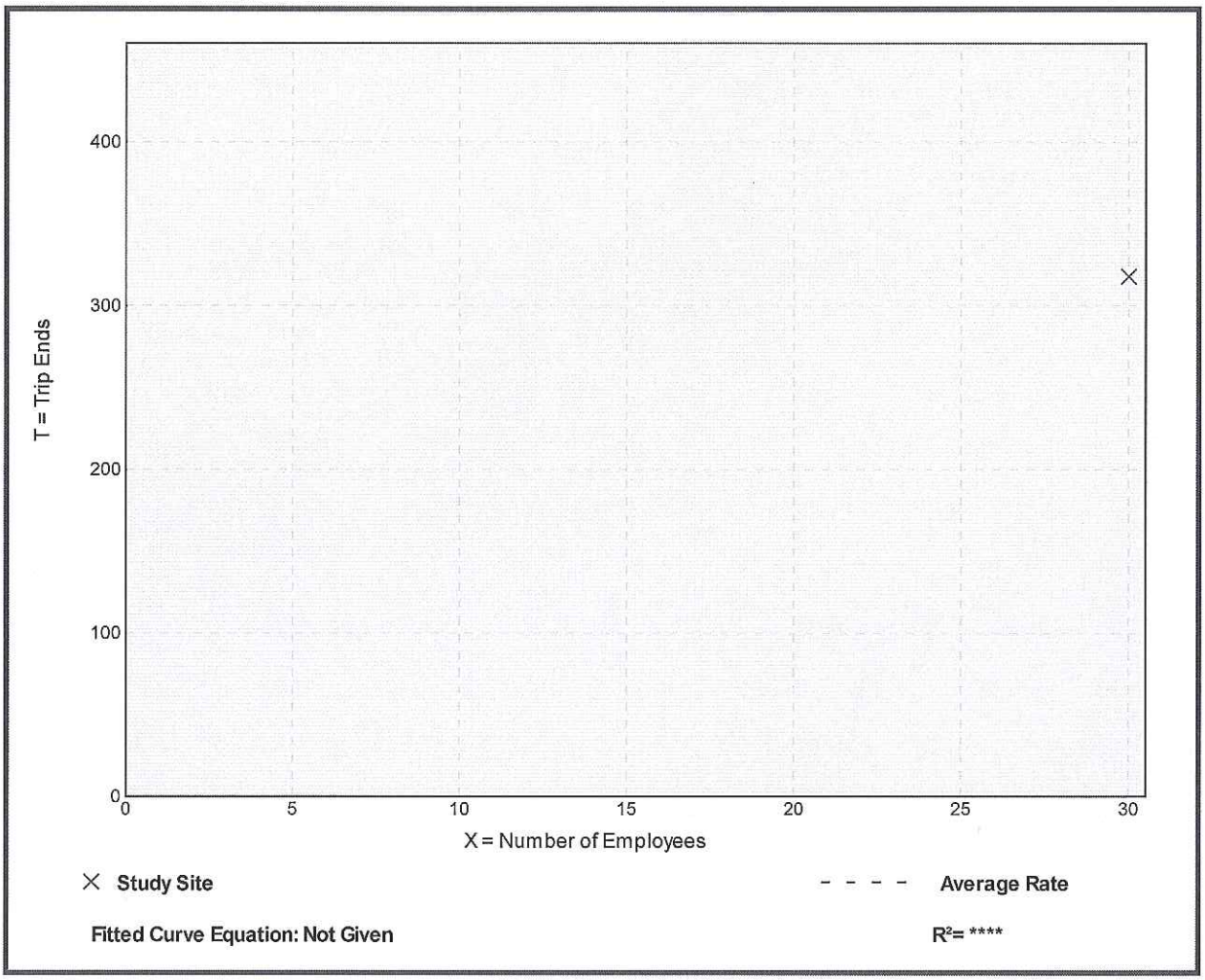
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Employees: 30
Directional Distribution: 47% entering, 53% exiting

Person Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
10.60	10.60 - 10.60	*

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Person Trip Ends vs: **Seats**
On a: **Weekday,**
AM Peak Hour of Generator

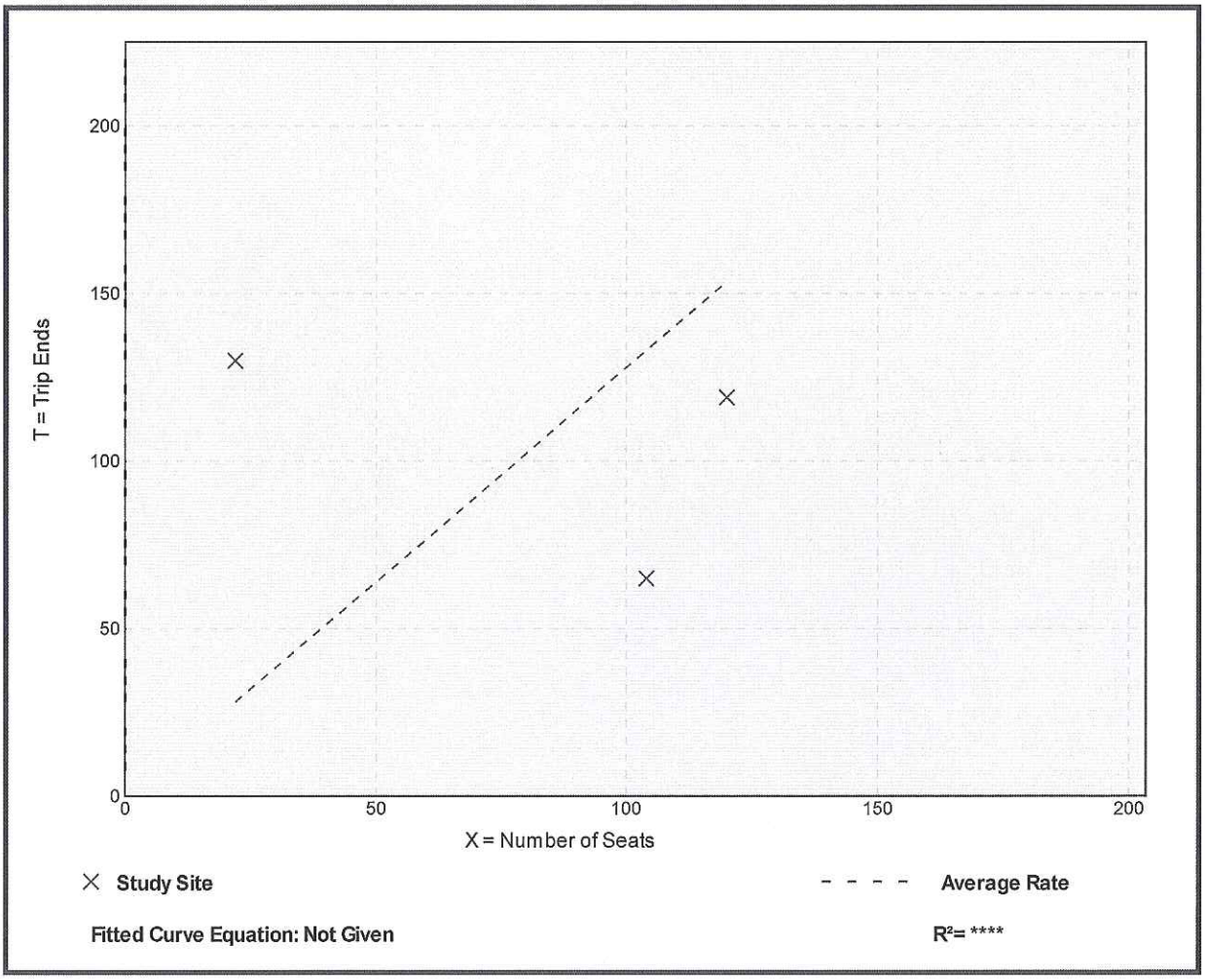
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. Num. of Seats: 82
Directional Distribution: 57% entering, 43% exiting

Person Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.28	0.63 - 5.91	4.26

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Person Trip Ends vs: **Seats**
On a: **Weekday,**
PM Peak Hour of Generator

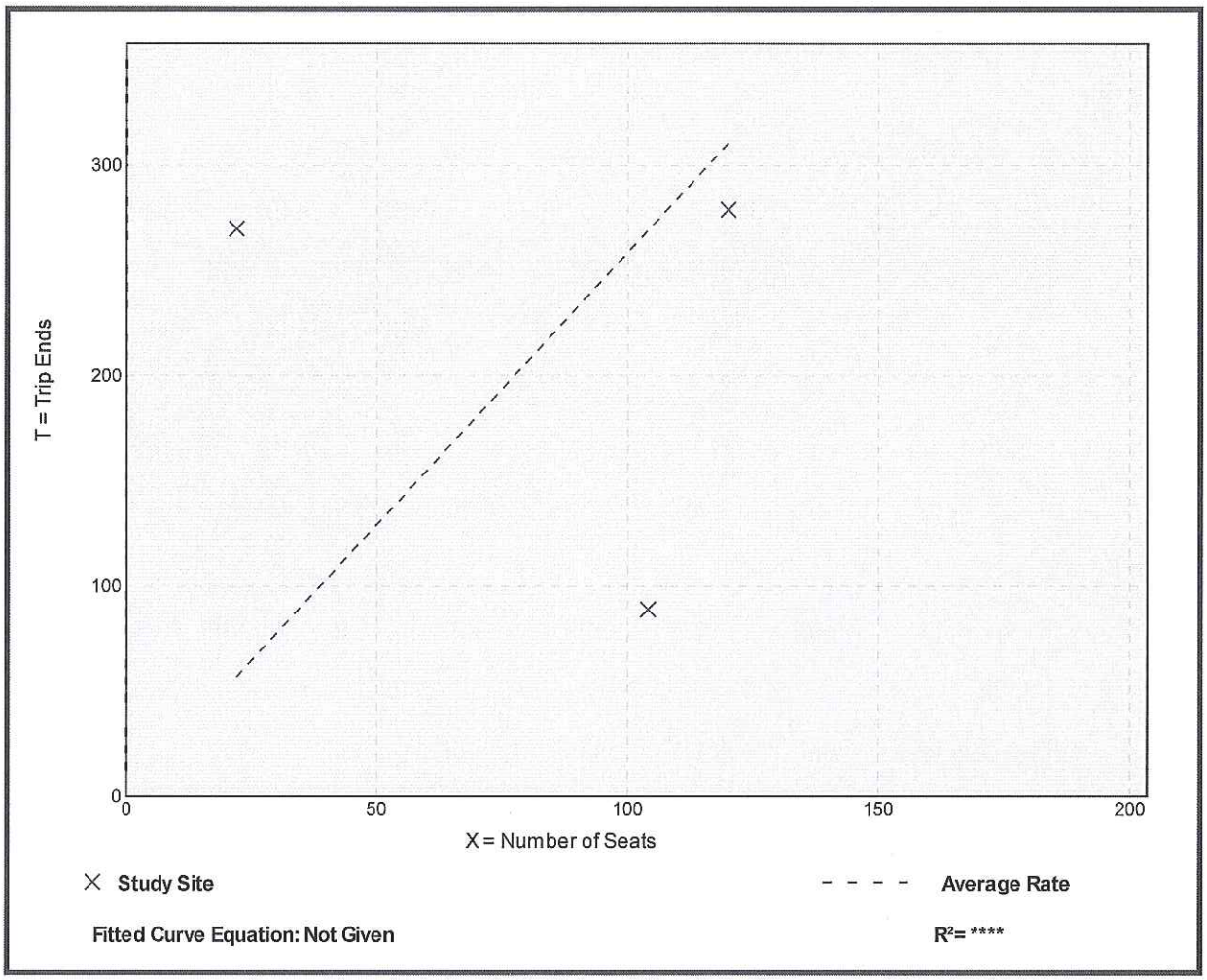
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. Num. of Seats: 82
Directional Distribution: 50% entering, 50% exiting

Person Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.59	0.86 - 12.27	8.85

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window
(934)

Person Trip Ends vs: **Seats**
On a: **Sunday, Peak Hour of Generator**

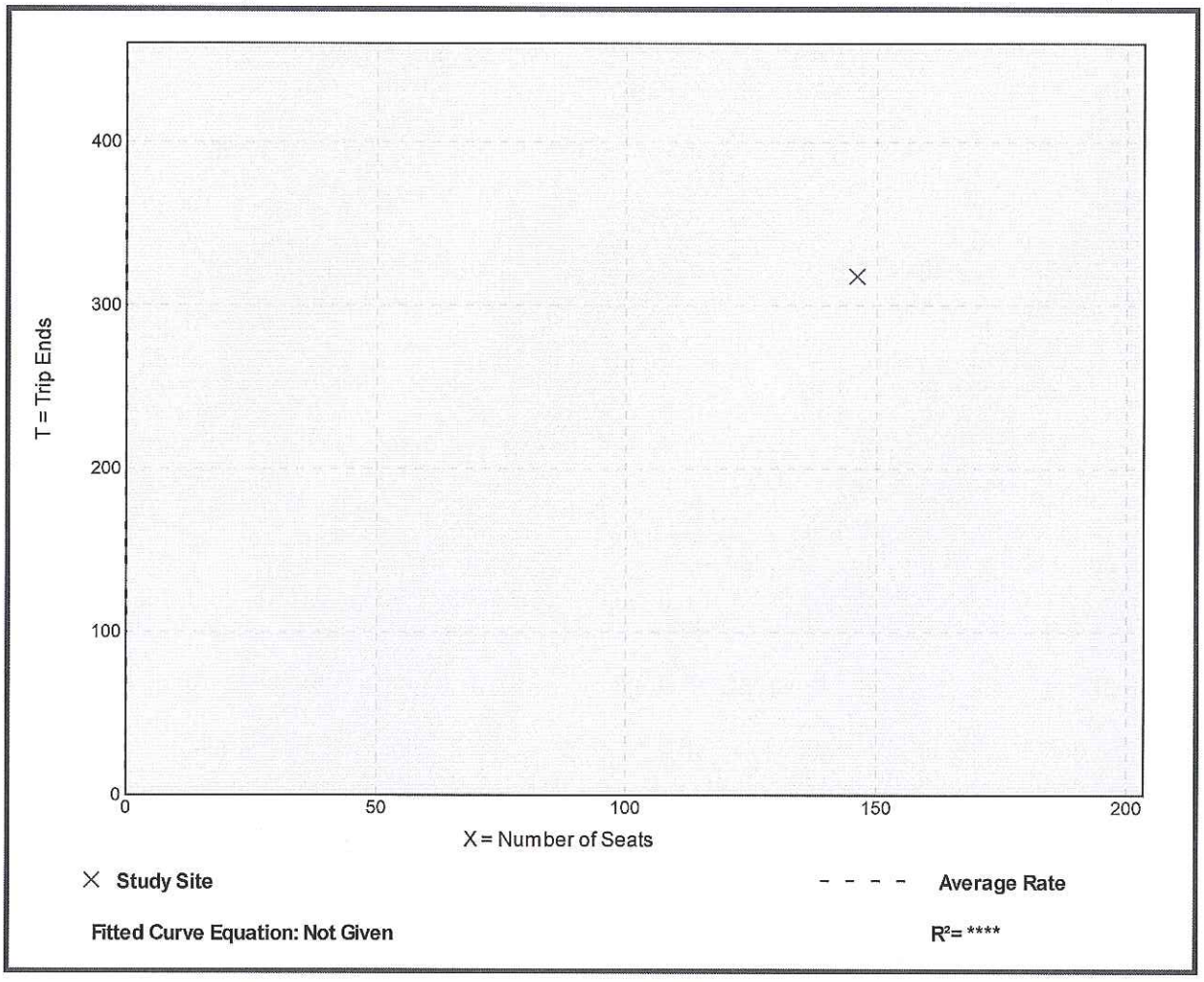
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Seats: 146
Directional Distribution: 47% entering, 53% exiting

Person Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.18	2.18 - 2.18	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

DATA FROM THE ITE TRIP GENERATION HANDBOOK, THIRD EDITION

Table E.9 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
53	Port Orange, FL	1993	162	2:00–6:00 p.m.	59	—	—	41	—	—	TPD Inc.
9	Kissimmee, FL	1994	107	2:00–6:00 p.m.	66	20	14	34	—	—	TPD Inc.
77	Edgewater, FL	1992	365	2:00–6:00 p.m.	46	—	—	54	—	—	TPD Inc.
82	Deltona, FL	1992	336	2:00–6:00 p.m.	34	—	—	66	—	—	TPD Inc.
78	Orlando, FL	1991	702	2:00–6:00 p.m.	55	23	22	45	—	—	TPD Inc.
45	Orlando, FL	1992	844	2:00–6:00 p.m.	56	24	20	44	—	—	TPD Inc.
50	Orlando, FL	1992	555	2:00–6:00 p.m.	41	41	18	59	—	—	TPD Inc.
52	Orlando, FL	1995	665	2:00–6:00 p.m.	42	33	25	58	—	—	TPD Inc.
17	Orlando, FL	1994	196	2:00–6:00 p.m.	66	—	—	34	—	—	TPD Inc.
60	Orlando, FL	1995	1,583	3:00–7:00 p.m.	40	38	22	60	—	—	TPD Inc.
158	Crestwood, KY	June 1993	129	4:00–6:00 p.m.	36	39	25	64	759	—	Barton-Aschman Assoc.
118	Louisville area, KY	June 1993	133	4:00–6:00 p.m.	22	51	27	78	3,555	—	Barton-Aschman Assoc.
74	Louisville, KY	June 1993	187	4:00–6:00 p.m.	30	43	27	70	922	—	Barton-Aschman Assoc.
59	Louisville area, KY	June 1993	247	4:00–6:00 p.m.	31	52	17	69	2,659	—	Barton-Aschman Assoc.
145	Louisville area, KY	June 1993	210	4:00–6:00 p.m.	53	30	17	47	2,636	—	Barton-Aschman Assoc.
104	Louisville area, KY	June 1993	281	4:00–6:00 p.m.	28	50	22	72	2,111	—	Barton-Aschman Assoc.
235	Louisville, KY	June 1993	211	4:00–6:00 p.m.	35	29	36	65	2,593	—	Barton-Aschman Assoc.
71	Louisville, KY	June 1993	109	4:00–6:00 p.m.	25	42	33	75	1,559	—	Barton-Aschman Assoc.
350	Worcester, MA	Apr. 1994	224	4:00–6:00 p.m.	18	45	37	82	2,112	—	ICSC
738	East Brunswick, NJ	Apr. 1994	283	4:00–6:00 p.m.	14	79	7	86	8,059	—	ICSC
294	Philadelphia, PA	Apr. 1994	213	4:00–6:00 p.m.	25	51	24	75	4,055	—	ICSC
256	Hamden, CT	Apr. 1994	208	4:00–6:00 p.m.	27	51	22	73	3,422	—	ICSC
418	Glen Burnie, MD	Apr. 1994	281	4:00–6:00 p.m.	20	51	29	80	5,610	—	ICSC
560	Harrisonburg, VA	Apr. 1994	437	4:00–6:00 p.m.	19	49	32	81	3,051	—	ICSC

Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
361	Glen Allen, VA	Apr. 1994	315	4:00–6:00 p.m.	17	54	29	83	2,034	—	ICSC
375	Shelby, NC	May 1994	214	4:00–6:00 p.m.	30	48	22	70	3,053	—	ICSC
413	Texas City, TX	May 1994	228	4:00–6:00 p.m.	28	52	20	72	589	—	ICSC
488	Texas City, TX	May 1994	257	4:00–6:00 p.m.	12	75	13	88	1,094	—	ICSC
293	Berwyn, IL	May 1994	282	4:00–6:00 p.m.	24	70	6	76	4,606	—	ICSC
667	Bourbonais, IL	May 1994	200	4:00–6:00 p.m.	16	53	31	84	2,770	—	ICSC
225	Bellevue, IL	May 1994	264	4:00–6:00 p.m.	35	32	33	65	1,970	—	ICSC
255	Bettendorf, IA	May 1994	222	4:00–6:00 p.m.	24	37	39	76	3,706	—	ICSC
808	Laguna Hills, CA	June 1994	240	4:00–6:00 p.m.	13	73	14	87	4,035	—	ICSC
450	Hanford, CA	May 1994	321	4:00–6:00 p.m.	23	49	28	77	2,787	—	ICSC
800	San Jose, CA	May 1994	205	4:00–6:00 p.m.	21	51	28	79	7,474	—	ICSC
598	Greeley, CO	May 1994	205	4:00–6:00 p.m.	17	55	28	83	3,840	—	ICSC
581	Pueblo, CO	May 1994	296	4:00–6:00 p.m.	18	53	29	82	2,939	—	ICSC
476	Bellevue, WA	May 1994	234	4:00–6:00 p.m.	26	54	20	74	3,427	—	ICSC
720	Framingham, MA	Dec. 1982	92	3:30–7:00 p.m.	23	39	38	77	—	73,628	Raymond Keyes Assoc.
890	Newark, DE	July 1984	179	3:00–8:00 p.m.	12	49	39	88	—	—	Raymond Keyes Assoc.
402	Manassas, VA	June 1984	87	4:00–6:00 p.m.	48	25	27	52	—	—	Raymond Keyes Assoc.
462	Ross, PA	June 1980	175	5:30–7:00 p.m.	36	—	—	64	—	27,200	Raymond Keyes Assoc.
234	Huntington LI, NY	Nov. 1985	181	4:00–7:00 p.m.	46	21	33	54	—	34,630	Raymond Keyes Assoc.
658	Wayne, NJ	Sept. 1984	243	3:00–6:00 p.m.	27	61	12	73	—	85,600	Raymond Keyes Assoc.
1,200	Washington, DC	1980	364	4:00–6:00 p.m.	25	35	40	75	—	—	Gorove-Slade
800	Southern CA	—	1,000	4:00–6:00 p.m.	12	45	43	88	—	—	Frischer
451	Portland, OR	—	—	5:00–6:00 p.m.	25	—	—	75	—	—	Buttke
113	Portland, OR	—	—	5:00–6:00 p.m.	17	—	—	83	—	—	Buttke

Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
622	Ramsey, MN	Nov. 1985	46	4:00–9:00 p.m.	44	26	30	56	—	36,370	Raymond Keyes Assoc.
736	Pensacola, FL	Oct. 1985	383	3:00–7:00 p.m.	26	35	39	74	—	—	Raymond Keyes Assoc.
84	Dover, DE	July 1985	218	3:30–7:00 p.m.	50	6	44	50	—	—	Raymond Keyes Assoc.
500	Meriden, CT	Apr. 1985	—	4:00–6:00 p.m.	8	—	—	92	—	—	Connecticut DOT
660	Enfield, CT	Apr. 1985	—	4:00–6:00 p.m.	22	—	—	78	—	—	Connecticut DOT
845	Waterford, CT	Apr. 1985	—	4:00–6:00 p.m.	14	—	—	86	—	—	Connecticut DOT
1,060	West Hartford, CT	Apr. 1985	—	4:00–6:00 p.m.	17	—	—	83	—	—	Connecticut DOT
131	Pr. Georges Co., MD	1982/83	88	4:00–6:00 p.m.	74	—	—	26	—	—	JHK
181	Pr. Georges Co., MD	1982/83	105	4:00–6:00 p.m.	36	—	—	64	—	—	JHK
100	Pr. Georges Co., MD	1982/83	93	4:00–6:00 p.m.	36	—	—	64	—	—	JHK
475	Pr. Georges Co., MD	1982/83	130	4:00–6:00 p.m.	20	—	—	80	—	—	JHK
60	Pr. Georges Co., MD	1982/83	72	4:00–6:00 p.m.	72	—	—	28	—	—	JHK
90	Pr. Georges Co., MD	1982/83	91	4:00–6:00 p.m.	58	—	—	42	—	—	JHK
78	Pr. Georges Co., MD	1982/83	113	4:00–6:00 p.m.	59	—	—	41	—	—	JHK
44	Pr. Georges Co., MD	1982/83	97	4:00–6:00 p.m.	51	—	—	49	—	—	JHK
467	Pr. Georges Co., MD	1982/83	99	4:00–6:00 p.m.	56	—	—	44	—	—	JHK
352	W. Orange, NJ	Mar. 1986	149	4:00–6:00 p.m.	38	19	43	62	—	21,520	Raymond Keyes Assoc.
176	Tarpon Springs, FL	May 1986	124	3:00–7:00 p.m.	37	28	35	63	—	34,080	Raymond Keyes Assoc.
762	Orlando, FL	Fall 1985	182	4:00–6:00 p.m.	25	52	23	75	—	—	Kimley-Horn and Assoc. Inc.
166	Orlando, FL	Fall 1985	124	4:00–6:00 p.m.	27	48	25	73	—	—	Kimley-Horn and Assoc. Inc.
129	Orlando, FL	Fall 1985	116	4:00–6:00 p.m.	28	50	22	72	—	—	Kimley-Horn and Assoc. Inc.
71	Orlando, FL	Fall 1985	81	4:00–6:00 p.m.	50	44	6	50	—	—	Kimley-Horn and Assoc. Inc.

Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
921	Albany, NY	July & Aug. 1985	196	4:00–6:00 p.m.	23	42	35	77	—	60,950	Raymond Keyes Assoc.
108	Overland Park, KS	July 1988	111	4:30–5:30 p.m.	26	61	13	74	—	34,000	—
118	Overland Park, KS	Aug. 1988	123	4:30–5:30 p.m.	25	55	20	75	—	—	—
256	Greece, NY	June 1988	120	4:00–6:00 p.m.	38	62	—	62	—	23,410	Sear Brown
160	Greece, NY	June 1988	78	4:00–6:00 p.m.	29	71	—	71	—	57,306	Sear Brown
550	Greece, NY	June 1988	117	4:00–6:00 p.m.	48	52	—	52	—	40,763	Sear Brown
51	Boca Raton, FL	Dec. 1987	110	4:00–6:00 p.m.	33	34	33	67	—	42,225	Kimley-Horn and Assoc. Inc.
1,090	Ross Twp, PA	July 1988	411	2:00–8:00 p.m.	34	56	10	66	—	51,500	Wilbur Smith and Assoc.
97	Upper Dublin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	41	—	—	59	—	34,000	McMahon Associates
118	Tredyffrin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	24	—	—	76	—	10,000	Booz Allen & Hamilton
122	Lawnside, NJ	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	20,000	Pennoni Associates
126	Boca Raton, FL	Winter 1988/89	—	4:00–6:00 p.m.	43	—	—	57	—	40,000	McMahon Associates
150	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	39	—	—	61	—	26,000	Booz Allen & Hamilton
153	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	50	—	—	50	—	85,000	McMahon Associates
153	Arden, DE	Winter 1988/89	—	4:00–6:00 p.m.	30	—	—	70	—	26,000	Orth-Rodgers & Assoc. Inc.
154	Doylestown, PA	Winter 1988/89	—	4:00–6:00 p.m.	32	—	—	68	—	29,000	Orth-Rodgers & Assoc. Inc.
164	Middletown Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	25,000	Booz Allen & Hamilton
166	Haddon Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	20	—	—	80	—	6,000	Pennoni Associates
205	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	55	—	—	45	—	62,000	McMahon Associates

Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
237	W. Windsor Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	48	—	—	52	—	46,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	44	—	—	56	—	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	—	4:00–6:00 p.m.	19	—	—	81	—	33,000	Wilbur Smith
150	Portland, OR	—	519	4:00–6:00 p.m.	68	6	26	32	—	25,000	Kittelson and Associates
150	Portland, OR	—	655	4:00–6:00 p.m.	65	7	28	35	—	30,000	Kittelson and Associates
760	Calgary, Alberta	Oct.-Dec. 1987	15,436	4:00–6:00 p.m.	20	39	41	80	—	—	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	35	—	—	65	—	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	176	3:30–6:15 p.m.	32	44	24	68	—	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	26	41	67	—	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

"—" means no data were provided

Figure E.7 Shopping Center (820)

Average Pass-By Trip Percentage vs: **1000 Sq. Feet Gross Leasable Area**
On a: **Weekday, P.M. Peak Period**
Number of Studies: 100
Average 1000 Sq. Feet GLA: 329

Data Plot

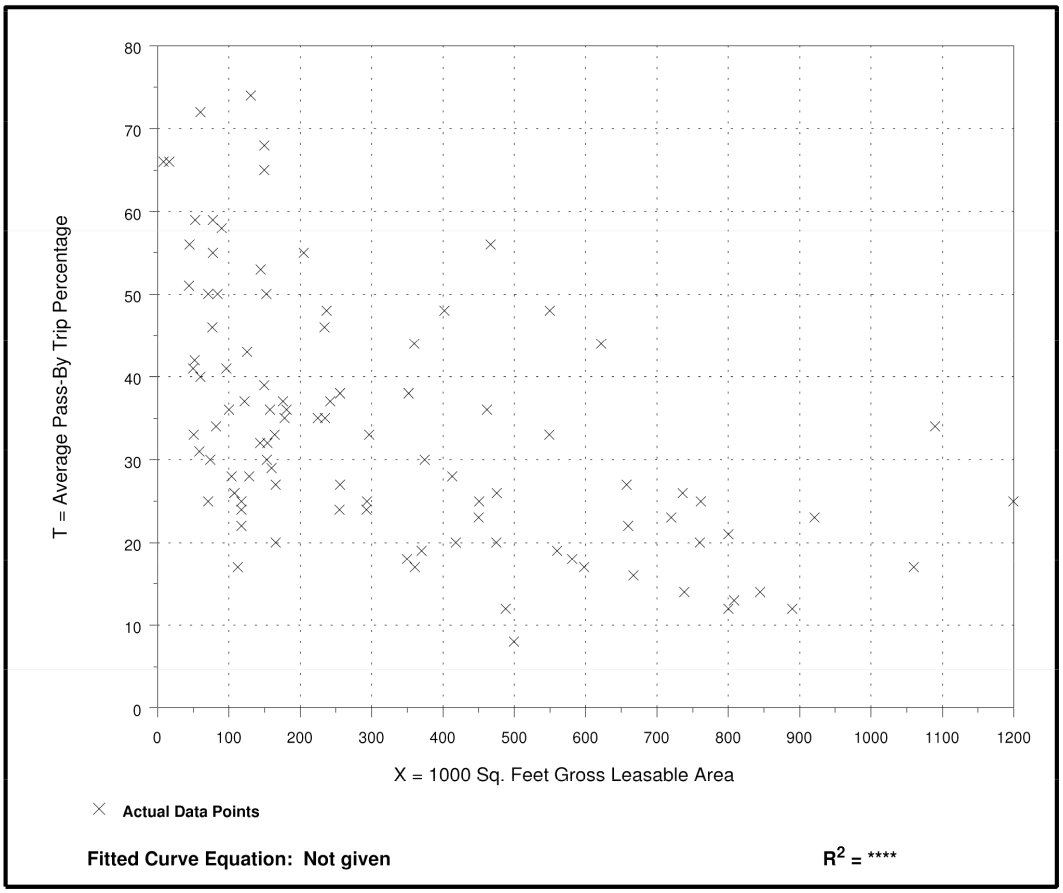


Figure E.8 Shopping Center (820)

Average Pass-By Trip Percentage vs: **PM Peak Hour Traffic on Adjacent Street**
On a: **Weekday, PM Peak Period**
Number of Studies: 28
Average PM Peak Hr. Traf. On Adj. Street: 3,122

Data Plot

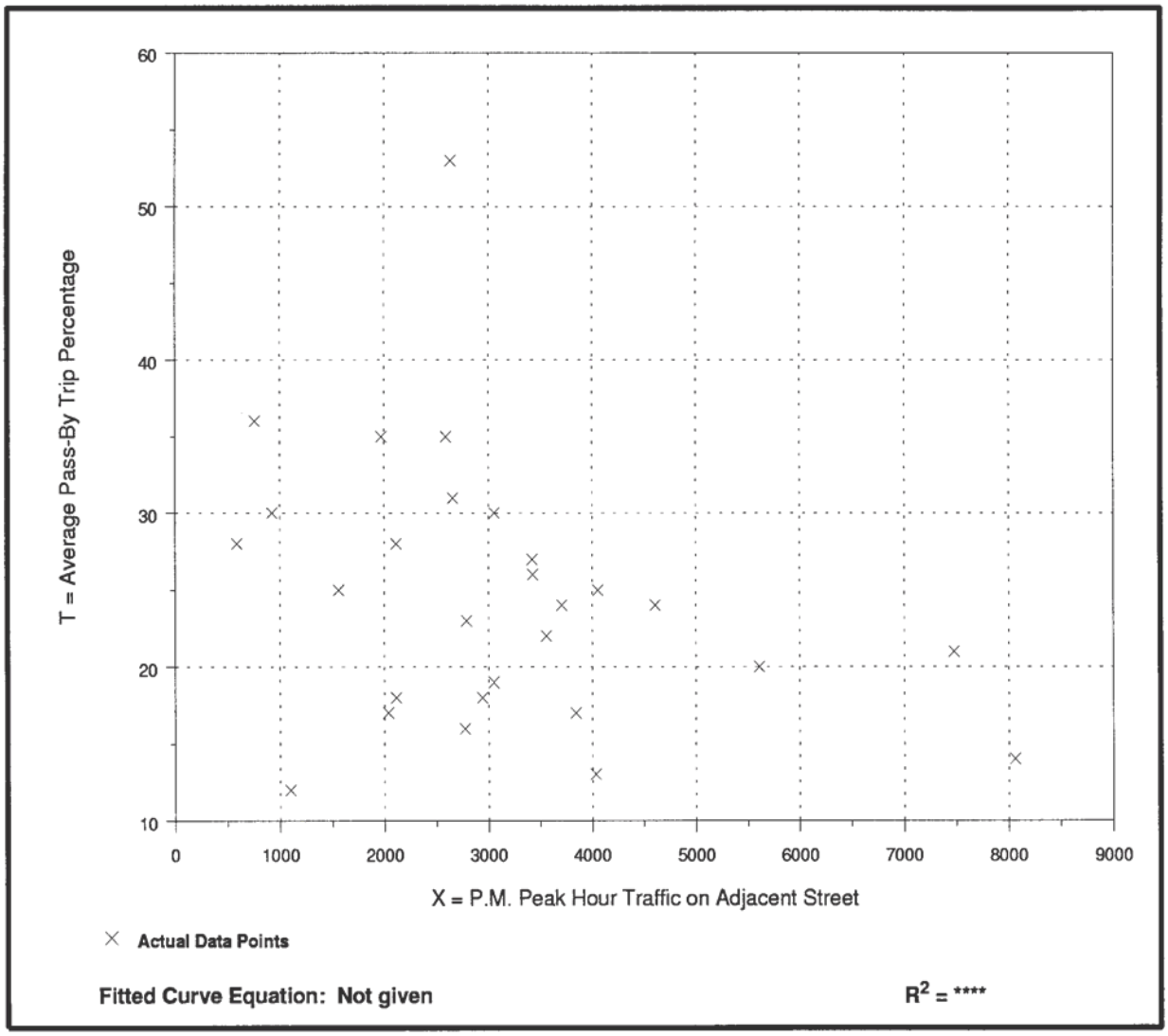


Table E.10 Pass-By and Non-Pass-By Trips Saturday, Mid-Day Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GFA)	LOCATION	SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
						PRIMARY	DIVERTED	TOTAL		
720	Framingham, MA	Feb. 1984	258	11:00 a.m.–4:00 p.m.	23	34	43	77	—	Raymond Keyes Assoc.
600	Brandywine, DE	Apr. 1983	256	10:00 a.m.–3:00 p.m.	17	50	33	83	—	Raymond Keyes Assoc.
880	Christiana, DE	July 1984	198	11:00 a.m.–4:00 p.m.	5	55	40	95	—	Raymond Keyes Assoc.
234	Huntington LI, NY	Nov. 1985	223	11:00 a.m.–3:00 p.m.	39	22	39	61	—	Raymond Keyes Assoc.
658	Wayne, NJ	Sept. 1984	329	11:00 a.m.–4:00 p.m.	46	44	10	54	—	Raymond Keyes Assoc.
622	Ramsey Cnty, MN	Nov. 1985	119	11:00 a.m.–3:00 p.m.	23	21	56	77	—	Raymond Keyes Assoc.
736	Pensacola, FL	Oct. 1985	680	11:00 a.m.–3:00 p.m.	20	31	49	80	—	Raymond Keyes Assoc.
430	Ross, PA	June 1980	425	11:00 a.m.–4:00 p.m.	22	—	—	78	—	Raymond Keyes Assoc.
176	Tampa Springs, FL	May 1986	188	11:00 a.m.–3:00 p.m.	31	42	27	69	—	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	264	11:00 a.m.–3:15 p.m.	31	47	22	69	63,362	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	2:15–3:15 p.m.	28	39	33	72	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 26
"—" means no data were provided

Figure E.9 Shopping Center (820)

Average Pass-By Trip Percentage vs: **1000 Sq. Feet Gross Leasable Area**
On a: **Saturday**
Number of Studies: 11
Average 1000 Sq. Feet GLA: 523

Data Plot

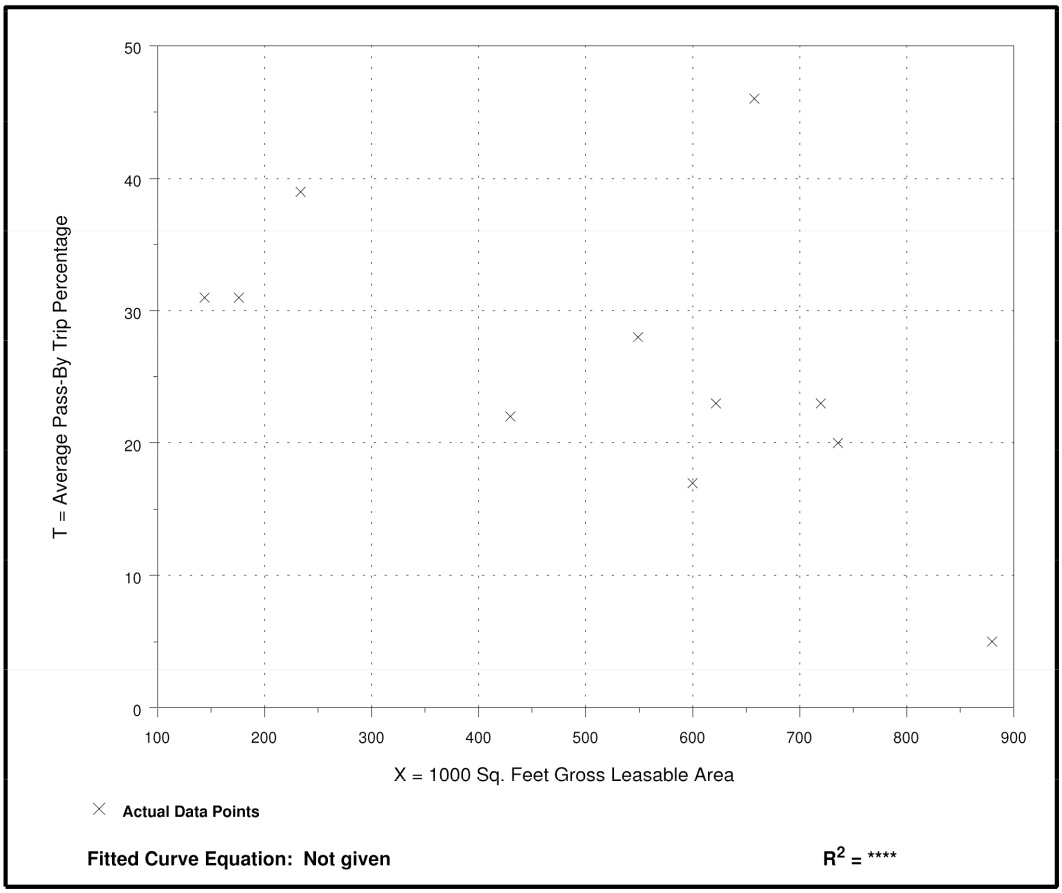


Table E.31 Pass-By and Non-Pass-By Trips Weekday, AM Peak Period
Land Use Code 934—Fast-Food Restaurant with Drive-Through Window

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	<5	Chicago suburbs, IL	1987	84	7:00–9:00 a.m.	44	—	—	56	—	Kenig, O'Hara, Humes, Flock
88	1.4	Louisville area, KY	1993	—	7:00–9:00 a.m.	62	22	16	38	1,407	Barton-Aschman Assoc.
100	3.6	Louisville, KY	1993	—	7:00–9:00 a.m.	32	47	21	68	437	Barton-Aschman Assoc.
87	4.2	New Albany, IN	1993	—	7:00–9:00 a.m.	46	23	31	54	1,049	Barton-Aschman Assoc.
150	3.0	Louisville area, KY	1993	—	7:00–9:00 a.m.	43	14	43	57	2,903	Barton-Aschman Assoc.
—	3.3	varies	1996	—	6:00–9:00 a.m.	68	—	—	32	—	Oracle Engineering

Average Pass-By Trip Percentage: 49
"—" means no data were provided

Table E.32 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 934—Fast-Food Restaurant with Drive-Through Window

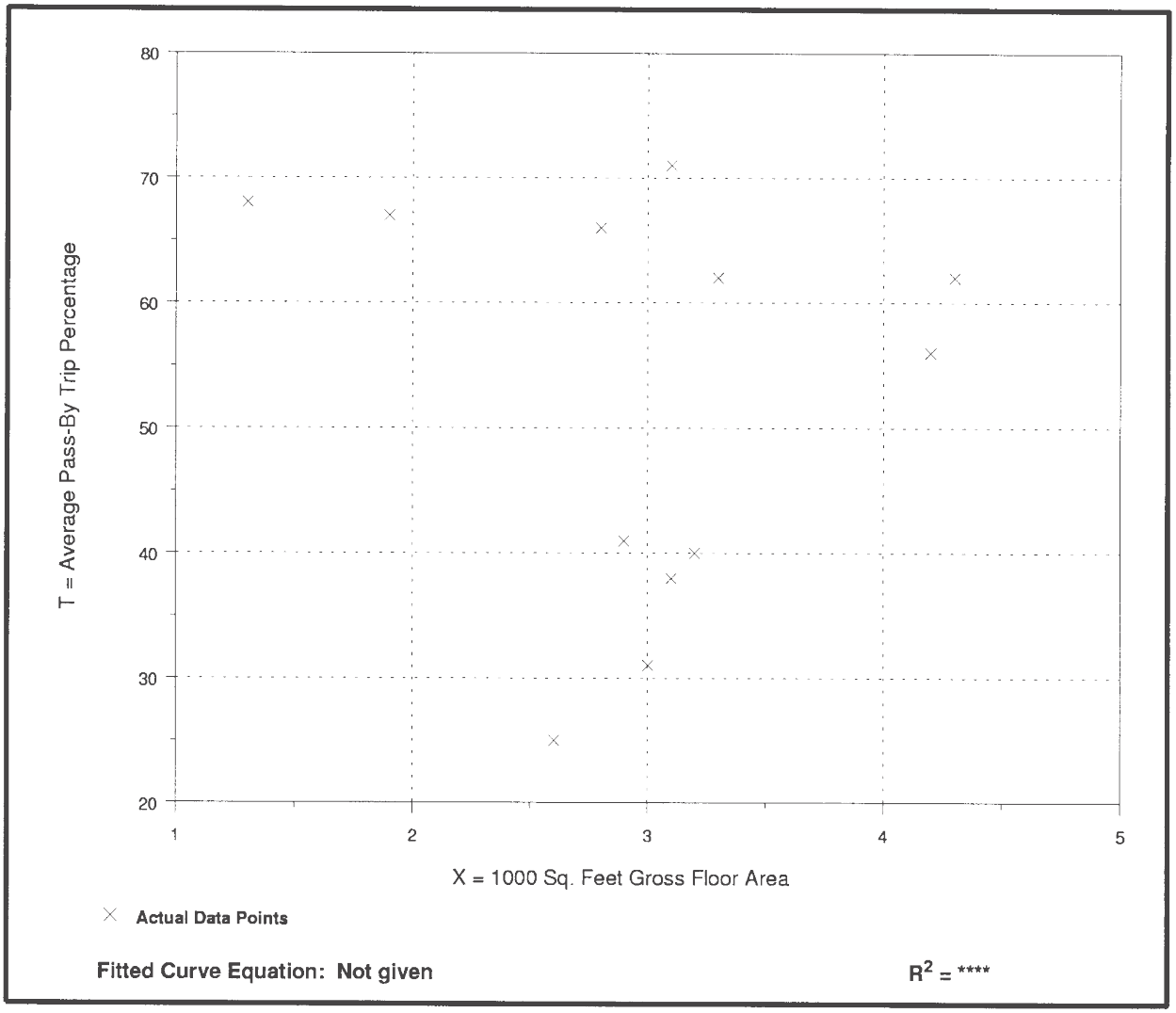
SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	~2.6	Minn-St. Paul, MN	1987	50	3:00–7:00 p.m.	25	27	48	75	—	—
—	<5.0	Chicago suburbs, IL	1987	80	3:00–6:00 p.m.	38	—	—	62	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	100	3:00–6:00 p.m.	55	—	—	45	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	159	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	225	3:00–6:00 p.m.	48	—	—	52	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	88	3:00–6:00 p.m.	35	—	—	65	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	84	3:00–6:00 p.m.	44	—	—	56	—	Kenig, O'Hara, Humes, Flock
88	1.3	Louisville area, KY	1993	—	4:00–6:00 p.m.	68	22	10	32	2,055	Barton-Aschman Assoc.
120	1.9	Louisville area, KY	1993	33	4:00–6:00 p.m.	67	24	9	33	2,447	Barton-Aschman Assoc.
87	4.2	New Albany, IN	1993	—	4:00–6:00 p.m.	56	25	19	44	1,632	Barton-Aschman Assoc.
150	3.0	Louisville area, KY	1993	—	4:00–6:00 p.m.	31	31	38	69	4,250	Barton-Aschman Assoc.
—	3.1	Kissimmee, FL	1995	28	2:00–6:00 p.m.	71	—	—	29	—	TPD Inc.
—	3.1	Apopka, FL	1996	29	2:00–6:00 p.m.	38	—	—	62	—	TPD Inc.
—	2.8	Winter Springs, FL	1995	47	2:00–6:00 p.m.	66	—	—	34	—	TPD Inc.
—	4.3	Longwood, FL	1994	304	2:00–6:00 p.m.	62	—	—	38	—	TPD Inc.
—	3.2	Altamonte Springs, FL	1996	202	2:00–6:00 p.m.	40	39	21	60	—	TPD Inc.
—	2.9	Winter Park, FL	1996	271	2:00–6:00 p.m.	41	41	18	59	—	TPD Inc.
—	3.3*	several	1996	varies	4:00–6:00 p.m.	62	—	—	38	—	Oracle Engineering

*Average of several combined studies.
Average Pass-By Trip Percentage: 50
"—" means no data were provided

Figure E.17 Fast-Food Restaurant with Drive-Through Window (934)

Average Pass-By Trip Percentage vs: **1,000 Sq. Ft. Gross Floor Area**
On a: **Weekday, PM Peak Period**
Number of Studies: 12
Average 1,000 Sq. Ft. GFA: 3.0

Data Plot



VACANT TENANT SPACES TRIP ASSIGNMENT – PRIMARY TRIPS

Kimley»Horn

VACANT TENANT SPACES TRIP ASSIGNMENT
PRIMARY TRIPS

VACANT TENANT SPACES TRIP ASSIGNMENT – PASS-BY TRIPS

Kimley»Horn

VACANT TENANT SPACES TRIP ASSIGNMENT
PASS-BY TRIPS

TRAFFIC COUNTS – STUDY INTERSECTIONS

Study Name 01 Arlington Heights & Palatine
Date Thursday, January 10, 2019

Report Summary

		Eastbound						Westbound						Northbound						Southbound							Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	destria	Total
AM Peak Period	Lights	11	248	1852	147	2258	1190	0	176	808	9	993	2023	0	132	593	136	1597	1251	0	35	736	239	1938	993	6786	W	0	2	2
Specified Period	%	100%	99%	98%	98%	98%	95%	0%	97%	95%	100%	95%	98%	0%	91%	97%	99%	96%	98%	0%	97%		97%	97%	97%	97%		0%	100%	
7:00 AM - 9:00 AM	Mediums	0	2	20	2	24	43	0	4	34	0	38	22	0	4	21	1	51	27	0	1	18	5	45	27	158	E	0	0	0
One Hour Peak	%	0%	1%	1%	1%	1%	3%	0%	2%	4%	0%	4%	1%	0%	3%	3%	1%	3%	2%	0%	3%		2%	2%	3%	2%		0%	0%	
7:15 AM - 8:15 AM	ticulated Truc	0	0	16	1	17	14	0	1	11	0	12	16	0	0	5	0	10	5	0	0	1	3	7	5	46	S	0	0	0
	%	0%	0%	1%	1%	1%	1%	0%	1%	1%	0%	1%	1%	0%	0%	1%	0%	1%	0%	0%	0%		1%	0%	0%	1%		0%	0%	
	icycles on Roa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	
	Total	**11**	**250**	**1888**	**150**	**2299**	**1247**	**0**	**181**	**853**	**9**	**1043**	**2061**	**0**	**145**	**610**	**137**	**1658**	**1283**	**0**	**36**	**768**	**247**	**1990**	**1025**	**6990**		**0**	**2**	**2**
	PHF	0	0.79	0.83	0.83	0.85	0	0	0.78	0.82	0.56	0	0.84	0	0.85	0.84	0.95	0.86	0.89	0	0.82	0.86	0.82	0.87	0.9	0.94				
	HV%	0%	1%	2%	2%	2%	5%	0%	3%	5%	0%	5%	2%	0%	3%	4%	1%	4%	2%	0%	3%	2%	3%	3%	3%	3%				
PM Peak Period	Lights	18	280	1187	138	1623	2158	2	184	1609	39	1834	1418	0	160	894	163	2289	1234	0	66	710	371	2059	1391	7805	W	0	1	1
Specified Period	%	100%	99%	97%	100%	98%	99%	100%	100%	99%	98%	99%	98%	0%	97%	100%	99%	99%	100%	0%	100%		99%	100%	99%	99%		0%	100%	
4:00 PM - 6:00 PM	Mediums	0	2	25	0	27	10	0	0	8	1	9	26	0	1	3	1	9	2	0	0	3	1	6	7	51	E	0	0	0
One Hour Peak	%	0%	1%	2%	0%	2%	0%	0%	0%	0%	3%	0%	2%	0%	1%	0%	1%	0%	0%	0%	0%		0%	0%	1%	1%		0%	0%	
4:15 PM - 5:15 PM	ticulated Truc	0	0	9	0	9	14	0	0	13	0	13	9	0	0	2	0	4	0	0	0	0	1	1	2	27	S	0	0	0
	%	0%	0%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	
	icycles on Roa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	
	Total	**18**	**282**	**1221**	**138**	**1659**	**2182**	**2**	**184**	**1630**	**40**	**1856**	**1453**	**0**	**165**	**895**	**164**	**2302**	**1236**	**0**	**66**	**729**	**373**	**2067**	**1400**	**7884**		**0**	**1**	**1**
	PHF	0	0.92	0.91	0.88	0.92	0	0	0.78	0.96	0.83	0	0.95	0	0.85	0.84	0.82	0.92	0.93	0	0.71	0.86	0.9	0.93	0.94	0.98				
	HV%	0%	1%	3%	0%	2%	1%	0%	0%	1%	3%	1%	2%	0%	1%	1%	1%	1%	0%	0%	0%	0%	1%	0%	1%	1%				
Saturday Midday Peak	Lights	14	298	866	107	1285	1308	0	147	808	40	995	1078	0	174	730	135	1957	1101	0	77	684	312	1920	1256	6157	W	0	2	2
Specified Period	%	100%	99%	99%	99%	99%	99%	0%	99%	100%	95%	99%	99%	0%	95%	100%	99%	99%	98%	0%	99%		99%	98%	99%	99%		0%	100%	
11:00 AM - 1:00 PM	Mediums	0	2	3	1	6	4	0	2	1	2	5	5	0	1	8	1	19	18	0	1	13	2	31	13	61	E	0	0	0
One Hour Peak	%	0%	1%	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	0%	1%	1%	1%	1%	2%	0%	1%		1%	2%	1%	1%		0%	0%	
11:45 AM - 12:45 PM	ticulated Truc	0	0	5	0	5	5	0	0	3	0	3	5	0	0	0	0	0	1	0	0	0	2	3	0	11	S	0	1	1
	%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		1%	0%	0%	0%		0%	100%	
	icycles on Roa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	
	Total	**14**	**300**	**874**	**108**	**1296**	**1317**	**0**	**149**	**812**	**42**	**1003**	**1088**	**0**	**183**	**730**	**136**	**1976**	**1120**	**0**	**78**	**711**	**316**	**1954**	**1269**	**6229**		**0**	**3**	**3**
	PHF	0	0.89	0.92	0.9	0.94	0	0	0.93	0.85	0.75	0	0.94	0	0.85	0.84	0.79	0.86	0.88	0	0.81	0.86	0.94	0.9	0.88	0.92				
	HV%	0%	1%	1%	1%	1%	1%	0%	1%	0%	5%	1%	1%	0%	1%	1%	1%	1%	2%	0%	1%	2%	1%	2%	1%	1%				

Study Name Arlington Heights & Lillian - Town & Country Access
Date Saturday, January 12, 2019 1:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles c**	**Pedestrians**	**Total**
AM Peak	Lights	0	84	6	49	139	82	0	27	8	52	87	62	0	47	747	33	827	1109	0	23	1033	27	1083	883	2136	W	0	2	2
Specified Period	%	0%	99%	100%	96%	98%	96%	0%	96%	89%	100%	98%	91%	0%	98%	96%	85%	96%	97%	0%	100%	98%	96%	98%	97%	97%		0%	100%	
7:00 AM - 9:00 AM	Mediums	0	1	0	2	3	2	0	1	1	0	2	6	0	0	26	6	32	25	0	0	22	1	23	27	60	E	0	0	0
One Hour Peak	%	0%	1%	0%	4%	2%	2%	0%	4%	11%	0%	2%	9%	0%	0%	3%	15%	4%	2%	0%	0%	2%	4%	2%	3%	3%		0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	1	4	0	5	4	0	0	4	0	4	4	9	S	0	1	1
	%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**85**	**6**	**51**	**142**	**85**	**0**	**28**	**9**	**52**	**89**	**68**	**0**	**48**	**777**	**39**	**864**	**1138**	**0**	**23**	**1059**	**28**	**1110**	**914**	**2205**	N	0	0	0
	PHF																									0.88		0%	0%	
	HV %	0%	1%	0%	4%	2%	4%	0%	4%	11%	0%	2%	9%	0%	2%	4%	15%	4%	3%	0%	0%	2%	4%	2%	3%	3%		**0**	**3**	**3**
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
PM Peak	Lights	0	77	21	10	108	111	0	66	30	132	228	187	0	27	1028	78	1133	996	0	88	920	54	1062	1237	2531	W	0	0	0
Specified Period	%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	0%	100%	99%	100%	99%	100%	0%	100%	100%	100%	100%	100%	100%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	1	0	1	3	4	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
4:15 PM - 5:15 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3	3	S	0	6	6
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**77**	**21**	**10**	**108**	**111**	**0**	**66**	**30**	**132**	**228**	**187**	**0**	**27**	**1034**	**78**	**1139**	**997**	**0**	**88**	**921**	**54**	**1063**	**1243**	**2538**	N	0	0	0
	PHF																									0.94		0%	0%	
	HV %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%		**0**	**6**	**6**
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Arlington Heights & Lillian - Town & Country Access
Date Saturday, January 12, 2019

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles (**	**Pedestrians**	**Total**
Saturday Peak	Lights	0	89	12	19	120	125	1	82	24	180	287	174	0	48	807	71	926	907	0	90	806	53	949	1076	2282	W	0	0	0
Specified Period	%	0%	99%	100%	100%	99%	100%	50%	100%	100%	100%	100%	99%	0%	100%	99%	100%	99%	98%	0%	100%	98%	100%	98%	99%	99%		0%	0%	
11:00 AM - 12:00 PM	Mediums	0	1	0	0	1	0	1	0	0	0	1	1	0	0	7	0	7	14	0	0	14	0	14	8	23	E	0	0	0
One Hour Peak	%	0%	1%	0%	0%	1%	0%	50%	0%	0%	0%	0%	1%	0%	0%	1%	0%	1%	2%	0%	0%	2%	0%	1%	1%	1%		0%	0%	
11:45 AM - 12:45 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	S	0	3	3
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**90**	**12**	**19**	**121**	**125**	**2**	**82**	**24**	**180**	**288**	**175**	**0**	**48**	**814**	**71**	**933**	**922**	**0**	**90**	**821**	**53**	**964**	**1084**	**2306**	N	0	0	0
	PHF																									0.95		0%	0%	
	HV %	0%	1%	0%	0%	1%	0%	50%	0%	0%	0%	0%	1%	0%	0%	1%	0%	1%	2%	0%	0%	2%	0%	2%	1%	1%		**0**	**3**	**3**
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Arlington Heights & Town & Country Loading Dock Access
Date Thursday, January 10, 2019

Report Summary

		Westbound					Northbound					Southbound							Crosswalk		
Time Period	Class.	U	L	R	I	O	U	T	R	I	O	U	L	T	I	O	Total		Bicycles o	Pedestrians	Total
AM Peak	Lights	0	4	3	7	12	0	816	9	825	1065	0	3	1061	1064	819	1896	E	0	0	0
Specified Period	%	0%	100%	75%	88%	80%	0%	96%	90%	96%	97%	0%	60%	97%	97%	96%	96%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	0	1	1	1	0	33	0	33	26	0	1	26	27	34	61	S	0	0	0
One Hour Peak	%	0%	0%	25%	13%	7%	0%	4%	0%	4%	2%	0%	20%	2%	2%	4%	3%		0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	2	0	4	1	5	3	0	1	3	4	4	9	N	0	0	0
	%	0%	0%	0%	0%	13%	0%	0%	10%	1%	0%	0%	20%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**4**	**4**	**8**	**15**	**0**	**853**	**10**	**863**	**1094**	**0**	**5**	**1090**	**1095**	**857**	**1966**		**0**	**0**	**0**
	PHF																0.88				
	HV %	0%	0%	25%	13%	20%	0%	4%	10%	4%	3%	0%	40%	3%	3%	4%	4%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
PM Peak	Lights	0	5	6	11	19	0	1132	17	1149	983	0	2	978	980	1138	2140	E	0	1	1
Specified Period	%	0%	100%	100%	100%	95%	0%	99%	94%	99%	100%	0%	100%	100%	100%	99%	100%		0%	100%	
4:00 PM - 6:00 PM	Mediums	0	0	0	0	1	0	3	1	4	2	0	0	2	2	3	6	S	0	0	0
One Hour Peak	%	0%	0%	0%	0%	5%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
4:15 PM - 5:15 PM	Articulated Trucks	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4	4	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**5**	**6**	**11**	**20**	**0**	**1139**	**18**	**1157**	**985**	**0**	**2**	**980**	**982**	**1145**	**2150**		**0**	**1**	**1**
	PHF																0.95				
	HV %	0%	0%	0%	0%	5%	0%	1%	6%	1%	0%	0%	0%	0%	0%	1%	0%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Arlington Heights & Town & Country Loading Dock Access
Date Saturday, January 12, 2019

Report Summary

		Westbound					Northbound					Southbound							Crosswalk		
Time Period	Class.	U	L	R	I	O	U	T	R	I	O	U	L	T	I	O	Total		Bicycles o	Pedestrians	Total
Saturday Peak	Lights	0	4	13	17	21	0	891	18	909	869	0	3	865	868	904	1794	E	0	3	3
Specified Period	%	0%	100%	93%	94%	95%	0%	99%	100%	99%	99%	0%	75%	99%	98%	99%	99%		0%	100%	
11:00 AM - 12:00 PM	Mediums	0	0	1	1	1	0	8	0	8	12	0	1	12	13	9	22	S	0	0	0
One Hour Peak	%	0%	0%	7%	6%	5%	0%	1%	0%	1%	1%	0%	25%	1%	1%	1%	1%		0%	0%	
11:45 AM - 12:45 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**4**	**14**	**18**	**22**	**0**	**899**	**18**	**917**	**882**	**0**	**4**	**878**	**882**	**913**	**1817**		**0**	**3**	**3**
	PHF																0.91				
	HV %	0%	0%	7%	6%	5%	0%	1%	0%	1%	1%	0%	25%	1%	2%	1%	1%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name	Town & Country RIRO Access & Palatine
Date	Thursday, January 10, 2019

Report Summary

		Eastbound					Northbound							Crosswalk		
Time Period	**Class.**	**U**	**T**	**R**	**I**	**O**	**U**	**L**	**R**	**I**	**O**	**Total**		**Bicycles or**	**Pedestrians**	**Total**
AM Peak	Lights	0	2019	25	2044	832	0	0	22	22	25	2898	W	0	0	0
Specified Period	%	0%	98%	96%	98%	95%	0%	0%	100%	100%	96%	97%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	17	1	18	30	0	0	0	0	1	48	E	0	0	0
One Hour Peak	%	0%	1%	4%	1%	3%	0%	0%	0%	0%	4%	2%		0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	15	0	15	12	0	0	0	0	0	27	S	0	0	0
	%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	1%		0%	0%	
	Total	**0**	**2051**	**26**	**2077**	**874**	**0**	**0**	**22**	**22**	**26**	**2973**		**0**	**0**	**0**
	PHF											0.89				
	HV %	0%	2%	4%	2%	5%	0%	0%	0%	0%	4%	3%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0				
PM Peak	Lights	0	1287	93	1380	1476	0	0	53	53	93	2909	W	0	0	0
Specified Period	%	0%	98%	99%	98%	99%	0%	0%	100%	100%	99%	98%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	20	1	21	7	0	0	0	0	1	28	E	0	0	0
One Hour Peak	%	0%	2%	1%	1%	0%	0%	0%	0%	0%	1%	1%		0%	0%	
4:15 PM - 5:15 PM	Articulated Trucks	0	12	0	12	13	0	0	0	0	0	25	S	0	0	0
	%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	1%		0%	0%	
	Total	**0**	**1319**	**94**	**1413**	**1496**	**0**	**0**	**53**	**53**	**94**	**2962**		**0**	**0**	**0**
	PHF											0.96				
	HV %	0%	2%	1%	2%	1%	0%	0%	0%	0%	1%	2%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0				

Study Name Town & Country RIRO Access & Palatine
Date Saturday, January 12, 2019

Report Summary

		Eastbound					Northbound							Crosswalk		
Time Period	**Class.**	**U**	**T**	**R**	**I**	**O**	**U**	**L**	**R**	**I**	**O**	**Total**		**Bicycles or**	**Pedestrians**	**Total**
Saturday Peak	Lights	0	987	81	1068	879	0	0	76	76	81	2023	W	0	0	0
Specified Period	%	0%	99%	99%	99%	99%	0%	0%	99%	99%	99%	99%		0%	0%	
11:00 AM - 12:00 PM	Mediums	0	4	0	4	5	0	0	1	1	0	10	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%		0%	0%	
11:45 AM - 12:45 PM	Articulated Trucks	0	4	1	5	3	0	0	0	0	1	8	S	0	0	0
	%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%		0%	0%	
	Total	**0**	**995**	**82**	**1077**	**887**	**0**	**0**	**77**	**77**	**82**	**2041**		**0**	**0**	**0**
	PHF											0.97				
	HV %	0%	1%	1%	1%	1%	0%	0%	1%	1%	1%	1%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0				

Study Name Town & Country RIRO Access & Rand
Date Thursday, January 10, 2019

Report Summary

		Eastbound					Northbound					Southbound						Crosswalk		
Time Period	Class.	U	L	R	I	O	U	L	T	I	O	U	T	R	I	O	Total		Bicycles c	Pedestrians	Total
AM Peak	Lights	0	0	15	15	22	0	0	691	691	1501	0	1486	22	1508	691	2214	W	0	0	0
Specified Period	%	0%	0%	94%	94%	100%	0%	0%	97%	97%	98%	0%	98%	100%	98%	97%	98%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	0	1	1	0	0	0	18	18	21	0	20	0	20	18	39	S	0	0	0
One Hour Peak	%	0%	0%	6%	6%	0%	0%	0%	3%	3%	1%	0%	1%	0%	1%	3%	2%		0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	0	0	0	2	2	7	0	7	0	7	2	9	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**0**	**16**	**16**	**22**	**0**	**0**	**711**	**711**	**1529**	**0**	**1513**	**22**	**1535**	**711**	**2262**		**0**	**0**	**0**
	PHF																0.86				
	HV %	0%	0%	6%	6%	0%	0%	0%	3%	3%	2%	0%	2%	0%	2%	3%	2%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
PM Peak	Lights	0	0	35	35	92	0	0	1512	1512	1139	0	1104	92	1196	1512	2743	W	0	0	0
Specified Period	%	0%	0%	100%	100%	100%	0%	0%	99%	99%	99%	0%	99%	100%	99%	99%	99%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	0	0	0	0	0	0	16	16	9	0	9	0	9	16	25	S	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	1%	0%	1%	1%	1%		0%	0%	
4:15 PM - 5:15 PM	Articulated Trucks	0	0	0	0	0	0	0	4	4	3	0	3	0	3	4	7	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**0**	**35**	**35**	**92**	**0**	**0**	**1532**	**1532**	**1151**	**0**	**1116**	**92**	**1208**	**1532**	**2775**		**0**	**0**	**0**
	PHF																0.94				
	HV %	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	1%	0%	1%	1%	1%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Town & Country RIRO Access & Rand
Date Saturday, January 12, 2019

Report Summary

		Eastbound					Northbound					Southbound						Crosswalk		
Time Period	Class.	U	L	R	I	O	U	L	T	I	O	U	T	R	I	O	Total		Bicycles c	Pedestrians	Total
Saturday Peak	Lights	0	1	48	49	99	0	2	1106	1108	1120	0	1072	97	1169	1107	2326	W	0	1	1
Specified Period	%	0%	100%	100%	100%	99%	0%	100%	99%	99%	99%	0%	99%	99%	99%	99%	99%		0%	100%	
11:00 AM - 12:00 PM	Mediums	0	0	0	0	1	0	0	12	12	11	0	11	1	12	12	24	S	0	0	0
One Hour Peak	%	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	0%	1%	1%	1%	1%	1%		0%	0%	
11:45 AM - 12:45 PM	Articulated Trucks	0	0	0	0	0	0	0	2	2	2	0	2	0	2	2	4	N	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**1**	**48**	**49**	**100**	**0**	**2**	**1120**	**1122**	**1133**	**0**	**1085**	**98**	**1183**	**1121**	**2354**		**0**	**1**	**1**
	PHF																0.94				
	HV %	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	0%	1%	1%	1%	1%	1%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Town & Country Full Access & Rand
Date Thursday, January 10, 2019

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles c**	**Pedestrians**	**Total**
AM Peak	Lights	0	10	2	17	29	47	0	12	8	7	27	16	0	29	702	3	734	1500	0	11	1471	10	1492	719	2282	W	0	0	0
Specified Period	%	0%	100%	100%	100%	100%	96%	0%	92%	89%	100%	93%	89%	0%	100%	97%	75%	97%	98%	0%	92%	98%	91%	98%	97%	98%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	0	0	0	0	0	0	1	0	0	1	2	0	0	16	1	17	19	0	1	18	0	19	16	37	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	3%	11%	0%	0%	2%	25%	2%	1%	0%	8%	1%	0%	1%	2%	2%		0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	3	5	0	0	5	1	6	3	9	S	0	0	0
	%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%		0%	0%	
	Total	**0**	**10**	**2**	**17**	**29**	**49**	**0**	**13**	**9**	**7**	**29**	**18**	**0**	**29**	**721**	**4**	**754**	**1524**	**0**	**12**	**1494**	**11**	**1517**	**738**	**2329**	N	0	0	0
	PHF																									0.87		0%	0%	
	HV %	0%	0%	0%	0%	0%	2%	0%	8%	0%	0%	3%	11%	0%	0%	3%	25%	3%	2%	0%	8%	2%	9%	2%	3%	2%		**0**	**0**	**0**
	Bicycles on Road	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
PM Peak	Lights	0	58	10	66	134	143	0	27	14	49	90	57	0	109	1438	24	1571	1185	0	23	1092	20	1135	1545	2930	W	0	0	0
Specified Period	%	0%	100%	100%	99%	99%	99%	0%	100%	100%	100%	100%	100%	0%	99%	99%	100%	99%	99%	0%	100%	99%	100%	99%	99%	99%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	0	0	1	1	1	0	0	0	0	0	0	0	1	8	0	9	11	0	0	10	0	10	8	20	E	0	0	0
One Hour Peak	%	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	1%		0%	0%	
4:15 PM - 5:15 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4	0	0	4	0	4	4	8	S	0	5	5
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**58**	**10**	**67**	**135**	**144**	**0**	**27**	**14**	**49**	**90**	**57**	**0**	**110**	**1450**	**24**	**1584**	**1200**	**0**	**23**	**1106**	**20**	**1149**	**1557**	**2958**	N	0	0	0
	PHF																									0.94		0%	0%	
	HV %	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	1%		**0**	**5**	**5**
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Town & Country Full Access & Rand
Date Saturday, January 12, 2019

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles o**	**Pedestrians**	**Total**
Saturday Peak	Lights	0	56	6	89	151	135	0	30	3	43	76	76	1	109	941	35	1086	1169	0	35	1049	23	1107	1040	2420	W	0	1	1
Specified Period	%	0%	98%	100%	100%	99%	99%	0%	100%	100%	100%	100%	100%	100%	99%	99%	100%	99%	99%	0%	100%	99%	100%	99%	99%	99%		0%	100%	
11:00 AM - 12:00 PM	Mediums	0	1	0	0	1	1	0	0	0	0	0	0	0	1	9	0	10	12	0	0	12	0	12	10	23	E	0	0	0
One Hour Peak	%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	1%		0%	0%	
11:45 AM - 12:45 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	0	1	2	3	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**57**	**6**	**89**	**152**	**136**	**0**	**30**	**3**	**43**	**76**	**76**	**1**	**110**	**952**	**35**	**1098**	**1182**	**0**	**35**	**1062**	**23**	**1120**	**1052**	**2446**	N	0	0	0
	PHF																									0.93		0%	0%	
	HV %	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	1%		**0**	**1**	**1**
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

TRAFFIC COUNTS – EXISTING RAISING CANE'S RESTAURANT

Raising Cane's Oak Lawn
Empirical Trip Generation
January 2019

TIME	NORTH DRIVEWAY			SOUTH DRIVEWAY			TOTAL SITE		
	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND	TOTAL
Tuesday, January 15, 2019									
7:00AM	0	0	0	0	0	0	0	0	0
7:15AM	1	0	1	0	0	0	1	0	1
7:30AM	1	1	2	0	0	0	1	1	2
7:45AM	0	0	0	0	0	0	0	0	0
8:00AM	2	0	2	0	0	0	2	0	2
8:15AM	1	0	1	0	0	0	1	0	1
8:30AM	1	1	2	0	1	1	1	2	3
8:45AM	1	0	1	0	0	0	1	0	1
4:00PM	8	10	18	10	7	17	18	17	35
4:15PM	11	16	27	5	2	7	16	18	34
4:30PM	4	9	13	5	4	9	9	13	22
4:45PM	8	12	20	7	2	9	15	14	29
5:00PM	12	6	18	9	9	18	21	15	36
5:15PM	10	13	23	7	11	18	17	24	41
5:30PM	5	7	12	7	8	15	12	15	27
5:45PM	9	11	20	1	1	2	10	12	22
Saturday, January 12, 2019									
11:00AM	3	0	3	5	4	9	8	4	12
11:15AM	14	8	22	5	8	13	19	16	35
11:30AM	6	7	13	4	7	11	10	14	24
11:45AM	5	5	10	5	5	10	10	10	20
12:00PM	12	6	18	6	7	13	18	13	31
12:15PM	7	10	17	3	2	5	10	12	22
12:30PM	6	7	13	5	6	11	11	13	24
12:45PM	13	7	20	6	9	15	19	16	35

Kimley»Horn

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